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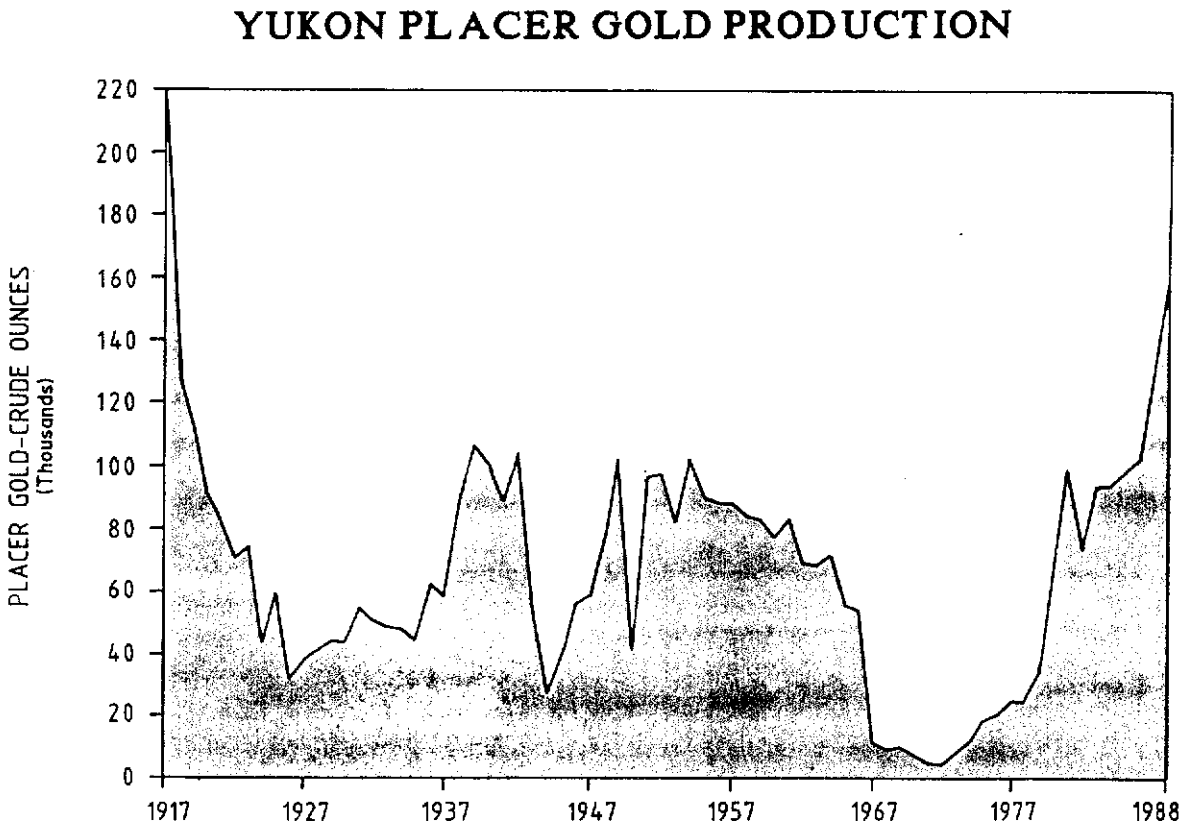
YUKON PLACER MINING AND EXPLORATION 1985 - 1988



Canada

On the cover: Yukon placer gold production in 1988 reached 162,492 crude ounces, a modern-day record which has not been surpassed since 1917 when 13 dredges were operating and hydraulic mining of the White Channel Gravels was a major activity.

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YUKON PLACER MINING AND EXPLORATION 1985-1988

Edited by W.P. LeBarge and S.R. Morison

Exploration and Geological Services Division
Mineral Resources Directorate
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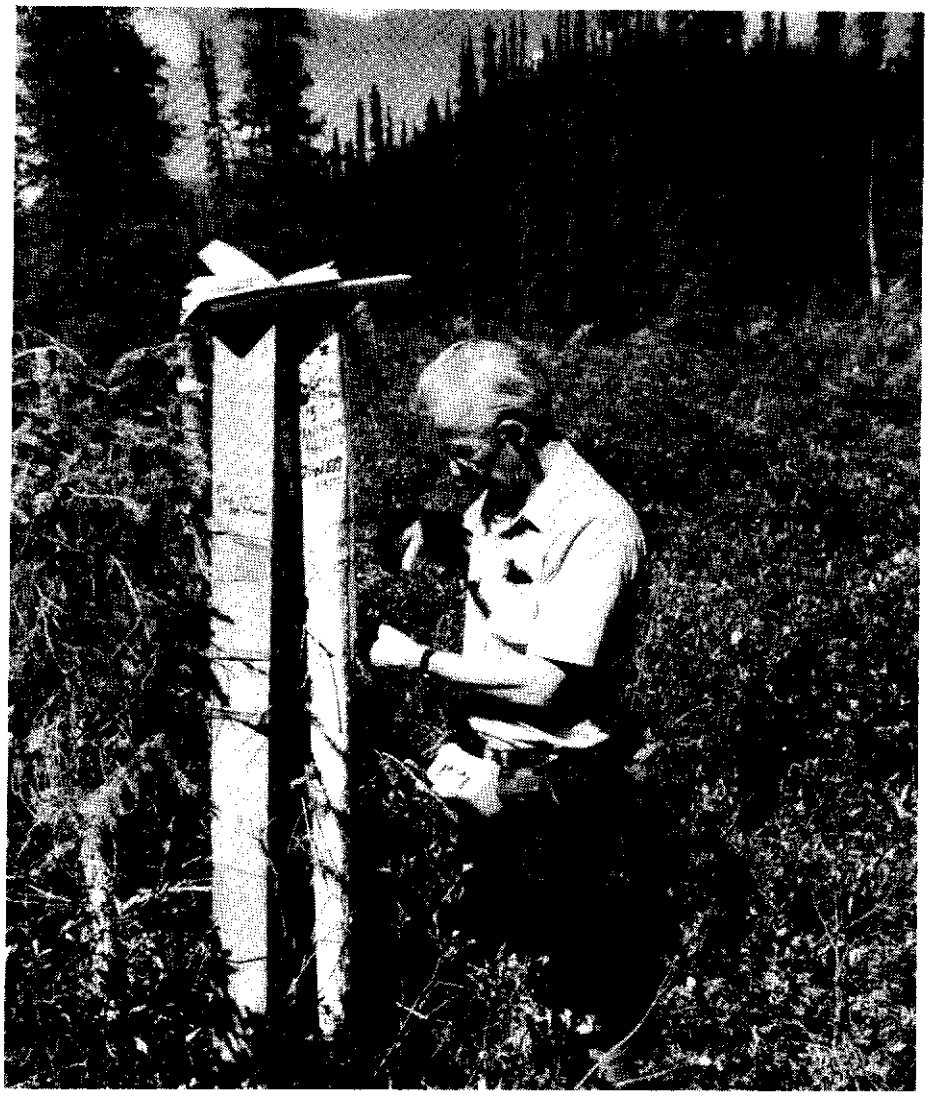

George Gilbert recently retired as the Head of the Placer Mining Inspection Unit of the Northern Affairs Program, after 15 years with the Department and 23 years in the Yukon. His long and distinguished career included employment as a geologist, hard rock gold miner, engineer, diamond driller, armorer for the RCAF, placer technician, placer miner, prospector, trapper, and game guide. His technical and historical knowledge of Yukon placer mining is a valued resource which will be missed. This book is dedicated to him.

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PREFACE

This volume represents the first attempt at publishing summaries of placer exploration programs which have been filed with the Northern Affairs Program for assessment credit. This information has been compiled in this volume along with mining inspection reports which have been traditionally released in Placer Mining Industry publications (e.g. Debicki and Gilbert 1986).

Traditional methods of evaluating placer deposits have been documented in this volume, as well as new and innovative techniques such as ground probing radar surveys. Yukon's placer industry is faced with a serious problem of diminishing reserves in traditionally mined areas. Exploration for new deposits is essential for the long term health of the placer industry. It is hoped that this publication will stimulate discussions and new ideas about both exploration techniques and new areas which should be investigated.

We thank the individuals and companies who approved the publication of exploration assessment summaries and the placer miners who spent considerable time with Northern Affairs Staff while collecting field data. This cooperation is sincerely appreciated, without which this publication would not be possible.

S.R. Morison
Chief Geologist
Exploration and Geological Services Division
Northern Affairs Program

EXPLOITATION ET EXPLORATION DES PLACERS DU YUKON 1985 - 1988

Notes explicatives

Les rapport dans cet ouvrage décrivent les exploitations de placers du Yukon qui ont été actives de 1985 à 1988, ainsi que les travaux d'exploration de placers au Yukon entre 1975 et 1988. L'information sur les exploitations actives de placers a été tirée de rapports d'inspection sur le terrain, recueillis par la Section de l'exploitation des placers des Affaires du Nord, Les travaux d'exploration de placers effectués au Yukon au cours de la dernière décennie sont documentés dans des résumés de rapports d'évaluation qui sont été déposés pour fins de crédit d'évaluation en vertu de l'article 41 de la Loi sur l'extraction de l'or dans le Yukon.

Un grand nombre des exploitations de placers qui ont été actives pendant toute la période n'ont été visitées aux fins du présent rapport qu'une ou deux fois; en outre, certaines exploitations n'ont aucunement été documentées durant ce temps. Il se peut que certains exploitations constatent que leur exploitation particulière a été omise à cause de données incomplètes ou manquantes. Chacun est invité à présenter toute information pertinente dans les prochains rapports sur l'activité de l'industrie. Les descriptions n'ont pas été rédigées par les exploitants.

Les résumés des rapports d'évaluation ont été rédigés à partir de l'ensemble des rapports d'évaluation des placers, tant confidentiels que non confidentiels.

Les résumés des rapport confidentiels ont été rédigés par les propriétaires des concessions. La longueur et le détail de chaque résumé sont indicatifs davantage du contenu du rapport original que de la valeur de la propriété en soi.

Les rapports su présent volume ont été classés alphanumériquement selon les divisions cartographiques au 1/250 du SNRC (Système national de référence cartographiques). Des versions rèduites de toutes les cartes au 1/250 000 pertinentes sont jointes aux résumés. Les résumés des rapport d'évaluation précèdent les rapports d'inspection minière ai sein de chaque division au SNRC. Chaque résumé renferme le nom du ruisseau, le nom de l'exploitant, le numéro de permis d'exploitation du cours d'eau (le cas échéant) et l'année pertinente du rapport d'inspection ou d'évaluation. Les emplacements des exploitations sont indiqués en termes de latitude et de longitude, ainsi qu'en termes de division cartographique de SNRC au 1/50 000. Chaque exploitation ou cible d'exploration est désigné par un numéro qui correspond à un symbole et à un numéro de la carte SNRC jointe. Les cercles représentent les travaux d'exploitation de placers exécutés entre 1985 et 1988, tandis que entre 1985 et 1988. Sont aussi représentées sur les cartes SNRC, entraits gras continus, les zones le long de ruisseaux où des baux ou des concessions étaient dûment détenus le 31 décembre 1989. Cette caractéristique vise à donner une indication générale des niveaux d'activité sur chaque carte.

A cause de grand nombre d'exploitations dans la région du Klondike (parties de 1150 et de 116B), ces rapports ont été traités comme une section séparée, les résumés étant accompagnés d'une carte beaucoup plus détaillée.

Comme la plupart des exploitants de placers n'utilisent en général pas le système métrique, les valeurs sont données en unités anglaises. Une table de conversion est fournie pour lever toute ambiguïté.

INDUSTRIE DES PLACERS DU YUKON 1985 A 1988; VUE D'ENSEMBLE
par W.P. LeBarge, géologie, AINC

Introduction

De 1985 à 1988, l'exploitation des placers est passée d'une activité liée au prix de l'or à une industrie bein établie, et stable malgré les fluctuations du prix de l'or. Pendant ces quatre années, la machinerie a grossi (permettant une extraction et une exploitation à plus grande échelle), le nombre d'employés a augmenté et les usines de récupération ont été perfectionnées. Cela s'est traduit en 1988 par une production record d'or de 162 492 onces brutes, chiffre qui n'a pas encore été dépassé depuis 1917. Les régions non glaciaires ont encore continué de dominer la production d'or, comptant pour 75% du total, le bassin de l'Indian se révélant la principale zone aurifère. D'autres facteurs ont touché l'industrie durant cette période, notamment la signature de l'autorisation pour la protection de pêches au Yukon en mai 1988. Ce document fixait de nouvelles normes pour les effluents des exploitations de placers et créait une seule autorité (la Section de l'exploitation des placers des Affaires du Nord) pour l'inspection et l'application de ces normes.

Travaux de jalonnement

Les travaux de jalonnement ont en général varié selon le prix de l'or. En 1985, le prix constamment à la baisse de l'or a fait chuter à leur plus bas depuis 1978 les travaux de jalonnement de nouvelles concessions de placers et de baux de prospection. Le nombre de baux de prospection de placers dûment détenus a aussi chuté à son plus bas depuis huit ans en 1985, mais à cause de la conversion de baux en concessions, le nombre de concessions dûment détenues n'a pas chuté autant. La comparaison entre le nombre de milles de concessions et de baux détenus sur des placers de 1979 à 1988 et les prix mensuels de l'or de 1985 à 1988 révèle que depuis 1985, ce nombre a toujours augmenté avec le prix de l'or. Lorsque le prix de l'or a brusquement chuté en 1988, les travaux diminué même si la superficie des concessions détenues a effectivement augmenté. Cela tient en partie à une augmentation du nombre de baux jalonnés en concessions. A la fin de 1988, la superficie totale des concessions détenues se chiffrai à 2580 milles de lit de ruissaux du Yukon, un sommet depuis 1981. Pendant essentiellement confinés aux régions traditionnelles, les nouveaux non traditionnelles ont été jalonnées, quoique l'exploration la plus intense s'est faite dans les parties les moins prospectées des bassins des rivières Stewart, Sixtymile et Indian.

Production d'or de placer 1985-1988

Malgré les fluctuations du prix de l'or, la production d'or de placers du Yukon a constamment augmenté entre 1985 et 1988, atteignant un total de 497 848 onces brutes pendant les quatre ans. Cet or valait environ 211 056 000 $ CAN. En 1987, l'exploitation des placers se classait bonne deuxième derrière la mine de plomb et zinc de Curragh Resources, en termes de la valeur du métal extrait, et donc deuxième pour sa contribution à l'économie du Yukon qui est basée sur les ressources. Un nouveau record de production de 152 497 onces brutes (129 994 onces d'or fin) a été atteint en 1988. Il s'agit là de la production d'or la plus élevée en une saison depuis 1917 où treize dragues étaient en exploitation et où l'exploitation hydraulique à grande échelle des graviers de White Channel culminait. Certains facteurs expliquent cette acroissement de la production: mineurs plus expérimentés, introduction d'engins de terrassement plus gros et plus efficaces, décapage accéléré des morts-terrains et usines de récupération plus perfectionnées. Le record est impressionnant vu la brusque chute du prix de l'or en 1988.

Prix de l'or

Le prix de l'once d'or a varié d'un creux de 299 $US en février 1985 à un sommet de 486 $US en décembre 1987. Le prix moyen pendant les quatre années a été de 392 $US (519 $CAN). Le raffermissement du dollar canadien en 1988 a fait baisser le prix de l'or pour les exploitants du Yukon, ce qui a pu être compensé par une baisse du prix des pièces de machinerie américaines. Il existe une assez forte corrélation entre le prix de l'or, la production et les concessions dûment détenues de 1979 à 1988. Avec quelque retard, suivi le prix changeant de l'or, sauf entre 1983 et 1985 où le prix de l'or comme la superficie des concessions ont chuté pendant que la production d'or se maintenait. Lorsque le prix de l'or s'est rétabli, la production a augmenté, mais la forte baisse de prix de 1988 a eu peu d'effet et la production a ateint un sommet de 72 ans. Cette nouvelle tendance d'une hausse de la production malgré la fluctuation du prix de l'or devrait se maintenir pendant les années 1990.

Principales exploitation de 1985 à 1988

Le nombre de personnes directement à l'emploi de l'industrie des placers a augmenté constamment au cours de la période de quatre ans, depuis un creux de 799 environ en 1985 jusqu'à un sommet de 750 en 1988. En

moyenne, quatre-vingts pour cent des exploitations ont employé 5 travailleurs ou moins, et seulement 10 exploitations ont employés 10 travailleurs ou plus.

Faits saillants de 1985

Au total, 190 exploitations de placers étaient actives en 1985, y compris trois exploitations souterraines. La Klondike Underground Mining Ltd a extrait 18 000 verges cubes de minerai par jour de son exploitation souterraine de Miller Creek, employant 8 personnes. La White Channel Underground Mining Ltd a extrait 39 000 verges cubes de minerai de la propriété Jackson Hill, employant 8 personnes sur la propriété qui avait été exploitée par la Jackson Hill Ventures la saison précédente. La King Solomon Mines Ltd, disposant de quatre employés, a extrait, de la partie du gisement de la colline King Solomon appartenant à la White Channel, 13 000 verges cubes par voie souterraine, exploitation qui a été interrompue par la suite. La Teck Mining Corporation Ltd a fait des travaux d'extraction sur le ruisseau Sulphur.

Faits saillants de 1986

Environ 185 exploitations étaient actives en 1986. La White Channel Underground Mining Ltd a poursuivi l'exploitation de la colline Jackson, extrayant 3000 onces brutes de 30 000 verges cubes en employant 6 personnes. La Klondike Underground Mining Ltd a produit 520 onces brutes à partir de 40 000 verges cubes de gravier sur sa propriété de Miller Creek, employant 11 personnes. Plus de 9800 onces brutes proviendraient de 9 à 10 exploitations actives de taille moyenne à grande sur la rivière Indian. La Teck Mining Corporation Ltd a terminé l'exploitation de sa propriété de Sulphur Creek et a commencé des travaux de décapage sur la ruisseau Gold Run. La Queenstake Resources Ltd a poursuivi le dragage sur le ruisseau Clear, déplaçant 227 000 verges cubes de gravier minéralisé et 130 000 verges cubes de gravier stérile en employant huit personnes. Elle a aussi poursuivi la production dans les exploitation des collines Black et du ruisseau Maisy May. La Miben Mining Ltd a déplacé environ 79 440 verges cubes de gravier minéralisé sur la moitié sud de la colline Dago, tandis que M. Church a extrait 75 000 verges cubes de la moitié nord de la même colline.

Faits saillants de 1987

Il y avait environ 200 exploitations de placers en production en 1987. La Granville Joint Venture, exploitée par la Teck Mining Corporation Ltd, a commencé l'exploitation sur le ruisseau Gold Run. Elle a extrait 6695 onces brutes d'or de 132 900 verges cubes de minerai, tout en décapant 415 090 verges cubes de stériles. La White Channel Underground Mining Ltd a extrait 85 000 verges cubes de gravier de berge minéralisé de son exploitation de la colline Jackson/Lovett, employant 16 personnes. La Miben Mining a traité 165 000 verges cubes de gravier minéralisé meuble du flanc sud de la colline Dago. La rivière Indian aurait produit 15 774 onces cours d'eau producteur d'or au Yukon. La Queenstake Resources Ltd a fait du dragage dans le ruisseau Clear jusqu'à l'automne lorsque les travaux ont été suspendu, et la drague démontée. Elle a poursuivi l'exploitation de ses mines sur les ruisseaux Black Hills et Maisy May.

Faits saillants de 1988

Le nombre d'exploitations actives en 1988 était évalué à 214. Les premiers D10 Cats sont arrivés dans les champs aurifères, augurant le passage à des exploitations minières à plus grande échelle. Au total, 30 482 onces brutes d'or proviendraient de la rivière Indian où la Gold City Resources Ltd était le principal exploitant. Elle a extrait de l'or aux embouchures des trois tributaires de la rivière Indian: les ruisseaux Quartz, McKinnon et Ruby. Les autres grands exploitants de la rivière Indian étaient: la Schmidt-Tatlow Mining et la Rise Resources Ltd. La Queenstake Resources Ltd a poursuivi l'exploitation aux ruisseaux Black Hills et Maisy May. La Teck Mining Corporation a fait des travaux au ruisseau Gold Run, et a Miben Mining Ltd, au ruisseau Hunker. La Klondike Underground Mining Ltd a poursuivi l'exploitation au ruisseau Miller, employant huit personnes et déplaçant 26 000 verges cubes de gravier. La White Channel Underground Mining Ltd a poursuivi l'exploitation de la colline Jackson. La Airgold Ltd a fait des travaux dans le cours inférieur du ruisseau Dominion, employant 21 mineurs et déplaçant 500 000 verges cubes de gravier. La Ross Mining Services Ltd a aussi déplacé de grandes quantités de gravier sur le ruisseau Dominion, contribuant au total de 16 190 onces brutes qui serait la production de ce ruisseau en 1988. La Canada Tungsten Mining Corporation Ltd a produit de l'or à partir de son exploitation du ruisseau Swamp dans le chaînon Moosehorn. Plusieurs régions non traditionnelles ont été explorées dans le but de trouver des placers, notamment les tributaires moyens de la rivière Sixtymile et les ruisseaux Australia et Wounded Moose.

YUKON PLACER MINING INDUSTRY 1985 TO 1988: AN OVERVIEW

By W.P. LeBarge, Staff Geologist, INAC

INTRODUCTION

In the years 1985 to 1988 placer mining graduated from an activity dependent on gold price to a well established industry, successful and stable despite fluctuations in gold price. The four-year period saw the introduction of larger machinery (resulting in larger-scale stripping and mining), more employees and more sophisticated recovery plants. This resulted in a record production of gold in 1988 of 162,492 crude ounces, an amount which has not been surpassed since 1917. Unglaciated areas once again continued to dominate production of gold, garnering 75% of the total with the Indian River drainage emerging as the major source area. Other factors that affected the industry during that period include the signing of the Yukon Fisheries Protection Authorization in May 1988. This document set new effluent discharge standards for placer mines and established a single authority (the Placer Mining Unit of Northern Affairs) for inspection and enforcement of those standards.

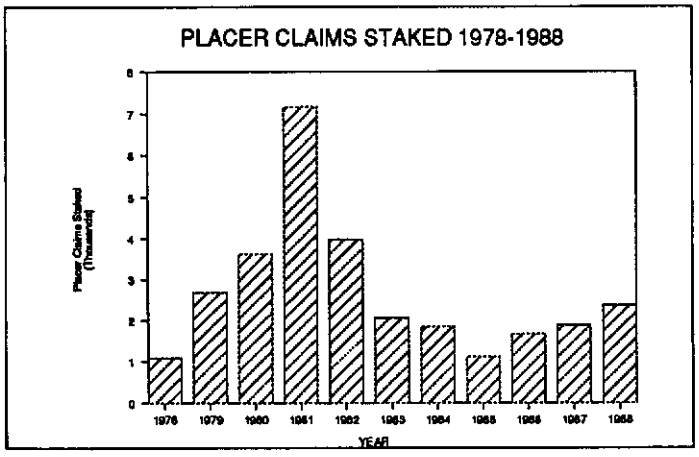


Figure 1

STAKING ACTIVITY

Staking activity was generally a function of the price of gold. In 1985, the steadily dropping price of gold led to the lowest amount of new placer claims and prospecting leases staked since 1978, as figures 1 and 2 illustrate.

The number of placer prospecting leases held in good standing (figure 3) also dropped to an eight year low in 1985, however due to the conversion of placer leases to placer claims the number of placer claims held in good standing (figure 4) did not suffer as sharp a drop. A comparison between figure 5 (miles of placer claims and leases held 1979 to 1988) and figure 6 (monthly gold prices 1985 to 1988) demonstrates that since 1985, the amount of placer ground held has been steadily increasing with the rising price of gold. When the price of gold dropped sharply in 1988, new placer prospecting lease staking activity dropped although the amount of placer ground held actually increased. This was at least partially due to an increasing number of placer leases being staked into placer claims. By the end of 1988, the total amount of placer ground held was equivalent to 2580 miles of Yukon creeks, the highest since 1981. Over the four-year period, staking activity was mainly confined to traditional areas, with new placer leases being staked over leases that had lapsed. Few non-traditional areas were staked, although significant exploration took place in the less prospected portions of the Stewart, Sixtymile and Indian River drainages.

PLACER GOLD PRODUCTION 1985-1988

Despite fluctuations in gold price, Yukon placer gold production steadily rose between 1985 and 1988, reaching a total of 497,848 crude ounces for the four-year period. This gold was worth approximately $211 056 000 Canadian. By 1987, placer mining was second only to Curragh Resources lead-zinc mine in value of metal extracted and thus the number two contributor to the Yukon's resource based economy. A modern-day record production of 162,492 crude ounces (129,994 fine ounces) was reached in 1988. As illustrated in figure 7, this was the most gold produced in a season since 1917, when thirteen dredges were in operation and large scale hydraulic mining of the White Channel gravels was a major activity. Some of the factors which may be responsible for this production increase are more experienced miners, the advent of larger and more efficient earth-moving machines, accelerated stripping of overburden, and more sophisticated recovery plants. The record is impressive in light of the sharp drop in the price of gold in 1988.

Table 1

Crude ounces of placer gold produced (from royalty payments)

Stream	1985 to 1988 production
1. Indian River	58,234
2. Hunker Creek	50,708
3. Dominion Creek	49,317
4. Bonanza Creek	43,795
5. Sixtymile River	35,089
6. Sulphur Creek	26,422
7. Scroggie/Mariposa	21,379
8. Black Hills Creek	19,283
9. Gold Run Creek	18,064
10. Miller Creek	16,528
11. Clear Creek	16,450
12. Maisy May Creek	14,843
13. Tenmile Creek	13,806
14. Eldorado Creek	13,429
15. Eureka Creek	12,376
16. Haggart Creek	10,100
Total for sixteen creeks	419,823 crude ounces
Total for all Yukon 1985-1988	497,848 crude ounces
Valued at	$211 056 000 Canadian

Table 1 and Table 4 show that sixteen creeks produced 84% of the total gold between 1985 and 1988, while the remaining 16% was mined from 66 streams.

The sources of placer gold have changed significantly in recent years, as can be demonstrated by comparing the top ten producing creeks for each of the periods 1985 to 1988 (Table 1) and 1978 to 1984 (Table 2). Notable trends are the large rise in annual production of gold from the Indian River (surpassing Hunker Creek in 1987) and the significant increases in production from Scroggie, Mariposa and Gold Run Creeks. Gold production from Sulphur, Quartz, Kenyon, and Eureka Creeks has dropped substantially in the past four years.

Seventy-five percent of the gold produced between 1985 and 1988 came from unglaciated areas of the Yukon. The four-year placer gold production by geographic area is shown in Table 3.

Table 2

Crude ounces of placer gold produced (from royalty payments)

Stream	1978 to 1984 production
1. Hunker Creek	45,402
2. Sulphur Creek	44,874
3. Dominion Creek	43,877
4. Bonanza Creek	41,222
5. Sixtymile River	31,949
6. Eureka Creek	31,943
7. Black Hills Creek	25,189
8. Miller Creek	21,532
9. Kenyon Creek	21,244
10. Quartz Creek	20,376
Total	327,608 crude ounces

GOLD PRICE

Gold price per ounce for the years 1985 to 1988 ranged from a low in February 1985 of $299 US to a high in December 1987 of $486 US. The average price for the four years was $392 US ($519 Canadian). The growing strength of the Canadian dollar in 1988 resulted in a lower gold price for Yukon miners. This may have been offset by lower prices on US manufactured machine parts. A fairly strong correlation exists between gold price, production and claims in good standing for the 1979 to 1988 period. With a small period of lag time, the amount of ground held and the production of gold was driven by the fluctuating price of gold. The exception to this is the period 1983 to 1985 when the price of gold dropped, and the amount of ground held dropped but gold production remained steady. When gold prices recovered production increased, but the sharp price drop in 1988 had little effect and gold production reached a 72 year record. This new trend of rising production despite fluctuating gold price is expected to continue into the 1990's.

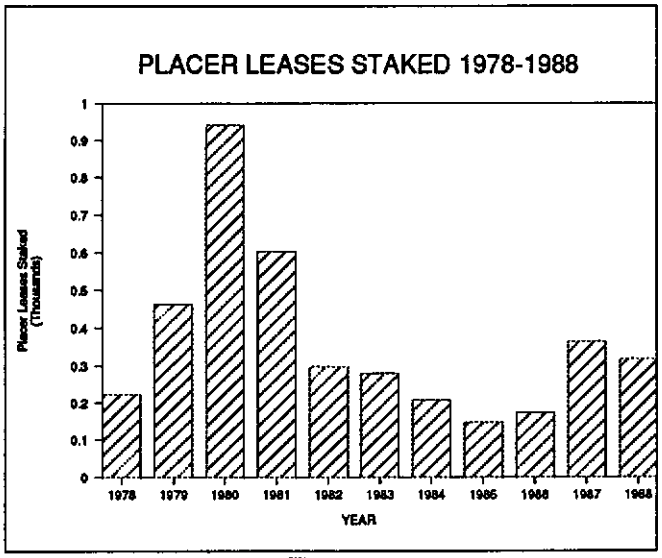


Figure 2

MAJOR OPERATIONS 1985 TO 1988

The number of persons directly employed by the placer industry increased steadily during the four-year period, from a low of approximately 700 in 1985 to a high of 750 in 1988. An average of eighty percent of the operations employed 5 workers or less, and only 10 operations employed 10 or more workers.

1985 HIGHLIGHTS

A total of 190 placer mining operations were active in 1985, including three underground placer operations. Klondike Underground Mining Ltd mined 18 000 cubic yards of pay on their Miller Creek underground property, employing 8 people. White Channel Underground Mining Ltd mined 39 000 cubic yards from the Jackson Hill property, employing 8 people on the property which had been operated by Jackson Hill Ventures the previous season. King Solomon Mines Ltd operated in the

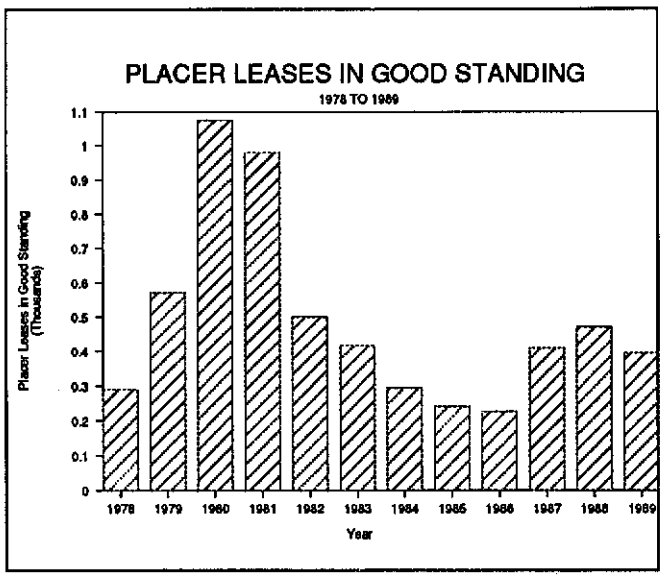


Figure 3

White Channel side pay of King Solomon Hill, mining 13 000 cubic yards in a 4 person underground operation which was later discontinued. Teck Mining Corporation Ltd mined on Sulphur Creek.

1986 HIGHLIGHTS

Approximately 185 operations were active in 1986. White Channel Underground Mining Ltd continued to operate at Jackson Hill, mining 3000 crude ounces from 30 000 cubic yards and employing 6 people. Klondike Underground Mining

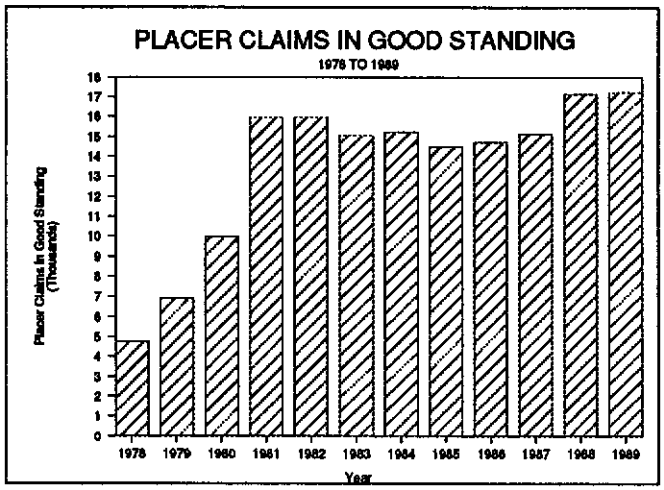


Figure 4

Ltd produced 520 crude ounces from 40 000 cubic yards of gravel on their Miller Creek property, employing 11 people. Over 9800 crude ounces were credited to the Indian River, with 9 to 10 moderate to large operations active. Teck Mining Corporation Ltd finished mining their Sulphur Creek property and began stripping on Gold Run Creek. Queenstake Resources Ltd continued operating the dredge on Clear Creek, moving 227 000 cubic yards of pay gravel and 130 000 cubic yards of waste gravel in an eight person operation. They also continued production from the Black Hills and Maisy May Creek operations. Miben Mining Ltd moved approximately 79 440 cubic yards of pay gravel on the south half of Dago Hill, while M. Church mined 75 000 cubic yards from the north half of Dago Hill.

Table 3

Area	Crude Ounces produced 1985-1988
Indian River Drainage	171,511
Klondike River Drainage	112,252
Sixtymile River Drainage	86,382
Lower Stewart River Drainage	65,644
Mayo Area	31,298
Clear Creek Drainage	16,533
Dawson Range Area	7,960
Kluane Area	3,960
Livingstone Area	1,781
Miscellaneous Areas	507
Total	497,848 crude ounces

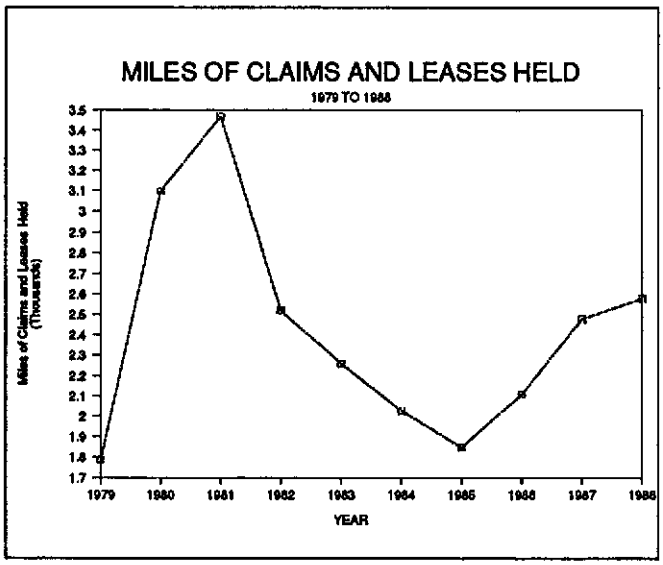


Figure 5

1987 HIGHLIGHTS

There were approximately 200 producing placer mines in 1987. Granville Joint Venture, operated by Teck Mining Corporation Ltd, began mining on Gold Run Creek. They recovered 6695 crude ounces of gold from 132 900 cubic yards of pay, while stripping 415 090 cubic yards of waste. White Channel Underground Mining Ltd mined 85 000 cubic yards of bank pay gravel from their operation at Jackson/Lovett Hill, employing 16 people. Miben Mining processed 165 000 cubic yards of loose pay gravel from the south side of Dago Hill. The Indian River was credited with 15 774 crude ounces of gold for 1987, surpassing Hunker Creek as the top gold producing stream in the Yukon. Queenstake Resources Ltd operated the dredge on Clear Creek until the fall when the operation was discontinued and the dredge was dismantled. Their mines at Black Hills and Maisy May Creeks continued operating.

1988 HIGHLIGHTS

An estimated 214 operations were active in 1988. The first D10 Cats arrived in the goldfields, signalling larger scale mining operations. A total of 30 482 crude ounces of gold was credited to the Indian River, where Gold City Resources Ltd was the principal operator. They mined at the mouths of three Indian River tributaries: Quartz, McKinnon and Ruby Creeks. Other major Indian River operators included Schmidt-Tatlow Mining and Rise Resources Ltd. Queenstake Resources Ltd continued operating at Black Hills and Maisy May Creeks. Teck Mining Corporation mined at Gold Run Creek and Miben Mining Ltd operated on Hunker Creek. Klondike Underground Mining Ltd continued operations at Miller Creek, employing eight miners and moving 26 000 cubic yards of gravel. White Channel Underground Mining Ltd continued to mine at Jackson Hill. Airgold Ltd operated on lower Dominion Creek, employing 21 miners and moving 500 000 cubic yards of gravel. Ross Mining Services Ltd also moved large amounts of gravel on Dominion Creek, contributing to the total of 16 190 crude ounces credited to Dominion in 1988. Canada Tungsten Mining Corporation Ltd produced gold from their Swamp Creek operation in the Moosehorn Range. Several non-traditional areas were explored for placer deposits, including the middle tributaries of the Sixtymile River, and Australia and Wounded Moose Creeks.

TABLE 4
PLACER GOLD PRODUCED FROM YUKON CREEKS, 1985 - 1988 (compiled by G.W. Gilbert)
Crude Ounces

Stream or River	Tributary to	78-84	85	86	87	88	85-88	78-88
	Dawson Mining District							
Allgold	Klondike	1560	69	0	151	635	855	2415
Ballarat	Yukon	2245	1077	163	472	483	2195	4440
Barker	Stewart	314	22	80	1182	0	1284	1598
Barlow	Clear	90	0	103	0	0	103	193
Bear	Klondike	13013	73	1384	647	435	2539	15552
Bedrock	Sixtymile	667	232	403	101	0	736	1403
Big Gold	Sixtymile	1712	952	0	0	0	952	2664
Black Hills	Stewart	25189	3829	4830	6857	3767	19283	44472
Bonanza	Klondike	41222	8567	10120	15284	9824	43795	85017
Clear	Stewart	17979	3680	3646	4834	4290	16450	34429
Dominion	Indian	43877	11151	8616	13360	16190	49317	93194
Eldorado	Bonanza	19111	3369	3356	2914	3790	13429	32540
Eureka	Indian	31943	3416	2355	2982	3623	12376	44319
Fortymile	Yukon	534	195	153	159	324	831	1365
Glacier	Sixtymile	2986	48	223	884	1336	2491	5477
Gold Run	Dominion	1697	1127	1129	7288	8520	18064	19761
Henderson	Stewart	19070	2762	857	854	1624	6097	25167
Hobo	Klondike	26	54	0	0	0	54	80
Hunker	Klondike	45402	12020	12910	8355	17423	50708	96110
Indian	Yukon	694	2143	9835	15774	30482	58234	58928
Kirkman	Yukon	0	61	91	128	81	361	361
Klondike	Yukon	1271	213	95	157	393	858	2129
Little Gold	Sixtymile	4206	693	0	0	364	1057	5263
Maisy May	Stewart	4494	2386	2852	5542	4063	14843	19337
Matson	Sixtymile	9731	50	88	0	0	138	9869
Miller	Sixtymile	21532	2916	2517	5069	6026	16528	38060
Moose	Fortymile	618	0	0	0	0	0	618
Poker	Fortymile	10	101	0	0	0	101	111
Quartz	Indian	20376	3249	2441	1024	384	7098	27474
Scroggie/Mariposa	Stewart	4305	2172	3918	6895	8394	21379	25684
Sheep	Firth	881	207	0	0	0	207	1088
Sixtymile	Yukon	31949	5239	8014	11676	10160	35089	67038
Sulphur	Dominion	44874	9520	8372	3868	4662	26422	71296
Tenmile	Sixtymile	13980	3567	3363	3399	3477	13806	27786
Thistle	Yukon	4085	0	0	162	0	162	4247
Minor Producers	Yukon	50	0	3	5	0	8	58
Sestak	Yukon	12	0	0	0	40	40	52
Total Dawson		431705	85160	91917	120023	140790	437890	869595
	Whitehorse Mining District							
Arch	Donjek	68	34	0	0	0	34	102
Back	Victoria	90	206	4	82	173	465	555
Burwash	Kluane	1899	4	53	18	39	114	2013
Canadian	Britannia	1299	386	0	0	0	386	1685
Casino	Dip	60	0	0	0	0	0	60
Dollis	Tatshenshini	133	0	0	0	0	0	133
Fourth of July	Jarvis	6619	174	462	948	1076	2660	9279
Guder	Seymour	0	0	35	47	0	82	82
Happy	Big	79	0	0	0	0	0	79
Hayes tributaries	Selwyn	121	19	0	30	105	154	275
Kenyon	Scottie	21244	2595	2120	4313	0	9028	30272
Kimberly	Jarvis	523	0	0	32	5	37	560
Klaza tributaries	Nisling	0	70	251	166	107	594	594
Little Violet	South Big Salmon	0	16	35	0	18	69	69
Livingstone	South Big Salmon	721	143	545	417	507	1612	2333
Martin	South Big Salmon	35	0	34	13	0	47	82
Mechanic	Big	229	55	30	0	57	142	371
Nansen	Nisling	273	17	29	162	737	945	1218
Quill	Kluane	102	0	0	6	0	6	108
Reed	Donjek	214	339	317	127	85	868	1082
Revenue	Big	4465	1229	540	105	623	2497	6962
Rude	Dip	1015	0	0	387	1039	1426	2441
Seymour	Big	462	101	207	320	347	975	1437
Squirrel	Duke	1105	166	8	0	0	174	1279
Summit	South Big Salmon	111	0	0	16	0	16	127
Swamp	Scottie	0	0	0	0	5583	5583	5583
Swede Johnson	Kluane	0	0	11	54	0	65	65
Victoria	Nisling	0	0	79	0	215	294	294
Cottoneva	South Big Salmon	13	0	0	0	0	0	13
Kate	Ladue	0	0	0	0	42	42	42
Lake	South Big Salmon	14	11	0	18	0	29	43
Mendocina	South Big Salmon	0	0	0	8	0	8	8
Moose	Lubbock/Atlin	31	0	0	0	0	0	31
Porcupine	Donjek	35	0	0	0	0	0	35
Printers	Cultus	0	2	0	0	0	2	2
South Big Salmon	Big Salmon	39	0	0	0	0	0	39
Wheaton	Lake Bennett	20	0	0	0	0	0	20
Total Whitehorse		41019	5567	4760	7269	10758	28354	69373
	Mayo Mining District							
Anderson	Mayo Lake	25	0	13	0	0	13	38
Bear	Moose/Stewart	180	0	0	80	132	212	392
Carlson	Minto	130	0	0	0	0	0	130
Davidson	Mayo River	354	0	0	0	0	0	354
Dawn	Mayo Lake	19	0	0	0	0	0	19
Duncan	Mayo River	5347	1323	798	238	727	3086	8433
Empire	No Gold	0	450	119	174	223	966	966
Gem	Sprague	129	124	101	14	64	303	432
Haggart	McQuesten	7333	3552	3345	1542	1661	10100	17433
Highet	Minto	5644	2192	1735	2233	3042	9202	14846
Johnson	McQuesten	2690	0	0	411	470	881	3571
Ledge	Mayo Lake	934	6	48	99	153	306	1240
Lightning	Duncan	586	590	673	437	331	2031	2617
McQuesten	Stewart	26	0	0	0	0	0	26
Minto	Mayo River	579	0	0	0	247	247	826
Morrison	Seattle	0	0	0	0	16	16	16
Russell	Macmillan	0	0	0	0	277	277	277
Seattle	McQuesten	229	0	0	0	0	0	229
Steep	Mayo Lake	22	0	76	0	0	76	98
Stewart	Yukon	84	0	0	0	0	0	84
Swede	Haggart	0	0	0	258	3230	3488	3488
Vancouver	McQuesten	0	0	0	0	371	371	371
Totals Mayo District		24311	8237	6908	5486	10944	31575	55886
	Watson Lake Mining District							
Liard River		3	0	10	13	0	23	26
Total Watson Lake		3	0	10	13	0	23	26
	Summary of Placer Gold Production							
Dawson Mining District		431705	85160	91917	120023	140790	437890	869595
Mayo Mining District		24311	8237	6908	5486	10944	31575	55886
Whitehorse Mining District		41019	5567	4760	7269	10758	28354	69373
Watson Lake Mining District		3	0	10	13	0	23	26
Total		497038	98964	103595	132791	162492	497842	994880

New Developments

YUKON FISHERIES PROTECTION AUTHORIZATION

In May, 1988 a document was prepared which resolved several long-standing conflicts involving the legislation and regulation of placer mining. Entitled "Yukon Fisheries Protection Authorization", this document was developed in consultation with representatives of the placer industry, affected federal and territorial government departments, and the Yukon Territory Water Board. It was signed by the Minister of Indian Affairs and Northern Development, the Minister of Fisheries and Oceans, and the Minister of the Environment. The

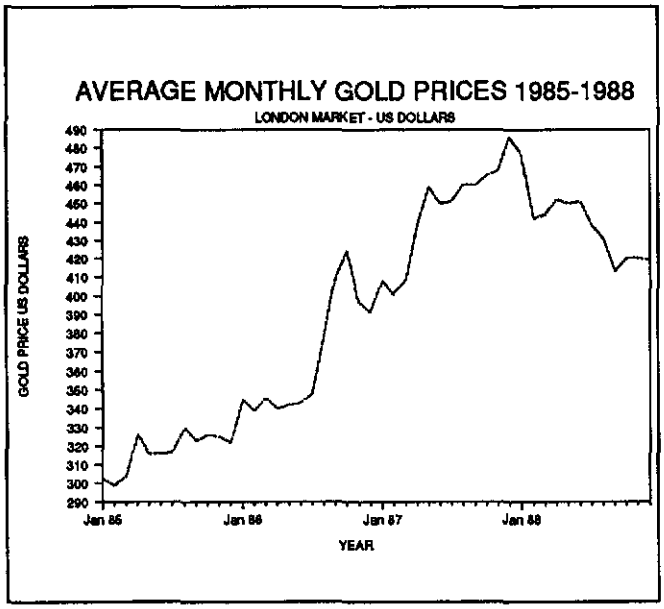


Figure 6

significance of this document to the placer miner is three-fold:

1) A schedule of allowable discharges is set for four categories of streams, based on fish habitats. This schedule provides the miner with legal certainty as meeting the standards results in compliance with Section 33 of the Fisheries Act. Placer miners who find it impossible to meet the discharge standards may apply for a Site Specific Authorization (SSA). If recommended by the Yukon Territory Water Board and approved by the Minister of Fisheries and Oceans, standard levels of effluent discharge for the stream may be exceeded under certain specific conditions and time periods.

2) The Yukon Placer Implementation Review Committee is formed to provide a forum for information exchange on

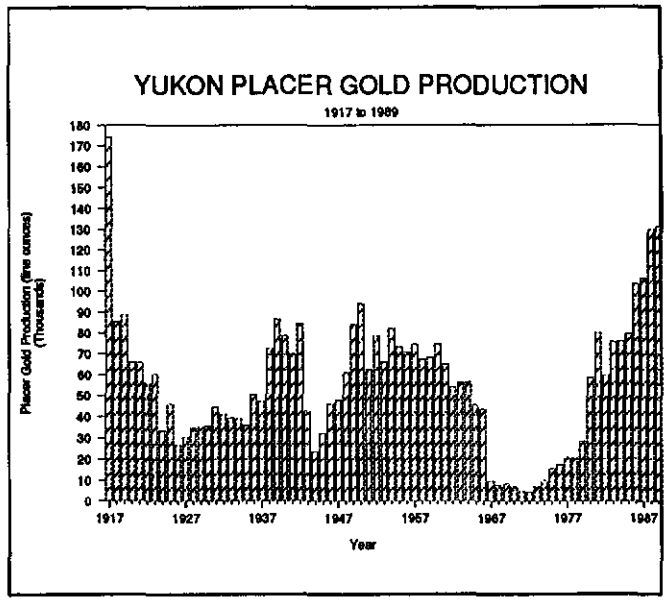


Figure 7

implementation of the schedule of allowable discharges. This committee is chaired by a member of the placer mining industry and includes representatives of the Klondike Placer Miners Association, the Department of Indian Affairs and Northern Development, the Department of Fisheries and Oceans, and the Government of Yukon. The committee reviews, amends and recommends present and future discharge standards. It also receives, evaluates and makes recommendations to the Minister of Fisheries and Oceans on proposed changes to the classifications of streams.

3) A Memorandum of Understanding signed by all three Ministers establishes that one government department (the Placer Mining Inspection Unit of Northern Affairs) is responsible for the measurement and enforcement of effluent regulations.

Acknowledgements

Much of the data used in this paper was compiled by G.W. Gilbert (Former Head, Placer Mining Unit, Northern Affairs Program). Additional information was furnished by L. van Kalsbeek (Placer Mining Inspector, Northern Affairs) and D. Latoski (Chief Placer Mining Inspector, Head, Placer Inspection Unit, Northern Affairs Program). The text and figures were formatted into the Xerox Ventura publishing system by Tony Carson, Communications Services, Northern Affairs Program.

MINERAL RESOURCES DIRECTORATE, NORTHERN AFFAIRS PROGRAM

SERVICES

Exploration and Geological Services Division (EGSD)

The Exploration and Geological Services Division of Northern Affairs consists of a Regional Manager, five geologists, an office manager, and a Map Sales Manager. Present staff includes S.R. Morison (Regional Manager/Chief Geologist), J.G. Abbott (Minerals Geologist), T.J. Bremner (Mineral Deposits Geologist), W.P. LeBarge (Staff Geologist), D.S. Emond (Staff Geologist), A. Wagner (Office Manager), and E. Phillips (Map Sales Manager). The Division maintains an outlet of the Canada Map Office and sells topographic, geological (surficial and bedrock), aeromagnetic, aeronautical and land use maps. Recent Geological Survey of Canada publications including geochemical surveys are also available for purchase. Other services available to industry personnel include a geological library of texts and journals, a lab equipped with petrographic microscopes, and a lab with rock cutting, staining, and core splitting facilities. Geology Division staff are available for consultation by arrangement at their office at 200 Range Road, Whitehorse, Yukon, (403) 667-3204.

Placer Mining Inspection Unit

The Placer Mining Inspection Unit of Northern Affairs consists of a Regional Manager, a Chief Claims Inspector, and six placer mining inspectors. Present staff includes A. Waroway (Regional Manager -Mineral Development), D. Latoski (Head, Placer Mining Section/Chief Claims Inspector), L. van Kalsbeek (Placer Mining Inspector - Whitehorse), A. Rothwell (Placer Mining Inspector - Dawson), J. Leary (Placer Mining Inspector - Dawson), M. Johnson (Placer Mining Inspector - Dawson), and R. Leckie (Placer Mining Inspector - Mayo). Placer mining inspectors conduct claim inspections under the authority of the Yukon Quartz Mining Act, the Yukon Placer Mining Act, the Territorial Dredging Regulations and the Territorial Coal Regulations. They also complete field inspection reports for each mine visited, and assistance is provided to miners regarding road access or mining problems. The Placer Mining Inspection Unit is the sole agency responsible for inspection and enforcement of effluent discharge standards set forth in the Yukon Fisheries Protection Authorization Document, which was implemented in May 1988.

ACKNOWLEDGEMENTS

This publication benefited from the efforts of a number of people and agencies. L.A. Olynyk, L. van Kalsbeek, A. Rothwell, J. Leary, M. Johnson and R. Leckie from the Placer Mining Section conducted the mine visits and gathered data for the placer mining inspection reports, under the direction of G.W. Gilbert, former Head, Placer Mining Section. Summaries of confidential assessment reports were written by W.P. LeBarge and T.J. Bremner (EGSD), while R.L. McIntyre of Yukon Engineering Services Ltd summarized non-confidential assessment reports and placer mining inspection reports through one of two contracts issued to complete this publication. Under a second contract S. Poole assisted in compilation, editing, and formatting of the final manuscript, and completed the topographic reference maps which accompany the text in NTS divisions. G.W. Gilbert, former Head, Placer Mining Section, edited the contract manuscript. The final manuscript was edited by W.P. LeBarge and S.R. Morison. Drafting Services (I. Stallabrass, L. Butterworth and B. Lewis) prepared camera-ready maps and figures while final production and publishing arrangements were coordinated by Tony Carson, Communications Services. Photographs were taken by S.R. Morison and L.A. Olynyk. Finally, the contributions of the placer mining industry and the individual miners is gratefully acknowledged, as this publication would not be possible without their cooperation and assistance.

YUKON PLACER MINING AND EXPLORATION 1985-1988

INTRODUCTION

This volume is a compilation of two types of data, placer mining inspection reports and placer exploration assessment reports. The Placer Mining Inspection Unit and the Exploration and Geological Services Division (EGSD) of the Northern Affairs Program, Indian and Northern Affairs Canada are the two main agencies which were involved in the gathering and compilation of data for this publication. Mining inspection reports were compiled from site visits conducted by the Placer Mining Inspection Unit from 1985 to 1988. Assessment report summaries were written from placer assessment reports which were submitted for assessment credit under Section 41 of the Yukon Placer Mining Act. These placer exploration assessment reports were submitted to EGSD for approval between 1975 and 1988, and contain geological, geochemical or geophysical data which has not been previously published.

EXPLANATORY NOTES

Many of the placer mining operations which were active for the entire period were visited for the purposes of this report only once or twice; there are also operations which were not documented at all during this time. Some miners may find their particular operation omitted due to incomplete or missing data. Submission of relevant information is invited for inclusion in subsequent industry activity reports. The descriptions were not edited by the miners.

The assessment report summaries were written from the collection of confidential and non-confidential placer assessment reports. Summaries which were derived from confidential reports have been edited by the claim owners. The length and detail of each summary is more a reflection of the content of the original report than an indication of the value of the property itself.

Reports in this volume have been alphanumerically arranged by NTS (National Topographic System) 1:250 000 scale map divisions. Reduced versions of all relevant 1:250 000 scale maps are included with the summaries. Assessment report summaries precede mining inspection reports within each NTS division. Each summary includes the creek name, the operator, the water licence number (when available), and the relevant year of the inspection or assessment report. Locations of each operation are given in latitude and longtitude, as well as the 1:50 000 scale NTS map division. Each operation or exploration target has been assigned a number which corresponds to a symbol and number on the accompanying NTS map. Circles represent placer mining activities between 1985 and 1988, while squares indicate placer exploration activities between 1975 and 1988. The NTS maps also depict, with solid dark lines, the areas along creeks where there were placer leases or claims held in good standing as of December 31, 1989. This is intended to give a general indication of levels of activity in each map area.

Due to the large number of operations in the Klondike region (parts of 115 O and 116 B), these reports have been treated as a separate section, with a more detailed map accompanying the summaries.

Since most placer miners do not commonly use the metric system British units of measure have been used. A conversion table is provided to clarify any ambiguities.

CONVERSION FACTORS

1 cubic yard	= 0.764 cubic metres
1 long ton	= 2240 lbs
1 short ton	= 2000 lbs
1 tonne	= 1.102 short tons
1 tonne	= 2204.62 lbs
1 troy ounce	= 31.1035 grams
1 troy ounce	= 20 pennyweights
1 troy ounce	= 480 grains
1 pennyweight	= 24 grains
1 grain	= 0.06479 grams
1 ounce/cubic yard	= 40.68 grams/cubic metre
1 ounce/ton	= 34.2848 grams/tonne

GRAIN SIZE

Particles	**Average diameter in mm**
Boulders	greater than 256 mm
Cobbles	64 mm to 256 mm
Pebbles	4 mm to 64 mm
Gravel	greater than 2 mm
Sand	2 mm to 1/16 mm
Silt	1/16 mm to 1/256 mm
Clay	less than 1/256 mm

Note: 1 inch = 25.4 millimetres (mm)

The following measures are not to be held as absolute values but are used by many miners in making working estimates:

1 standard gold pan = 16" diameter top, 10" diameter bottom, 2.5" depth, holds 0.007 cubic yards, or 0.005 cubic metres, and weighs approximately 21 lbs (ordinary gravel)
1 cubic yard = approximately 143 standard gold pans
Weight of ordinary gravel in place = 2500 to 3000 lbs/cubic yard
Specific gravity of ordinary gravel in place = 1.48 to 1.78 g/cm^3
1 ounce gold/ton ordinary gravel = 1.25 to 1.50 ounces/cubic yard
1 gram gold/tonne ordinary gravel = 1.48 to 1.78 grams/cubic metre
Swelling factor of ordinary gravels = 20 to 30% increase in volume

INDEX OF PLACER ACTIVITIES FOR ALL MAP SHEETS IN YUKON (OTHER THAN THE KLONDIKE)

MAP SHEET/CREEK	OPERATOR	NTS	LAT.	LONG.	ACTIVITY	MAP #
Watson Lake		105 A				
Liard River	J. Franks	105 A2	60° 02'N	128° 42'W	Mining	1
Liard River	P. Rousseau/First Capital	105 A2	60° 03'N	128° 52'W	Mining	2
Wolf Lake		105 B				
Swift Creek	A.T. Syndicate	105 B2,3	60° 08'N	131° 00'W	Explor.	1
Teslin		105 C				
Wilson Creek	Golden Empire Mines Ltd.	105 C11	60° 40'N	133° 25'W	Explor.	1
Whitehorse		105 D				
Two Horse Creek	K. Hougen	105 D6	60° 25'N	135° 10'W	Explor.	1
Sheldon Creek	Orion Gold and Mines Ltd.	105 D16	60° 55'N	134° 10'W	Explor.	2
Laberge		105 E				
Laurier Creek	E. Kreft	105 E2	61° 03'N	134° 45'W	Explor.	1
Livingstone Creek	Gem Resources Ltd.	105 E8	61° 20'N	134° 15'W	Explor.	2
Livingstone Creek	J. Ziehe	105 E8	62° 19'N	134° 16'W	Explor.	3
May Creek	D. Gonder	105 E8	61° 17'N	134° 07'W	Explor.	4
South Big Salmon River	Canada Tungsten Mining Corp.	105 E8	61° 18'N	134° 20'W	Explor.	5
Livingstone Creek	Livingstone Placers Ltd.	105 E8	61° 20'N	134° 15'W	Mining	2
Cottoneva Creek	P. Robinette, L. Barteaux	105 E8	61° 24'N	134° 21'W	Mining	6
Lake Creek	E. Kosmenko	105 E8	61° 22'N	134° 19'W	Mining	7
Little Violet Creek	Golden Violet Mining Ltd.	105 E8	61° 25'N	134° 22'W	Mining	8
Martin Creek	D. Gonder	105 E8	61° 18'N	134° 19'W	Mining	9
Summit Creek	R. Asuchak	105 E8	61° 21'N	134° 21'W	Mining	10
Mayo		105 M				
Steep Creek	Meyer Properties Inc.	105 M10	63° 42'N	134° 58'W	Explor.	1
Duncan, Davidson, Oliver, McLaughlin, Caslnor Creeks	B.E.L. Yukon Establishment Company Limited	105 M11, 105 M14, 115 P9,16	63° 52'N	135° 16'W	Explor.	2
Owl Creek	Meyer Properties Inc.	105 M11	63° 44'N	135° 08'W	Explor.	3
Secret Creek	Canada Tungsten Mining Corp.	105 M13, 106 D4, 115 P16	64° 00'N	136° 00'W	Explor.	4
Swede Creek	Canada Tungsten Mining Corp.	105 M13, 115 P16	63° 59'N	136° 00'W	Explor.	5
Lynx Creek	Canada Tungsten Mining Corp.	105 M14	64° 00'N	135° 45'W	Explor.	6
Duncan Creek	F. Taylor	105 M14	63° 49'N	135° 28'W	Mining	7
Empire Creek	D. Sabo	105 M5	63° 28'N	135° 36'W	Mining	8
Ledge Creek	B. Liske	105 M10	63° 40'N	134° 52'W	Mining	9
Ledge Creek	H. Moritz	105 M10	63° 41'N	134° 51'W	Mining	10
Minto Creek	Gulderand Mining Corp.	105 M12	63° 43'N	135° 55'W	Mining	11
Swede Creek	Grandex Resources Ltd.	105 M13	63° 59'N	136° 00'W	Mining	5
Thunder Gulch	Bardusan Placers Ltd.	105 M14	63° 54'N	135° 15'W	Mining	12
Lansing Range		105 N				
Russell Creek	Noranda Exploration Co. Ltd.	105 N3	63° 07'N	133° 25'W	Explor.	1
Russell Creek	F. Poppe	105 N3	63° 03'N	133° 26'W	Mining	2
Nash Creek		106 D				
Dublin Gulch	Canada Tungsten Mining Corp.	106 D4	64° 03'N	135° 51'W	Explor.	1
Dublin Gulch	Dublin Gulch Mining Ltd.	106 D4	64° 03'N	135° 51'W	Mining	2
Dezadeash		115 A				
Silver Creek	G.C. Lee	115 A3	60° 04'N	137° 13'W	Explor.	1
Mount St. Elias		115 B-C				
Kimberly Creek	C. and P. Sawyer	115 B16	60° 52'N	138° 04'W	Mining	1

Kluane Lake		115 F-G			
Frypan Creek	R. Berdahl	115 F15	62° 00'N 140° 55'W	Explor.	1
Burwash Creek	D. Pfaff	115 G6	61° 22'N 139° 20'W	Explor.	2
Quill, Nickel Creeks	M. Neilson	115 G6	61° 25'N 139° 26'W	Explor.	3
Hoge Creek	Moraine Gold Mines Ltd.	115 G5	61° 17'N 139° 30'W	Explor.	4
Gladstone Creek	Catear Resources Ltd.	115 G7	61° 18'N 138° 05'W	Explor.	5
4th of July Creek	Churchill Placers Ltd./ T. Churchill/Sikanni Oilfield Construction Ltd.	115 G1	61° 11'N 138° 05'W	Mining	6
4th of July Creek	Orion Gold and Mines Ltd.	115 G1	61° 11'N 138° 04'W	Mining	7
Arch Creek	F. Green	115 G5	61° 29'N 139° 38'W	Mining	8
Arch Creek	O. Leckie	115 G5	61° 30'N 139° 42'W	Mining	9
Reed Creek	D. Duensing/R. Holway	115 G12	61° 32'N 139° 38'W	Mining	10
Wade Creek	J. Birdman	115 G5	61° 25'N 139° 37'W	Mining	11
Quill Creek	W. Pfisterer	115 G6	61° 29'N 139° 25'W	Mining	12
Aishihik Lake		115 H			
Kirkland Creek	J.M. Graham	115 H9, 115 H10	61° 32'N 136° 28'W	Explor.	1
Carmacks		115 I			
Caribou Creek	J.E. Wallis	115 I6	62° 16'N 137° 12'W	Explor.	1
Guder Creek	G.C. Lee/D. Granger	115 I6	62° 18'N 137° 11'W	Explor.	2
Kitchener(Seymour) Creek	G. Harris	115 I6	62° 22'N 137° 08'W	Explor.	3
Liberty Creek	L. Lebedoff	115 I6	62° 17'N 137° 06'W	Explor.	4
Seymour Creek	G. Lee	115 I6	62° 22'N 137° 08'W	Explor.	5
Seymour Creek	J.E. Wallis	115 I6	62° 15'N 137° 07'W	Explor.	6
Stoddart Creek	G. MacDonald/Dart Placers	115 I6	62° 18'N 137° 03'W	Explor.	7
Back Creek	F. and G. Cochrane	115 I3	62° 04'N 137° 04'W	Mining	8
Back Creek	J. and B. Coghlin	115 I3	61° 04'N 137° 07'W	Mining	9
Discovery Creek	L. Tricker	115 I3	62° 05'N 137° 12'W	Mining	10
Eva Creek	D and H Placers	115 I3	62° 05'N 137° 05'W	Mining	11
Eva Creek	L. Csoma	115 I3	62° 06'N 137° 08'W	Mining	12
Klaza River (unnamed trib.)	T. Tullis	115 I3	62° 09'N 137° 12'W	Mining	13
Klaza River (unnamed trib.)	W.D.P. Placers/W.D. Perry	115 I3	62° 08'N 137° 18'W	Mining	14
Nansen Creek (east fork)	A. Dendys	115 I3	62° 06'N 137° 12'W	Mining	15
Nansen Creek (east fork)	G. Ireland	115 I3	62° 06'N 137° 12'W	Mining	16
Rusk and Discovery Creeks	M. Woods	115 I3	62° 04'N 137° 13'W	Mining	17
Guder Creek	G. Lee	115 I6	62° 18'N 137° 11'W	Mining	18
Revenue Creek	K. Djukastein	115 I6	62° 20'N 137° 16'W	Mining	19
Seymour Creek	D. Dodge	115 I6	62° 18'N 137° 12'W	Mining	20
Seymour Creek	Murnion United	115 I6	62° 19'N 137° 11'W	Mining	21
Hayes Creek (unnamed trib.)	G. Wilson	115 I12	62° 31'N 137° 57'W	Mining	22
Snag		115 J-K			
Ballarat Creek	Tara Pacific Resources Ltd.	115 J14, 115 J15	62° 55'N 139° 00'W	Explor.	1
Diane and Liz Creeks	Crew Natural Resources Ltd.	115 J14, 115 J15	62° 55'N 139° 00'W	Explor.	2
Excelsior, Pedlar, Coffee, and Dan Man Creeks	Atlantic Energy Ltd.	115 J14, 115 J15	62° 53'N 138° 58'W	Explor.	3
Pedlar Creek	Atlantic Energy Ltd. et al	115 J15	62° 55'N 138° 46'W	Explor.	4
Scottie Creek	Canadian Occidental Petroleum Ltd.	115 K15	63° 00'N 140° 56'W	Explor.	5
Weinerwurst Lake	New Gateway Oil and Minerals Ltd.	115 K15	63° 00'N 141° 00'W	Explor.	6
Rude Creek	A. Fournier	115 J10	62° 40'N 138° 42'W	Mining	7
Mariposa Creek	Resore Industries Corp.	115 J15	62° 59'N 138° 34'W	Mining	8
Stewart River		115 N-O			
Claymore Creek	Canadian Occidental Petroleum Ltd.	115 N2	63° 05'N 140° 50'W	Explor.	1
Great Bear, Claymore Creeks	Claymore Resources Ltd.	115 N2	63° 07'N 140° 50'W	Explor.	2
Great Bear Creek	4229 Yukon Ltd.	115 N2	63° 04'N 140° 55'W	Explor.	3

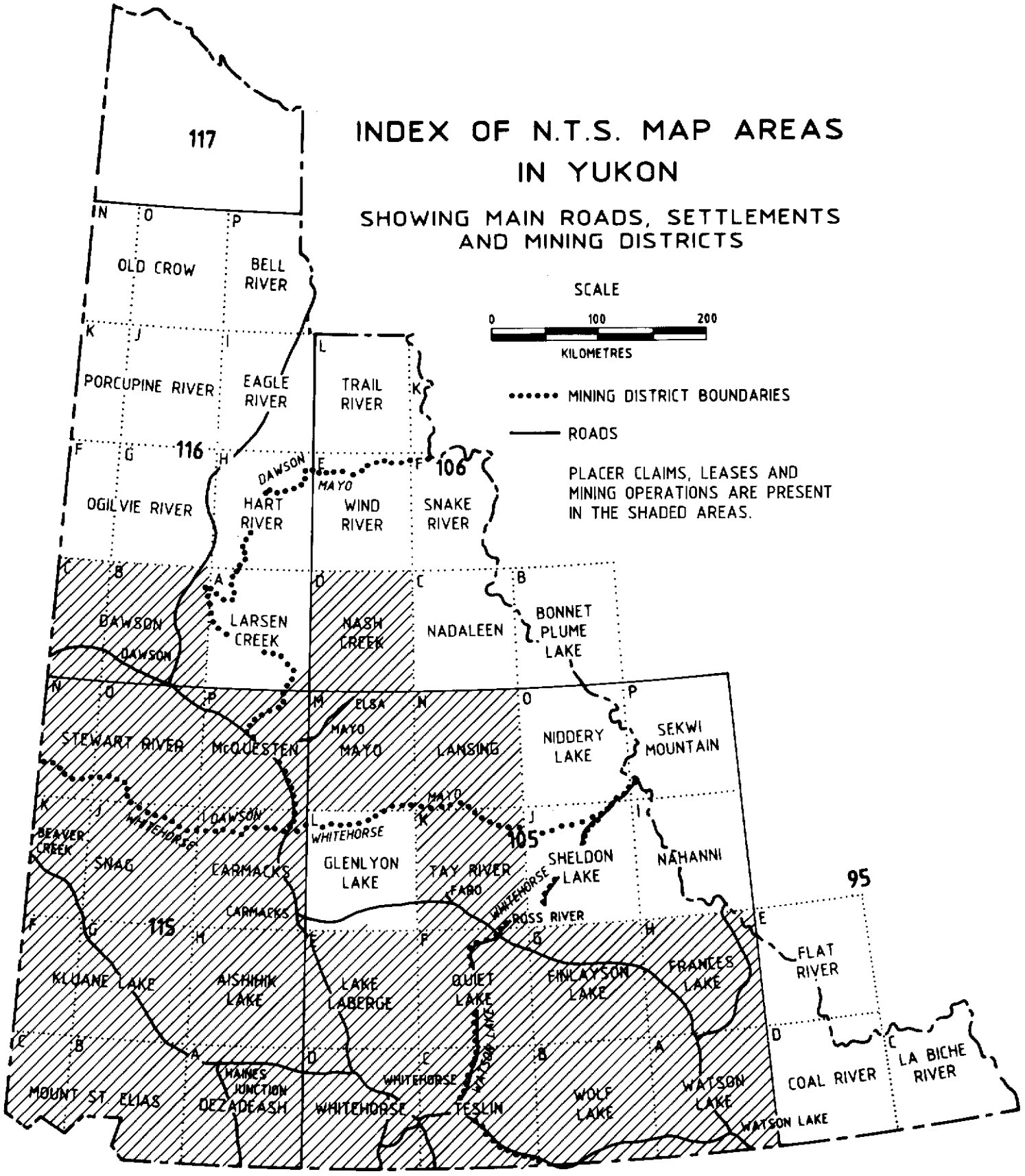
Kenyon Creek	Claymore Resources Ltd.	115 N2	63° 03'N 140° 59'W	Explor.	4
Great Bear Creek	Aries Resources Ltd.	115 N2	63° 05'N 140° 51'W	Explor.	5
7 Mile Creek	Great Bear Mining Ltd.	115 N1,2	63° 04'N 140° 54'W	Explor.	6
Swamp Creek	Canada Tungsten Mining Corp./ Claymore Resources Ltd.	115 N2	63° 05'N 140° 55'W	Explor.	7
Discovery, Swamp, Great Bear, Claymore Creeks	Claymore Resources Ltd.	115 K15, 115 N2	63° 05'N 140° 50'W	Explor.	8
Discovery, Swamp, Claymore Creeks	Claymore Resources Ltd.	115 N2	63° 04'N 140° 55'W	Explor.	9
Kenyon, Discovery Creeks	Claymore Resources Ltd.	115 N2	63° 04'N 140° 55'W	Explor.	10
Spud Creek	R.G. Hilker/Mariposa Gold Corp.	115 N7	63° 29'N 140° 50'W	Explor.	11
Soda Creek	R.G. Hilker/Mariposa Gold Corp.	115 N7,10	63° 30'N 140° 50'W	Explor.	12
Gemini Creek	R. Hilker/Mariposa Gold Corp.	115 N10	63° 31'N 140° 50'W	Explor.	13
Boucher Creek	Gold Creek Mining Ltd.	115 N15	63° 58'N 140° 30'W	Explor.	14
Boucher Creek	J. Vroom	115 N15	63° 58'N 140° 32'W	Explor.	15
Boucher Creek	L. Mollot	115 N15	63° 58'N 140° 33'W	Explor.	16
Bourdelais Creek	A. Vroom	115 N15	63° 58'N 140° 34'W	Explor.	17
Butler Gulch	J. Vroom	115 N15	63° 58'N 140° 33'W	Explor.	18
Central Fiftymile Creek	P. Mollot/L. Mollot/E. Setrakov	115 N15	63° 52'N 140° 37'W	Explor.	19
Enchantment Creek	A. Perrin/L. Mollot/E. Setrakov	115 N15	63° 54'N 140° 19'W	Explor.	20
Huot Gulch	D. Vroom	115 N15	63° 59'N 140° 29'W	Explor.	21
Miller Creek	Klondike Underground Mining Ltd	115 N15	63° 59'N 140° 48'W	Explor.	22
Mosquito Creek	Tammi Resources Ltd.	115 N15	63° 57'N 140° 50'W	Explor.	23
Upper Fiftymile Creek	R. Ellie/L. Mollot/E. Setrakov	115 N15	63° 53'N 140° 38'W	Explor.	24
Western Fiftymile Creek	L. Mollot/E. Setrakov	115 N15	63° 52'N 140° 39'W	Explor.	25
Fiftymile Creek	L. Mollot/E. Setrakov	115 N16	63° 50'N 140° 28'W	Explor.	26
Scroggie, Walhalla, Alberta Creeks	Auramet International Ltd./ Isleshaven Capital Corp.	115 O1	63° 03'N 138° 20'W	Explor.	27
Alberta Creek	B. Lueck/K. Rodgers	115 O1, 115 J16	63° 00'N 138° 15'W	Explor.	28
Scroggie, Walhalla, Sharp Creeks	Blackridge Gold Ltd./ Cruiser Minerals Ltd.	115 O1,2	63° 10'N 138° 35'W	Explor.	29
Barker Creek	Territorial Gold Placers Ltd.	115 O2	63° 07'N 138° 50'W	Explor.	30
Barker, Agate Creeks	Havilah Gold Mines Ltd.	115 O2	63° 03'N 138° 56'W	Explor.	31
Scroggie Creek	4955 Yukon Ltd.	115 O2	63° 07'N 138° 39'W	Explor.	32
Ten Mile Creek	Clear Mines Ltd.	115 N9	63° 32'N 140° 05'W	Explor.	33
Moosehorn Creek	Stetson Resource Management	115 O6	63° 23'N 139° 15'W	Explor.	34
Black Hills Creek	Black Hills Gold Ltd.	115 O7	63° 25'N 138° 45'W	Explor.	42
Black Hills Creek	Coleton Construction Ltd.	115 O7	63° 26'N 138° 49'W	Explor.	43
Black Hills Creek (Childs Gulch)	Territorial Gold Placers Ltd.	115 O7,10	63° 20'N 138° 45'W	Explor.	44
Australia Creek	Hughes-Lang Corporation	115 O10	63° 35'N 138° 25'W	Explor.	45
Ten Mile Creek	Clear Mines Ltd.	115 N9	63° 32'N 140° 05'W	Explor.	46
Ensley Creek	Tamarack Inc.	115 O14	63° 53'N 139° 32'W	Explor.	47
Miller Creek	Klondike Underground Mining Ltd	115 N15	63° 59'N 140° 47'W	Mining	22
Sixtymile River	Brisbois Brothers	115 N15	63° 59'N 140° 48'W	Mining	35
Sixtymile River	Neil Duncan	115 N15	63° 59'N 140° 48'W	Mining	36
Sixtymile River	Granges Exploration	115 N15	63° 59'N 140° 46'W	Mining	37
Henderson Creek	Northway Mining	115 O6	63° 26'N 139° 08'W	Mining	38
Maisy May Creek	Queenstake Resources Ltd.	115 O6	63° 22'N 139° 00'W	Mining	39
Black Hills Creek	E. Wallin	115 O7	63° 30'N 138° 52'W	Mining	40
Ten Mile Creek	Oak Bay Manor	115 N9	63° 37'N 140° 03'W	Mining	41
McQuesten		115 P			
Minto, McIntyre Creeks	Goldorex Minerals Inc.	115 P9	63° 43'N 136° 07'W	Explor.	1
Upper Minto Creek	Triex Resources Ltd.	115 P9	63° 43'N 136° 07'W	Explor.	2
Vancouver, Thoroughfare, Right Hook Creeks	Eagles Nest Mining	115 P11	63° 40'N 137° 05'W	Explor.	3
Clear Creek	Birch Industries Inc.	115 P12	63° 47'N 137° 15'W	Explor.	4
Clear Creek	Barlow Lake Gold Mines Ltd.	115 P12, 115 P13	63° 45'N 137° 45'W	Explor.	5
Clear Creek	Birch Industries Inc./ Crescent Mines Ltd.	115 P13	63° 46'N 137° 33'W	Explor.	6
Clear Creek (unnamed trib.)	Raleigh Energy Corp. Ltd.	115 P13	63° 45'N 137° 30'W	Explor.	7
Little South Klondike River	Canada Tungsten Mining Corp.	115 P14	63° 54'N 137° 11'W	Explor.	8

Swede, Secret Creeks	Canada Tungsten Mining Corp.	115 P16, 105 M13	63° 58'N	136° 00'W	Explor.	10
Bear Creek	P. Tyerman	115 P9	63° 39'N	136° 22'W	Mining	11
Upper Carlson Creek	H. Lunny	115 P9	63° 39'N	136° 22'W	Mining	12
McQuesten River	J. Rustenburg	115 P11	63° 37'N	137° 08'W	Mining	13
Vancouver Creek	A. Lewis	115 P11	63° 39'N	137° 05'W	Mining	14
Barlow Creek	R.E. Moore	115 P13	63° 47'N	137° 40'W	Mining	15
Clear Creek	4757 Yukon Ltd.	115 P13	63° 46'N	137° 22'W	Mining	16
Morrison Creek	F. Schomig	115 P13	63° 50'N	136° 06'W	Mining	17
Left Fork Clear Creek	T. Bazylinski	115 P14	63° 51'N	137° 06'W	Mining	18
Left Fork Clear Creek	Blackstone Placer Mining	115 P14	63° 51'N	137° 07'W	Mining	19
Clear Creek	Van Bibber Placer Development	115 P15	63° 47'N	137° 33'W	Mining	20
Gem Creek	E. Wiez	115 P15	63° 57'N	136° 49'W	Mining	21
Gill Gulch	T. Takas	115 P16	63° 59'N	136° 01'W	Mining	22
Highet Creek	Bleiler Placers Ltd.	115 P16	63° 45'N	136° 10'W	Mining	23
Highet Creek	E. Bleiler	115 P16	63° 46'N	136° 11'W	Mining	24
Highet Creek	Erl Enterprises	115 P16	63° 46'N	136° 13'W	Mining	25
Highet Creek	W. Gordon	115 P16	63° 46'N	136° 11'W	Mining	26
Johnson Creek	R. Barchan	115 P16	63° 48'N	136° 23'W	Mining	27
Johnson Creek	C. and I. Construction	115 P16	63° 47'N	136° 21'W	Mining	28
Dawson		116 B-C				
California Creek	Wilshire Mortgage	116 C1	64° 07'N	140° 20'W	Explor.	1
California Creek	G. Karens	116 C1	64° 05'N	140° 22'W	Explor.	2
Browns Creek	ABAC Resources Ltd.	116 C2	64° 11'N	140° 47'W	Explor.	3
Little Gold Creek	Kostem Resources Ltd.	116 C2	64° 05'N	140° 56'W	Explor.	4
Twelvemile Creek	Englefield Resources Ltd.	116 C2	64° 04'N	140° 34'W	Explor.	5
Fortymile River	Fortymile Placers Ltd.	116 C7	64° 21'N	140° 47'W	Explor.	6
Fortymile River	Fortymile Placers Ltd.	116 C7	64° 21'N	140° 47'W	Mining	6
Browns Creek	J. Conklin	116 C1	64° 15'N	140° 50'W	Mining	7
Glacier Creek	E. Rauguth	116 C2	64° 02'N	140° 47'W	Mining	8
Glacier, Little Gold Creeks	D. and P. Cuevos	116 C2	64° 02'N	140° 49'W	Mining	9
Miller Creek	Sixtymile Enterprises	116 C2	64° 00'N	140° 51'W	Mining	10
Moose Creek	R. Mallone	116 C2	64° 16'N	140° 58'W	Mining	11

INDEX OF PLACER ACTIVITIES FOR THE KLONDIKE AREA (PARTS OF 115 O AND 116 B)

RIVER/CREEK	OPERATOR	NTS	LAT.	LONG.	ACTIVITY	MAP #
Australia, Wounded Moose Creeks	RK Resources Ltd.	115 O10	63° 37'N	138° 41'W	Explor.	4
Indian River	T.W. Patch	115 O10	63° 36'N	138° 43'W	Explor.	6
Montana Creek	J. O'Neill	115 O11	63° 35'N	139° 00'W	Explor.	7
Ruby Creek, Indian River	Alcan Construction Ltd.	115 O11	63° 44'N	139° 13'W	Explor.	8
Upper Bonanza Creek	L. Busch	115 O14	63° 54'N	139° 09'W	Explor.	10
Paradise Hill	L. Busch	115 O14	63° 59'N	139° 04'W	Explor.	11
Bonanza Creek	Topaz Explorations Ltd.	115 O14	64° 00'N	139° 22'W	Explor.	13
Bear Creek	Teal Minerals Ltd.	115 O14, 116 B3	64° 00'N	139° 13'W	Explor.	14
Germaine Creek	First Nuclear Corp. Ltd.	116 B2	64° 03'N	138° 55'W	Explor.	15
Goring Creek	L. Busch	116 B2	64° 00'N	138° 53'W	Explor.	16
Hunker Creek	Hunker Creek Gold Co. Ltd.	116 B3	64° 01'N	139° 10'W	Explor.	17
Quigley Gulch	R. Garneau	116 B3	64° 02'N	139° 17'W	Explor.	18
Klondike River	Berglynn Resources Inc.	116 B3	64° 03'N	139° 26'W	Explor.	19
Yukon River	Anglo American Corp.	116 B3	64° 05'N	139° 25'W	Explor.	20
Dominion Creek	H. Liedtke/J. Erickson	115 O10	63° 38'N	138° 41'W	Mining	21
Eureka Creek	Discovery Creek Gold Placers	115 O10	63° 35'N	138° 52'W	Mining	22
Eureka Creek (lower)	Edgewater Exploration Ltd.	115 O10	63° 36'N	138° 50'W	Mining	23
Eureka Creek (upper)	Edgewater Exploration Ltd.	115 O10	63° 35'N	138° 50'W	Mining	24
Eureka Creek	Hakkon Placers	115 O10	63° 33'N	138° 55'W	Mining	25
Gold Run Creek	Hakkon Placers/Granville Placers	115 O10	63° 45'N	138° 43'W	Mining	26
Lower Dominion Creek	Airgold Ltd.	115 O10	63° 38'N	138° 41'W	Mining	27
Sulphur Creek (Brimstone Gulch)	W.D. Groner	115 O10	63° 43'N	138° 50'W	Mining	28
Sulphur Creek	H. Kruger	115 O10	63° 40'N	138° 43'W	Mining	29
Sulphur Creek	Teck Mining Corp./Granville J.V.	115 O10	63° 43'N	138° 49'W	Mining	30
Indian River	Gold City Resources Ltd.	115 O11	63° 44'N	139° 08'W	Mining	31
Indian River	Auramet International Ltd.	115 O11	63° 45'N	139° 09'W	Mining	32
Indian River	D. Congan	115 O11	63° 44'N	139° 08'W	Mining	33
Upper Bear Creek	Russell Placers	115 O14	63° 59'N	139° 15'W	Mining	34
Bear Creek	Teal Minerals Ltd.	115 O14	63° 59'N	139° 16'W	Mining	35
Upper Bonanza Creek	J. Bryde	115 O14	63° 55'N	139° 09'W	Mining	36
Upper Bonanza Creek	J. Conklin	115 O14	63° 55'N	139° 09'W	Mining	37
Bonanza Creek (Skookum Gulch)	K. Daunt	115 O14	63° 55'N	139° 20'W	Mining	38
Bonanza Creek	Kohlman Explorations Ltd.	115 O14	63° 59'N	139° 22'W	Mining	39
Bonanza Creek (Adams Gulch)	G. Caley	115 O14	63° 56'N	139° 20'W	Mining	40
Upper Bonanza Creek (Ready Bullion Gulch)	D. Coomes	115 O14	63° 53'N	139° 08'W	Mining	41
Bonanza Creek (49 Pup)	E. Rauguth	115 O14	63° 58'N	139° 22'W	Mining	42
Bonanza Creek (Grand Forks)	H. Reinink	115 O14	63° 55'N	139° 18'W	Mining	43
Bonanza Creek (Little Skookum Gulch)	B. Wright/I. Thomas	115 O14	63° 55'N	139° 19'W	Mining	44
Bonanza Creek	G. Hakonson	115 O14	63° 59'N	139° 22'W	Mining	45
Upper Bonanza Creek (Victoria Gulch)	V. Trainer	115 O14	63° 54'N	139° 12'W	Mining	46
Eldorado Creek	Eldorado Mining	115 O14	63° 54'N	139° 18'W	Mining	47
Eldorado Creek (Gay Gulch)	J. Simpson	115 O14	63° 53'N	139° 16'W	Mining	48
Eldorado Creek (Chief Gulch)	G. Hakonson/Eldorado Placers	115 O14	63° 52'N	139° 14'W	Mining	49
Eldorado Creek (French Gulch)	J. Archibald	115 O14	63° 53'N	139° 20'W	Mining	50
Upper Eldorado Creek	G. Hakonson	115 O14	63° 52'N	139° 14'W	Mining	51
Hunker Creek	Daval Mining	115 O14	63° 59'N	139° 00'W	Mining	52
Hunker Creek	J. Gould	115 O14	63° 59'N	139° 02'W	Mining	53
Hunker Creek (Hester Creek)	A. Kosuta	115 O14	64° 00'N	139° 01'W	Mining	54
Hunker Creek (80 Pup)	Tamarack Inc.	116 B3	64° 01'N	139° 05'W	Mining	55
Last Chance Creek, Henry Gulch	J. Alton	115 O14	63° 57'N	139° 10'W	Mining	56
Last Chance Creek (15 Pup)	T.P. Resources Ltd.	115 O14	63° 55'N	139° 09'W	Mining	57
Last Chance Creek (15 Pup)	T.P. Resources Ltd.	115 O14	63° 55'N	139° 09'W	Mining	58
Quartz (Little Blanche) Creek	Ballarat/Tatlow Joint Venture	115 O14	63° 49'N	139° 03'W	Mining	59
Quartz (Little Blanche) Creek	P. Monfette	115 O14	63° 51'N	139° 08'W	Mining	60
Upper Quartz Creek	Ballarat/Tatlow Joint Venture	115 O14	63° 50'N	139° 02'W	Mining	61

Allgold Creek	B. Ould	115 O15	63° 56'N	138° 38'W	Mining	87
Upper Bonanza Creek (Homestake Gulch)	A. and M. Roberts	115 O15	63° 55'N	139° 16'W	Mining	62
Dominion Creek	J. Coghlin	115 O15	63° 46'N	138° 33'W	Mining	63
Dominion Creek	I. Hamilton	115 O15	63° 51'N	138° 54'W	Mining	64
Dominion Creek	J. Taylor	115 O15	63° 49'N	138° 40'W	Mining	65
Caribou Creek	J. Stuart	115 O15	63° 49'N	138° 48'W	Mining	66
Gold Run Creek	Teck Mining Corp./Granville J.V.	115 O15	63° 42'N	138° 38'W	Mining	67
Upper Dominion Creek	Quality Box Co. Ltd.	115 O15	63° 51'N	138° 53'W	Mining	68
Eldorado Creek (Nugget Gulch)	Beron Placers Co. Ltd.	115 O15	63° 52'N	139° 19'W	Mining	69
Gold Bottom Creek	L. Millar	115 O15	63° 57'N	138° 58'W	Mining	70
Gold Bottom Creek	K. Yardley	115 O15	63° 54'N	138° 59'W	Mining	71
Gold Bottom Creek (Soda Pup)	O. Lunde	115 O15	63° 57'N	138° 59'W	Mining	88
Hunker Creek (24 Pup)	G. and E. Ahnert	115 O15	63° 54'N	138° 55'W	Mining	72
Hunker Creek	J. and I. Fraser	115 O15	63° 59'N	138° 58'W	Mining	73
Gold Bottom Creek (Soap Creek)	P. Erickson	115 O15	63° 53'N	138° 59'W	Mining	74
Hunker Creek (Little Gem Gulch)	J. and C. Holdings Ltd.	115 O15	63° 57'N	138° 55'W	Mining	75
Hunker Creek (Ensel Hill)	H. Liedtke/J. Erickson	115 O15	63° 57'N	138° 53'W	Mining	76
Hunker Creek (Mint Gulch)	H. Liedtke/J. Erickson	115 O15	63° 56'N	138° 53'W	Mining	77
Sulphur Creek	L. Gibson	115 O15	63° 43'N	138° 05'W	Mining	78
Sulphur Creek	Meadow Gold Placers Ltd.	115 O15	63° 49'N	138° 56'W	Mining	79
Bonanza Creek	M. Orbanski	116 B3	64° 02'N	139° 23'W	Mining	80
Bonanza Creek (Trail Hill)	C. Denver	116 B3	64° 01'N	139° 22'W	Mining	81
Hunker Creek	J. and C. Holdings Ltd.	116 B3	64° 01'N	139° 09'W	Mining	82
Hunker Creek	L. Somerton	116 B3	64° 01'N	139° 10'W	Mining	83
Hunker Creek (Dago Hill)	M. Church/Preido Mines Ltd.	116 B3	64° 01'N	139° 07'W	Mining	84
Hunker Creek (Dago Hill)	Miben Mining Co. Ltd.	116 B3	64° 01'N	139° 07'W	Mining	85
Klondike River (Jackson Hill)	White Channel Underground Mining Ltd.	116 B3	64° 02'N	139° 22'W	Mining	86
Hunker Creek	Archer, Cathro and Associates	116 B3	64° 02'N	139° 12'W	Explor.	89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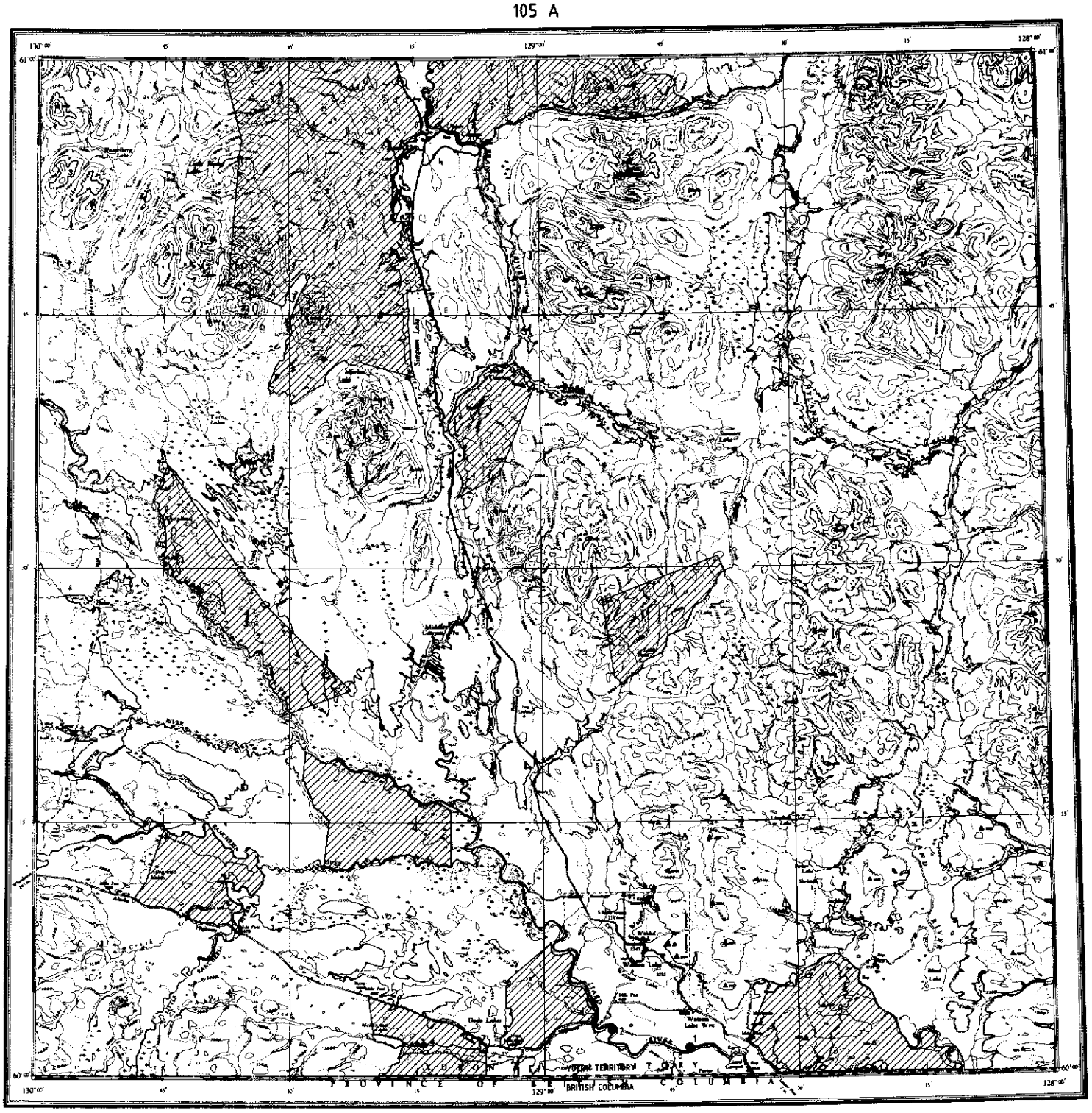
WATSON LAKE

YUKON PLACER MINING AND EXPLORATION ACTIVITIES

Summaries of mining inspection reports and exploration assessment reports with accompanying NTS maps

105 A



WATSON LAKE

YUKON TERRITORY

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

LIARD RIVER **105 A 2 (1)**
J. Franks **60°02'N 128°42'W**
1987

This property is located on the north bank of the Liard River approximately 2.5 miles south of Watson Lake.

Equipment used included a Warner and Swasey H900A hoe with a 1.5 cubic yard bucket, a Terex 82-30 bulldozer and a Michigan loader.

The wash plant consisted of a dual drum trommel, a 6 by 10 foot hopper with 6 inch bars and a 100 foot by 20 inch wide conveyor.

Water was supplied to the wash plant using a Monarch 6 by 8 inch 206 pump and an 8 by 10 inch Paramount pump, powered by a Dormac 6 cylinder diesel.

Effluent was treated in two settling ponds measuring 60 by 150 feet and 30 by 220 feet.

LIARD RIVER **105 A 2 (2)**
P. Rousseau **60°03'N 128°52'W**
First Capital **1987**
Water Licence: PM88037

This property is located on the right limit of the Liard River approximately 2.5 miles east of the settlement of Upper Liard.

A crew of seven miners working two shifts used a Warner and Swasey H-900A hoe, a D8H Cat, a Cat 966 loader and 930 loader to mine river gravels on the property.

The wash plant consisted of a 7 1/2 by 12 foot hopper, a vibrating screen onto a 20 inch by 100 foot conveyor and an 8 foot trommel with 2 drums.

Water was supplied from the river, via a ditch, to the 6 foot spray bar using a 4 inch gas powered pump along with 4 inch and 6 inch electrical pumps, powered by a 3208 generator. Effluent was treated in a holding pond.

The gold was reported as fine-grained.

105 B

WOLF LAKE
YUKON TERRITORY

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

5 0 5 10 15 20 25 30
Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

SWIFT CREEK **105 B 2,3 (1)**
A. T. Syndicate **60°08'N 131°00'W**
1985

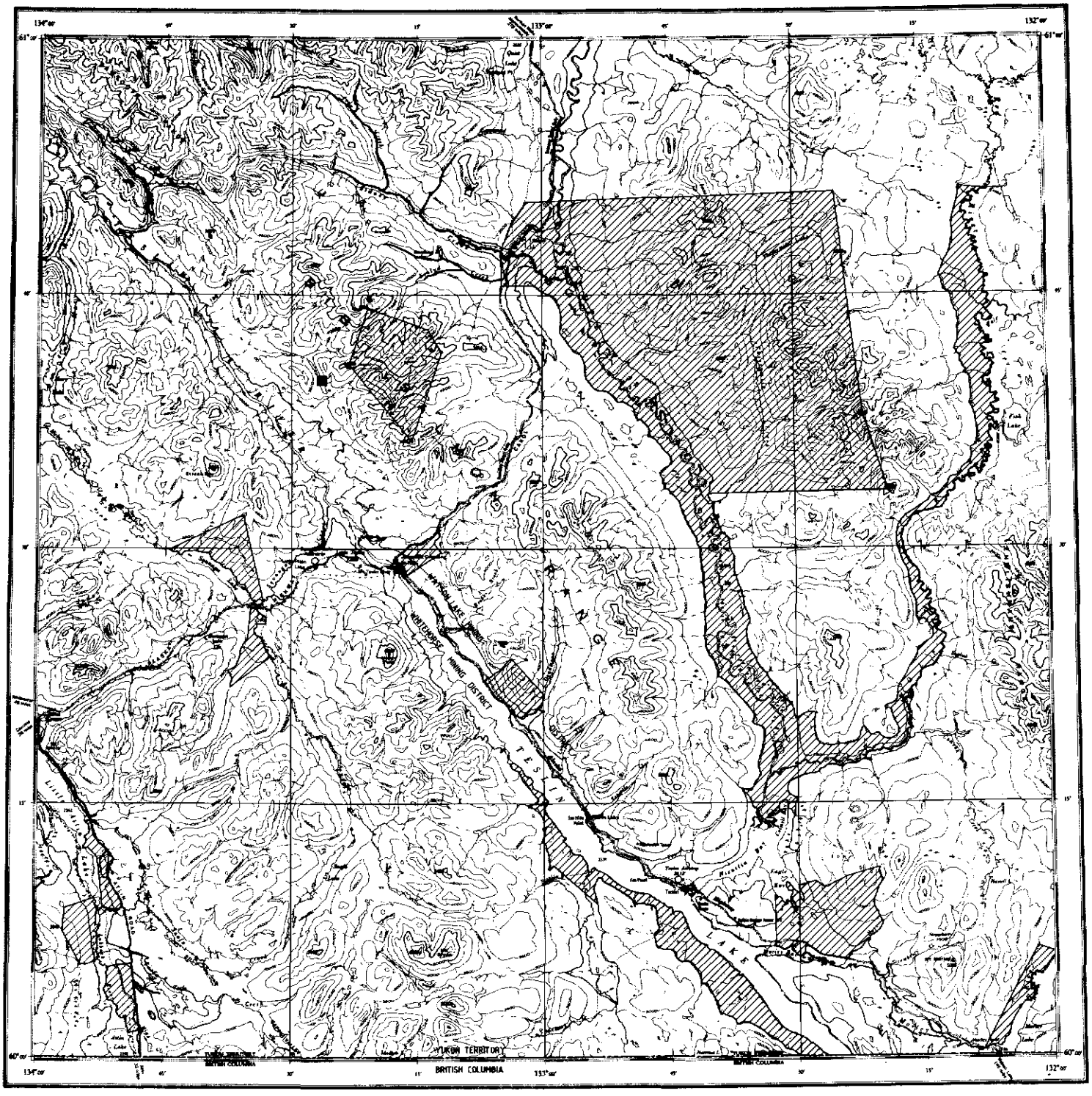
References: No previous reference

Claims: PL 6926

Source: Summary by R.L. McIntyre from assessment report 120062 by P.E. Walcott (Peter E. Walcott and Associates Ltd).

Current Work and Results:

The consultant performed a seismic geophysical survey on four lines across the claim, using a Nimbus ES-121 12 channel seismograph. Energy source was dynamite; bi-directional surveys used 50 feet of geophone separation. The data are presented as hand-drawn time-distance plots, with interpreted depth sections. The seismic survey indicated that rotary drilling, rather than backhoe testing, would be needed to test gravels to bedrock because of greater than anticipated depths.



TESLIN

YUKON TERRITORY

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

WILSON CREEK **105 C 11 (1)**
Golden Empire Mines Ltd **60°40'N 133°25'W**
1981

References: No previous reference

Claims: PL 5972

Source: Summary by T. Bremner of assessment report 120028 by G. Lee and R. Granger.

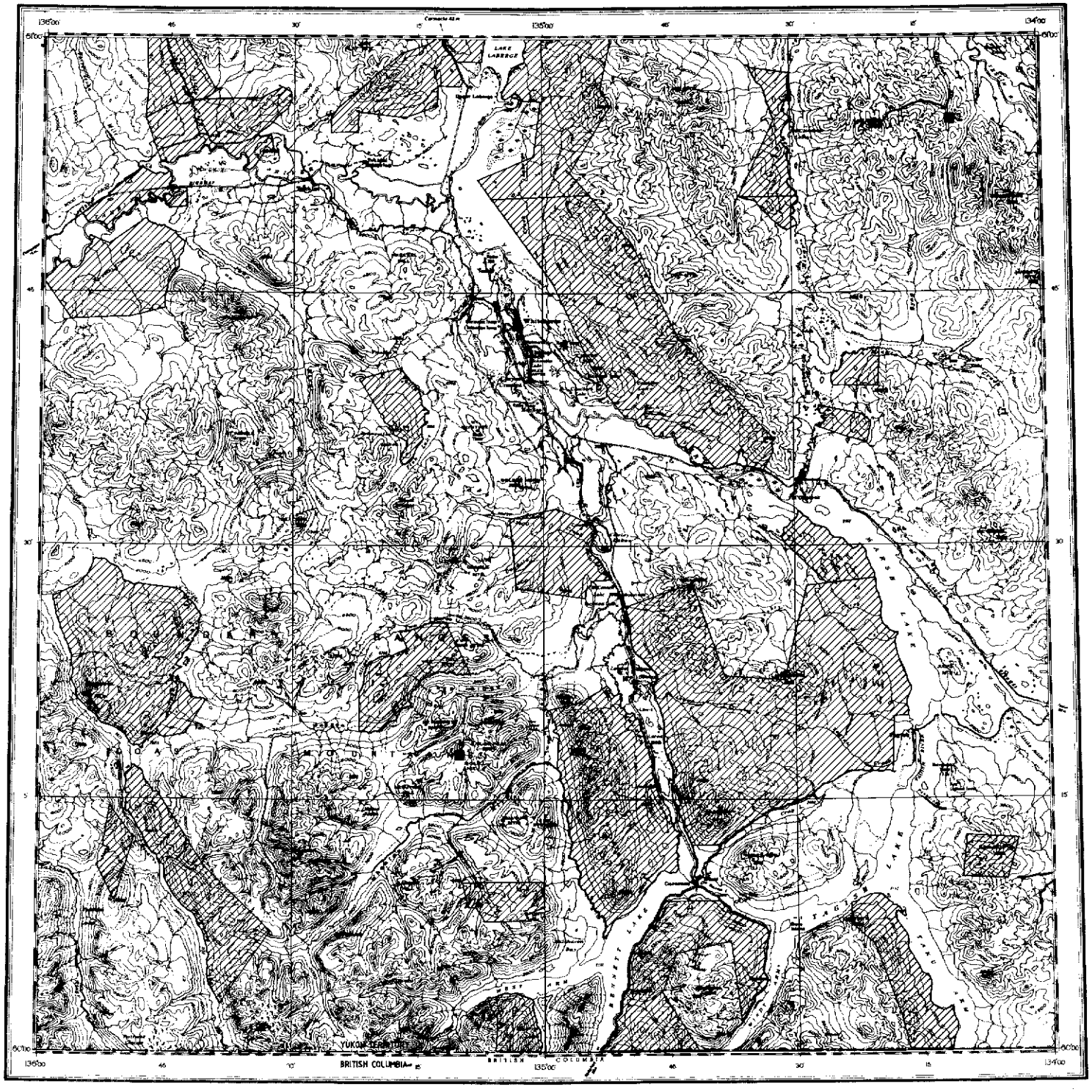
Description:

The lease covers the upper part of Wilson Creek, 2.2 miles upstream of its confluence with the Teslin River. Gold and platinum have been recovered on a small scale in the past. The creek straddles the contact between Upper Triassic Lewes River Group greywacke and volcanic rocks and Mississippian metamorphic rocks of the Cassiar platform. Quartz veins carrying gold, silver and base metals have been found intruding sheared diorite and amphibolite in the hills above the north end of the lease.

Current Work and Results:

In 1981 a magnetometer survey was conducted. Readings were taken at 16 foot intervals along an 2755 foot baseline following the creek. Cross lines were laid out at 100 foot intervals. Six linear magnetic anomalies trending north to northeast are interpreted as possible buried placer concentrations of magnetite.

105 D



WHITEHORSE

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

TWO HORSE CREEK **105 D 6 (1)**
K. Hougen **60°25'N 135°10'W**
1982

References: No previous reference

Claims: PL 5313

Source: Summary by T. Bremner of assessment report 120001 by G.C. Lee.

Description:

The property is located on Two Horse Creek, 2 miles upstream of its confluence with the Watson River. Flat terraces several feet to 330 feet wide and occasional rock bluffs border the creek, which lies 3-10 feet below the level of the terraces.

Current Work and Results:

A 6.5 foot test pit was excavated in sand and silt on the terrace northeast of the stream. Bedrock was not reached but fine gold was encountered in a boulder layer at a depth of 4.3 feet. A magnetometer survey was conducted over a 3940 by 100 foot grid on the northeast bank, along lines perpendicular to the creek spaced 100 feet part. A strong anomaly on 4 adjacent cross lines near the base of the hill slope to the northeast indicates a possible paleo-channel.

SHELDON CREEK **105 D 16 (2)**
Orion Gold and Mines Ltd. **60°55'N 134°10'W**
1983

Reference: Debicki and Gilbert (1986, p. 50)

Claims: PL 6727

Source: Summary by T. Bremner of assessment report 120000 by R.A. Hillman (R.A. Hillman and Associates Ltd).

Description:

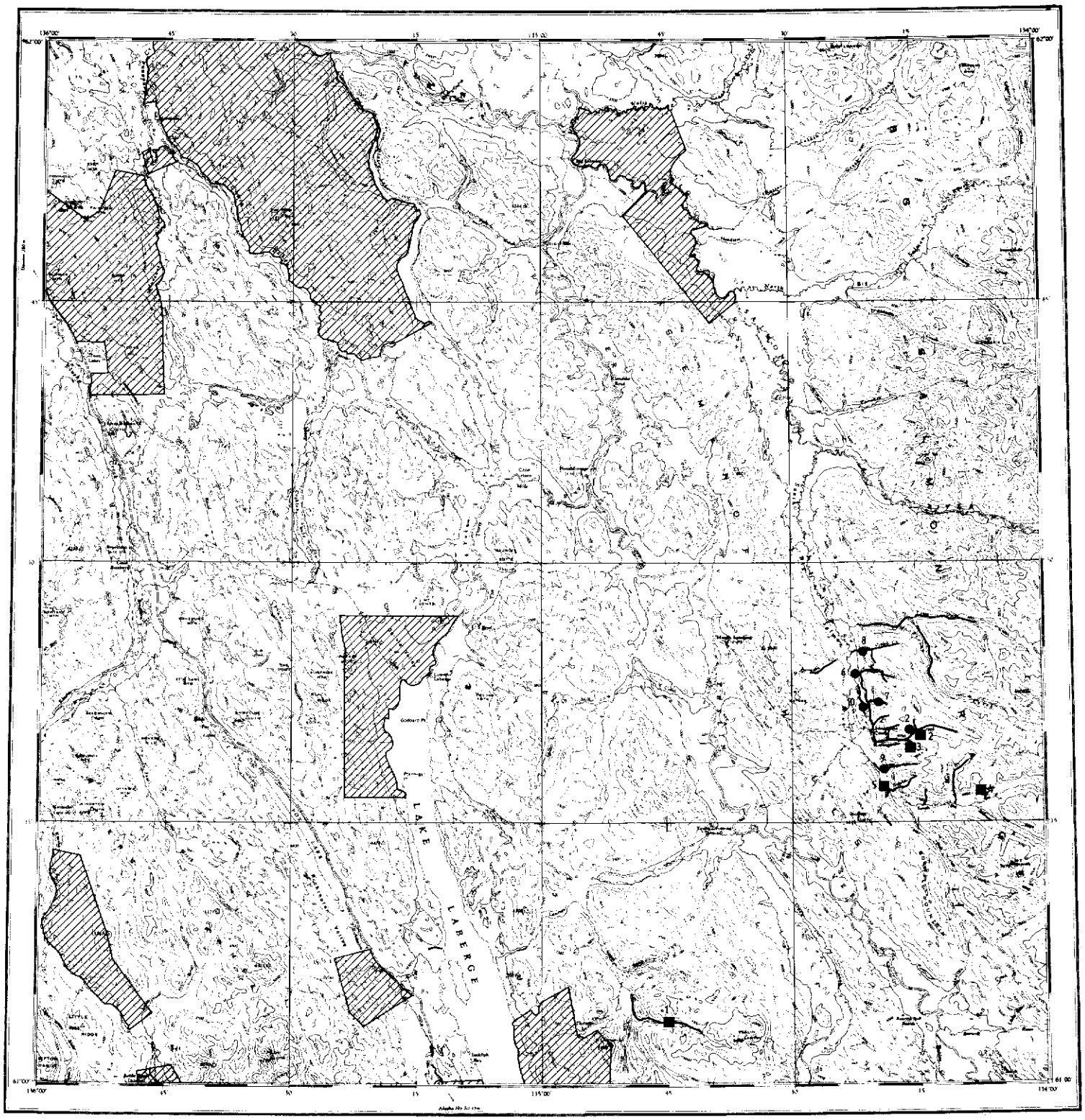
The property is located at the headwaters of Sheldon Creek. Bedrock is exposed in the stream banks at the east end of the property, but the western upstream segment is covered with sand, coarse gravel, cobbles and boulders.

Current Work and Results:

A seismic refraction survey was carried out to define the thickness of gravels overlying bedrock. Three short lines totalling 3500 feet, were shot along the stream bed using dynamite and a 12-geophone spread. Profiles were drawn showing 4 layers, each defined by a distinct velocity range:

Velocity (f/s)	Inferred Material
750	Very loose unsaturated surficial sand and gravel
1000-2500	Loose unsaturated sand, gravel, cobbles
3500-5000	Medium dense saturated sand, gravel, cobbles, boulders
14000-21000	Bedrock (Triassic Lewes River Group clastics and limestone).

105 E



LABERGE

YUKON TERRITORY

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

LAURIER CREEK **105 E 2 (1)**
E. Kreft **61°03'N 134°45'W**
1988

Reference: No previous reference.

Claims: PL 7928

Source: Summary by W.P. LeBarge of assessment report 120108 by J. Dickie.

Description:

Laurier Creek, originating at Teslin Mountain, flows northeast past Mount Laurier through a steep-walled drainage basin that broadens as it reaches Lake Laberge. Gradient averages 150 feet/mile in the area of the lease. Up to 100 feet of glacial outwash sand and gravel, reworked by recent stream action, are exposed in the banks of the creek. Bedrock consists of volcanic greywacke, mudstone, sandstone and rare andesitic tuffs of the Triassic Lewes River Group.

Current Work and Results:

In 1988 a program of surficial and bedrock mapping, panning, magnetometer surveying and stream sediment sampling was undertaken. A total of 137 stream samples were collected and analyzed for gold, silver, arsenic and 10 other elements. Flour gold was recovered in some localities, and anomalous values of gold, silver, beryllium, arsenic and chromite were detected in silt samples along a narrow part of the creek basin.

LIVINGSTONE CREEK **105 E 8 (2)**
Gem Resources Ltd **61°20'N 134°15'W**
1981

References: No previous reference

Claims: PL 5609, PL 5610

Source: Summary by T. Bremner of assessment report 120030 by S.A.S. Croft. (Nevin Sadlier-Brown Goodbrand Ltd).

History:

Gold has been mined in the Livingstone Creek area since 1898. Most gold was mined from pre-glacial gravels exposed in a steep v-shaped canyon near the north of the creek. In 1938 Bostock and Lee reported coarse gold (nuggets weighing up to 19 ounces) originating from the bedrock surface and 20 inches of pre-glacial gravel immediately overlying the bedrock. Upstream of the canyon, the pay gravel continues as a buried channel which was mined by driving adits south from the present stream. Hydraulic mining above the canyon was hampered by permafrost and abandoned. Hydraulic mining resumed in 1981.

Description:

Placer leases 5609 and 5610 lie above the canyon on Livingstone Creek, extending 5 miles upstream from a point 6 miles above the Big Salmon River. The property lies within a broad v-shaped valley filled with glacio-fluvial sediments and till.

Current Work and Results:

A seismic refraction survey was undertaken in 1981 in an attempt to define a buried bedrock canyon beneath the glacial gravel on the lower mile of the lease. Survey lines were located parallel and perpendicular to the creek, using 12 geophones, spaced 33 feet apart and a hydraulic energy source. Five shots were recorded per setup. The survey was designed to give a 115 foot depth of signal penetration. Permafrost was encountered at a depth of approximately 6.5 feet and apparently extends to depths greater than 165 feet. Bedrock was not detected.

LIVINGSTONE CREEK **105 E 8 (3)**
J. Ziehe **62°19'N 134°16'W**
1988, 1989

Reference: No previous reference.

Claims: P 26334 - P 26341

Source: Summary by W.P. LeBarge of assessment reports 120087 and 120122 by R.L. McIntyre (Yukon Engineering Services Ltd)

Description:

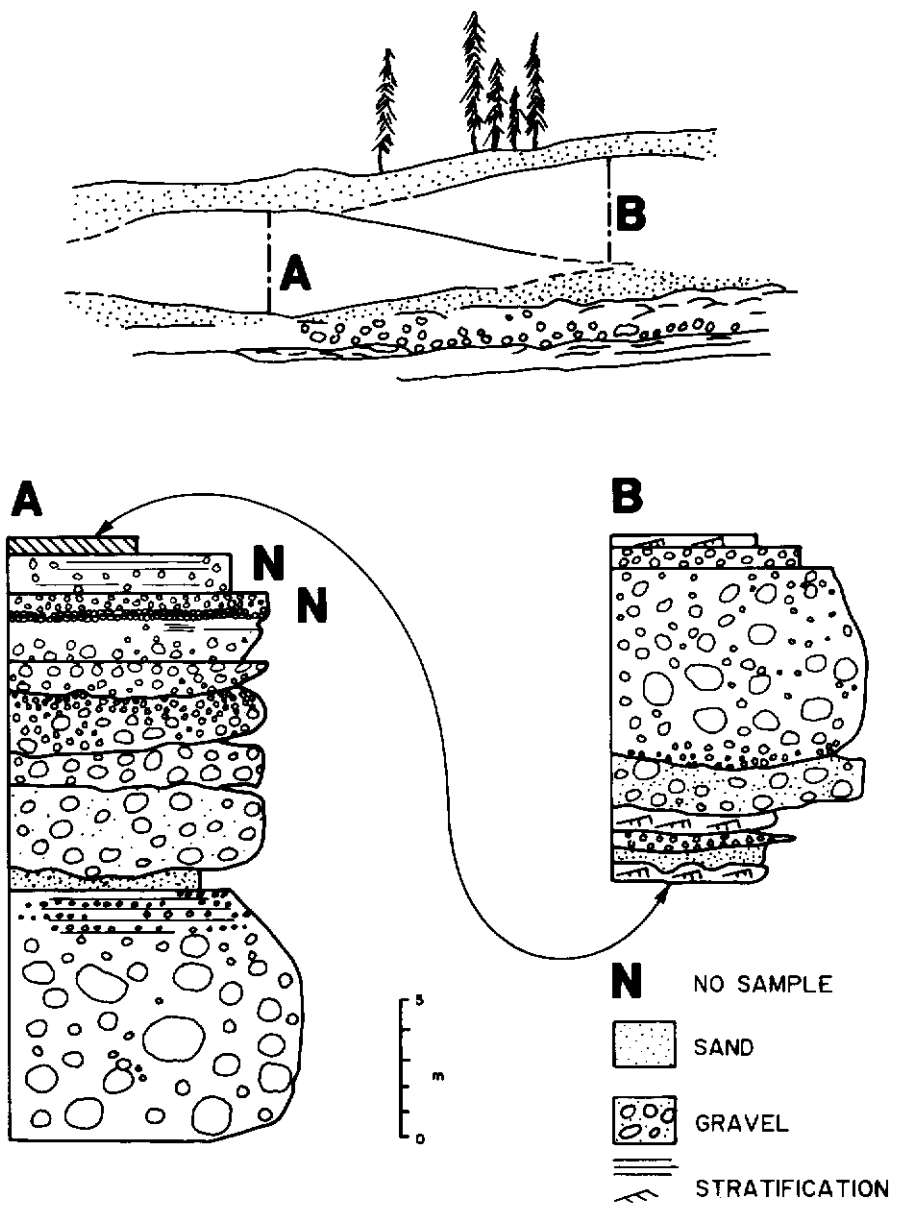
The claims lie on a left fork of Livingstone Creek. Surficial deposits of till, sand, clay and gravel are reported to be 80 to 100 feet thick in the main valley. Bedrock beneath the claims consists of fine-grained amphibolite and greenstone.

Current Work and Results:

Exploration in 1988 consisted of a proton precession magnetometer survey which was conducted on a grid with a 2300 foot baseline, crosslines every 164 feet and stations every 16 feet. Linear magnetic anomalies were detected 82 to 147 feet away from the present stream channel. In 1989 the magnetometer survey was extended downstream on a grid with a 984 foot baseline, crosslines every 66 feet and stations every 16 feet. Several curvilinear magnetic anomalies (ranging to 100 gammas above background) were detected on high ground to the north of the present stream channel.

Figure 1

MEASURED PLEISTOCENE SECTIONS, LAURIER CREEK
(modified from assessment report 120108 by J. Dickie)



An example of measured Pleistocene gravel sections in the Laurier Creek area. This type of work is an essential component to exploration programs and forms the basis for interpretations used for drilling and trenching programs.

MAY CREEK **105 E 8 (4)**
D. Gonder **61°17'N 134°07'W**
1987

Reference: No previous reference.

Claims: P 12900 - P 12910, P 26838

Source: Summary by W.P. LeBarge of assessment report 092512 by G. Hartley.

History:

Evidence of past exploration on May Creek is present in the form of abandoned pits, shafts and tailings. No written record is available of this work, although it probably took place in the 1930s.

Description:

May Creek flows south from the Big Salmon Range into the South Big Salmon River. Upper portions of the valley are wide and unglaciated, while lower portions are dominated by steep canyons which cut through several tens of feet of glacial sediments down to the level of the South Big Salmon River. Bedrock consists of quartzite and chloritic schist of the Big Salmon Metamorphic Complex, with minor serpentinized ultramafics.

Current Work and Results:

In 1987 exploration consisted of excavation and sampling of two test pits, one to a depth of 13 feet and one to a depth of 10 feet. Although bedrock was not reached, small quantities of gold were panned out of the surficial gravels.

SOUTH BIG SALMON RIVER **105 E 8 (5)**
Canada Tungsten **61°18'N 134°20'W**
Mining Corp. Ltd **1987**

Reference: No previous reference.

Claims: PL 7524

Source: Summary by W.P. LeBarge of assessment report 120097 by W. Lennan.

History:

Placer mining activity in the area dates back to 1898, when gold was discovered in Martin and Livingstone Creeks. Evidence of previous work on the lease is present in the form of numerous pits and old shafts near the drillsites, however there is no written record of this activity.

Description:

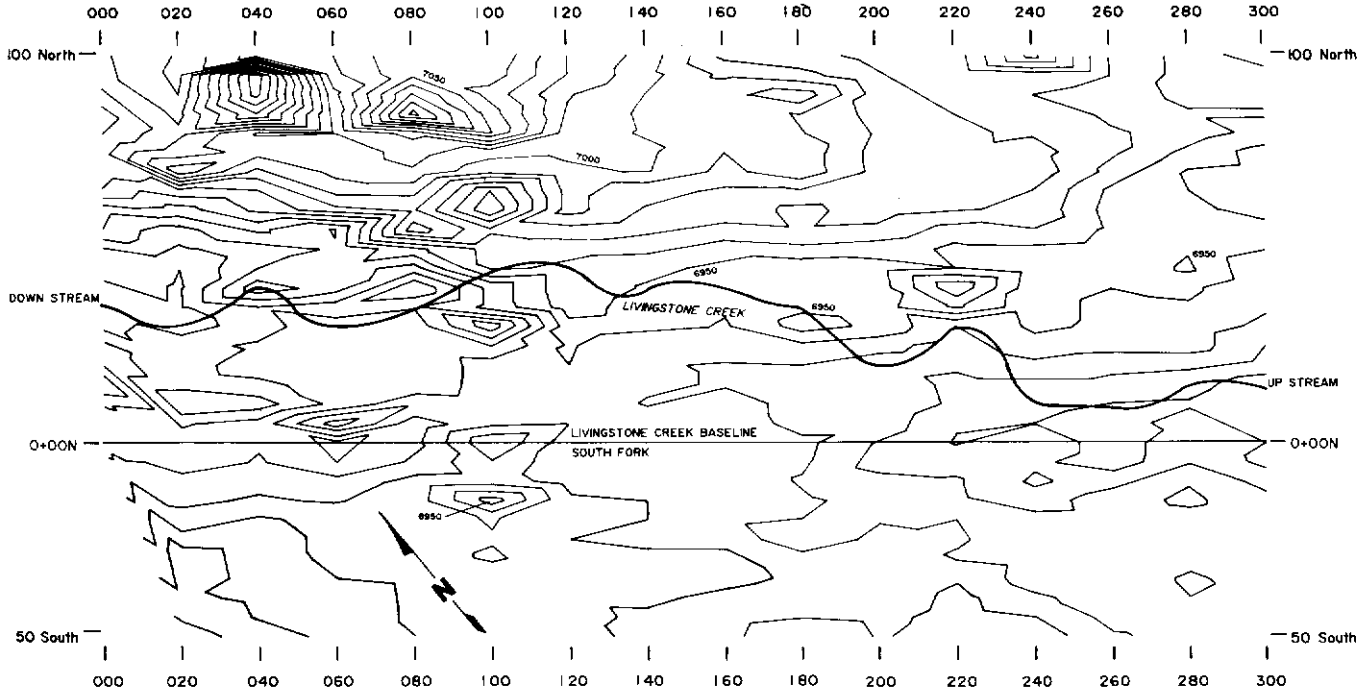
The South Big Salmon River drainage has been subjected to several glacial advances in recent geological history, and surficial sediments reflect many episodes of scouring, deposition and redeposition. Deeply incised westerly-flowing streams, with channels perpendicular to ice paleoflow, direction often contain gold-bearing pre-glacial gravels which were preserved in their middle and upper reaches. Martin and Livingstone Creeks, tributaries to South Big Salmon River, are examples. Several tens of feet of fluvio-glacial gravels, clay layers and remnant glacial moraines commonly overlie the pre-glacial gravels. Bedrock consists of micaceous quartzite and chloritic schist of the Paleozoic Big Salmon Metamorphic Complex. Clasts of schist and quartzite are common in pre-glacial gravels.

Current Work and Results:

In 1987 exploration consisted of a churn drilling program which was designed to test the placer gold potential of South Big Salmon River in the area between Martin and Livingstone Creeks. Two holes were drilled, Hole SAL 87-1 to a depth of 29 feet and Hole SAL 87-2 to a depth of 75 feet. Samples were taken in one foot intervals, screened to minus 6 mesh and fed to a heavy mineral concentrating wheel. Overflow was fed through a long tom sluicebox and heavy mineral concentrates were collected from the wheel and sluicebox. Heavy minerals and gold colours were noted and saved. Two samples were sent for amalgamation and fire assay. In Hole SAL 87-2 a weighted average grade of gold was calculated as 0.003 troy oz/yard^3 over 39 feet, including 12 feet of 0.0055 troy oz/yard^3. These gold values were intersected in gravels in the top 40 feet of the drillhole, while underlying gravels were barren of gold. This is possibly due to the reconcentration of gold-bearing bench deposits by the South Big Salmon River.

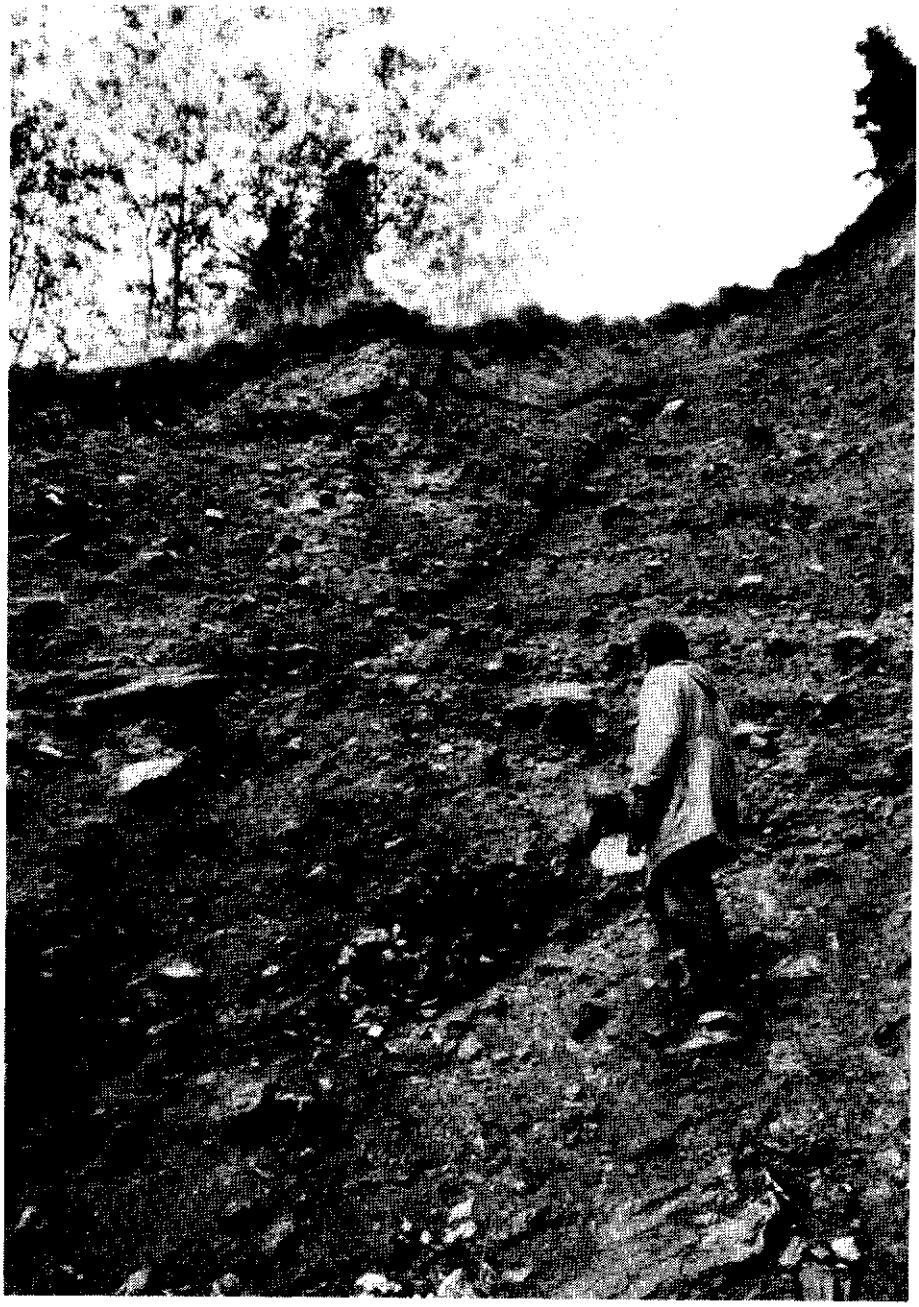
Figure 2

LIVINGSTONE CREEK - JACKIE CLAIMS
Total Field Magnetometer Survey
(from assessment report 120122 by R.L. McIntyre, Yukon Engineering Services Ltd.



Notes: 1. Contour interval: 10 Grammas total field.
2.Datum subtracted: 50,000 Gammas.
3.Grid parameters: Line spacing 20 metres, readings 5 metres.

The above figure illustrates a total field magnetometer survey, a relatively new method of placer exploration used in Yukon. This particular magnetometer survey was conducted on the south fork of Livingstone Creek. Theoretically, alluvial processes will concentrate the heavy mineral magnetite in the same general area as placer gold. The area in the upper left corner of the figure may have anomalous concentrations of magnetite, and possibly gold. Magnetic anomalies may be subject to variations in bedrock and caution must be used in interpreting magnetic highs as placer accumulations of magnetic minerals.



Pay gravels are located beneath a thick cover of glacial till in the Livingstone Creek area. This particular section, although considered overburden, contained scattered values of placer gold.

LIVINGSTONE CREEK **105 E 8 (2)**
Livingstone Placers Ltd **61°20'N 134°15'W**
1987, 1988

This property is located on Livingstone Creek, slightly downstream from the head of the canyon. Deposits here consisted of 12 feet of thawed gravel and boulders on bedrock. The crew consisted of three miners and a cook working one twelve hour shift.

A Terex D-800 bulldozer and an 8230 bulldozer (one on standby) were used to push pay to the Terex 72-61 loader which fed the Derocker. A Terex 72-51 loader was used to haul tailings, which in turn were used to build roads as work progressed up the creek. Three sluice locations were used to mine a cut that measured 2500 feet by 100 feet.

The wash plant consisted of a Derocker, with a 10 foot vibrating deck powered by a 3 cylinder Lister motor, and a 4 by 20 foot sluice run with 2 inch riffles and 8 feet of punch plate. The processing rate was 100 cubic yards per hour. Water was supplied from a ground water charged reservoir to the wash plant at a rate of 1500 igpm by a Cornel 8 by 10 inch pump, powered by a 671 Jimmy diesel.

Effluent was treated in two small lakes downstream.

Gold recovered was between 2 and 16 mesh with the majority between 4 to 6 mesh. Fineness was reported as 880 with one 5 ounce nugget found.

Work continued in 1988 with one cut mined using the same operation as above. The processing rate was 150 cubic yards per hour using 1500 igpm. Water was supplied from an instream reservoir.

COTTONEVA CREEK **105 E 8 (6)**
P. Robinette, L. Barteaux **61°24'N 134°21'W**
Water Licence: PM86132R **1985, 1986**

This operation is located on Cottoneva Creek about 1000 feet upstream of the South Big Salmon valley.

In 1985 an exploratory drift was driven and timbered 10 feet into the left limit valley wall. This work was done by a Mr. Al Serafinchon.

Work in the 1986 season began by thawing a cut 50 feet long by 25 feet wide, along the right limit of the valley, approximately two claim lengths upstream of the South Big Salmon valley. The valley width at this location was estimated to be 100 feet. Creek grade is moderate and valley slopes are moderate to steep. Deposits present were 10 feet deep, consisting of a minor amount of organic overburden overlying 10 feet of gravels. Large, well worn boulders were prevalent and bedrock is highly decomposed. Evidence of historic open cut handwork was prevalent along the valley.

The sluice section consisted of the total gravel section plus 2 feet of bedrock.

The crew consisted of three to four men working either a single or double shift.

Equipment included a D8H Cat bulldozer, used to stockpile pay for the loader and push tailings, and a Terex 7241 loader, equipped with a 3 cubic yard bucket, used to feed the plant.

At the time of inspection, approximately 4500 cubic yards of material had been sluiced in a single run sluice (24 inches by 20 feet). The sluice had a dump box equipped with a wet grizzly screening to minus 3 inches. Rate of feed was estimated to be 30 to 40 cubic yards hourly. The wash plant was changed to a vibrating single deck screen and twin sluice runs. The screen was an adjustable tapered type screening from 1 to 3 inches, with capacity rated at 100 cubic yards per hour maximum. Power was to be supplied by a 125 KVA generator driven by a 6 cylinder diesel Cat engine. Water was pumped with an electrically powered 6 inch submersible Flyght pump. Sluice runs measured 2 feet by 30 feet, lined with 2 inch Hungarian riffles over Nomad matting. Effluent was settled in a pond situated at the mouth of Cottoneva Creek.

There was no activity at this site in 1988.

LAKE CREEK **105 E 8 (7)**
E. Kosmenko **61°22'N 134°19'W**
Water Licence: PM87072R **1985, 1986**

This property is located on Lake Creek above the canyon, approximately 1 mile upstream from the lake. Deposits in the valley bottom are approximately 28 feet thick with large boulders occurring only in the upper layers of the deposits. Intermittent frozen patches are present along the valley sides. Mr. Kosmenko worked the property in 1985 and 1986 using a Scoopmobile LD-358 wheeled loader and a 8240 Terex bulldozer. No mining activity was reported in the 1988 season.

LITTLE VIOLET CREEK **105 E 8 (8)**
Golden Violet Mining Ltd **61°25'N 134°22'W**
Water Licence: PM87122R **1985, 1986**

The property is located on the lower reaches of Little Violet Creek, approximately 4000 feet upstream of the South Big Salmon valley right limit. Deposits present are sandy gravels with some medium sized boulders, 50 feet deep at valley center and 70 feet deep along the margins. The valley bottom is about 50 feet wide

with gently sloping sides and a steep gradient. Large boulders were located in the lower part of the section and bedrock was competent. The ground on the north facing slope was frozen and represented 25% of the material mined.

In 1985 the property was operated by Mr. Gary Hudson and his wife. The operation was small-scale with 5 to 10 cubic yards processed daily. The total amount of material processed in 1985 was 500 cubic yard.

Heavy equipment on the property included a 931 tracked loader, equipped with a 3/4 cubic yards front bucket and a 1/8 cubic yards hoe used to stockpile pay and feed the box, and a 977 Traxcavator used to strip overburden.

The sluice plant consisted of a dump box and single run sluice. The dump, lined with slick plate only, fed a 16 inch by 12 foot run lined with 2 inch Hungarian riffles over Nomad matting.

Sluice water, at a rate of 1000 igpm, was delivered to the box via a 6 inch pipeline, under gravity, at a head of 20 feet. The pipe inlet sat in a barrel in the creek. No reservoir was necessary. Material in the dump was washed with water directly from the pipe outlet. No monitor was used.

The pay was said to be in the lower 15 feet of gravels, on a small left limit "reef", 22 feet in elevation above the valley floor.

In 1986 the operation was scaled upwards. The crew size was increased by one person for half the season. Equipment included a D7E Cat bulldozer used primarily to strip the cut, a Cat 931 tracked loader used to do some selective stripping and stockpiling of pay for the 966 loader which fed the plant and hauled tailings.

The washing plant, new to the property in 1986, consisted of a hopper, vibrating screen deck, trommel and sluice trays. The hopper was fabricated from a 1000 imperial gallon fuel tank cut in half lengthwise. Material was washed in the hopper and on the screen deck at a rate of 25 cubic yards per hour with 800 igpm. Pump type was a Peabody Barnes powered by a 4 cylinder gasoline engine. Material was screened to minus 2 1/4 inches on the single vibrating deck. Undersize was directed to the trommel where it was further screened to minus 3/8 inches and entered a sluice run 2 by 24 feet lined with 2 inch Hungarian riffles over Nomad matting. Grade was set at 1 1/8 inches to the foot.

The undersize was directed to a small, 8 inch by 7 foot sluice run. Material from this run exhausts into the top end of the oversize run for further washing. The plant was powered by a 12.5 KVA generator set. A 5 HP electric motor drove the screen deck while a 3 HP electric motor drove the trommel.

Sluice water was impounded in a small instream reservoir in the centre of the valley, adjacent to the cut and immediately upstream of the plant. Effluent was settled in 2 locations prior to entering the South Big Salmon River. Primary settling was in a small pond 200 feet above camp estimated to be 0.25 acres in size. Final settling was accomplished in a natural depression in the South Big Salmon valley, estimated to be 1 acre in size.

The pay in 1986 was on the valley floor favouring the right limit. The pay channel throughout the valley was described as interrupted and was concentrated in the lower 8 feet of gravels and upper 2 feet of bedrock.

The creek has yielded several large nuggets in the past seasons, the largest weighing 9 oz. 7 dwt. Approximately 90% of the gold was reported to be plus 20 mesh in size. Fineness was 866.

MARTIN CREEK **105 E 8 (9)**
D. Gonder **61°18'N 134°19'W**
Water Licence: PM88096 **1987, 1988**

This property is located on Martin Creek approximately 2000 feet upstream of its confluence with the South Big Salmon River. The gradient of the creek is steep. Deposits present are 65 feet deep and thawed, with about 20 feet of glacial till and gravel on 30 feet of clay. This overlies 15 feet of pay gravels on bedrock. The crew consisted of three miners and one cook working two shifts. An area 500 feet by 60 to 100 feet was monitored in preparation for processing, and only limited test sluicing was carried out using a small sluice box. Monitoring continued in 1988.

Equipment on the property included a D9 Cat and D7 Cat working with the monitor, and a 966 loader working around the yard.

The wash plant consisted of a 20 by 7 foot dump box with punch plate, a 4 by 40 foot sluice run with 2 1/2 inch riffles and expanded metal, and a 4 by 30 foot side run lined with expanded metal for fines.

Water was supplied to the monitor by way of a gravity fed pipeline from two large reservoirs several hundred feet upstream from the operation. Effluent was settled in two downstream ponds before entering the South Big Salmon River.

Gold recovered from the small scale testing was found to be mostly minus 4 mesh with about 10% fine-grained and a fineness of 870.

SUMMIT CREEK **105 E 8 (10)**
R. Asuchak **61°21'N 134°21'W**
Water Licence: PM87080R **1986, 1987**

The property was not mined in 1985; however, operations resumed in 1986.

Exploratory work was done over the summer of 1986. Miners were Mr. R. Asuchak and Mr. E. Trudeau, who were assisted by one helper in camp.

Heavy equipment included a Terex 8240 bulldozer used primarily to keep the left limit working face free, a Cat 977 Traxcavator used to undermine the face and a Case 450 tracked loader used to muck the drift and feed the sluice.

During the summer of 1986, an exploratory drift was put in at the upper end of the existing left limit face. The drift was established in thawed, tightly compacted ground along the bedrock surface level. The 10 by 10 foot timbered drift was driven 30 feet before heavy rains caved it in. The face height above the drift approaches 100 feet.

Drill and blast techniques were used to excavate the drift. A Jack-leg was used to drill 8 to 9 holes per round. Fifteen sticks of a combination of Forcite 40% and 75% explosives were used per round, representing a 4 foot advance or 15 cubic yard bank of material mined. The vertical section represented 8 feet of gravels and 2 feet of decomposed chlorite schist bedrock.

The excavated material was washed in a single run sluice and dump. Material was screened, prior to entering the dump, to approximately minus 6 inches by a dry grizzly. The run, measuring 16 inches by 20 feet, was lined with 2 inch Hungarian riffles directly overlying the runs wooden bottom. The box was fed at a rate of 10 cubic yards per hour, with 800 igpm gravity water.

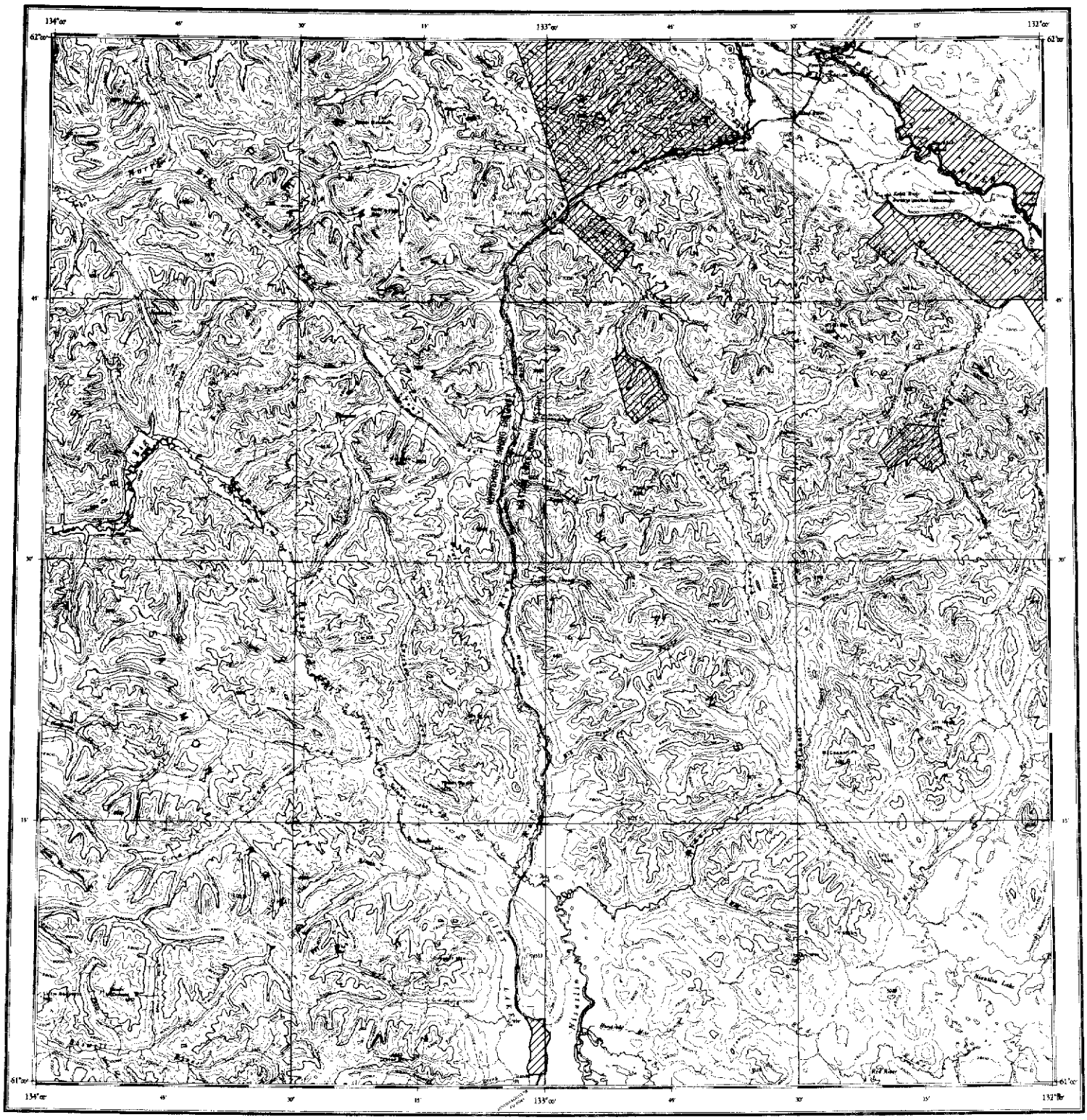
Based on the results of the exploratory drift it was decided to put a production drift in after freezeup. In addition to the 10 by 10 by 30 foot drift, Mr. Asuchak worked a narrow strip of bedrock along the left limit face. The face was undermined with the Cat 977 Traxcavator and allowed to cave. The Terex 8240 dozer was used to push away the caved material and keep the working face open. Pay was considered to be the lower 6 feet of gravels and upper 3 feet of bedrock.

Immediately downstream of the drift location is an untimbered drift, 7 feet in length, established by early hand miners. The drift was established in thawed but highly compacted gravels and remains uncaved.

Several large nuggets were recovered in 1986, the largest ones weighing 6, 12 and 14 2/3 ounces respectively. Fineness is reported to be 860 to 890.

Work on the property continued in 1987.

105 F



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

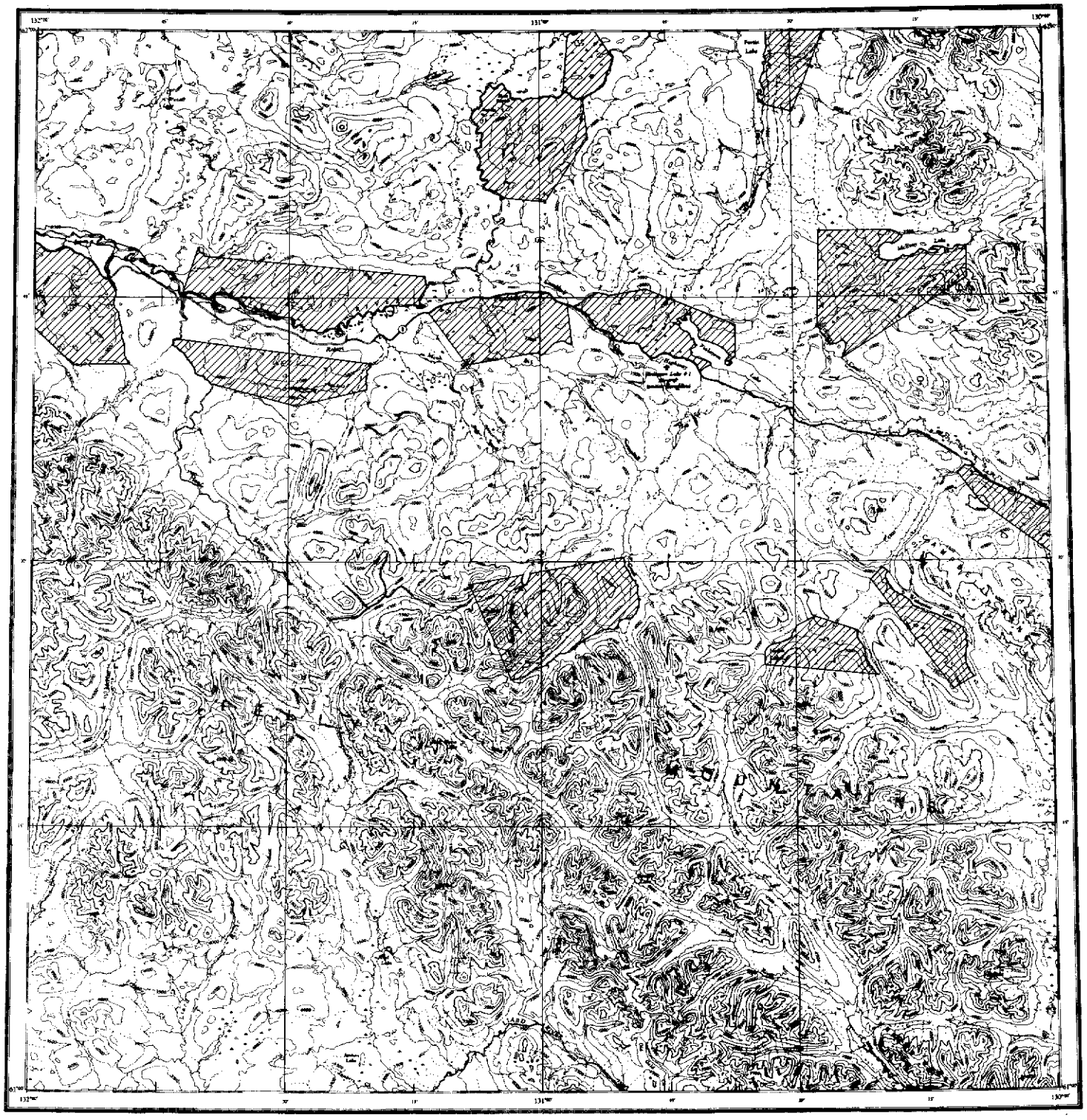
QUIET LAKE

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

FINLAYSON LAKE

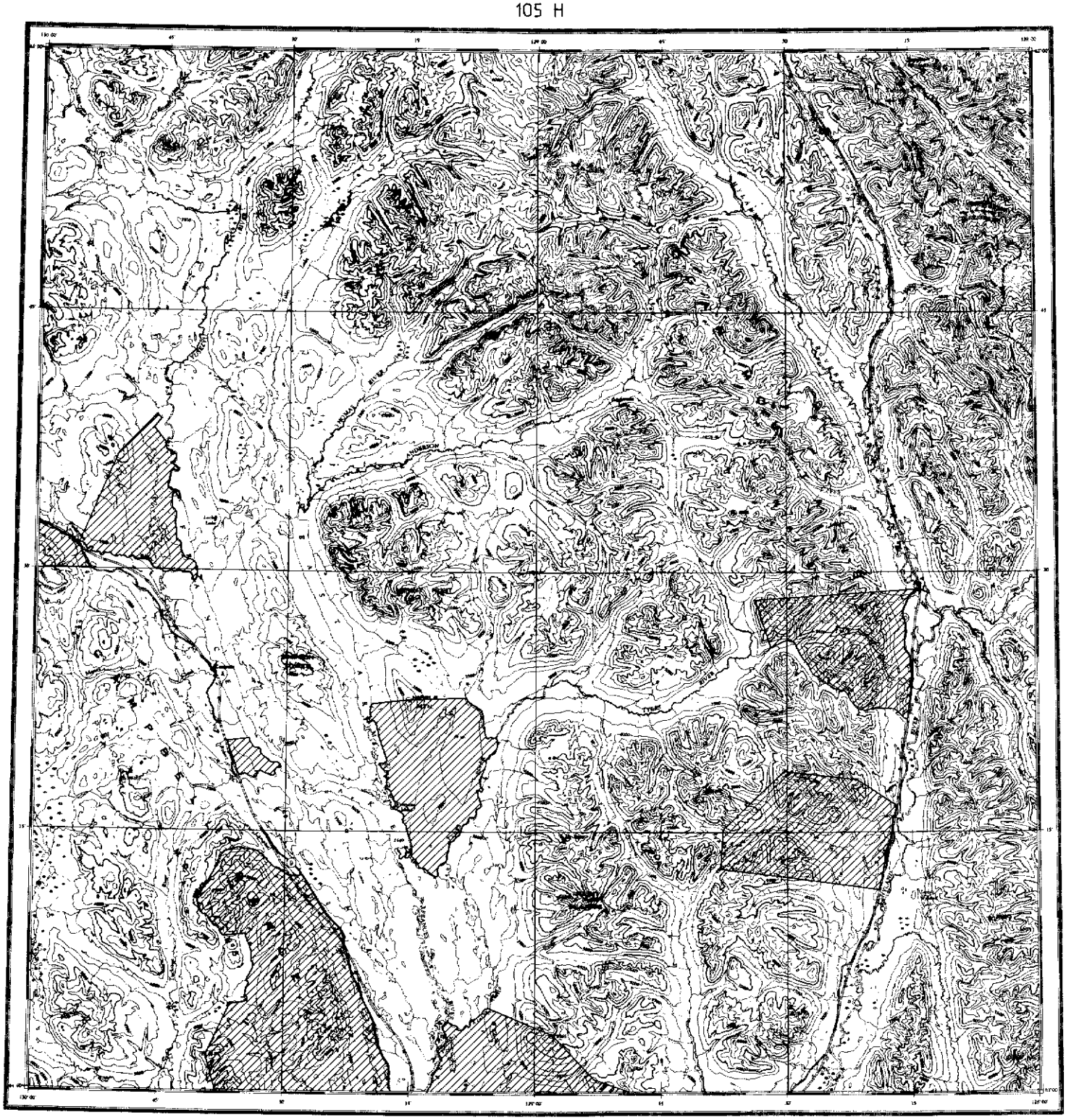
YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

105 H



FRANCES LAKE

YUKON TERRITORY

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

105 K

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

TAY RIVER

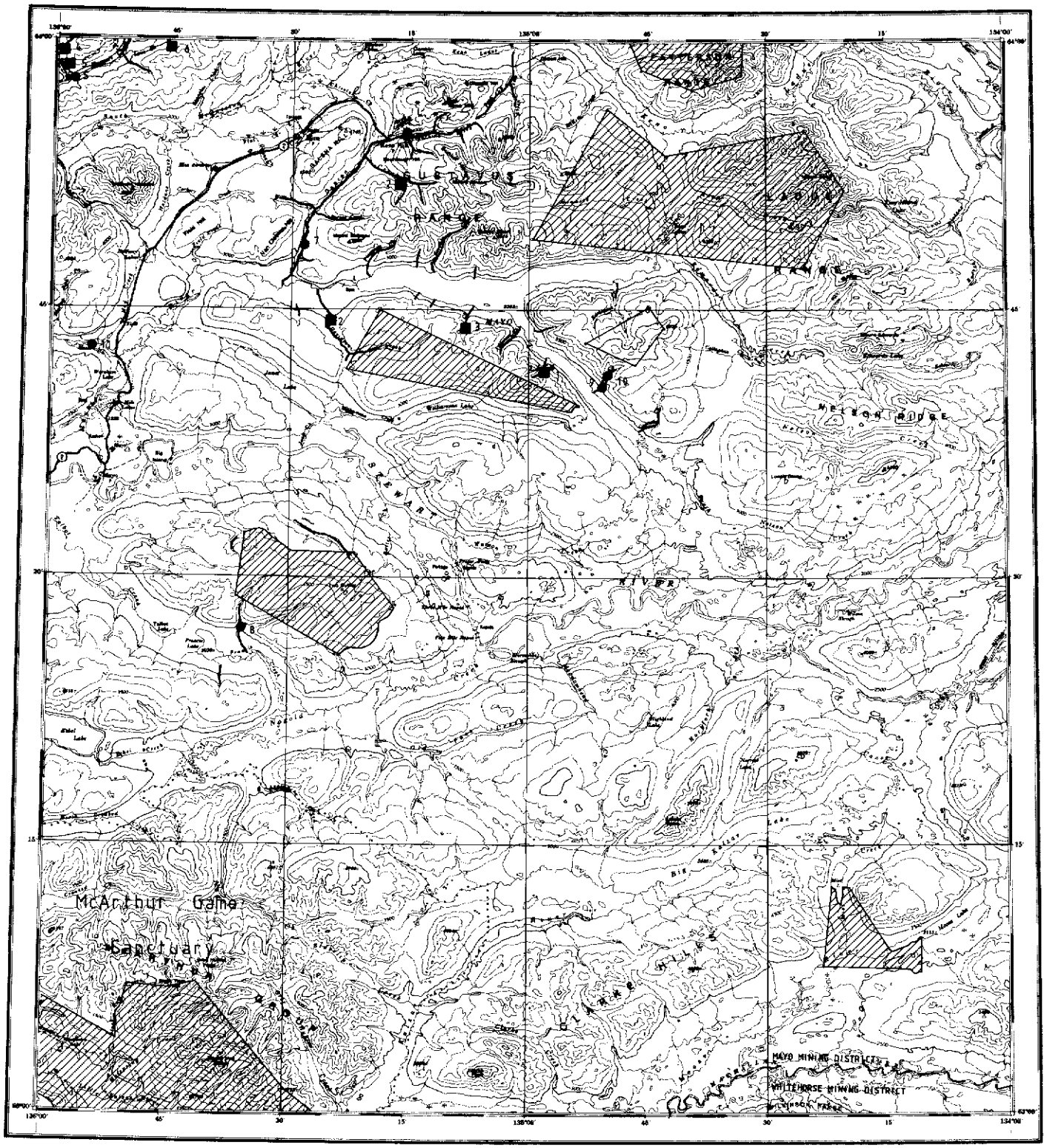
YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

105 M



MAYO

YUKON TERRITORY

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

STEEP CREEK **105 M 10 (1)**
Meyer Properties Inc. **63°42'N 134°58'W**
1982

References: No previous reference

Claims: Creek Claims Discovery 41554, No. 1 to 7 (above), P 2132 - P 2138, No. 1 to 2 (below) P 5601 - P 5602

Source: Summary by T. Bremner of assessment report 120002 by D.L. Melrose.

History:

The Steep Creek gravels have been mined or tested intermittently since the early 1900's. Tailings piles can be seen on the property.

Description:

Steep Creek flows from the southwest into the Nelson arm of Mayo Lake. Most of the property is underlain by permafrost. Bedrock consists of steeply-dipping pyritic mica schist and quartzite of probable Paleozoic age. At the south end of the property the stream flows on bedrock, while at the north end, alluvial gravel more than 52 feet thick has built an alluvial fan which extends into the lake.

DUNCAN, DAVIDSON, 105 M 11,14 115 P 9,16 (2)
MCLAUGLIN, OLIVER & **63°52'N 135°16'W**
CASLNOR CREEKS **1974**
B.E.L. Yukon Establishment

References: No previous reference

Claims: PL 41627 - PL 41657

Source: Summary by T. Bremner of assessment report 120031 by K. Columbo.

Current Work and Results:

An initial reconnaissance of the Duncan Creek leases showed that the skarn bed consisted of 1-2 feet of boulder clay overlying bedrock, with small amounts of black sand containing visible gold. Gravel up to 130 feet thick underlies beaches on the other side of the creek. Two gravel samples taken from a depth of approximately 3 feet, on adjacent Duncan Creek claims were panned and assayed. The concentrates yielded values of 209 g/t and 102 g/t Au respectively. A total of 7.3 miles of line was cut on the five properties in preparation for future geophysical drilling and sampling programs. Two sample pits 4-40 feet deep were excavated on each property. Bedrock was encountered at a depth of 4-5 feet on Davidson, Oliver and Caslnor Creeks.

OWL CREEK **105 M 11 (3)**
Meyer Properties Inc. **63°44'N 135°08'W**
1982

References: No previous reference

Claims: P 5440, P 5603, P 5604, PL 6319

Source: Summary by T. Bremner of assessment reports 120003 and 120004 by D.L. Melrose.

History:

Intermittent mining or testing has been carried out on Owl Creek since the early 1900's. Old sluice boxes, shafts and tailings can be seen on the property.

Description:

Owl Creek flows north into the Mayo arm of Mayo Lake. Most of the property is underlain by permafrost. Bedrock consists of pyritic mica schist and quartzite which dips steeply to the south. Alluvial gravel in the creek bed is angular and locally-derived.

SECRET CREEK 105 M 13, 106 D 4, 115 P 16 (4)
Canada Tungsten **64°00'N 136°00'W**
Mining Corp. **1981**

References: No previous reference

Claims: PL 5156

Source: Summary by T. Bremner of assessment report 120005a by M.D. Philpot.

History:

The only evidence of past placer activity consists of several old cabins and a small sluicing operation near the lower end of the creek. Ten trenches were excavated by Bema Industries in 1980, removing 2161 cubic yards of gravel. Eleven concentrate samples were analyzed for gold, silver, tungsten and tin.

Description:

Secret Creek flows south through a narrow valley into Swede Creek. The lease extends 2 miles upstream from the confluence of Secret and Swede Creeks. A poplar-covered gravel bench forms the west bank.

Current Work and Results:

The gravel bench was trenched using a D7 Cat and a backhoe, and 68 cubic yards of gravel was sluiced. The fine material was examined for scheelite with an ultraviolet lamp, washed, funnelled through a concentrator and panned. The concentrate was

analyzed for gold, silver, tungsten and tin. Small amounts of gold, scheelite and cassiterite were recorded visually. An assay of the concentrate gave 89.8 g/t Ag, 496 g/t Au, 0.25% Wo_3 and 0.73% Sn.

SWEDE CREEK **105 M 13, 115 P 16 (5)**
Canada Tungsten Mining Corporation **63°59'N 136°00'W**
1981

References: No previous reference

Claims: PL 5327

Source: Summary by T. Bremner of assessment report 120005 by M.D. Philpot.

History:

In 1980 Bema Industries Ltd excavated 14 trenches on the lower part of Swede Creek, removing 3167 cubic yards of gravel. Eighteen concentrate samples were analyzed for gold, silver, tungsten and tin. The results were highly anomalous in gold and tin.

Description:

The placer lease extends 3 miles upstream from the confluence of Swede and Haggart Creeks. The floor of Swede Creek valley is underlain by permafrost.

Current Work and Results:

A 66 by 8 foot trench was excavated by a D7 Cat in the valley floor 43 feet west of the creek. After stripping 180 cubic yards of surficial gravel, 280 cubic yards were excavated for testing. A total of 136 cubic yards of the test material was run through a sluice box. The fine material was visually examined for gold, then for scheelite with an ultraviolet lamp, then washed. It was then run through a concentrator and panned. The concentrate was examined with a microscope and an ultraviolet lamp and analyzed for gold, silver, tungsten and tin. Low to moderate amounts of gold, scheelite and illmenite, and small amounts of cassiterite and titanite, were recorded visually. An assay of the concentrate gave 227 g/t Au, 1800 g/t Au, 0.16% Wo_3 and 1.26% Sn.

LYNX CREEK **105 M 14 (6)**
Canada Tungsten Mining Corporation **64°00'N 135°45'W**
1981

References: No previous reference

Claims: PL 5326

Source: Summary by T. Bremner of assessment report 120034 by M. Philpot.

Description:

The property is located 4 miles upstream from the confluence of Haggart Creek and Lynx Creek.

Current Work and Results:

A 100 foot rotary hole was drilled in pebble - cobble gravel on the first tier bench on the north side of Lynx Creek. Trace amounts of scheelite and pyrite were encountered throughout the hole. Traces of gold were reported from several sections. The hole was stopped before reaching bedrock.

DUNCAN CREEK **105 M 14 (7)**
F. Taylor **63°49'N 135°28'W**
Water Licence: PM86138R **1987, 1988**

This property is located on the Duncan Creek, approximately 3 miles from its confluence with the Mayo River. In 1987 approximately 60 000 cubic yards were processed from cuts along the right limit of Duncan Creek. In 1988 mining proceeded upstream from the last cut made in 1987 but switched over to the left limit of Duncan Dreek. Deposits consisted of 2 feet of frozen organic black muck, 1 to 2 feet of sand and medium sized gravel, 25 feet of pay gravel with boulders up to 3 feet in diameter and intermitent bands of frozen muck. Bedrock is decomposed schist and Keno Hill quartzite. About 60 000 cubic yards, including 15 feet of gravel and 1 foot of bedrock, were sluiced.

In both 1987 and 1988 a total of eight people made up the operation, four of whom were miners. Two 11 hour shifts were worked daily. The black muck was stripped off 2 to 3 years in advance using a D8H Cat and hydraulic stripping. In 1988, 34 000 cubic yards were stripped mechanically and 14 000 cubic yards were stripped using the creek. The box was moved upstream 25 feet and sideways 40 feet as mining progressed. An Hitachi UH30 tracked excavator with a 4.5 cubic yard bucket fed the box. The excavator was also used for ditching and stripping. Tailings were removed by a Cat 988 loader with a 7 cubic yard bucket. The loader was also used for stripping. A 17 cubic yard Volvo 5350 rock truck was used to haul overburden, tailings and to move equipment. Tailings were used to build a berm for effluent drain and for road building.

The wash plant consisted of a 10 by 12 foot dump box, wet grizzly and a three run sluice box. The centre run was 3 feet wide and consisted of 6 feet of slotted punch plate, followed by 10 feet of Hungarian riffles. The two side runs were 16 feet long and 3 feet wide and were lined with 1 by 2 inch expanded metal over Nomad matting. Material less than 5 1/2 inches in size fell through the grizzly and passed over the centre run. Material smaller than 5/8 inch passed through slotted punch plate in the centre run and travelled through the side runs. The processing rate varied from 120 to 160 loose cubic yards per hour.

A small jig and longtom measuring 3.5 feet by 6 feet was used to clean the concentrate from the sluice box. The gold was then refined into dore bars on site. Fineness is 788: two thirds is plus 25 mesh.

In 1987 water was pumped directly out of the creek at a rate of 2600 igpm to the sluice box and spray bar by a Paco 10 by 8 inch pump, powered by a Deutz diesel. Effluent was treated in two out of-stream settling ponds located 1.5 miles downstream in Haggart Creek.

In 1988 water was pumped out of a suction pond into a diversion channel at a rate of 2600 igpm. The diversion channel was equipped with a culvert and hand-operated gate. A Gorman-Rupp 10 by 10 inch slurry pump, powered by a Cat 3306 diesel supplied water. In 1988, effluent was treated in one out-of-stream settling pond located about 1500 feet downstream of the wash plant. The height of the settling pond dam was increased when more capacity was required.

EMPIRE CREEK **105 M 5 (8)**
D. Sabo **63°28'N 135°36'W**
Water Licence: PM88002 **1987, 1988**

This property is located on Empire Creek. In 1987 deposits 1500 feet above the junction of the right and left forks were mined. The valley is only 25 feet wide with a very steep gradient at this point. Deposits consist of 6 feet of large boulders, clay and gravel. Bedrock is schist and overburden consists of a small amount of organic material that has slid off the side hills. The gravel and 3 feet of bedrock were sluiced. The total width of the valley was mined. Gold distribution was irregular with concentrations occuring around bedrock reefs.

In 1988 work continued 650 feet upstream from the 1987 operation. At this point the valley was 35 feet wide with the same steep gradient and deposit profile. Two and one half cuts were mined for a total of 5200 cubic yards sluiced.

Mining was done by D. Sabo and a helper working an eight hour shift.

A D65A Komatsu was used for stripping and removing tailings. A H65C Hough rubber tired loader with a 3 cubic yard bucket was used to feed the sluice box. The Hymac 580B backhoe with a 5/8 cubic yard bucket used in 1987 to strip and move pipe, was upgraded to an Hitachi UHO-81 excavator with a 1 cubic yard bucket in 1988. Overburden and tailings were pushed downstream and used to build a road along the right limit of the creek over mined-out ground.

The wash plant consisted of a dump box and wet grizzly 14 feet long by by 10 feet wide and a single run sluice 11 feet long and 21 inches wide. A flat lying grizzly was lifted after every load to eject large rocks. Four feet of grader blade lined the throat of the dump box. The sluice box was lined with 3 inch Hungarian riffles at 3 inch spacings over Coco matting. The grade of the box was 2 inches per foot.

A 4 inch Monarch pump powered by a Toyota 1100cc engine supplied water to the spray bar. Water was supplied by gravity to the box by 250 feet of 36 inch diameter riveted steel pipe. This discharged into a manifold equipped with an overflow discharge and rubber flap control gates. The pipe and the wash plant were moved upstream when the mine cut reached the supply end of the pipe. Effluent flowed through the creek bed to a large instream settling pond located 3/4 of a mile below the forks. The pond was equipped with a large metal-lined log spillway. The creek was diverted out of the pond at the end of the season.

The gold was coarse-grained and had a fineness of 910.

LEDGE CREEK **105 M 10 (9)**
B. Liske **63°40'N 134°52'W**
Water Licence: PM88106 **1987**

This property is located on Ledge Creek about 3/4 of a mile above Mayo Lake, and although the creek valley widens at this point, the gradient is still quite steep.

The material mined was contained in a bedrock depression and consisted of 7 to 8 feet of channel gravels overlain by 6 feet of old tailings. The area had been worked previously and was not frozen.

B. Liske worked the property alone, approximately 10 hours per day.

An HD5 Allis Flat bulldozer was used to feed the wash plant and remove tailings.

The sluice box consisted of 2 runs lined with punch plate (1/2 inch diameter holes). Material was processed at a rate of 2.5 cubic yards per hour by filling the 12 cubic yard dump box and monitoring the material through the box. A small jig was used for clean-ups. It was anticipated that 600 to 800 cubic yards would be processed in the 1987 testing program.

Water was supplied at a rate of 750 igpm from the settling pond by a 4 inch pump, powered by a Wisconsin 4 cylinder gas engine. The effluent was recycled to the settling pond which measured 400 by 150 yards. This pond was also used by an upstream miner (H. Moritz) and had essentially no effluent discharge.

The gold is mostly coarse-grained, and has a fineness between 805 and 825.

LEDGE CREEK **105 M 10 (10)**
H. Moritz **63°41'N 134°51'W**
1987

This property is located on Ledge Creek about 1 mile above Mayo Lake. The valley bottom narrows at this location and the stream gradient is steep. Deposits at the site consisted of post-glacial muck, silt, clay and gravel at the apex of the Ledge Creek delta. The deposits are 40 feet thick and are not frozen. Bedrock is soft schist with some quartz stringers. Approximately 25 feet of the glacial gravels and 1 foot of bedrock were sluiced.

The crew consisted of H. Moritz, his wife and one helper.

A D7E Cat was used to strip overburden, break up pay ground and remove fine tailings. A Massey Ferguson 66 rubber tired loader was used to feed the wash plant and remove coarse tailings. Overburden and tailings were deposited on the valley sides.

The wash plant consisted of a dump box 15 feet long by 6 feet wide, a grizzly and a single run sluice, 26 inches wide and 24 feet long. The grizzly bars were spaced 4 inches apart. The sluice box was lined with 2 by 2 inch Hungarian riffles spaced 2 inches apart and Coco matting. The grade on the box was 1.75 inches per foot.

The processing rate was 40 cubic yards per hour. One cut totaling 12 000 cubic yards was mined.

Water was supplied by gravity via a 22 inch diameter riveted steel pipe from a small instream reservoir at a rate of 2600 igpm. A plywood gate controlled the flow by dropping the water level below the pipe level when not sluicing. Effluent was treated in a large 150 by 400 yard out-of-stream pond. This pond discharged essentially clean water by seepage into a marshy area. There was no direct discharge into the creek.

About 75% of the gold was coarse-grained with a fineness between 805 and 820.

MINTO CREEK **105 M 12 (11)**
Guilderand Mining Corp. **63°43'N 135°55'W**
1988

This operation is located on the left limit of Minto Creek approximately 0.5 miles upstream from McIntyre Creek. A bench deposit was mined in 1988, and the area had been stripped in 1987. Deposits consisted of stream gravel reworked by glaciation. Bedrock is 200 feet deep in places with some schist bedrock outcrops. Only 6 feet of gravel were sluiced as gold values decreased with depth. About one foot of vegetated overburden was stripped.

The crew consisted of miners and helpers working one 10 hour shift.

A D9G Cat was used to strip overburden, push pay and level tailings. A Hough 80 loader with a 3.5 cubic yard bucket was used to remove tailings. A Cat 950 loader with a 3 cubic yard bucket was used to feed

the wash plant. An American excavator with a 1.25 cubic yard bucket was used for testing.

The main component of the wash plant was a 36 foot long, textured conveyor belt with linear agitation. The gold was separated from the sand and gravel by the shaking motion of the belt and water flow across the belt. The material was first screened to minus 1/4 inch by a 7 by 7 foot wet grizzly. The screen was fed by an 8 foot by 17 foot dump box where the material was washed.

The plant was designed to process 60 to 150 cubic yards of screened material per hour. A total of 30 000 cubic yards of material was processed by the wash plant. About 8000 cubic yards were stripped in preparation for the next year. Although some problems were encountered in the initial set up of the complete system, the belt was reported to have low maintenance and easy to operate.

Water was supplied from an instream pool using a 6 by 5 inch SW-US pump. A 4 inch electric (13.5 Kw) WEDA submersible pump supplied water to the belt at a rate of 750 igpm. Effluent was treated by a 100 by 400 foot out-of-stream pond.

The gold was flat with a fineness of 830. Eighty percent of the gold was less than 20 mesh and 1% greater than 10 mesh. No nuggets over 1/4 inch in diameter were recovered.

SWEDE CREEK **105 M 13 (5)**
Grandex Resources Ltd **63°59'N 136°00'W**
Water Licence: PM87145 **1987, 1988**

This property begins at the junction of Swede and Haggart Creeks and extends up Swede Creek 1000 feet past Secret Creek. The valley bottom is wide and the stream gradient moderate.

In 1987 a testing program was conducted on the lower portion of the property. A series of 400 cubic yard bulk samples were taken along the length of a 1600 foot bedrock drain. In addition, 1000 feet of trenches were dug perpendicular to the bedrock drain. Four 200 cubic yard tests were made on each trench. A total of 1500 cubic yards were processed. A D9G Cat with ripper and a D8 Cat with ripper were used to strip from 0 to 4 feet of organic permafrost. A 950 Cat loader with a three cubic yard bucket and a 980 loader with a 5.5 cubic yard bucket were used to feed the wash plant and remove tailings.

Deposits consisted of 6 to 15 feet of postglacial gravels which were sluiced along with one foot of bedrock. The gold was found to be evenly dispersed with some concentration on bedrock. Water from an instream reservoir was transported by a ditch to another, smaller downstream reservoir. A Monarch 8 by 6 inch pump, powered by a 6 cylinder Lister diesel, supplied between 600 and 1000 igpm to the wash plant. Water was in short supply for part of the season. Effluent was treated in a 150 by 100 yard out-of-stream pond.

In 1988 five cuts were excavated: 600 by 200 by 6 feet; 800 by 250 by 20 feet; 800 by 250 by 20 feet; 700 by 175 by 6 feet; and 800 by 250 by 8 feet respectively. About 300 000 cubic yards were sluiced and 200 000 cubic yards stripped. All mining took place in the Swede Creek valley for a distance of about 1.5 miles upstream from the Haggart Creek road.

The average depth to bedrock was 48 feet. The material consisted of 12 feet of frozen black muck, 8 feet of post-glacial stream gravel, 4 feet of sand, 8 feet of stream gravel and 16 feet of interbedded glacial till, blue clay and Tertiary gravels. The bedrock was graphitic phyllite. All material below the black muck, including 1 foot of bedrock, was processed.

In 1987 the crew consisted of one cook and eight miners working one ten hour shift. In 1988 this was increased to one cook, two bull cooks and seventeen miners working 2-12 hour shifts.

A D9G Cat with ripper and straight blade and a D355A Komatsu bulldozer with U blade and ripper were used to strip the frozen organic overburden, push up pay and build settling ponds. A WA600 Komatsu loader with a 7.1 cubic yard bucket, a 950 Cat loader with a 3 cubic yard bucket and a 980 Cat loader with a 5.5 cubic yard bucket were used to feed the wash plant, remove the tailings, transport muck uphill and build ponds. A Warner-Swasey excavator with a 2.5 cubic yard bucket was used to build drainage ditches. Overburden was pushed up the valley sides, and the tailings were used as a berm by the creek to build ponds, roads, and for filling in the mine cuts.

The wash plant consisted of a 32 foot long by 6.6 foot diameter trommel and a 24 foot by 80 inch double run sluice. The trommel was fed by a 15 yard hopper with spray bar. The trommel classified the material down to minus 1.25 inches and was powered by a 471 GMC diesel. The gradient of the sluice box was 2.5 inches to the foot. It was lined with rubber riffles spaced 6 inches apart and a combination of Monsanto Astroturf and Nomad matting. The processing rate was 200 cubic yards per hour in 1987 and 100 cubic yards in 1988.

In 1988 water was pumped out of a small instream reservoir. An 8 by 6 inch Cornel pump, powered by a Cat V8 diesel, supplied between 1000 and 1500 igpm to the wash plant. Water was abundant all season. A series of ponds downstream of the main road were filled in by mid-season. A large pond measuring 890 by 130 by 20 feet was constructed in a mined-out area just upstream of the main road.

Ninety-five percent of the gold was smaller than 10 mesh. The gold was reported to be angular with a fineness of 895. It was refined on site into dore bars

using a jig, ball mill, mercury/slick plate, retort and furnace.

THUNDER GULCH **105 M 14 (12)**
Bardusan Placers Ltd **63°54'N 135°15'W**
Water Licence: PM87171R **1987, 1988**

This property is located on Thunder Gulch, half a mile upstream from Lightning Creek. Mining in 1988 proceeded upstream from the 1987 cut at the confluence of Tundra Pup and the main fork of Thunder Gulch. These valleys are narrow with a very steep gradient. Deposits are about 50 feet deep and consist of 20 feet of stream gravel overlain by 30 feet of glacial till with large boulders. Bedrock is schist and quartzite. The stream gravel and 5 to 6 feet of bedrock was washed. The ground was not frozen.

The crew consisted of three miners and a helper working a 10 hour shift.

A D7 Cat was used to strip overburden and a 988 Cat loader with a 7 cubic yard bucket was used to feed the sluice plant. A 980 Cat loader with a 5.5 cubic yard bucket was used to remove tailings. Tailings and overburden were packed uphill and stacked on the valley sides and in old cuts.

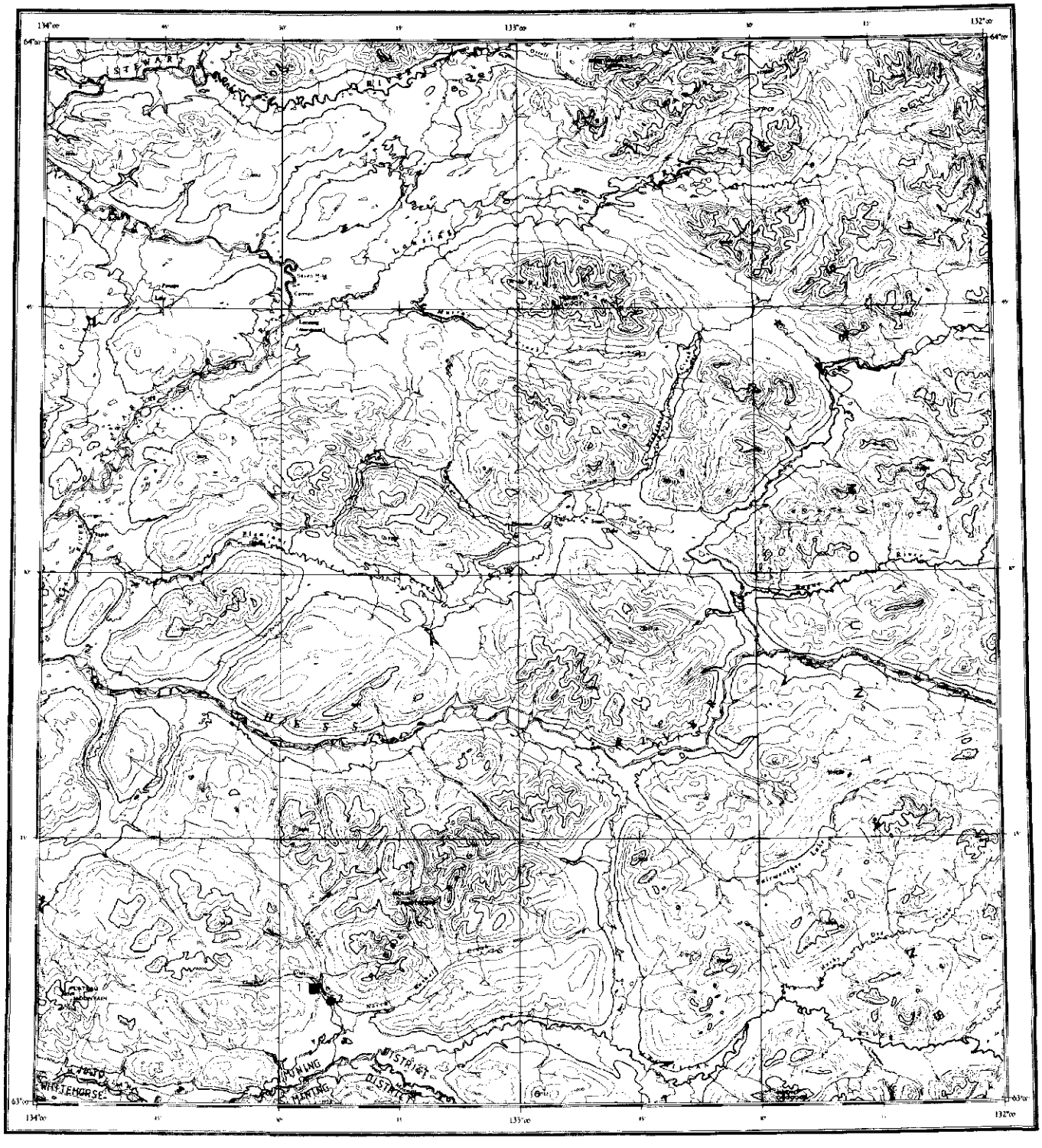
The wash plant consisted of a Derocker and a twin run sluice. The Derocker was powered by a 21 HP Lister diesel. The upper run was lined with flat riffles spaced 2.5 inches apart over expanded metal and Coco matting. The first 12 feet of the upper run also had punch plate with 1/2 inch holes. Material passing through the punch plate went into a lower run and traveled over expanded metal and Coco matting. The sluice box grade was set at 1.5 inches per foot.

The processing rate was 100 cubic yards per hour in both 1987 and 1988. Production in 1987 was approximately 34 500 cubic yards. One cut on Tundra Pup and two on the main fork were mined in 1988 for a total of 80 000 cubic yards sluiced. The stripping to sluicing ratio was about 1 to 1.

Water was supplied to the wash plant by gravity through a 12 inch diameter pipe equipped with a plywood control gate and a screen. A small instream reservoir supplied water to the pipe. The pipe length varied from 20 to 160 feet depending on the location of the sluice box. The effluent was treated in a series of three out-of-stream ponds located in the Lightning Creek valley. The ponds were 180 by 70 feet, 200 by 100 feet and 200 by 150 feet, equipped with wooden spillways. New ponds were added as the old ones filled up.

The gold was very rough and angular with quartz attached. Twenty percent was larger than 4 mesh, 20% was 4 to 6 mesh, 10% was 6 to 10 mesh and 50% was less than 10 mesh in size. The fineness was reported to be 823. Galena was commonly found in the concentrate.

105 N



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

LANSING

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

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RUSSELL CREEK **105 N 3 (1)**
Noranda Exploration Co. Ltd **63°07'N 133°25'W**
1982

References: No previous reference

Claims: P 4924 - P 5099

Source: Summary by T. Bremner of assessment report 120006 by M. Milner.

Current Work and Results:

Eighty-six holes were drilled using a Midwest Sonic drill, on lines at right angles to Russell Creek and Limestone Creek spaced 490 feet apart. On each line the spacing between drillholes was approximately 50 feet. Red and green shale with stringers of quartz-carbonate alteration was encountered at an average depth of 34 feet. The consolidated sediments consist of boulders, gravel, sand and clay in all possible combinations. A total of 49 gold-bearing horizons were intersected by 40 drill holes, averaging 0.51 g/m^3 over a thickness of 6.5 feet.

RUSSELL CREEK **105 N 3 (2)**
F. Poppe **63°03'N 133°26'W**
Water Licence: PM87033 **1987, 1988**

This property is located on Russell Creek approximately 100 yards downstream from Limestone Creek. The valley is wide with a moderate gradient. Limited mining occurred in channel deposits on the right limit in 1987 and moved to the left limit in 1988. The right limit deposit consisted of one foot of unfrozen organic material overlaying six feet of large bouldered gravel and twelve feet of medium gravel on quartzite bedrock. The bottom two feet of gravel and three feet of bedrock were sluiced. On the left limit the depth to bedrock varied between 38 and 40 feet. The ground was frozen and consisted of 8 feet of gravel and boulders, 12 feet of blue clay and muck, and 20 feet of old stream gravel mixed with granite boulders. The clay caused some recovery problems. Bedrock was fractured quartzite and red slate. The bedrock rises rapidly upstream of the present cut and the old channel crosses to the right limit and is covered with slide material. Three to eight feet of Tertiary gravel and 6 feet of bedrock were sluiced, totalling 5000 cubic yards sluiced in 1988. The ground is frozen where mining is planned for 1989.

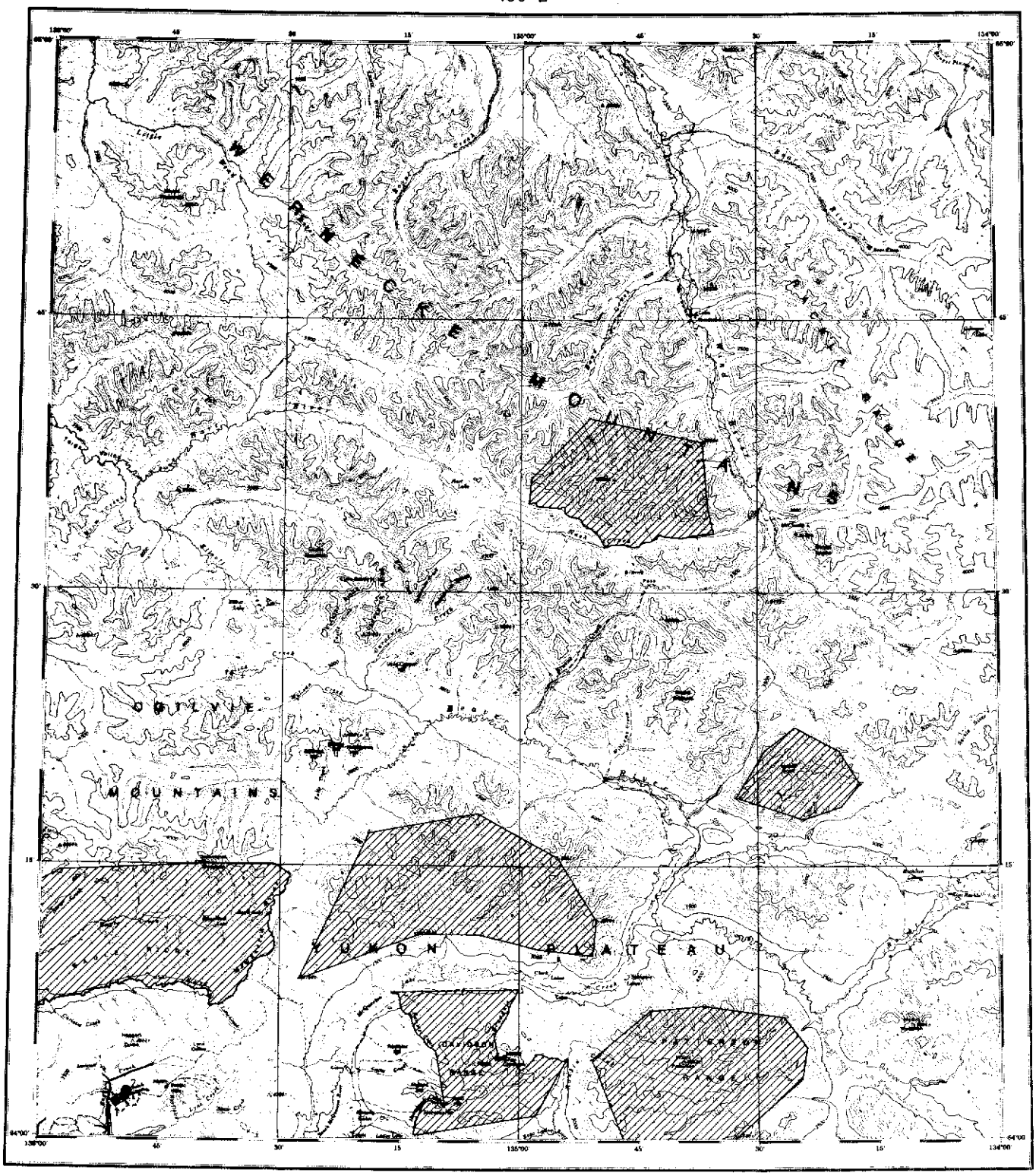
The crew consisted of four miners working a ten hour shift.

Two D8K Cats and two 619 Cat scrapers were used for stripping overburden. The bulldozers were also used to push away and remove the tailings. A 2500 Timber Jack loader was used to feed the sluice box. A 215 Cat excavator was used to dig the drainage ditch and to feed the box. Mechanical and overburden removal problems limited the amount of sluicing done in 1988.

The wash plant was custom built and consisted of a 14 by 10 feet hopper and wet grizzly with 3.5 inch diameter horizontal drill pipe spaced 1 inch apart. The sluice box had one upper run and two live lower runs. The main run contained Hungarian riffles and expanded metal over Coco matting. The lower runs were 30 inches wide and 5 feet long and processed material less than 1/8 inches in size. The processing rate was 50 cubic yards per hour.

Water was pumped out of a reservoir along Russell Creek at a rate of 1200 igpm, using a 6 inch Monarch irrigation pump powered by a 150 HP Jimmy. The effluent was treated in a series of 10 out-of-stream ponds which were not filled to capacity.

The gold was flat and 30% coarse with a fineness of 850. Heavy minerals found in the concentrate included scheelite, pyrite and galena.



NASH CREEK

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

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DUBLIN GULCH **106 D 4 (1)**
Canada Tungsten Mining Corporation Ltd **64°03'N 135°51'W**
1987

This property is located in Dublin Gulch, a small valley off Haggart Creek with a history dating back to 1895. Deposits at the site consist of 50 feet of frozen till over a five to ten foot section of olive-coloured gravels. Bedrock is graphitic schist with interbedded rhyolite and quartzite. The gravels and two feet of bedrock were sluiced.

The work was carried out by three miners and one helper working one shift.

Equipment used for removing overburden included D9H and D8K bulldozers for ripping and pushing, along with a 225 excavator. The D9H Cat was also used to push pay up for the 980C loader which fed the sluice and removed tailings. Some sloping and stabilization work was carried out in the spring in preparation for demobilization. Approximately 68 000 cubic yards of waste material were moved in 1987.

The wash plant consisted of a Derocker and a two run sluice box. Material leaving the Derocker passed over punch plate with 5/8 inch diameter holes. Larger material was directed into a 3 by 26 foot sluice box with 2 1/2 inch angle iron riffles while the minus 5/8 inch fraction dropped through into a second 3 by 26 foot sluice box with 1 1/4 inch angle iron riffles.

Concentrates were washed on a four by eight foot steel table opening at one end into a 10 inch by 8 foot long tom sluice box. Water was supplied to the processing area from the Derocker water supply using a 2 inch hose.

The processing rate was 65 cubic yards per hour with a total of 12 000 cubic yards sluiced. A 3306 Cat engine driving a Berkley 8 by 6 inch pump supplied water from the reservoir to the sluice plant at 2500 Igpm via a 12 inch steel pipeline. Effluent was carried via a drainage ditch to the two settling ponds located on Haggart Creek 2000 feet downstream.

About 8% of the gold found was greater than 10 mesh. "Wire" gold, crystals and angular gold were commonly found with quartz attached. Fineness was approximately 880.

DUBLIN GULCH **106 D 4 (2)**
Dublin Gulch Mining Ltd **64°03'N 135°51'W**
Water Licence: PM88001 **1988**

This property, located on Dublin Gulch 1 mile upstream of Haggart Creek, has been mined in the past by Canada Tungsten. After an uneconomic attempt to recover scheelite from the placer deposits, Canada Tungsten turned to gold mining and returned the property to previous operator Ron Holway. Five cuts were mined in 1988. The first cut was made on the right limit of the creek downstream of the camp. The other four cuts were upstream of the camp and were continuous across the valley. The average depth of the deposit was 20 feet with 2 feet of organic material, 3 feet of gravel, 10 to 15 feet of pay gravels and decomposed schist bedrock. The pay contained large boulders. The sluice section consisted of 10 to 15 feet of channel gravel and 1 foot of bedrock. The stripping to pay ratio was 1 to 3 for ground mined in 1988.

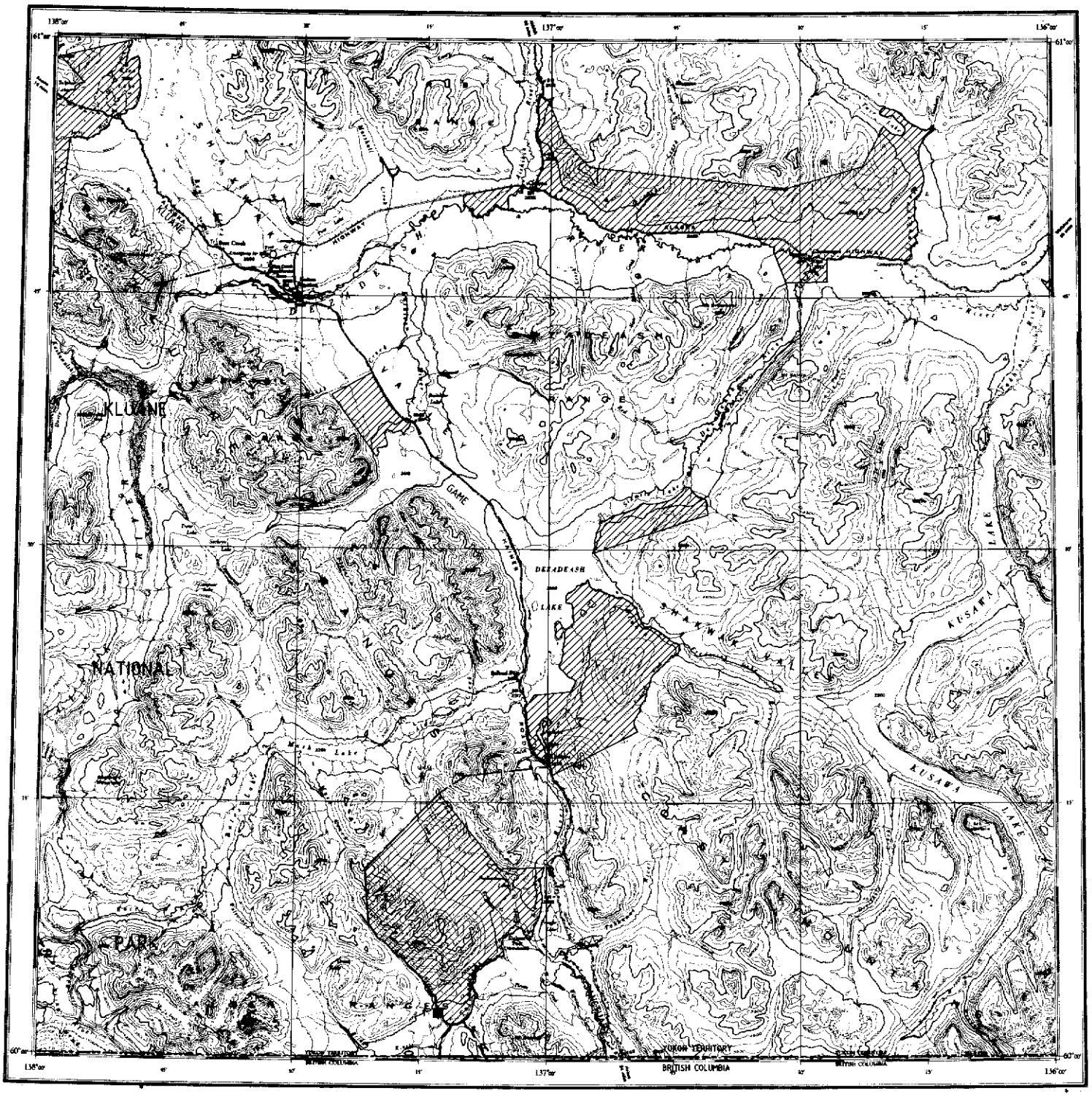
The crew consisted of nine miners and one cook working two ten hour shifts.

Two D9 Cat bulldozers with U blades were used to strip overburden and push pay. A 988 Cat loader with a 6 cubic yard bucket and a 966 Cat loader with a 3 cubic yard bucket were used to load the box and move tailings. A 172 Hitachi excavator with a 1 7/8 cubic yard bucket was used in the cut for drainage ditches and to stockpile pay. A D6 Cat bulldozer was used as a standby.

A Derocker fed a 30 foot long, double run sluice. One run took minus 1/2 inch material through punch plate over 15 feet of Hungarian riffles and 15 feet of expanded metal. The other run took the coarser material over 2 by 2 inch Hungarian riffles. Astroturf, coco matting and expanded metal were used under the riffles. The processing rate was 90 to 100 cubic yards per hour. Approximately 53 050 cubic yards were sluiced in 1988. A total of about 50 000 cubic yards of stripping were moved including preparation work for 1989.

Water was supplied to the spray bars on the Derocker via a 12 inch diameter gravity feed steel pipeline from a medium sized instream reservoir. No water shortage was experienced in 1988. Two large settling ponds in the Haggart Creek valley were used to treat the effluent.

Thirty percent of the gold was larger than 10 mesh including 5% nuggets up to 1 ounce in size. The fineness was 870. Concentrates contained wolframite, hematite, bismuth, jamesonite and scheelite.



DEZADEASH

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

SILVER CREEK **115 A 3 (1)**
G. C. Lee **60°04'N 137°13'W**
1981

References: No previous reference

Claims: P 11578, P 11585, P 11586, P 11577

Source: Summary by T. Bremner of assessment report 120007 by G.C. Lee.

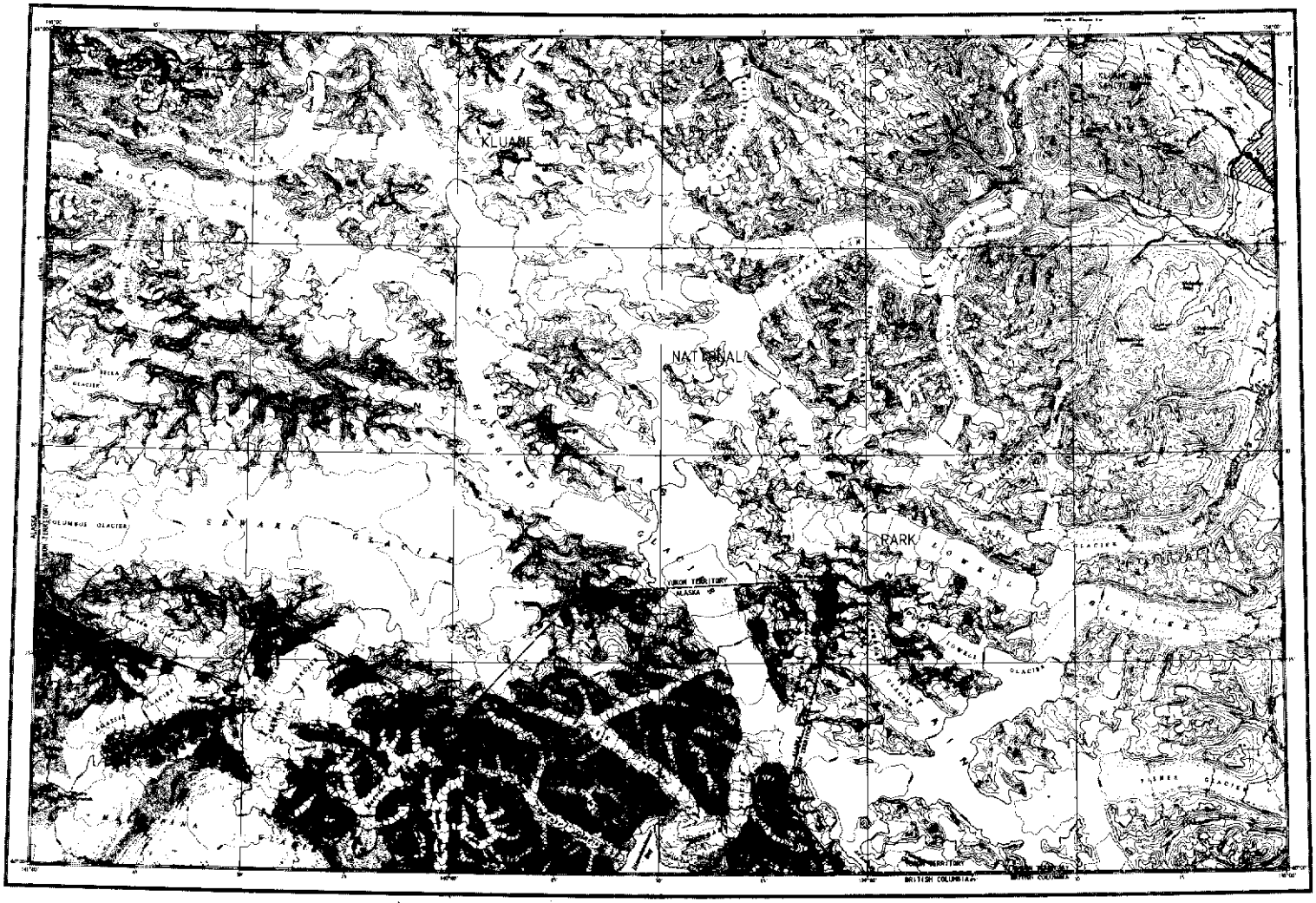
Description:

Claim #4 lies on the northeast side of Silver Creek in a narrow valley 2 miles upstream from the Tatsenshini River. The other 3 claims lie on a flat delta at the mouth of Silver Creek. The stream is incised into thick glacial deposits. Bedrock consists of Carboniferous and Permian limestone and slate.

Current Work and Results:

A magnetometer survey was done to reveal the presence of buried magnetite placers. A total of 16 lines were run perpendicular to the claim line at 65-130 foot intervals and readings were taken every 3-16 feet. On claim #4 sharp magnetic anomalies were detected beneath a gravel bench 130-330 feet north of the creek. No anomalies were detected beneath the other claims.

115 B & C



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

MOUNT ST ELIAS
YUKON TERRITORY

5 0 5 10 15 20 25 30
Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1965 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

KIMBERLY CREEK **115 B 16 (1)**
C. & P. Sawyer **60°52'N 138°04'W**
Water Licence: PM87155R **1988**

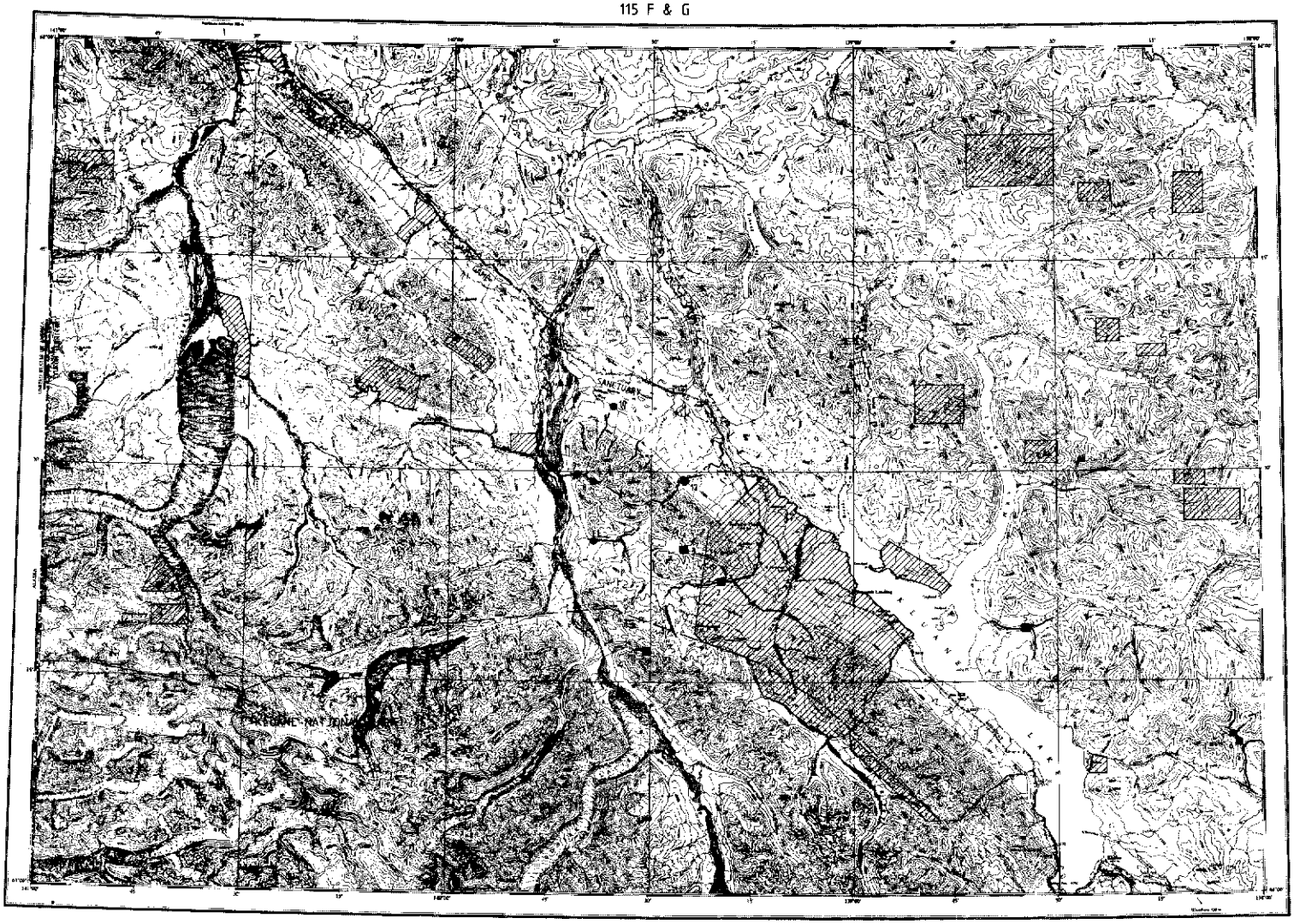
This property is located on Kimberly Creek, a tributary of the Jarvis River. The deposit consisted of 4 feet of thawed gravel on bedrock. All the gravel section and 2 feet of bedrock were processed.

Two miners working a single shift used a D6 Cat bulldozer to stockpile pay, remove tailings and push gravel to the Drott Cruz-Air 40 rubber-tired hoe which fed the plant. A skid-mounted wobble feeder was used to process the gravels.

This wash plant has a small wash box with spray bar. The material moves over 5 chain-driven elliptical shafts which screen the material to minus 1 inch. The gravels drop down to a second wash deck which separates and moves 3/8 inch material to the sluice run and minus 3/8 inch to a jig. The wobble feeder was powered by a 9 HP Hatz diesel. The sluice run was 1 foot wide by 5 feet long with a nugget trap. Water was supplied from an instream reservoir by a 4 by 5 inch Allis Chalmers pump at 300 igpm.

Tailings were stacked along the creek right limit and effluent was treated in an out-of-stream settling pond. One 300 by 60 foot cut was mined in 1988, processed at about 25 cubic yards per hour.

115 F & G



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

KLUANE

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1986. Numbers beside the symbols relate to the text.

FRYPAN CREEK **115 F 15 (1)**
R. Berdahl **62°00'N 140°55'W**
1988

Reference: No previous reference.

Claims: PL 7944

Source: Summary by W.P. LeBarge of assessment report 120105 by R. Berdahl.

Description:

Frypan Creek is a right limit tributary to Tchawsahmon Creek. Bedrock consists of Jurassic conglomerate, greywacke and minor volcanics, Permian greenstone and diorite, and Cretaceous granodiorite.

Current Work and Results:

Exploration in 1988 consisted of the excavation and sampling by hand of several pits, old shafts and trenches. Sandy gravel and boulder layers were encountered followed by fractured dark volcanic and sedimentary bedrock at depths of 3 to 6 feet. Disseminated sulphides and iron staining were evident in bedrock. Some coarse gold and small copper nuggets were panned from an orange clay layer resting upon and within fractures of the bedrock.

BURWASH CREEK **115 G 6 (2)**
D. Pfaff **61°22'N 139°20'W**
1986

Reference: Debicki and Gilbert (1986, p. 68)

Claims: P 38421 - P 38441

Source: Summary by W.P. LeBarge of assessment report 120081 by L. Seiga.

Description:

Depth to bedrock ranges from 20 to 38 feet on the claim group. Boulders, gravel and sand are interlayered with occasional clay bands 8 to 16 inches thick. An intermittent series of benches exposed on the south side of the creek are elevated 10 to 30 feet above the present stream channel.

Current Work and Results:

In 1986 a program of trenching and bulk sampling was conducted on the claims. A total of 7280 yd^3 of gravel was excavated from 4 pits and 2 benches. Selected samples were processed through a Flying Dutchman concentrator. Gold was extracted and weighed. Based on sampling data, auriferous gravel reserves were calculated to be 750 000 to 1 000 000 cubic yards grading 0.0187 oz/yd^3.

QUILL, NICKEL CREEKS **115 G 6 (3)**
M. Nelson **61°25'N 139°26'W**
1987

Reference: No previous reference.

Claims: PL 7633, P 27080

Source: Summary by W.P. LeBarge of assessment report 120109 by G. Lee.

Description:

Quill Creek lies near the Shakwak Trench, flowing northeast across steeply-dipping, fault-bounded Permian volcanics, sediments and ultrabasic rocks. Valley walls are steep and narrow, averaging less than 656 feet across.

Current Work and Results:

In 1987 a magnetometer survey was conducted on 3 grids in the area, with grid spacings of 82 and 164 feet and station intervals of 33 feet. Several magnetic anomalies were detected, most of which were due to bedrock interference.

HOGE CREEK **115 G 5 (4)**
Moraine Gold Mines Ltd **61°17'N 139°30'W**
1969

References: No previous reference

Claims: FIRE ONE, FIRE TWO (P 41377)

Source: Summary by T. Bremner of assessment report 120009 by A. Allan.

History:

Placer mining was first attempted on Hoge Creek about 1920. An old camp and a small shaft remain on the property. The FIRE ONE and FIRE TWO claims were staked by Moraine Gold Mines Ltd and optioned to Scurry-Rainbow Oil Ltd in 1969.

Description:

The property lies at the headwaters of the north fork of Hoge Creek, a tributary of the Donjek River. Bedrock consists of Upper Triassic limestone, calcareous shale and gypsum, which are exposed in the core of a syncline parallel to the stream channel. Depth to bedrock beneath the creek and adjacent benches was not established.

Current Work and Results:

Gold-bearing creek gravel was tested at approximately 100 foot intervals. Samples of 5 cubic yards each were taken using a suction dredge, concentrated using a rocker and re-concentrated by panning. Twenty-eight concentrates were assayed, returning values of up to 1.9 g/t Au and 0.002 g/t Pt. All samples were anomalous in gold.

GLADSTONE CREEK **115 G 7 (5)**
Catear Resources Ltd **61°18'N 138°34'W**
1984

References: No previous reference

Claims: TUT 1-52 (P 11946-65), TANK 1-20 (P 11966-12017)

Source: Summary by R.L. McIntyre from prospectus 120054 by Erik A. Ostensoe.

History:

The creek was discovered and named by miners rushing into Kluane area in 1903. Payable gold was first discovered in 1911 by T.T. Murray and Axel Swanson. The property was dredged by Kluane Dredging Company Ltd from 1952-1955, recovering a reported 5770 ounces of gold. John M. Graham staked the ground in 1970.

Description:

The property is composed of seventy-two creek claims, extending a distance of five miles upstream from the mouth of Gladstone Creek and including the lower two miles of Cyr Creek. The entire valley has been subjected to the Ruby and Nisling ice sheet advances; recent stream erosional processes have reconcentrated gold-bearing glacial tills. The estuary of Gladstone Creek consists of lake sediments from varying Kluane Lake levels, modified by stream action. In upper portions of the creek, a boulder clay layer "hard pan" lies 12-15 feet below surface at an unknown distance above bedrock. Quartz-sericite schist of the Yukon Metamorphic complex outcrops on and near Cyr Creek, and may be the original source of the placer gold. This schist may be broadly similar to the Klondike schist that underlies the Dawson placer gold mining area.

Current Work and Results:

The work for this prospectus involved a site visit and literature search. A bulk testing program involving backhoe testing of several locations was recommended.

4TH OF JULY CREEK **115 G 1 (6)**
Churchill Placers Ltd, **61°11'N 138°05'W**
T. Churchill, Sikanni **1987, 1988, 1989**
Oilfield Construction Ltd
Water Licence: PM88034

The property is located on the 4th of July Creek extending a distance of greater than 2 miles below the left limit tributary of the 12th of July Creek to above the left limit tributary of Snyder Creek. Mining has taken place since 1978. Deposits consist of less than one foot of organics overlying ten to twenty feet of unfrozen gravels on a false bedrock layer (glacial boulder clay).

In 1985 Mr. Churchill conducted a bulk sampling program throughout the property using one D4 Cat to prepare test areas and feed the plant. A 3850 International loader, equipped with an one cubic yard bucket and a 3/8 cubic yard hoe attachment, removed tailings and dug the test pits.

The test plant consisted of a grizzly over the dump box and a three run sluice, each run measuring 18 inches by 10 feet. Sluice water was supplied to the box with a 3 inch Monarch pump. The crew of three processed a total of 4000 cubic yards at a rate of 10 to 20 cubic yards per hour through the wash plant.

Work at the property in 1987 was done by Churchill Placers Ltd and Sikanni Oilfield Construction Ltd, from Alie Pup to 2000 feet below Alie Pup. Equipment included a 235 hoe that fed the plant, a D8H Cat removed the tailings, a D6 Cat for camp use and stand-by, and a 3850 International loader for settling pond and road maintenance. A total crew of eight worked a double shift.

The wash plant consisted of a 44 by 6 foot diameter trommel, turning at 11 RPM and driven by a 30 HP electric motor powered by a 150 Kw Cat generator and a 3406 Cat diesel. The trommel was made up of a 20 foot scrub section followed by four feet of 1/2 inch slots, a 10 foot scrub section, 10 feet of 1/2 inch slots and a section of 3/4 inch and 1 inch crusher screen. Undersized material goes to a bank of six centrifugal drums turning at 150 RPM, two at 20 inch diameter and 8 feet long, and four at 14 inch diameter by 8 feet long.

Water was supplied from a sump, charged by seepage via a 6 inch Flyght electrical submersible, to the trommel at the rate of 1200 igpm. The total section of the 2000 by 30 by 20 foot deep cut was sluiced for a total of 50 000 cubic yards processed in 1987 at about 100 cubic yards per hour.

Churchill Placers Ltd continued the same operation in 1988. Gold was generally flat and rough-edged with occasional quartz. Ninety-five percent was smaller than 14 mesh and fineness averaged 810.

4TH OF JULY CREEK **115 G 1 (7)**
Orion Gold & Mines Ltd **61°11'N 138°04'W**
1986

The operation was located immediately below Alie Pup on 4th of July Creek.

The claims are owned by Mr. T. Churchill and leased to Orion Gold & Mines Ltd. Property manager was Mr. Gus Borger. The first season on the property for Orion was 1986.

The deposit consisted of 2 feet of sand and silt mixed with large angular boulders overlying 6 to 8 feet of gravels on boulder clay.

The crew consisted of eight miners and three support help, working a double shift.

Heavy equipment included a D65E Komatsu bulldozer used to work the cut and feed the hoe, a PC22OLC Komatsu hoe, equipped with a 0.75 cubic yard bucket used to feed the plant, and a Cat 966C loader used to haul tailings.

The wash plant consisted of a dump box with wet grizzly screening material to a 3 run sluice box. Washed material leaving the dump box was screened to minus 4 inches on the static grizzly prior to entering the triple run box. Material less than 1/2 inch in size was screened in the triple run box dump with the minus fraction entering the side runs. The side runs were lined with a combination of 1 inch Hungarian riffles and expanded metal. The main run was lined with 3 inch Hungarian riffles.

The washing rate was approximately 60 loose cubic yards per hour at 500 to 800 igpm. Sluice water was pumped simultaneously by two 6 inch Monarch pumps powered by two 4 cylinder diesel engines. The entire gravel section was sluiced.

Gold was reported to be 815 fine, with 60% smaller than 14 mesh in size.

ARCH CREEK **115 G 5 (8)**
F. Green **61°29'N 139°38'W**
1985, 1986

The property is located 200 feet upstream from the head of the upper canyon on Arch Creek. The deposits present are both thawed and frozen. They consist of sandy gray gravel with numerous boulders. The valley bottom is approximately 150 feet wide, and the gradient of the creek is steep.

Mr. Green worked the property intermittently during both years.

Equipment used included a 310 Case tracked loader and a rental D7 bulldozer, which was used primarily to push off a limited amount of overburden.

The wash plant consisted of a grizzly, single run sluice and dump box. Preparatory work was done only in 1985 with a limited amount of material being sluiced in 1986.

ARCH CREEK **115 G 5 (9)**
O. Leckie **61°30'N 139°42'W**
Water Licence: PM88080 **1988**

This property is located on Arch Creek, a tributary of the Donjek River. The main creek channel deposit is thawed gravels 20 to 25 feet deep on competent bedrock, and bench deposits are frozen. Due to the flooding and high water only testing work was carried out in 1988.

Heavy equipment included a D6C Cat bulldozer which was used to strip overburden on the bench and stockpile pay gravel. A Cat 426 backhoe was used to feed the sluice box. Material was dumped through a 2 inch mesh grizzly into a 6 by 12 foot wash box, followed by a 26 foot long twin run sluice. The 14 inch wide run handled coarse material and a 24 inch wide run handled finer material. Water was supplied from an instream reservoir to the wash plant by a 6 by 6 inch pump powered by a 635 Perkins diesel at 450 igpm. The processing rate was 25 cubic yards per hour. All tailings were to be stockpiled, recontoured and leveled after mining operations were completed. Effluent was treated in two out-of-stream ponds.

Gold was reported as 30% fine-grained and 70% coarse with a fineness of 870.

REED CREEK **115 G 12 (10)**
D. Duensing, R. Holway **61°32'N 139°38'W**
1986, 1987

The current operation is located approximately 2000 feet up from the mouth of the canyon. The operation has advanced approximately 3000 feet upstream in the past two mining seasons.

The stratigraphic section consisted of an average of 8 feet of sandy brown gravels overlying bedrock. Large boulders are present, including some several cubic yards in size. The deposit was frozen prior to stripping. The total gravel section was sluiced as well as 4 feet of bedrock.

The valley, averaging 80 feet wide at the upper end of the canyon, was worked in two separate parallel cuts. While working the first cut, waste material was pushed to the unworked side until bedrock was cleaned. This material, along with any other waste material from the second cut, will be pushed onto the mined out side as the second cut is being processed.

The property continued to be mined on a single shift basis by three miners plus one camp person.

Heavy equipment included a D9G Cat bulldozer used to work the cut, feed the loader and remove tailings, a Cat 966 loader used to feed the box, and a Cat 988 loader which was used to remove tailings and do road work.

The sluicing plant consisted of a wet grizzly, dump box, single run sluice box, and a small side run. The grizzly was 18 feet wide by 10 feet long and screened material to less than 5 inches for the first four feet of its length, and to less than 3 inches in diameter for the remaining 6 feet. Material fell into the dump box and was washed into the 56 inch by 30 foot sluice run, lined with 3 inch riffles spaced 6 inches apart over Astroturf and Coco matting. Near the end of the run, a short section of punch plate with 3/8 inch holes fed a small side run 1 foot by 4 feet, lined with 2 layers of expanded metal over matting. Gravity fed water was delivered to the dump box and spray bar independently by way of a 2 foot diameter pipe and a 6 inch pipe respectively. Sluice effluent is settled in a series of ponds downstream.

Gold fineness ranged from 889 to 896.

Work continued in 1987 with three miners and one helper working one shift. The equipment and wash plant were the same as previously reported. Five cuts were mined, representing 1000 feet of creek, two of which were the total valley width and three that were half the valley width. The six to nine foot sluice section, 90% thawed, was processed at a 50 to 60 cubic yards per hour. Effluent was handled in three downstream ponds. Recovered gold was reported as rougher than the previous year with more quartz attached.

WADE CREEK **115 G 5 (11)**
J. Birdman **61°25'N 139°37'W**
Water Licence: PM87095 **1986**

The property is located on Wade Creek, a right limit tributary of the Donjek River.

Deposits present consisted of 4 to 7 feet of gravels overlying bedrock. Large boulders were present. The total gravel section, plus a small amount of bedrock, were sluiced. A 500 foot section of valley was mined, canyon wall to canyon wall (50 feet wide). The valley was mined in two separate parallel cuts in order to keep the creek out of the cut. Approximately 5100 cubic yards were processed.

During the 1986 season the operation employed three workers, including one camp helper.

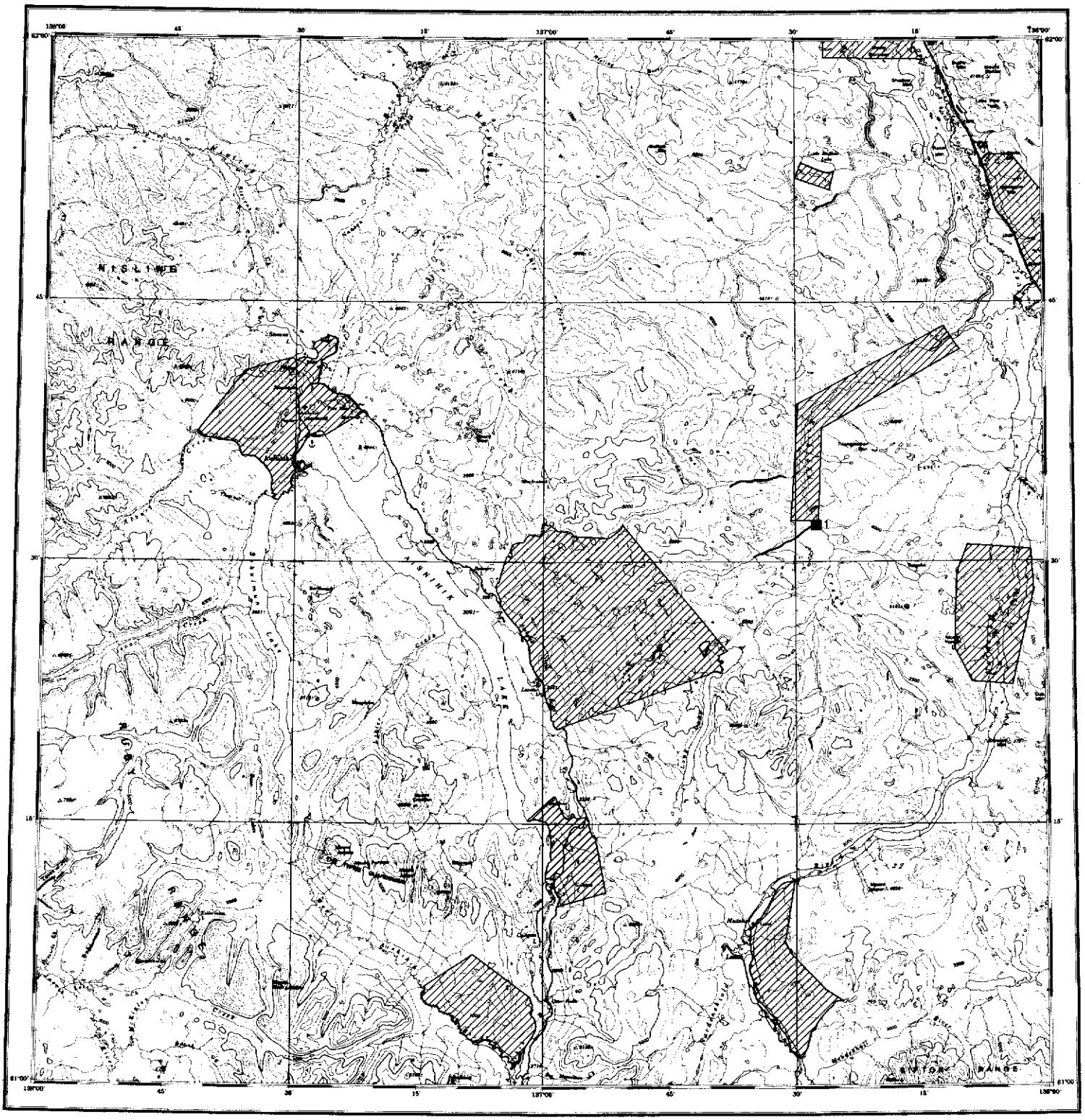
Equipment used on the property included a D8H Cat bulldozer, used to construct a road and push tailings, and a Warner and Swasey model 900A hoe (Cat 235 size equivalent) used to mine the cut and feed the plant.

The sluice plant consisted of a dump box with a grizzly that screened material to minus 4 inches prior to entering a secondary dump lined with expanded metal over matting. The sluice run, measuring 2 feet by 18 feet, was lined with expanded metal and matting. Processing rate was 35 cubic yards per hour or 200 cubic yards per day. Water to the plant was gravity-fed through an 8 inch diameter pipe.

QUILL CREEK **115 G 6 (12)**
W. Pfisterer **61°29'N 139°25'W**
Water Licence: PM87151 **1988**

This property is located at the lower reaches of Quill Creek, approximately four miles upstream from the Alaska Highway. Deposits here are thawed and 12 feet deep and consist of mixed layers of sand, silt and gravel.

Mr. Pfisterer did not sluice this season due to the high water and flooding. Some limited testing was carried out. One miner using a 426 Cat rubber-tired excavator fed the small sluice with standard runs. A 3 inch gas pump supplied water to the wash plant at 350 igpm which processed material at 12 to 15 cubic yards per hour.



AISHIHIK

YUKON TERRITORY

Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

KIRKLAND CREEK **115 H 9, 115 H 10 (1)**
J. M. Graham **61°32'N 136°28'W**
1980

References: No previous reference

Claims: PL 4405

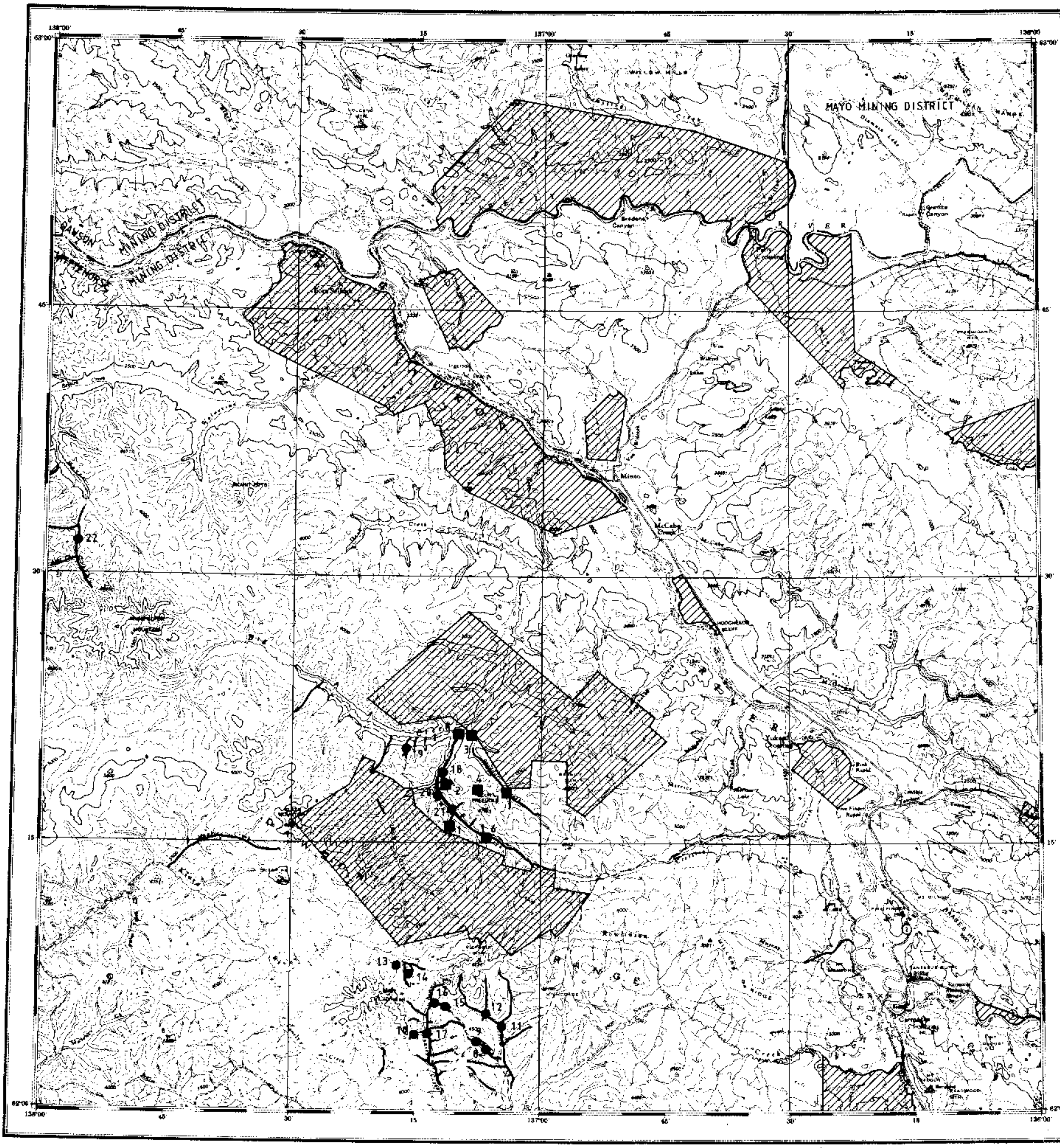
Source: Summary by T. Bremner of assessment report 120010 by D. Runkle and J. Montgomery.

Description:

This property extends 5 miles up an unnamed tributary of Kirkland Creek. Basalt and andesite flows of the Oligocene Carmacks Group volcanics outcrop along the creek, but the stream bed is filled with alluvial gravel. Three old cabins and some old placer workings can be seen on the property.

Current Work and Results:

A hammer seismograph and seismic refraction principles were used to determine the depth of gravel under a 690 foot reach of the stream and adjacent benches. Measurements were taken on 5 lines 100 feet apart, crossing the creek at right angles. On each line, spacing between adjacent stations was 65 feet. Seismic velocities ranged between 1775 and 6562 f/s in the alluvial gravels and 5250 and 14 765 f/s in bedrock. Depth to bedrock was calculated to be 3 to 16.5 feet in the surveyed area.



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

CARMACKS

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

CARIBOU CREEK **115 I 6 (1)**
J.E. Wallis **62°16'N 137°12'W**
1981

References: No previous reference

Claims: PL 4771

Source: Summary by T. Bremner of assessment report 120012 by J.E. Wallis.

History:

Caribou Creek was first prospected for placer gold as early as 1910. In the early 1930's lode gold veins were discovered on Mt. Freegold near the headwaters of Caribou Creek. A small amount of vein gold was recovered in the mid 1930's using a small stamp mill built near the head of Caribou Creek valley.

Description:

Approximately 3-13 feet of black muck, 10-16 feet of boulder clay and 16 feet of gravel overlie bedrock on the lease. The boulder clay is interpreted as slumped material from the adjacent hillsides which dammed the creek causing accumulation of stream silt and muck behind the dam. Traces of extremely fine gold may be panned from the surface gravel in the present stream bed.

Current Work and Results:

Two rotary holes totalling 75.1 feet were drilled near the bottom of the creek. Seven colours were noted in 1 sample from drillhole #1. Because of the slide material encountered the drill results are regarded as inconclusive.

GUDER CREEK **115 I 6 (2)**
G.C. Lee, D. Granger **62°18'N 137°11'W**
1982

References: No previous reference

Claims: P 11825 - P 11826, PL 5603

Source: Summary by T. Bremner of assessment report 120015 by G.C. Lee.

Description:

Guder Creek drains the northwest slope of Mt. Freegold. The creek flows between steep, spruce-covered valley walls with a bench 65-130 feet wide on the northeast bank in the area of the lease. Bedrock consists of Cretaceous granodiorite and hornblende-biotite-chlorite gneiss of possible Permian age. Gold-bearing quartz veins occur at the head of Guder Creek.

Current Work and Results:

A detailed magnetometer survey was conducted in September, 1982 to follow up a 1981 anomaly. A 1970 foot baseline was established with cross lines between 50-246 feet and measurements were read every 16 feet. Strong magnetic peaks were recorded on almost all lines, mostly within 33 feet of the present channel. These anomalies close to the creek are interpreted as possible former channels: other strong anomalies higher up the valley sides are more likely caused by bedrock.

KITCHENER (SEYMOUR) CREEK **115 I 6 (3)**
CREEK **62°22'N, 137°08'W**
G. Harris **1983**

References: No previous reference

Claims: PL 6628

Source: Summary by T. Bremner of assessment report 120014 by G.C. Lee.

Description:

Kitchener (Seymour) Creek flows north into Big Creek, draining the north slope of Mt. Freegold. Placer lease PL 6628 is located at mile 253 on the Freegold Road and extends upstream 10 miles from the Kitchener-Big Creek junction. At the survey site the property covers low-level forested benches 655-985 feet wide immediately upstream of a canyon. Overburden has previously been stripped from the north part of the lease. Bedrock consists of hornblende-biotite-chlorite gneiss of possible Permian age. Gold-bearing quartz veins outcrop upstream on the north slope of Mt. Freegold.

Current Work and Results:

Following a 1982 magnetometer survey upstream, which successfully outlined a buried gold-magnetite placer, a detailed magnetometer survey was carried out on the Harris property in 1983. The baseline was tied in to the 1982 baseline and cross-lines were run at 165 foot intervals. Readings were made on the cross-lines every 16 feet. A pattern of elongate magnetic highs, aligned roughly parallel to the present creek, was outlined beneath the bench gravels. The 1983 anomalies showed similar character to the 1982 anomalies but had weaker amplitudes.

LIBERTY CREEK **115 I 6 (4)**
L. Lebedoff **62°17'N 137°06'W**
1983

References: No previous reference

Claims: P 22997

Source: Summary by T. Bremner of assessment report 120018 by G.C. Lee.

Description:

The claim lies on the upper part of Liberty Creek at about 3000 ft elevation. Bedrock consists of hornblende-biotite-chlorite gneiss of possible Permian age. Gold-bearing quartz veins are known to occur at the head of Liberty Creek.

Current Work and Results:

In 1983 a magnetometer survey was carried out on the property. A 1475 by 1805 foot grid was established using the claim line as a baseline. Crosslines were 165 feet apart and measurements were taken on the crosslines at 8.2 foot intervals. Two anomalies which may be caused by magnetite-rich placer deposits were found beneath the low-level benches, and one was indicated beneath the active channel.

SEYMOUR CREEK **115 I 6 (5)**
G. Lee **62°22'N 137°08'W**
1982

Reference: Deblcki and Gilbert (1986, p. 80)

Claims: P 22607, P 17224, P 17214- P 17217, P 22996

Source: Summary by W.P. LeBarge of assessment report 120114 by G.C. Lee.

Current Work and Results:

Exploration in 1982 consisted of a total field magnetometer survey. Measurements were taken at station intervals of 33 feet along lines spaced 165 feet apart on the 3940 foot baseline. Several magnetic anomalies were detected which may represent buried concentrations of magnetite and associated placer gold.

SEYMOUR CREEK **115 I 6 (6)**
J.E. Wallis **62°15'N 137°07'W**
1981

References: No previous reference

Claims: PL 4770

Source: Summary by T. Bremner of assessment report 120011 by J.E. Wallis.

Description:

Seymour Creek drains the southwest slope of Mt. Freegold. This property extends up Seymour Creek 5 miles from the junction of Seymour and Kitchener Creeks.

Current Work and Results:

Sixteen 6 inch rotary holes totalling 736 feet were drilled to bedrock. The drill penetrated an average of 2 feetof black muck and 40.7 feet of gravel overlying bedrock. In some drillholes, the gravel contained lenses of coarse sand and occasional boulders.

STODDART CREEK **115 I 6 (7)**
G. MacDonald, Dart Placers **62°18'N 137°03'W**
1983

References: No previous reference

Claims: PL 6663, P 23402 - P 23419, P 25706 - P 25709, P 11723 - P 11734

Source: Summary by T. Bremner of assessment report 120013 by G.C. Lee.

Description:

Stoddart Creek drains the northeast flank of Mt. Freegold and flows northwest into Big Creek. The properties cover low benches which vary in width from a few feet to 338 feet. High level bench gravels occur up to 985 feet from the creek. Bedrock in the area consists of Upper Triassic granodiorite and hornblende-biotite-chlorite gneiss of possible Permian age. Two areas have been stripped by previous placer mining.

Current Work and Results:

Following a 1982 magnetometer survey on adjacent Seymour Creek, which successfully outlined a buried gold-magnetite placer, a magnetometer survey was carried out on Stoddart Creek in 1983. Eight baselines were established in different areas on the properties and readings were taken on cross lines mostly at intervals of 15 feet. Linear anomalies subparallel to the present stream channel were recorded beneath low level benches in four of the eight areas. Two other areas showed anomalies beneath high-level benches which could be part of a high-level buried channel system. One of the high level anomalies covers a previously-excavated trench from which gold was recovered by panning.

BACK CREEK **115 I 3 (8)**
F. & G. Cochrane **62°04'N 137°04'W**
Water Licence: PM87011R **1986**

The current operation is located on the mid-section of Back Creek, approximately 2 miles upstream of its confluence with Victoria Creek.

Deposits present are 15 feet deep with 2 to 3 feet of silt, on 12 feet of gravel, overlying boulder clay. The lower 6 feet of gravels were sluiced.

Equipment on the property included one D-7 17A Cat cable bulldozer used to strip and mine the cut, a Hough model 100 loader, equipped with a 6 cubic yard bucket used primarily to feed the plant and haul tailings, and a model 550 Ford wheeled tractor, equipped with a 1 1/8 cubic yard bucket and Hoe attachment used as a standby machine to the Hough.

The washing plant was the same as described in 1984: dump box, trommel 40 inches diameter by 15 feet long set at a gradient of 1/2 inch per foot, and single sluice run 24 inches by 24 feet. Grade on the run was set at 3/4 inches to the foot. The engine driving the trommel in 1984 was replaced with a Ford 4 cylinder diesel.

Washing rate was approximately 20 cubic yards per hour. Water for sluicing was supplied at a rate of 1000 igpm by a 6 inch Gorman Rupp, powered by a 4 cylinder Ford diesel. The instream recycle pond was situated immediately below a large presettling pond located immediately below the sluice plant.

Overflow from the recycle pond was settled in a series of 2 ponds downstream. Mr. Cockrane reports having mined 1.5 claim-lengths over the four mining seasons from 1982 to 1986.

In 1988, when the operation moved to Nansen Creek, the wash plant was changed to a 25 foot trommel with a standard sluice run of 4 feet by 20 feet. The Ford tractor P.T.O. powered the trommel. The deposit mined had a depth of 20 to 25 feet and effluent was treated in an out-of-stream pond with great success. Four miners worked one shift.

BACK CREEK **115 I 3 (9)**
J. and B. Coghlin **61°04'N 137°07'W**
Water Licence: PM87098A **1987, 1988**

This property is located on Back Creek about 2 1/4 miles upstream of its confluence with Victoria Creek and immediately upstream of F. Cockrane's operation. The deposit present consisted of 2 to 3 feet of frozen black muck, over 13 to 16 feet of gravel on larger angular boulders and clay. The lower 3 to 4 feet of gravels and 1 to 2 feet of clay was sluiced.

The crew consisted of two miners and one helper working a single shift. A D7F bulldozer, with U blade, was used to rip and push the overburden and stockpile pay for the John Deere 644 loader, which fed the plant and removed tailings.

Water was supplied to the wash plant from an instream reservoir by an electric 6 inch Flyght pump, powered by a 453 Jimmy/55 KVA generator at a rate of 1000 to 1200 igpm. Three cuts were mined; two side-cuts measuring 20 by 150 feet each and one upstream creek cut at the end of the season. The processing rate was 40 cubic yards per hour. Effluent was treated in a 100 by 100 by 15 foot recycle pond and presettling pond.

Gold was described as being angular, flat and occasionally porous. Fifty percent was greater than 16 mesh and 20% was between 60 and 100 mesh. Fineness was reported as 836.

The operation continued processing in 1988.

DISCOVERY CREEK **115 I 3 (10)**
L. Tricker **62°05'N 137°12'W**
Water Licence: PM87138 **1988**

This property is located in Discovery Creek approximately 1.2 miles upstream of its confluence with Nansen Creek.

Three miners working one shift used a D7 Cat bulldozer and a rubber-tired hoe with a front bucket to mine the 30 by 150 foot cut.

The wash plant was fed by the hoe at 20 to 40 cubic yards per hour and consisted of a wet dump box running into a 16 foot trommel. The first 10 feet of the trommel was used as a scrubber and the last 6 feet was used to screen the material before it entered a standard 4 by 20 foot sluice run. A 6 inch pipe gravity fed the water for the wash plant from an instream reservoir to the dump box. Effluent was treated in an instream settling pond.

EVA CREEK **115 I 3 (11)**
D & H Placers **62°05'N 137°05'W**
Water Licence: PM88056 **1988**

This property is located at the junction of Eva Creek and Victoria Creek, tributaries of the Nisling River. The deposit mined consisted of 1 to 2 feet of frozen overburden over 8 to 15 feet of frozen gravels on clay. A crew of four used a D8H Cat bulldozer and a Cat 950 rubber-tired loader to mine one 50 foot by 200 foot cut.

The wash plant processed 50 cubic yards per hour and consisted of a feeder hopper, an oscillating

screen deck, and a standard 2 by 20 foot sluice box. Water was supplied to the wash plant at 600 igpm from an instream reservoir using a 4 by 6 inch pump, powered by a 3 cylinder diesel.

Effluent was treated in a series of five out-of-stream settling ponds. Tailings were removed by the loader to the left limit where they were stockpiled for future recontouring.

EVA CREEK **115 I 3 (12)**
L. Csoma **62°06'N 137°08'W**
1986

The operation was located 0.25 miles upstream of the left fork of Eva Creek, which lies 2.5 miles upstream of the confluence of Eva and Victoria Creeks. Access is from the ridge road separating the headwaters of Victoria and Nansen Creeks.

The deposit consisted of 5 feet of silt overburden on 10 feet of rusty stained gravels overlying boulder clay. The gravel section is banded with layers of silt and sand with some slide rock present. The total gravel section was sluiced.

Les Csomas' first year on the property was 1986. Heavy equipment used included a John Deere 410 loader equipped with a 1.25 cubic yard front bucket and a 0.25 cubic yard hoe bucket used to construct drainage ditches and test pits, a 1.75 cubic yard capacity Clarke Michigan wheeled loader, used to feed the plant, and a D7 17A Cat bulldozer used to feed the Clarke loader and push tailings.

The wash plant consisted of a trommel screening unit and single run sluice. The trommel, 36 inches in diameter by 11 feet in length, acts as a scrubber the first 8 feet of its length. Screening takes place in the final 3 feet. The barrel here is lined with two layers of screen. The inside one, screening to minus 1 inch, is heavier gauge and is designed to take the shock and wear of the oversize material. The outer expanded metal screens the material to minus 1/4 inch. This fraction enters a single run 2 by 8 foot sluice lined with expanded metal over long fibre matting. The trommel was driven by truck tires attached to a standard differential, powered through a reduction gear box by a 2 HP electric motor. Electric power was supplied by a Centennial 4 cylinder diesel.

The sluice run was shunted in 1/2 inch lengthwise movements (belt driven) by an 8 HP Briggs and Stratton engine. Production was rated at 20 cubic yards per hour with water usage of 550 igpm. Wash water was pumped from a small reservoir upstream by a 4 by 8 inch Petter pump powered by an Isuzu engine. A second sluicing operation was being set up one mile downstream.

Two miners working a single shift continued on the property in 1987. The cut mined consisted of 26 feet of frozen muck and silt over 10 feet of pay gravels on bedrock. The D7 17A bulldozer and Clarke Michigan loader were again used. The wash plant was changed to a 6 by 12 foot dump and 2 by 20 foot single run sluice with 2 inch riffles and lined with Astroturf. A 4 by 8 inch Petter 2 cylinder diesel pump and a 4 inch Isuzu 4 cylinder diesel supplied 450 igpm to the wash plant which processed 1000 cubic yards at approximately 20 cubic yards per hour. Water was pumped from an instream reservoir and had to be recycled towards the end of the season. Effluent was handled by two small ponds in series.

Gold was found to be mostly fine-grained, with some coarse nuggets associated with quartz. Fineness averaged 790.

KLAZA RIVER **115 I 3 (13)**
(UNNAMED TRIBUTARY) **62°09'N 137°12'W**
T. Tullis **1986, 1987, 1988**

The current operation is located approximately 1/2 mile upstream from the Klaza River on a small left limit tributary. The tributary valley at this point is estimated to be 500 feet wide with gentle sloping walls.

Access to the property was upgraded to four-wheel drive standards in 1986 with partial funding obtained through the Roads to Resources Program.

The deposit consists of approximately 2 feet of organic material underlain by 10 to 12 feet of angular gravels which rest upon a red clay layer. The gravels contain large pieces of angular rock, some exceeding 2 feet square in size. The total deposit is frozen.

Stripping upstream of the cut has been done to facilitate thawing of future cuts. The total gravel section plus one foot of clay was sluiced.

Mr. Tullis worked the property on a single shift basis with Mr. Don Banks. In addition to labour, Mr. Banks supplied one piece of equipment (D6 bulldozer).

Heavy equipment on the property included a D6C Cat bulldozer used to prepare the cut, stockpile pay for the loader and push tailings, a Cat 950 loader used primarily to feed the plant, and a 3300 TT Hi-Hoe with a 7/8 cubic yard bucket for testing and ditching.

In 1984 the washing plant, which was used on Nansen Creek, consisted of a hopper/conveyor-fed vibrating screening deck and 2 oscillating sluice runs, one lined with riffles over Astroturf, the second with double layers alternating with single layers of expanded metal over Astroturf. The only modification since 1984 was the addition of a "live bottom" to the sluice trays. A 2 HP electric motor provided the oscillating motion. All electric power to the plant was supplied by a 50 KW generator set, powered by a Cat D-3800 4 cylinder diesel.

Production was rated at 20 cubic yards per hour with water usage of 500 igpm, pumped by a 6 inch Gould and powered by a 20 HP electric motor.

Sluice water was impounded in a small, out-of-stream reservoir immediately above the sluice operation. Sluice effluent was treated in 2 settling ponds in series, each 100 feet square.

Work on the property continued in 1987 with few changes. The deposit depth of 18 feet consisted of a 10 foot sandy muck layer on 5 feet of mixed angular gravel over a 3 foot mixed clay and boulder layer. Bedrock was decomposed sandy red granite. The sluice section averaged 6 feet in depth. The crew consisted of one to three miners and one cook. A 8240 Terex Cat was used for stripping, stockpiling for the loader, and to push tailings. Production was rated at 20 to 24 bank cubic yards per hour with 400 igpm used. One cut was mined with approximately 5000 cubic yards sluiced. In 1988 a new trommel wash plant was employed, which included a feeder hopper and manifold spray bar.

Gold was described as rough with a fineness of 760. Concentrates also contained abundant heavy black sand and quartz.

KLAZA RIVER **115 I 3 (14)**
(UNNAMED TRIBUTARY) **62°08'N 137°18'W**
W.D.P. Placers, W.D. Perry **1987, 1988**

This property is located on a tributary of the Klaza River. The deposit present consisted of 6 feet of black frozen muck interspersed with sand seams and quartz and oxidized granodiorite boulders over 12 feet of mixed gravel, angular rock, clay and sand on decomposed bedrock.

Two miners and one helper working a single shift used a D6 Cat to strip, remove tailings and stockpile pay for the 544 B John Deere loader which fed the plant.

The wash plant consisted of a 5 by 18 foot trommel and feeder hopper with manifold spray bar, and a 3 inch spray bar ahead of the screening, and a 4 by 21 foot sluice run. The trommel contained 14 feet of "scrubber" and 4 feet of 1 inch screen. The sluice tray consisted of 4 feet of slick plate followed by 16 inches of riffles and another foot of slick plate. The 12 foot gravel section was processed at the rate of 16 cubic yards per hour using 600 igpm supplied from a ground-charged recycling pond using three 3 inch Yamaha pumps.

Effluent was treated in a pre-settling area and two 100 by 200 foot ponds.

The gold was described as porous and occasionally flattened, with 70% less than 35 mesh in size. The fineness was reported as 830.

The operation continued in 1988 with a crew of two using the same equipment.

NANSEN CREEK (EAST FORK) **115 I 3 (15)**
A. Dendys **62°06'N 137°12'W**
1988

This property is located on the east fork of Nansen Creek, a tributary of the Nisling River. Deposits here are frozen and 25 to 30 feet deep.

The crew of three miners and one cook worked two shifts using a 988 rubber-tired Cat loader and a D8H Cat bulldozer.

The wash plant consisted of a 4 by 8 foot long shaker system with standard sluice. Water was recycled from an instream settling pond, using a standard 6 inch pump powered by a 4 cylinder diesel to the wash plant at 1500 igpm.

Two cuts measuring 100 by 200 feet were processed at a rate of 80 to 100 cubic yards per hour. Tailings were stacked with the 988 loader. Effluent was treated in two instream settling ponds.

The gold was described as 90% fine-grained and 10% coarse-grained.

This operation will not be returning in 1989.

NANSEN CREEK **115 I 3 (16)**
(EAST FORK) **62°06'N 137°12'W**
G. Ireland **1986**

The operation was located on the east fork of Nansen Creek immediately below the confluence of the south fork, 200 feet upstream of the 1984 location.

The frozen deposit was comprised of 2 to 3 feet of organic material overlying 6 feet of gravels, overlying boulder-rich clay. The organic material was stripped off and the total gravel section sluiced. Along with the gravel a considerable amount of clay was sluiced in order to pick up the gravel pockets in the clay troughs.

Mr. Ireland worked the property in 1985 with the help of one employee, and in 1986, Mr. Ireland worked alone.

Heavy equipment on the property included a D8H Cat bulldozer used to strip ground and stockpile pay, and a Cat 955 track loader used to feed the plant from the stockpile and haul tailings. During periods that the bulldozer was down this machine took care of all mining chores.

The sluice plant consisted of a dump box, trommel screening unit and double sluice trays. The trommel, 4 feet in diameter by 24 feet in length, acted as a scrubber for the first 16 feet. Grade was set at 1.5

inches to the foot. Material screened to minus 1 inch fed two parallel, 2 by 16 foot sluice trays. One tray was equipped with 2 inch angle riffles over long wire Monsato matting, while the other was lined with expanded metal over Monsato. The trommel turned at a rate of 12 RPM, driven by tires mounted on a truck differential, powered through a reduction box by a 4 cylinder gas engine, running at 1800 RPM.

Material fed into the dump box (fabricated from the box of a dump truck) was washed into the trommel at a rate of 30 to 40 cubic yards per hour with 500 igpm. Water was delivered via five spray nozzles by a 4 inch pump, powered by a 6 cylinder gasoline engine.

Gold was reported to be entirely fine-grained.

RUSK AND DISCOVERY CREEKS — **115 I 3 (17)**
M. Woods — **62°04'N 137°13'W**
Water Licence: PM87142 — **1987, 1988**

This operation is located on Rusk and Discovery Creeks, tributaries to Nansen Creek. The deposit here is 30 feet deep. Three miners and one cook worked a single shift in 1987, and this was doubled to six miners working two shifts in 1988. Equipment on site included an Hitachi which fed the trommel and a small Michigan loader used to remove tailings. One 150 by 500 foot cut was mined.

The wash plant consisted of a 4 by 30 foot long trommel with a small hopper and three small sluice runs. Fifty cubic yards per hour were processed. Water was supplied from an instream reservoir using a 6 by 6 inch pump powered by a cylinder diesel. Effluent was treated in an out-of-stream pond.

GUDER CREEK — **115 I 6 (18)**
G. Lee — **62°18'N 137°11'W**
1985, 1986, 1987

This property is located on Guder Creek, approximately 3000 feet upstream from the centre of Seymour valley. The valley is narrow here with steep valley sidewalls and a steep creek gradient. Water is in short supply.

The frozen deposits present are approximately 15 to 18 feet deep consisting of 1 to 3 feet of muck, silt and volcanic ash overlying 12 to 15 feet of silt, sand and banded gravels containing large sub-angular boulders. Large boulders lay deep into decomposed bedrock.

Testing work was first done on the property in 1984, at which time shafting and drifting was carried out. Preparation work was done in 1985 with mining commencing late in the fall. A total of 400 cubic yards was sluiced.

In 1986 a single cut 200 feet long by 50 feet wide was begun. Mr Lee, at seasons end, reported having cleaned 40 to 50 feet of the downstream cut floor before freezup. Three hundred feet of valley length rim to rim had been stripped upstream of the cut to facilitate thawing. The sluice section consisted of approximately the lower 1/2 of the gravel section and 1 to 2 feet of bedrock.

A total of three persons worked the property on a double shift basis, (2x9 hours). Mr. Lee worked an overlapping shift, and sluicing took place 16 hours daily.

Heavy equipment on the property included a Cat 933 Traxcavator used to strip, work the cut and stockpile pay for the loader. A Cat 930 wheeled loader equipped with a 2.5 cubic yard capacity bucket was used to feed the plant and haul tailings.

The sluice plant consisted of a hopper, vibrating single deck screen and three run box. The twin belt driven vibrating screen deck, measuring 4 feet in width by 5 feet in length, is powered by a single cylinder 15 HP gasoline engine. Material screened to minus 1 inch enters a dump box screening the minus 1 inch fraction to minus 1/2 inch. The undersize fraction enters either of two side runs 6 inches wide by 5 feet long, lined with light expanded metal over matting, for sluicing. The 1/2 -1 inch fraction was sluiced in the 15 inch by 5 foot long main run lined with heavy expanded metal over matting. Discharge from the three runs entered a final in-line sluice, 16 inches by 8 feet long.

Washing rate averaged 8 cubic yards per hour with 100 igpm. Evidently the plant could efficiently handle 20 cubic yards per hour under ideal water conditions. Total creek flow was impounded in a small instream reservoir 1000 feet upstream of the plant. From there water was delivered by gravity to the plant via a pipeline at an estimated head of 50 feet plus. The head provided enough pressure to operate two spray bars.

Work on the property in 1987 was carried out with two miners. A D6 9U Cat was added to work the cut. The processing rate was increased to 10 to 15 cubic yards per hour using the same wash plant and gravity-fed water. Deposits averaged 12 to 18 feet. Overburden of one to six feet were hydraulicked off using a 2 1/2 inch hose with a one inch nozzle and the entire gravel section was processed. Effluent was treated in two ponds in series.

Gold was reported as varied in character with a fineness of 838. No activity was reported in 1988.

REVENUE CREEK — **115 I 6 (19)**
K. Djukastein — **62°20'N 137°16'W**
Water Licence: PM87120B — **1986, 1987, 1988**

This property is located along Revenue Creek, approximately 4000 feet upstream from its confluence with Big Creek.

The deposits present were 25 to 30 feet deep, consisting of 15 to 20 feet of muck overlying approximately 10 feet of gravels. The sluice section consisted of 9 to 12 feet of gravels plus 2 feet of bedrock.

In 1985 Mr. Djukastein and one helper continued to work the property on a single shift basis, taking two cuts, each measuring 250 feet by 50 feet. This repreesented 500 feet of creek length, rim to rim, mined. The upper end of the final cut was located approximately 200 feet below the forks. The 1985 cuts were stripped hydraulically in the summer/fall of 1984, with water pumped from Big Creek to a 3 inch nozzle monitor at the cut. The muck was settled in the large single pond at the entrance to the Big Creek valley.

A D7E Cat bulldozer was used to finish stripping and feed the sluicing plant. Tailings were removed by a Cat 966 B loader.

The wash plant consisted of a Derocker screening unit and a single run sluice box 48 inches wide and 30 feet long. (Editors note: Klaus Djukastein is the inventor of the Derocker). Material was fed to the Derocker at a rate of approximately 80 cubic yards per hour. An estimated 50% of the material was oversized, or over 2 inches in diameter. Undersized fell into the sluice run which was lined by 1 3/4 inch riffles, set four inches apart and tipped back at an angle of 13°, over expanded metal. No matting was used. Narrow, elongated pieces of iron were also welded vertically to the tops of the riffles to create areas to trap lightweight nuggets with quartz attached. The gradient of the sluice run was 1 3/4 inches per foot. Water for sluicing was supplied by a ditch approximately 4000 feet long, which brought water from Big Creek at grade to the mouth of Revenue Creek. The water was pumped by a 6 by 8 inch Pacco centrifugal pump powered by a 471 Jimmy diesel engine through 3000 feet of 10 inch pipe to the sluice plant at a rate of 1500 igpm. A second 6 by 8 inch Pacco pump and Jimmy 471 diesel were added in "line" for hydraulic stripping. The total number of sluice hours for the season was 150.

In 1986 men, equipment and mining method remained the same. However, unlike past seasons where two cuts were generally taken, only one 300 by 80 foot cut was taken. The cut headed slightly upstream of the forks, widening to 150 feet to take in both forks. Bedrock on the right fork was high with the total deposit being only 8 feet deep. The bedrock level of the left fork was consistent with the slope profile of the creek bedrock below the forks. Ground depth at the left fork east cut wall (at the forks) was 30 feet. The section consisted of 6 to 10 feet of black muck over 20 to 24 feet of gravels with muck stringers. Bedrock was level into the wall at the cut edge.

Pay along the wall suggested the possibility of the pay channel heading eastward, into the right valley limit (of the right fork). An effort was being made to scrape away at the frozen east bank with the D7E bulldozer to determine the channel direction. Gain was slow, representing 3 inches daily. Shafts sunk on the left fork, 300 feet above the forks, revealed no "pay" streak. Shafts sunk 1000 feet up the right fork revealed the same. Total number of sluice hours for 1986 were 75, half of those reported during 1985.

Gold from this property is reported to be almost entirely fine-grained. The few "nuggets" which were present contained batches of wiry gold attached to quartz pebbles.

In 1988 the operation was plagued with breakdowns and very little mining was accomplished. Two miners using a D8H Cat and a 980 rubber-tired loader worked the cut. A Derocker and standard 3 by 12 foot sluice processed gravel at a rate of 80 to 120 cubic yards per hour using 2000 igpm.

SEYMOUR CREEK **115 I 6 (20)**
D. Dodge **62°18'N 137°12'W**
1986, 1987, 1988

The current operation is located on Seymour Creek, approximately 3700 feet above the confluence with Bow Creek.

Deposits present are 20 feet deep and frozen. They consist of 7 feet of muck and ash overlying 13 feet of gravels. The muck is believed to have been transported into the valley by a right limit tributary directly across from the cut. The muck was stripped off in the spring with water from a 3 inch tipped monitor. The sluice section consisted of the lower 5 feet of sandy fine-grained gravels and bedrock. Upper gravels (coarse-sized) were pushed off when thawed. No ripping was done.

A single cut 200 feet square was worked, favouring the valleys' right limit. A single shift was worked by Deric, his wife and one employee. Heavy equipment on the property included a D7 Cat bulldozer, used to work the cut and feed the plant, and a Cat 980 B loader, used primarily to haul tailings.

The sluice plant consisted of a 14 foot wide Derocker classifier (powered by a 3 cylinder Lister diesel) and dual sluice trays. The Derocker had been modified to classify the material to minus 1 inch. Oversize was reported to comprise 20% of the volume washed. The trays, measuring 48 inches by 20 feet, were set at a grade of 1 3/8 inches to the foot. The upper half of the tray lengths were lined with 1 1/4 inch riffles spaced 8 inches apart to keep them from packing. The lower portion was lined with identical riffles, only 5 inches apart. All riffles were run directly on steel with no matting.

Water was delivered to the plant from a small out-of-stream reservoir via a 10 inch pipeline, at a rate of 1500 igpm. The 8 by 10 inch pump was powered by a Jimmy 471 (4 cylinder) diesel, run at 1/4 throttle.

Sluice effluent was settled in a series of 3 ponds immediately downstream in the area previously mined out by the Yardley family.

Reportedly, much black sand was present, estimated to be 6% of the volume of gravels. Ninety percent of the black sand was said to be magnetic. Cobbles of magnetite to 4 inches in size were common, with some 12 inches in diameter being found.

The sluice trays were cleaned every day necessitated by the large percentage of heavy concentrate.

In 1987 operations resumed with three miners and one cook working a single shift. A TD 15 was added to feed the wash plant that remained the same except for the addition of expanded metal in the throat and Nomad matting under the riffles. Two 200 by 300 foot cuts were worked, comprised of 3 feet of frozen muck over 17 feet of gravels on granite bedrock. Overburden was again monitored to the two settling ponds. The sluice section included the bottom 3 feet of fine gravels and 2 feet of bedrock. Water was supplied by two 10 inch pumps powered by a 471 Jimmy from a small out-of-stream pump reservoir, at a rate of 1500 igpm to the wash plant. The processing rate was about 50 cubic yards per hour. Work continued in 1988 with the addition of a D9H bulldozer.

Gold recovered was described as well worn with 50% less than 20 mesh in size. Fineness averaged 860. Some larger gold had quartz attached. Abundant magnetite was found on bedrock.

SEYMOUR CREEK **115 I 6 (21)**
Murnion United **62°19'N 137°11'W**
1986

The property is located on Seymour Creek near the mouth of the left limit tributary Kitchener Creek, approximately 1.75 miles upstream of the Seymour-Big Creek confluence. The first year of operation was 1986. The operation was run by four persons, including one in camp, on a single shift basis.

Deposits present averaged 11 feet deep, with 50% of the cut area frozen. The total section was gravel excluding a thin layer of organic material on the surface. The sluice section was comprised of the lower 2 feet of gravels and 2 feet of bedrock. The upper foot of bedrock was described as highly decomposed.

Heavy equipment on the property included one D8 Cat model 24 cable bulldozer used to work the cut and feed the plant, one D6 9U Cat bulldozer used to blade tailings, and a Case model 880 hoe used to work the edges of the cut and feed the bulldozer feeding the plant. The hoe was also used for putting the drain in.

The washing plant consisted of a trommel screening unit and single sluice run. The 52 inch diameter trommel was 34 feet in length with the forward 24 feet being scrubber, followed by 4 feet of screen, followed by 6 feet of exhaust. Material screened to minus 1 3/4 inches in size entered the 36 inch by 18 foot run. The run was lined for the first 5 feet of its length by punch plate over expanded metal, followed by 3 inch Hungarian riffles for the next 8 feet, followed by expanded metal for the remaining 5 feet. Underneath the riffles and expanded metal laid either Nomad or Coco matting.

Processing rate was 65 cubic yards per hour, with a water use of 800 igpm.

Wash water was pumped directly from a 300 foot diversion inlet of Seymour Creek with a 6 by 8 inch Cat 3400 pump package. As the cut lowered in depth it was found that the drain depth was insufficient. The deepest area of the cut was allowed to fill with water to a depth where it could be pumped to the sluice plant.

Effluent was settled in a series of two ponds, each 50 by 50 feet square. Discharge to Seymour Creek from the final pond was by seepage only.

HAYES CREEK **115 I 12 (22)**
(UNNAMED TRIBUTARY) **62°31'N 137°57'W**
G. Wilson **1988**
Water Licence: PM87050

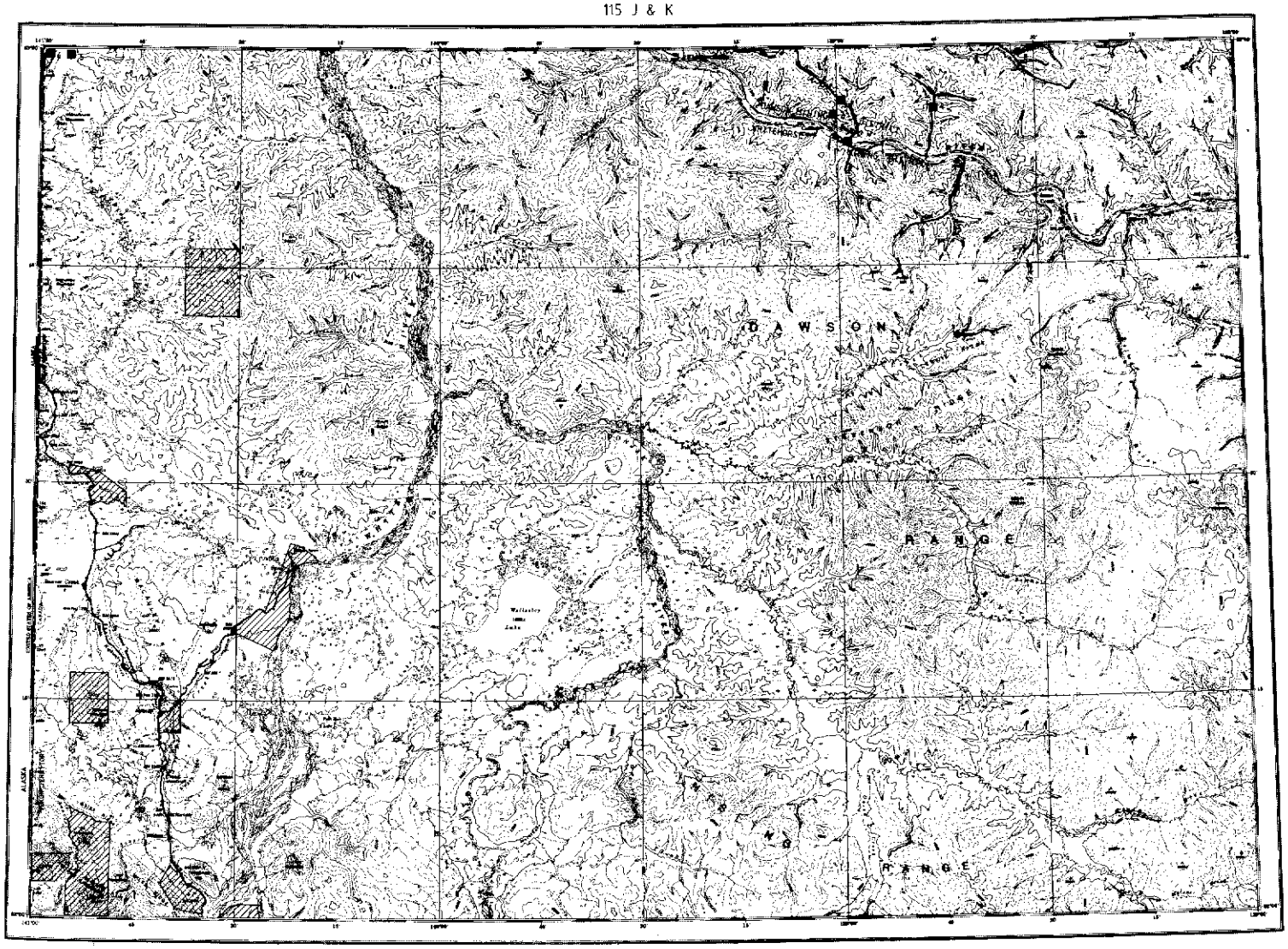
This property is located on a unnamed tributary of Hayes Creek, approximately 2 miles downstream from the Hayes Creek-Apex Creek confluence. Gold was first reported on Hayes Creek in 1898.

Two miners using a Fiat Allis bulldozer and a Cat 980 loader worked one shift on the property.

The wash plant consisted of a Derocker and a 4 by 20 foot standard sluice run and processed at a rate of 120 cubic yards per hour. Water from an out-of-stream reservoir was supplied to the plant at 1200 igpm by a 6 by 6 inch pump powered by a 4 cylinder diesel.

Effluent was treated in an instream pond.

115 J & K



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

SNAG

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

BALLARAT CREEK **115 J 14, 15 (1)**
Tara Pacific Resources Ltd **62°55'N 139°00'W**
Water Licence: PM87112R **1985**

Reference: Debicki (1983, p.97), and Gilbert (1986, p.86)

Claims: P 27650 - P 27700, P 24602, P 12273, P 12274

Source: Summary by W.P. LeBarge of assessment report 120009 by T.G. Hawkins (Tara Pacific Resources Ltd).

History:

Placer gold has been produced sporadically from Ballarat Creek since 1898. In the years between 1951 to 1959, Ballarat Mines Ltd produced 12 487 oz of gold. In 1981, M. Fuhre and Van Sea Investments Ltd produced 365 oz of gold from 32 500 cubic yards of gravel. In 1982 Van Sea Investments Ltd recovered 709.99 oz of fine gold from 45 000 cubic yards of gravel. In 1983 M. Fuhre recovered 630 oz of gold from 24 500 cubic yards of gravel, and in 1984 a total of 821 oz of gold were produced from 44 900 cubic yards of gravel.

Description:

Steeply dipping schist and gneiss of the Lower Paleozoic Pelly Gneiss Group underlie Ballarat Creek. Auriferous gravels lie along the main valley of Ballarat Creek on bedrock in thicknesses varying from 6-10 feet. Six to ten feet of non-auriferous gravels overlie the pay gravels, followed by three to ten feet of black muck and humus. Heavy mineral concentrates consist mainly of garnet, magnetite, sulphides, titanium minerals and coarse to fine gold.

Current Work and Results:

An exploration program of magnetic surveys and bulk sampling was undertaken in 1985 by Tara Pacific Resources Ltd. A total of 57.4 mile line of magnetic surveys were conducted over four grids. Grids were constructed with lines spaced 98 feet apart along a baseline which followed the creek, and station readings were taken every 16-32 feet. Accumulations of alluvial magnetite were detected and paleo-stream channels were outlined. Bulk sampling of 77 850 cubic yards of gravel recovered 1.1 oz of crude gold with an average grade of 0.014 oz per cubic yard.

DIANE and LIZ CREEKS **115 J 14, 15 (2)**
Crew Natural Resources Ltd **62°55'N 139°00'W**
1988

Reference: No previous reference
Claims: PL 7750, PL 7323

Source: Summary by W.P. LeBarge of assessment report 120086 by R.L. McIntyre (Yukon Engineering Services Ltd).

Description:

Diane and Liz Creeks are immature, south-flowing tributaries of Ballarat Creek which vary in width from 160 to 300 feet. Gradients are in the order of 200 to 300 feet/mile, decreasing with lower elevations. Bedrock is mapped as Lower Paleozoic Pelly Gneiss, and rock types include foliated biotite-muscovite granodiorite and garnetiferous amphibolite.

Current Work and Results:

In 1988 a proton precession magnetometer survey was conducted on the leases, with the intention of delineating placer concentrations of magnetite. These are traditionally associated with concentrations of gold in the Ballarat Creek area. Thirteen mile line of grid were surveyed along lines which were spaced 164 feet apart with station intervals of 16 feet. Several magnetic anomalies were outlined, although some high values trending across the creek valleys probably corresponded with bedrock interference rather than placer sources of magnetite.

EXCELSIOR, PEDLAR, COFFEE AND DAN MAN CREEKS **115 J 14, 15 (3)**
Atlantic Energy Ltd **62°53'N 136°58'W**
1981

References: No previous reference

Claims: PL 5920 (Excelsior Creek), PL 5931 (Coffee Creek), PL 5932 (Dan Man Creek), PL 5950 (Pedlar Creek)

Source: Summary by T. Bremner of assessment report 120017 by C.D.N. Taylor.

History:

These creeks were originally staked during the 1898 gold rush. Excelsior Creek was originally staked by George and Martha Louise Black in 1898 and minor gold production was reported in 1978, 1980 and 1984. Coffee Creek was mainly used as a trade and supply route from Dawson to Alaska via Beaver Creek. Dan Man Creek was staked by a stampeder from Alaska but it is not known whether any pay was found. An old prospect shaft at the mouth of Pedlar Creek and a turn of the century woodlot are the only signs of activity on Pedlar Creek.

Description:

These 4 creeks are all tributaries of the Yukon River. The placer leases each extend 5 miles upstream from the mouth of the creek. Pedlar Creek drains Pelly Gneiss on the west side of Ballarat Dome. The other 3 creeks drain micaceous quartzite, mica schist and amphibolite (Pelly Gneiss, Klondike Schist) on the east slope of the Dawson Range.

Current Work and Results:

Soil and pan concentrate samples were taken approximately every 1250 feet in each creek. A total of 35 samples were analyzed for arsenic and gold. Regional background values were 25 ppm As and 0.15 ppm Au in soil, 50 ppm As and 0.2 ppm Au in silt. The most consistent values of gold and arsenic came from Excelsior Creek, where small quantities of gold have been mined. The only anomaly was a gold value of 1.45 ppm taken from Excelsior Creek.

PEDLAR CREEK **115 J 15 (4)**
Atlantic Energy Corporation et al **62°55'N 138°46'W**
1982

References: No previous reference

Claims: P 20749 - P 20797

Source: Summary by R.L. McIntyre from assessment report 120063 by R.G. Hilker, P. Eng (Aurun Mines Ltd).

Current Work and Results:

In the winter of 1982, a four man hand shafting crew sunk three shafts on Pedlar Creek 17 and 19 claims above its confluence with the Yukon River. The shafts sunk had a depth of 33.5 feet, and a total volume of 27.42 cubic yards. The following summer a sampling program was carried out to hand sluice approximately twenty-three cubic yards of material from two of the shafts. The entire column of gravels, stockpiled during shafting, was sluiced and considered as a bulk sample. Heavy concentrate from the sluicing was shipped back to Whitehorse for assay by Technational Research Corporation. Results are as follows: Shaft #3, on Ped. #19: 0.08 g per cubic metre; Shaft #1, on Ped. #17: 0.0008 g per cubic metre. Based on these results, a moderate scale tractor trenching or drilling program was recommended.

SCOTTIE CREEK **115 K 15 (5)**
Canadian Occidental Petroleum Ltd **63°00'N 140°56'W**
1979

References: No previous reference

Claims: PL 4334, PL 4335

Source: Summary by T. Bremner of assessment report 120020 by M.P. Herrick and J.R. Houle.

History:

Gold-bearing quartz veins were discovered in the Moosehorn Range north of Scottie Creek in 1975. No records or evidence of previous exploration on Scottie Creek were found.

Description:

The 2 placer leases extend 10 miles downstream from the headwaters of Scottie Creek which drains the south slope of the Moosehorn Range. Beneath the wide valley floor, 16-30 feet of frozen organic soil, silt and peat overlie altered granodiorite bedrock.

Current Work and Results:

Five churn drillholes totalling 151 feet were located at the junction of Scottie Creek and each of its major tributaries draining the Moosehorn Range. No gravel or gold was encountered in any of the drillholes.

WEINERWURST LAKE (MOOSEHORN RANGE) **115 K 15 (6)**
New Gateway Oil & Minerals Ltd **63°00'N 141°00'W**
1976

References: No previous reference

Claims: PL 3773 - PL 3777

Source: Summary by T. Bremner of assessment report 120019 by D.K. Robertson.

History:

Lode gold was first discovered on Moosehorn Mountain in 1975 by Claymore Exploration. New Gateway Oil & Minerals Ltd staked placer leases covering the Weinerwurst Lakes basin at the south end of the Moosehorn Range later in the same year.

Description:

The Weinerwurst Lake basin is filled with sediments from Scottie Creek which drains the south end of the gold-bearing Moosehorn Range. Free gold occurs in frozen blue silty clay underlying 2.3 feet of unfrozen organic material.

Current Work and Results:

Twelve hand pits were dug to a depth of 2.9 feet for the purpose of soil sampling. No visible gold was found at this level. Several of the pits were deepened to 8.8 feet using a power auger, with suction hoses removing the mud from each auger hole. Sluicing and panning of the mud yielded gold-bearing concentrates which were examined and assayed. Up to 50 colours per 0.009 cubic yard sample were obtained from pit #1 and up to 20 colours per 0.009 cubic yard sample were obtained from pit #9. Four more holes were augered to a depth of six feet, yielding up to 6

colours per sample. Assays of the gold-bearing muds yielded values up to 0.006 oz per cubic yard gold.

RUDE CREEK **115 J 10 (7)**
A. Fournier **62°40'N 138°42'W**
Water Licence: PM87017 **1987, 1988**

This property is located on Rude Creek near its confluence with Dip Creek. The deposit mined was 20 to 25 feet deep and frozen with 2 to 3 feet of overburden, over 18 to 23 feet of gravels on bedrock.

Five miners and one cook worked a double shift using a D8H Cat bulldozer to strip overburden and stockpile pay gravels, and a Cat 966 loader which removed tailings and fed the wash plant. Part of a 225 by 650 foot cut was mined in 1987.

The wash plant consisted of a Derocker and standard 4 by 20 foot long sluice box which processed 60 to 70 cubic yards per hour. Water was supplied to the wash plant from an out-of-stream reservoir by a 6 inch Flyght electric pump, powered by a diesel generator that supplied 2000 igpm. Effluent was settled in an instream pond.

Gold was reported as 85% fine-grained and "flaky", and 15% coarse with a fineness of 840 to 850. The tailings were leveled and recontoured.

The same operation was continued in 1988 with the addition of a Dresser TD 25 bulldozer. The remainder of the 1987 cut, and a second 225 by 650 foot, cut were mined.

MARIPOSA CREEK **115 J 15 (8)**
Resore Industries Corp. **62°59'N 138°34'W**
1985, 1986

This operation is located on Mariposa Creek, approximately one mile upstream of its confluence with Scroggie Creek. The deposit mined was frozen, and was 12 to 16 feet deep. The deposit consisted of 4 to 8 feet of black muck overlying 8 feet of gravels. Work on this property began in 1984. During the 1985 and 1986 seasons the property was operated on a double shift basis by eight persons. The sluice section consisted of the lower 4 feet of gravels and 2 feet of bedrock.

On Scroggie Creek, 1000 feet upstream of the airstrip, a second site was also worked.

While working the Scroggie site the men and equipment were brought down from Mariposa. On the property is a duplicate 3 channel box and a 10 by 12 inch pump. Deposits present are similar to those on Mariposa.

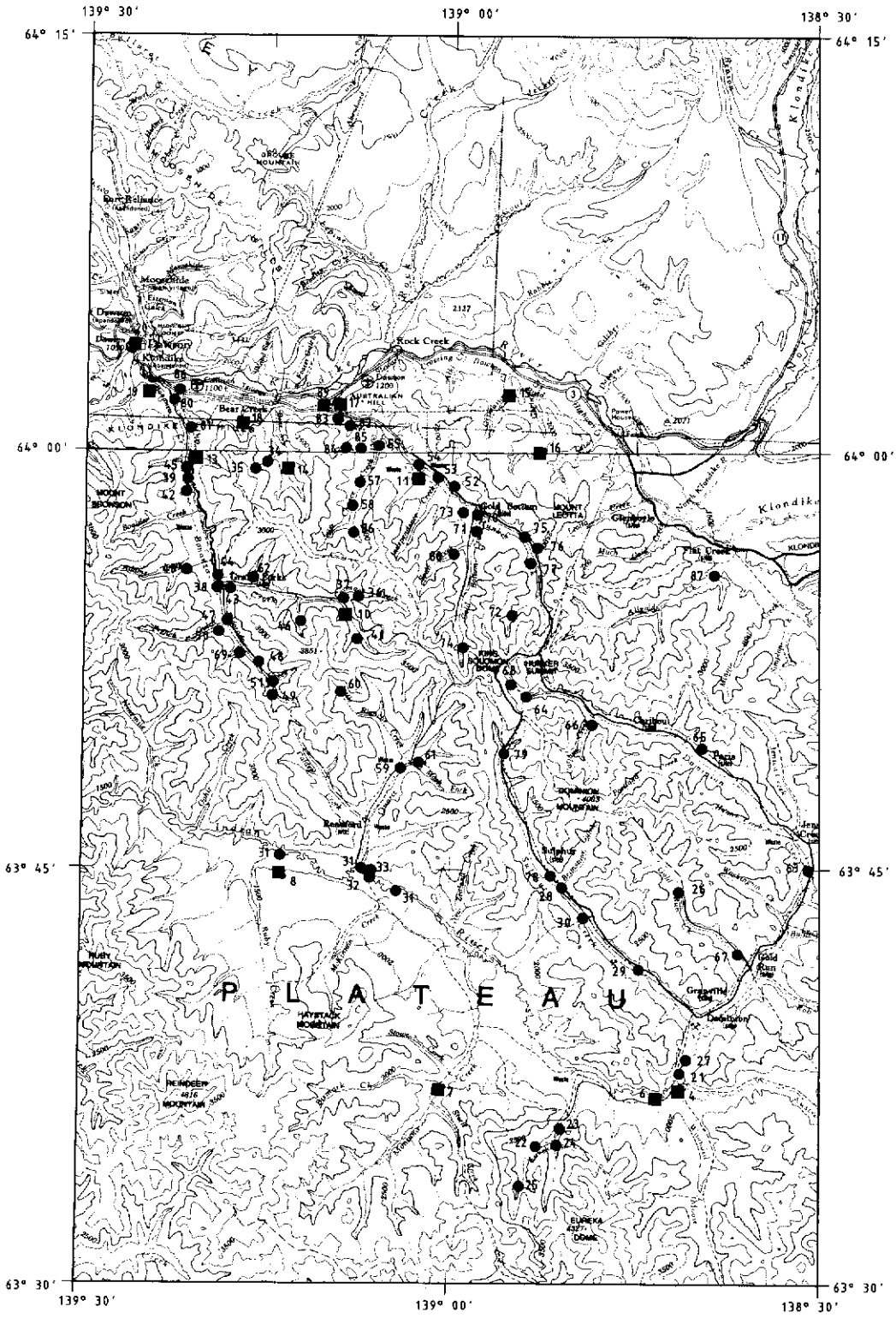
The heavy equipment on the property included two Komatsu model 155 A bulldozers. Both machines were used to strip overburden and stockpile pay. While sluicing, one machine worked the cut and stockpiled pay while the other pushed tailings. A Komatsu 6 cubic yard loader was also used primarily to feed the sluice plant.

The sluice plant consisted of a side-fed dump box and triple run sluice, processing at a rate of 100 cubic yards per hour. Sluice water was pumped from a diversion channel located on the right limit of the valley, adjacent to the cut. Pump type used was a 10 by 12 inch Worthington, powered by a Cat 3208 diesel. Approximately 3500 igpm were delivered to a monitor and spray bar mounted on the dump box.

The effluent was settled in a series of downstream mining cuts.

Twenty-five percent of the gold was reported to be larger than 12 mesh, and 75% was between 150 and 12 mesh. The fineness was 900.

PARTS OF NTS 1150/N & 116B/C



KLONDIKE AREA

YUKON TERRITORY

5 0 5 10 15 20

Kilometres

Circles indicate placer operation active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

AUSTRALIA AND WOUNDED MOOSE CREEKS
RK Resources Ltd

115 O 10 (4)
63°37'N 138°41'W
1989

Reference: No previous reference.

Claims: PL 7961 - PL 7964; KAS 1-19; RAS 1-40, 50-52

Source: Summary by W.P. LeBarge of assessment report 120102 by M. Power (Yukon Engineering Services Ltd) and personal communication by R.L. McIntyre.

Description:

Australia and Wounded Moose Creeks are left limit tributaries of the Upper Indian River, which drains Wounded Moose Dome, Eureka Dome and Australia Mountain. Tertiary bench gravels lie along both sides of Australia Creek and along the southern side of the Upper Indian River. Recent stream action has resorted and redeposited these sediments. Bedrock consists of Mesozoic or older gneissic granite, gneiss, schist and quartzite.

Current Work and Results:

In the winter of 1988-1989 a ground probing radar (GPR) survey was conducted, with the objective of determining the depth to bedrock on the property. The instrument used was a SIR-3 (model PR 8300) GPR manufactured by Geophysical Survey Systems Inc. A 120 MHz transmitter/receiver antenna pair was operated at a pulse rate of 50 KHz. The instrument was placed in a Nodwell and the antennas, spaced at 6.5 feet, were towed in a specially constructed sled which ensured good ground coupling. A continuous profile was recorded by towing the antennas at a constant speed of approximately 2 m/hr. A total of 3 line miles were cleared with a D6 Cat and surveyed in 5 lines perpendicular to the drainage. A reflector possibly representing bedrock was detected at depths of 9.8 to 19.6 feet immediately west of Australia Creek. Other indications were that clay-rich overburden was strongly attenuating the signals and obscuring deep reflectors. Since the electromagnetic phase velocity of near-surface material on the property was unknown, depths could only be estimated and error was originally thought to be as much as plus or minus twenty-five percent. Under ideal conditions (good ground coupling, little clay and ice content) ground probing radar is effective in mapping the top 30 to 40 feet of overburden and/or bedrock. Subsequent to this program, rotary centre sample recovery drilling was performed along the survey lines (figure 3). The estimated depths were in fact found to corroborate to within 10% of drill indicated depths. Although depths to bedrock were readily interpreted, it was found that it was very difficult to distinguish "black muck" from gravels. It is recommended that accurate stratigraphic data be obtained by some physical method prior to the geophysical survey, in order to calibrate the instrument.

INDIAN RIVER
T. W. Patch

115 O 10 (6)
63°36'N 138°43'W
1986

References: No previous reference

Claims: Carglidor (P 9658) and Big M (P 9657)

Source: Summary by R.L. McIntyre from assessment report 120077 by H. Copland.

Description:

These two bench claims cover a portion of high Indian River left limit bench gravels immediately downstream of the mouth of Wounded Moose Creek. The claims are approximately 985 feet south of the Indian River, on a very small tributary. While bedrock was not observed on the claims, the area is underlain by rocks of the Klondike schist series.

Current Work and Results:

A total of five hand-dug pits were sampled and described. The creek was panned and sampled at 65 foot intervals. The pits varied in depth from 1.6 to 3 feet and did not reach bedrock. The material encountered included topsoils, sand and schist pebbles overlying clay and organics, most likely representing material well above true bench gravels. Sampling of 22 pan concentrates, 16 silt samples and 11 soil samples yielded results at or below detection limits.

MONTANA CREEK
J. O'Neill

115 O 11 (7)
63°35'N 139°00'W
1988

Reference: No previous reference.

Claims: PL 7897

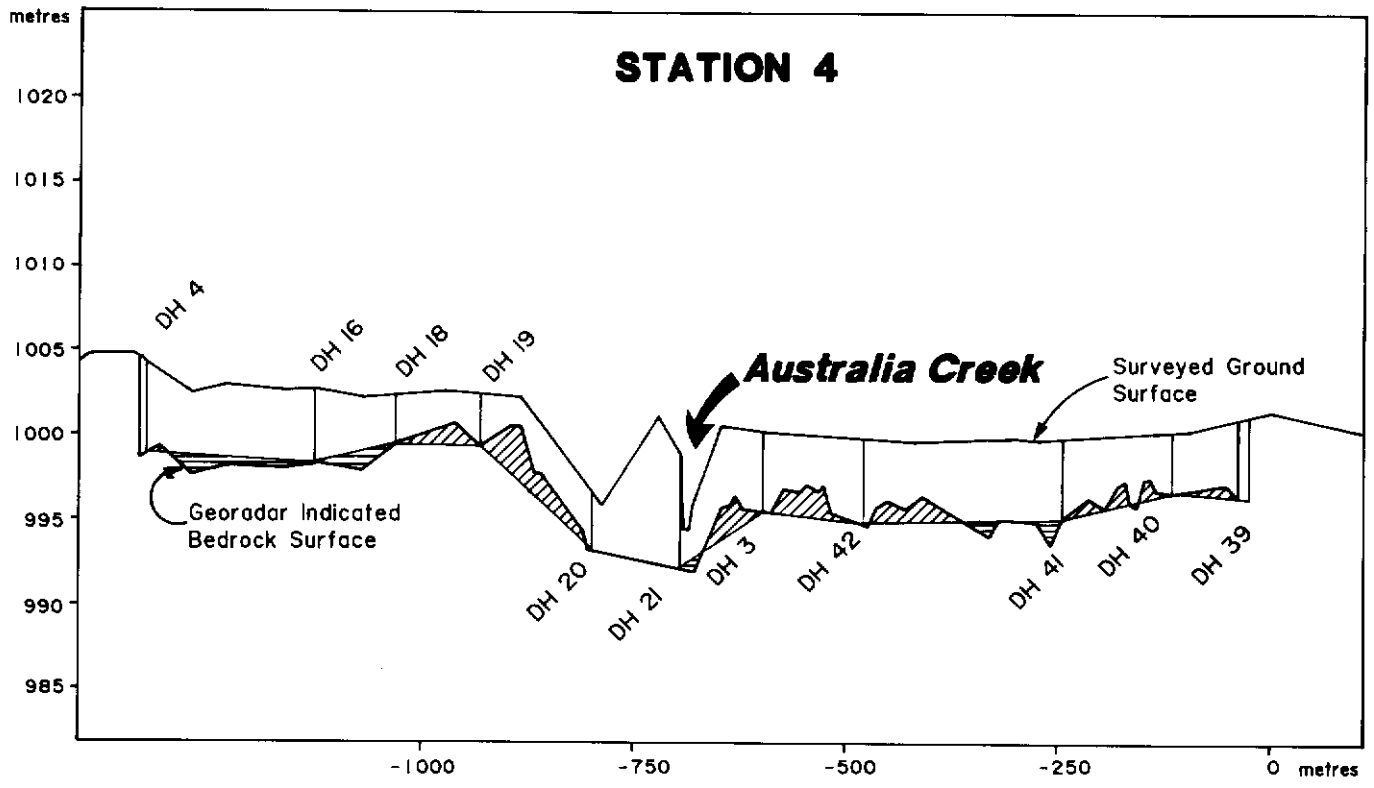
Source: Summary by W.P. LeBarge of drilling report 120104 by H. Gillam.

Description:

Montana Creek is a mature left limit tributary to the Indian River. Tertiary bench gravels occur at the mouth of the creek, at its confluence with the Indian River. Bedrock consists of Paleozoic or older gneiss, schist, quartzite, and minor limestone. Minor outcrops

Figure 3

WOUNDED MOOSE, AUSTRALIA CREEKS - GEORADAR SURVEY LINE A4
(modified from assessment report 120102 by R.L. McIntyre, RK Resources Ltd.)



Areas of bedrock where conventional interpretation of drill data would result in an overestimation of gravel volume.

Areas of gravel where conventional interpretation of drill data would result in an underestimation of gravel volume.

Ground-probing radar is a new placer exploration tool. In the winter of 1988-1989, RK Resources Ltd. used this technology to determine the bedrock profile at the confluence of Australia and Wounded Moose Creeks. Subsequent rotary drilling confirmed the accuracy of the georadar-indicated depths to within 10 percent.

of Tertiary conglomerate, sandstone and shale also occur.

Current Work and Results:

In 1988, 6 rotary drill holes totalling 152 feet were drilled, and one 10 foot deep trench was excavated. A thickness of 15 to 17 feet of black organic muck was encountered followed by 4 to 10 feet of sand and gravel. Greenstone and schist were intercepted at a depth of 20 to 30 feet. The best gold colours were panned from the cuttings within 10 feet of bedrock.

RUBY CREEK, INDIAN RIVER — **115 O 11 (8)**
Alcan Construction Ltd — **63°44'30"N 139°13'00"W**
1986, 1987

Reference: No previous reference

Claims: P 29809 - P 29844, P 29938, PL 7472, PL 7471, PL 7260, PL 7245, PL 7611, PL 7610, PL 7609, PL 7608, PL 7607, PL 7604.

Source: Summary by W.P. LeBarge of assessment report 092080 by Ace Parker (Ace-Parker Mines and Minerals Corp. Ltd).

History:

Gold was first discovered in 1893 along Indian River by prospector William Redford. In 1905 Ruby Ellis found gold on a large gravel terrace, later named Ruby Ellis bench, which extends along the left limit of Indian River immediately upstream from Ruby Creek. Little attention was given to gravels in the middle and lower reaches of the Indian River in subsequent years; however in the 1920's small scale hand mining took place along Ruby Creek. Placer mining activity was dormant until the mid-1970's when the rising price of gold made lower grade deposits economically viable. By 1984 the Indian River was being mined along both limits of its lower valley 1 mile below the mouth of Quartz Creek. Alcan Construction Ltd conducted pilot mining operations at a point 4200 feet downstream from the mouth of Quartz Creek during the same year. In 1986 S. Schmidt and K. Tatlow recovered coarse and fine gold from the Indian River channel below an oxbow bend near the toe of Ruby Ellis bench.

Description:

Basement rocks of Precambrian to Paleozoic age, consisting of granite, gneiss and schist, underlie lower Cretaceous sandstone, mudstone and conglomerate with minor coal. Upper Cretaceous andesite is interbedded with and overlies the conglomerate unit. Immediately upstream from the mouth of Ruby Creek lies a broad, low level terrace of Tertiary gravels. Standing 197 feet above the present level of Indian River, this tabular shaped body is a 3937 foot long remnant of the Indian River paleo-channel. Grey quartz-rich auriferous gravels are slightly altered and overlie bedrock beneath the Ruby Ellis bench. Rounded to subangular cobbles and pebbles consist mainly of mica schist, quartz and gneiss. Upper gravels consist of alternating layers of reddish orange, fine-grained gravel and sand, with clasts primarily consisting of mica schist and quartz. Heavy minerals in sand contain equal proportions of garnet and magnetite, as well as fine gold. Recent stream gravels lie adjacent to and along the modern Ruby Creek channel. Clasts are pebble to cobble-sized and consist of granite gneiss, andesite, quartz pebble conglomerate and schist.

Current Work and Results:

In 1986 shallow pits along the recent gravels of Ruby Creek recovered a mixture of rounded and subangular gold ranging in size from minus 100 mesh to nuggets 4 mm long. Heavy minerals consisted of equal amounts of garnet and magnetite. A random sample of gravel from this area yielded 0.056 ounces gold per cubic yard. Tertiary gravels of Ruby Ellis bench were sampled along the top surface and were found to contain 0.0034 to 0.007 ounces gold per cubic yard of gravel. A total of 25 000 cubic yards of probable ore gravels and 76 810 cubic yards of possible ore gravels were calculated to exist in both areas of the property, using a cut off grade of 0.0054 ounces gold per cubic yard of gravel. Two D6 Cat bulldozers stripped gravel along the Indian River channel in the spring of 1987.

UPPER BONANZA CREEK — **115 O 14 (10)**
L. Busch — **63°54'N 139°09'W**
1985

Reference: No previous reference

Claims: P 0652 - P 0656

Source: Summary by W.P. LeBarge of assessment report 120065 by L. Busch.

Current Work and Results:

On claim P 0652 nine rotary drill holes totalling 115 feet were drilled in 1985. Depth to bedrock varied between 4 and 24 feet. Up to 11 feet of black muck was intersected with an average of 6 to 12 feet of sand and gravel.

PARADISE HILL — **115 O 14 (11)**
L. Busch — **63°59'N 139°04'W**
1985

Reference: No previous reference

Claims: P 25165 - P 25167, P 24554 - P 24560, P 21502 - P 21503, P 21278, P 21283, P 21975 - P 21982

Source: Summary by W.P. LeBarge of assessment report 120066 by L. Busch

Current Work and Results:

Approximately 15 000 cubic yards of gravel was stripped from 4 adjoining pits and 86 feet of rotary drilling was done. Three to 8 feet of black muck was encountered with 5 to 6 feet of red sand and gravel followed by 6 to 15 feet of grey gravel and 15 feet of white sand and gravel. Bedrock was not encountered.

BONANZA CREEK **115 0 14 (13)**
Topaz Explorations Ltd **64°00'N 139°22'W**
1986

References: No previous reference.

Claims: P 7953

Source: Summary by R.L. McIntyre from prospectus 121006 by James W. McLeod.

History:

Bonanza Creek has had a long and productive placer gold history. Its' discovery on August 16, 1896 precipitated the Klondike Gold Rush. Nearly continuous mining has occurred on most of Bonanza Creek since then, and areas both upstream and downstream of the claim P 7953 have been dredged by the Yukon Consolidated Gold Corporation. Placer claim P 7953 was recorded in 1979.

Description:

The property covers recent stream bed gravels of Bonanza Creek; depth to bedrock is not described. Bedrock is locally mapped as Klondike schist.

Current Work and Results:

One area of approximately 50 000 square feet was stripped of overburden, and four bulldozer trenches were dug for sampling. These trenches excavated a total of 11 500 cubic yards of stream gravels. Bedrock was not reached in any of the trenches, which averaged 10 feet in depth. The surficial material is described as well sorted, clean, quartz-rich and relatively clay free. Sluicing of 11 cubic yards of gravel returned one calculated grade of 0.019 ounces of gold per cubic yard.

BEAR CREEK **115 0 14H, 116 B 3B (14)**
Teal Minerals Ltd **64°00'N 139°13'23"W**
1985

References: No previous reference

Claims: P 24809, P 24781-4, P 4285-95, P 42175-76, P 42037-38, P 38880-1, P 38783, P 38776, P 38605, P 38874-75, P 22128, P 22122, P 22129-31, P 22123, P 21820, P 24720, P 6621, P 38910-11, P 0218-19, P 4212, P 0813, P 24571-75, P 38800.

Source: Summary by R.L. McIntyre from prospectus 120071 by R.T. Heard, P.Eng. (R.T. Heard and Associates Ltd).

History:

The Bear Creek Discovery claim was staked on September 24th, 1896 by Solomon Manberg. Minor hand mining and drifting occurred here from 1901 to 1933, and recorded production to 1974 was approximately 80 000 ounces of raw gold. Between 1978 and 1983, 12 120 raw ounces were reported to have been taken. Teal Minerals optioned the property in 1984.

Description:

The property, situated on Bear Creek, tributary to the Klondike River, comprises forty-one creek claims and seven fractions. In 1983, Sigma Group of Companies Mining produced an average grade of 0.035 troy ounces/cubic yard. The gravels are underlain by Paleozoic Klondike Schist.

Current Work and Results:

The preparation of this prospectus involved largely a literature search, with a short site visit to verify gravel types and volumes.

GERMAINE CREEK **116 B 2 (15)**
First Nuclear Corp. Ltd **64°03'N 138°55'W**
1980

References: No previous reference

Claims: PL 5301, PL 5324

Source: Summary by T. Bremner of assessment report 120024 by R.A. Tilsley.

Description:

Germaine Creek flows into the Klondike River 8 miles west of the Dempster Highway cutoff. Beneath most of the claim block, weathered quartz mica schist and interbedded graphite schist is overlain by 3 to 6 feet of well-sorted gravel.

Current Work and Results:

A road was constructed along the west bank of the creek. A D8 Cat bulldozer was used to move 12 513 cubic yards of unconsolidated material: several areas were stripped to bedrock and 10 test pits were excavated. Samples from the test pits were panned. Medium-grained gold was found in only 1 of the pits in discontinuous gravel lenses within black graphitic clay. Bedrock exposed in this pit consists of graphite schist composed of 80% graphite and 20% quartz

stringers and pyrite. This pit was later sampled in detail, but yielded only specks of medium-grained gold in a pan from a probable layer of graphitic clay at a depth of 16 feet.

GORING CREEK **116 B 2 (16)**
L. Busch **64°00'N 138°53'W**
1985

Reference: No previous reference.

Claims: TOK 23-39, KARLI 1-10, YM 1-19

Source: Summary by W.P. LeBarge of assessment report 120067 by L. Busch.

Current Work and Results:

Twenty-seven rotary drill holes totalling 450 feet were drilled on a bench on the left limit of Goring Creek. From 2 to 8 feet of black muck was intersected followed by 5 to 20 feet of red-yellow sand and gravel. Depth to bedrock varied from 15 to 30 feet.

HUNKER CREEK **116 B 3 (17)**
Hunker Creek Gold Co. Ltd **64°01'N 139°10'W**
1983

References: No previous reference

Claims: OAM, MBW, 1 AM

Source: Summary by T. Bremner of assessment report 120026 by R.W. Lane.

Description:

The claim group lies within Hunker Creek valley near the confluence of Hunker Creek and the Klondike River. Recent creek gravels, 4.6 to 10 feet thick are overlain by 5 to 20 feet of permanently frozen silt and peat. Terrace gravels up to 16 feet thick occur in narrow, disconnected strips along both sides of the valley. Bedrock consists of quartz-sericite schist and graphite-sericite schist of Permian age, generally soft and partially decomposed.

Current Work and Results:

Sixty-one holes totalling 2626 feet were drilled with a Hawker-Siddley Sonic drill. Every metre of cored material was run through a sluice box and further concentrated to 2-10 cm^3 by panning. Smaller intervals were processed either side of the bedrock interface. Gold colours were separated from the concentrate by hand, and weighed. The most consistent results were from the Rabbit Gulch area where 4 drillholes recovered gold averaging 0.0046 ounces/cubic yard over 18.7 feet of gravel and weathered bedrock.

QUIGLEY GULCH **116 B 3 (18)**
R. Garneau **64°02'N 139°17'W**
1988, 1989

Reference: No previous reference.

Claims: PL 7773

Source: Summary by W.P. LeBarge of assessment report 120088 by M. Mollot.

Description:

The claims are located in unglaciated terrain along Quigley Gulch, a tributary to the Klondike River near Dawson City. A few inches to a few feet of black organic muck occurs in discontinuous patches and overlies several feet of frozen gravels. Bedrock consists of muscovite-feldspar-quartz schist and carbonaceous quartzite.

Current Work and Results:

A proton precession magnetometer survey measured total magnetic field and magnetic gradient on the claims in 1988. Grid lines with stations spaced at 16 feet were located 33 feet apart perpendicular to a 3300 foot baseline. Several zones of high magnetic gradient and anomalous total magnetic field were detected. In 1989 some of the magnetic anomalies were drilled with a Becker rotary drill. Drill cuttings contained fine gold and some nuggets but very little magnetite.

KLONDIKE RIVER **116 B 3 (19)**
Berglynn Resources Inc. **64°03'N 139°26'W**
1987

References: No previous reference

Claims: MARK 1-2, MARRIETTE 1, TAMMY 1, JEAN 1, COLUMBIA 1, LEROY 1, AL 1, EB 1, MM, CANADIAN, PETER FR., SHAWN FR., BILL FR.

Source: Summary by W.P. LeBarge of assessment report 120085 by J. Wallis.

History and Description:

The property lies along the southwest side of the Klondike River at its confluence with the Yukon River, at the historic site of Lousetown. Placer mining has not previously taken place on the claims due to the proximity of the now-abandoned townsite.

Current Work and Results:

In 1987 a rotary drill program was conducted in which 1545 feet of drilling was completed in 46 holes. Samples were taken every 2 feet, then sluiced and pan concentrated. Gold was handpicked from the concentrates, then dried and weighed. Drillholes intersected thawed sand and gravel, and the depth

varied from 30 to 40 feet. Abundant water was encountered below 20 feet and a silicified bedrock unit could not be penetrated by more than 1 foot. A narrow channel of coarse, gold-bearing gravel was outlined parallel to the Klondike River, in a band 2500 feet long, 135 feet wide and 8 feet thick.

YUKON RIVER **116 B 3 (20)**
Anglo American Corp. **64°05'N 139°25'W**
1974

References: No previous reference

Claims: Dredging Lease 74

Source: Summary by T. Bremner of assessment report 120025 by J.S. McKinney.

History:

Anglo American Corp. staked 5 dredging leases on the Yukon River in December, 1973. The leases were staked downstream of the confluence of the Yukon River and on each of five gold-bearing tributaries: Stewart, Sixtymile, Klondike and Fortymile Rivers, and Swede Creek. The Klondike River lease was evaluated by drilling during the winter of 1974.

Description:

The Klondike River lease 74-4 covers approximately 2.2 miles of the Yukon River bed and floodplain downstream of the junction of the Klondike and Yukon Rivers. Near Dawson townsite the river bottom profile is a steep-sided flat-bottomed trough covered with 1.6 to 49 feet of gravel with up to 10% sand and no clay or silt. The thinnest sediments occur in the swiftest parts of the river channel. Bedrock consists of altered andesite, which along with serpentine, forms most of the river bottom; and chlorite-sericite schist, which underlies the Dawson townsite, occurring in the west Dawson area.

Current Work and Results:

In April, 1974, roads were constructed on the Yukon River ice and 35 holes were drilled using a Beaker drill with a total of 1124 feet. Three lines of holes were drilled across the river and one line of holes was drilled along the riverbank on the west side. The borehole cuttings were sampled at 1.6 foot intervals. Samples were sluiced and panned and the concentrates sent for fire assay. Gold was encountered in all boreholes in concentrations up to 0.06 ounces/cubic yard. The particles ranged in size from flour gold to small nuggets up to 4 mm^2, with an average size of approximately 2 mm^2. Horizons with high gold values were erratically distributed throughout the sediments, and did not appear to be concentrated at the bedrock interface.

HUNKER CREEK **116 B 3 (89)**

Archer, Cathro and Associates (1981) Ltd. **64° 02'N 139° 12'W**
1983

Reference: No previous reference.

Claims: PL 6346, PL 6571, PL 6572

Source: Summary by W.P. LeBarge of assessment report 120109 by A. Archer (Archer, Cathro and Associates Ltd.)

Description:

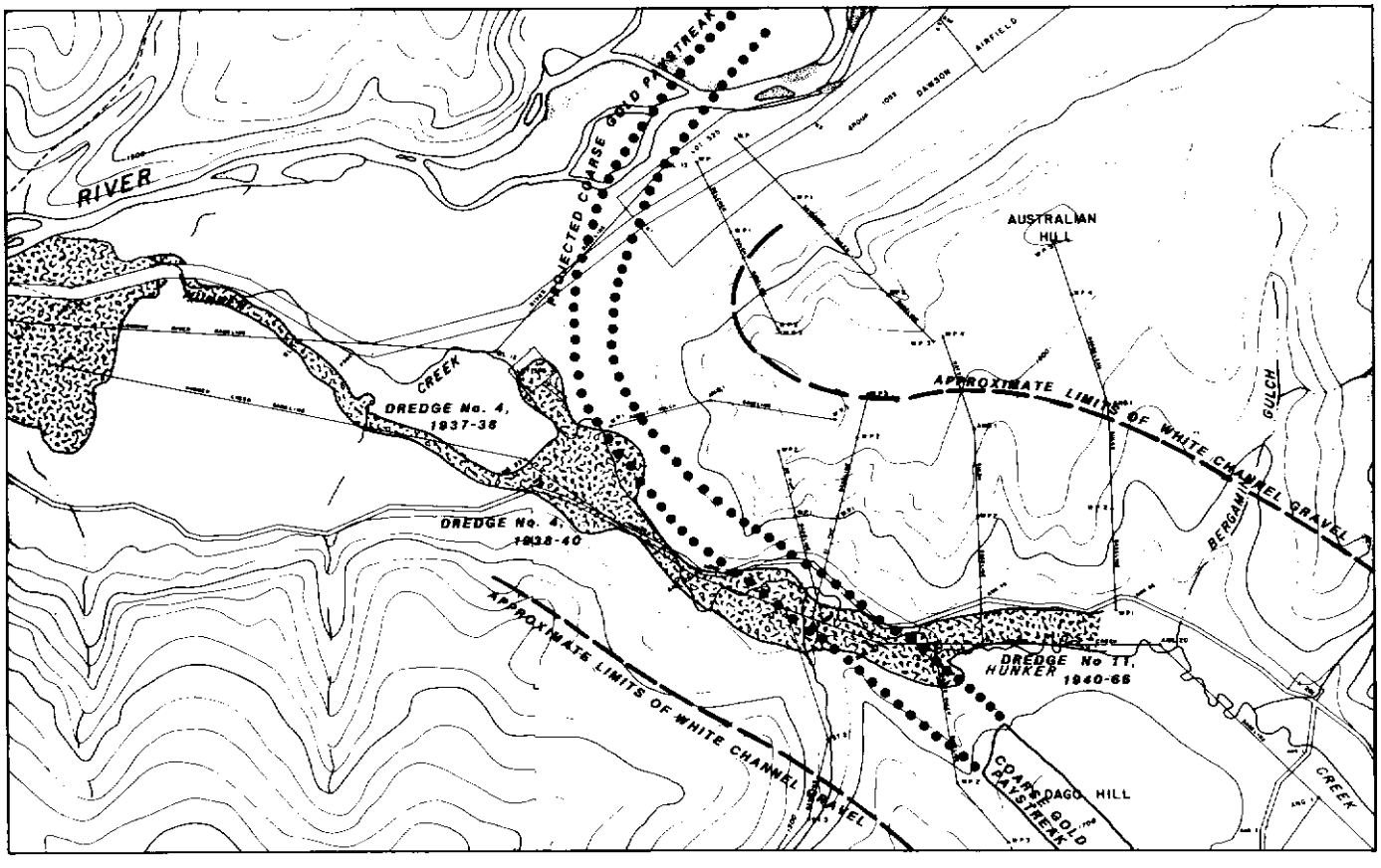
The leases lie at the confluence of Hunker Creek and the Klondike River. The section consists of "Klondike Schist" bedrock overlain by several feet of preglacial gravel, glaciofluvial gravel, organic muck, loess and slump deposits. Adjacent hills have White Channel Gravel terraces and colluvial deposits.

Current Work and Results:

A literature search and examination of YCGC records was conducted in order to evaluate the potential of an unmined Hunker Creek paystreak. Between 1939 and 1940, YCGC dredge no. 4 dredged a small area at the mouth of Hunker Creek known as the Arlington prospect. YCGC data state that during this period, 2 240 000 cubic yards of gravel were dredged, recovering over 33 000 ounces of gold for an average grade of 0.015 ounces per cubic yard. Mr. A. Troberg reported that YCGC dredge no. 4 once recovered 1500 ounces in an eight hour shift at the mouth of Hunker Creek. The Dawson Packet newspaper similarly reported cleanups of up to 800 ounces per day. Mining in this area was suspended in 1940, and the Hunker Creek paystreak was never successfully traced into the Klondike River valley. McConnell (1907) suggested that the Klondike River during the Tertiary period flowed east into the Stewart River or Twelvemile Creek. The distribution of gold at the mouth of Bonanza Creek implies that this is a possibility. If this is true, then the Hunker Creek paystreak would have swept east into an east-flowing Klondike River.

Figure 4

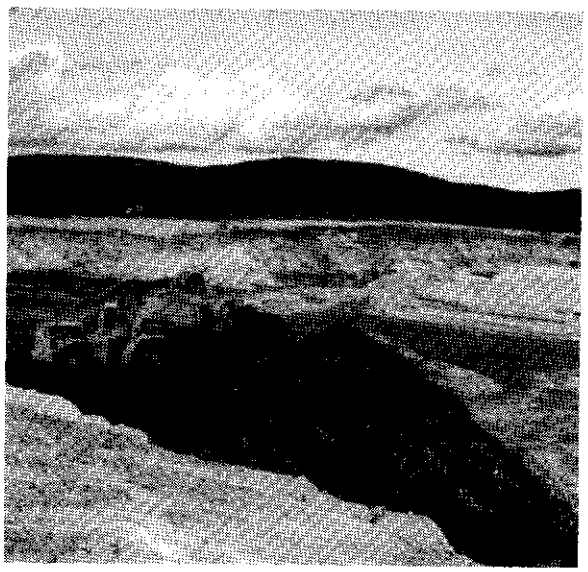
ARLINGTON PROSPECT - CONFLUENCE OF HUNKER CREEK AND KLONDIKE RIVER
(from assessment report 120109 by Archer, Cathro and Associates (1981) Ltd.)

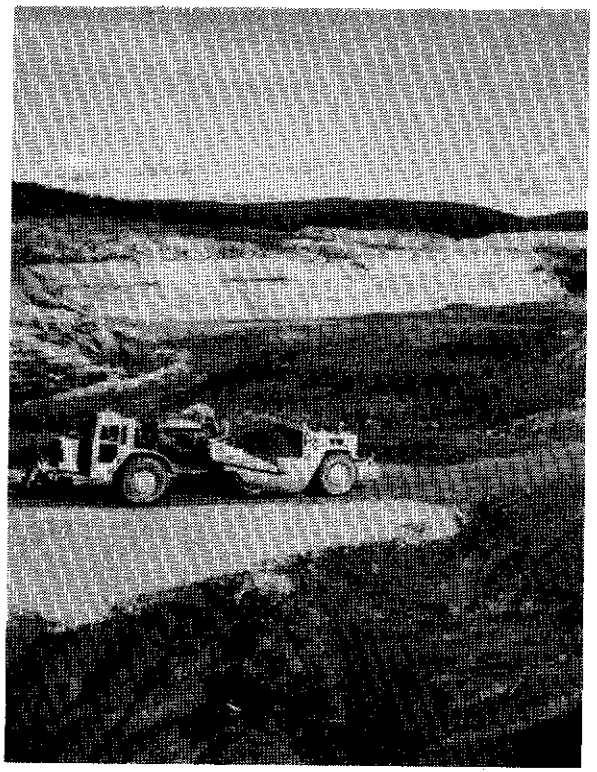


The above map shows the projected path of the Hunker Creek coarse gold paystreak, postulated from data that implies an east-flowing Klondike River during the Tertiary period.

This photograph shows typical nonglacial gravel deposits which are mined in lower Dominion Creek. These deposits have been called "White Channel Gravels", however it is difficult to correlate these gravels with the thick White Channel gravel deposits on Hunker and Bonanza Creeks.

The photo at right shows the placer mining operation of Lorne Ross on Lower Dominion Creek in 1986, one of several large open pits in the area. A Caterpillar twin engine 637 scraper is in the foreground.





The photo at left shows Norm Ross' large open pit operation on Lower Dominion Creek in 1986. The Caterpillar 988b loader and the Cat 769b dump truck (one of three) are some of the largest machines in the Klondike.

DOMINION CREEK **115 O 10 (21)**
H. Liedtke & J. Erickson **63°38'N 138°41'W**
1986

This property is located on the left limit of Dominion Creek, approximately 4000 feet downstream of the confluence of Sulphur and Dominion Creeks. Mining at this site began in 1986, although some preparation work was carried out late in the 1985 season.

The mining cut consisted of 7 feet of black muck overlying 6 feet of gravels. All material was frozen. The entire gravel section plus 1 foot of bedrock was sluiced, from a cut measuring 200 by 1000 by 14 feet, yielding roughly 50 000 cubic yards of pay from the 90 000 cubic yard excavation.

Two D8 Cat bulldozers stripped and developed the cut, pushing away waste and stockpiling pay. A Caterpillar 966 loader fed the sluicing assembly, which consisted of a vibrating screen deck, and two 40 foot by 36 inch runs. The 12 by 20 foot screen deck contained screening and punch plate, and was powered by a Volkswagon 4 cylinder diesel. The capacity of this plant was about 100 cubic yards per hour.

Three thousand igpm water was supplied by a 10 by 12 inch Dayton pump, powered by a 6 cylinder Caterpillar diesel. Dominion Creek water diverted into a dredge pond and supplied a continuous water source.

No information on the fineness or character of the gold was available.

EUREKA CREEK **115 O 10 (22)**
Discovery Creek **63°35'N 138°52'W**
Gold Placers Ltd **1988**

This operation was run by Richard Allen in 1988, and was located on the right fork of Eureka Creek, approximately 1000 feet upstream of the mouth.

The stratigraphic section was comprised of about 2 feet of vegetation covering about 20 feet of black muck over 10 to 20 feet of washed gravels and sand. Bedrock tended to be quite competent, with little weathering. Gold was not found throughout the gravel section, therefore only about 4 feet of the gravel section and 6 inches of the bedrock were processed.

Two full time miners and a cook operated a single shift in 1988.

Two cuts, each measuring approximately 600 by 100 by 35 feet deep were mined in 1988, for excavations totalling about 150 000 cubic yards, yielding roughly 20 000 cubic yards of pay.

Two D9 Cat bulldozers were used for stripping, feeding the plant, and handling tailings. A Ross Box model 500 sluice box was used, incorporating punch plate at the throat, to classify and split the minus 1 inch material to the two 5 foot wide side runs, routing the oversize down the 3 foot wide centre run. The side runs were lined with matting and expanded metal. This plant reportedly had an operating capacity of approximately 150 cubic yards per hour.

One 12 by 10 inch pump, powered by a 200 H.P. Cat diesel, supplied the 4000 igpm required from an instream reservoir. A system of two, and sometimes three instream settling ponds settled the effluent.

Gold was reported to be mainly fine-grained and flat in character, with fineness of about 720.

EUREKA CREEK (LOWER) **115 O 10 (23)**
Edgewater Exploration Ltd **63°36'N 138°50'W**
1988

This operation is located in the center of the valley along Eureka Creek. The stratigraphic section is made up of a 1 foot layer of moss and brush covering 10 to 15 feet of frozen black muck, and a gravel layer of approximately 5 feet. Bedrock was encountered at 20 to 25 feet, and was either decomposed or "gumbo clay-false bedrock". Approximately 2 to 3 feet of the fractured bedrock was sluiced, while the clay was cleaned of the gravels and left in the cut. The entire 5 foot gravel layer was sluiced.

Six miners were required for each of the two shifts that were run.

Two large cuts were mined during 1988. The first measured 1000 feet long by 500 feet wide. The second measured 700 by 300 feet, for a total excavated volume of approximately 470 000 cubic yards and a processed volume of about 150 000 cubic yards.

A Ross 500 sluice box was used, with a dump box measuring 12 feet long by 20 feet wide and a 6 by 12 foot classifier just above the throat. One inch punch plate with 5 feet of undercurrent and matting lined the box, while punch plate (5/8 inch) was used in the throat of the box. The two side runs were lined with Coco matting and expanded metal. The main center run used matting, expanded metal, riffles and punch plate.

Equipment included a Cat 235 hoe, three Cat 637 scrapers, a D9 Cat bulldozer, a D8K Cat and a Fiat Allis HD3 loader. The hoe dug drainage ditches and assisted in stripping. The scrapers were used to transport overburden, pay and tailings. The bulldozers were used for stripping and to push-load the scrapers.

An instream reservoir captured total creek flow into a system of three ponds. These ponds were used for water acquisition and for settling. Two 12 by 10 inch Morris pumps powered by 3406 Cat engines delivered the 5000 igpm needed to sluice. A control gate managed the water level within the ponds.

Both coarse and fine-grained gold were recovered. Much of the gold was flat with jagged edges. The assayed fineness was 720.

EUREKA CREEK (UPPER) **115 O 10 (24)**
Edgewater Exploration Ltd **63°35'N 138°50'W**
1988

This operation is located along the main creek in the centre of the valley. The stratigraphy is comprised of a layer of organic mat covering 15 to 20 feet of frozen black muck, over approximately 8 feet of gravel. Bedrock was encountered at 28 to 30 feet and changed from very competent and smooth to decomposed and weathered. Approximately 3 feet of decomposed bedrock and the bottom 5 feet of the gravel were sluiced.

One cut 1300 by 200 feet was systematically mined upstream during 1988, for an excavation of some 250 000 cubic yards, which yielded roughly 50 000 cubic yards of pay.

One D8H Cat bulldozer, and one D8K Cat bulldozer were used for stripping, stockpiling of pay, handling of tailings, and occasionally for feeding the Ross Box Model 200. Generally, a Cat 235 hoe fed the dump box, which was lined with 1/2 inch punch plate for classification ahead of the two side runs. These were lined with Astroturf. Approximately 100 cubic yards per hour were washed through this plant.

Tailings were pushed by bulldozer to the left limits of the creek and, where practical, the black muck was pushed over the tailings for reclamation purposes.

Total creek flow was captured in a horseshoe shaped instream reservoir. The reservoir was used for both sluicing and as a settling pond. A 10 by 10 inch Cornell pump, powered by a 471 cubic inch engine, supplied the 2500 igpm needed to sluice. A spillway allowed for outflow from the reservoir.

Gold was reported to be primarily fine-grained and flat with no nuggets recovered. The assayed fineness was 720.

EUREKA CREEK **115 O 10 (25)**
Hakkon Placers **63°33'N 138°55'W**
1985, 1986

This operation is situated on the upper portion of the right fork of Eureka Creek.

The deposit mined was approximately 42 feet deep, and was made up of a 40 foot section of black muck inter-mixed with sliderock, over 2 feet of brown coloured gravels. The sluice section consisted of the 2 foot gravel layer, plus 5 feet of bedrock.

A crew of five, including the cook, worked at this property in 1985 and 1986.

Three Caterpillar bulldozers were used on this operation. A D9H handled the ripping and stripping, while one D8H fed the plant, and another D8H pushed away the tailings. The sluice plant was comprised of a 27 by 6 foot dump box and a single 28 by 3 foot sluice run.

Material was reportedly processed at a rate of 125 cubic yards per hour. Sluice water at a rate of 3000 igpm was delivered via a 10 by 12 inch pump, powered by a Cat 3208 diesel engine.

Gold with a fineness of 640 was recovered, reported to be fine to medium-grained, with some quartz attached.

GOLD RUN CREEK **115 O 10 (26)**
Hakkon Placers/ **63°45'N 138°43'W**
Granville Placers **1985, 1986**

The 1985/1986 operation was located on Gold Run Creek roughly 6.5 miles upstream from its confluence with Dominion Creek, about 1000 feet downstream from the mouth of "60 Pup".

The deposits mined consisted of 24 feet of black muck over 2 to 4 feet of gravel. The sluice section consisted of the lower 2 feet of gravel and 4 feet of bedrock.

Three miners and one cook were employed on a single shift basis.

All mining was performed by three D9 Cat bulldozers, one D9H Cat and two D9G Cat bulldozers. While stripping, all three machines ripped and dozed up overburden. When sluicing, one D9 pushed to a feed-dozer, while the third D9 managed the tailings.

The sluicing plant consisted of a 40 by 10 foot dump box, ahead of a 30 by 3 foot single run, lined with 2 inch angle-iron riffles over matting. The dump box contained punch plate over expanded metal, over Coco matting. Pay was processed at roughly 150 cubic yards per hour, with 2000 igpm water pumped by a Paco 10 by 12 inch pump, powered with a 471 G.M. diesel engine.

Gold was described as generally coarse-grained and angular, with a reported fineness of 860.

LOWER DOMINION CREEK **115 0 10 (27)**

Airgold Ltd **63°38'N 138°41'W**
1988

This operation is in the lower Dominion Creek valley, approximately one mile upstream from the mouth of Australia Creek. Eighteen to 20 feet of black muck overlies 10 to 12 feet of boulders and gravel. Two to 4 feet of partially decomposed bedrock was also mined and sluiced. In 1988, almost six claims were mined for approximately 500 000 cubic yards.

Twenty-one miners worked night and day shifts in 1988. Heavy equipment included ten machines as follows: two D9L Cat bulldozers; a 455 Komatsu bulldozer and a D8H Cat bulldozer to strip overburden and stockpile ore; two Cat 966s, one 980, and one W.A. 600 Komatsu loaders to feed the sluice plant and remove tailings; a Cat 235 excavator and dragline were used to dig drainage ditches.

This operation used two sluice plants to process a combined 224 cubic yards per hour. Each sluice plant consisted of a triple-run Ross box equipped with punch plate in the mouth and center runs, and expanded metal over Nomad matting in the side runs. There was no pre-classification of bank run ore.

Water was supplied from a total recirculation pond in old dredge tailings (Y.C.G.C. dredge #6 lies on site). Three 10 by 10 inch Cat diesel-powered pumps provided 3500 igpm to each sluice plant.

Predominantly fine-grained gold with very little quartz is recovered on this site, which is 850 fine.

SULPHUR CREEK **115 O 10 (28)**
(BRIMSTONE GULCH) **63°43'N 138°50'W**
W. D. Groner **1988**

This operation is at the mouth of Brimstone Gulch and Sulphur Creek. Mr. Groner mines this ground by himself and is a weekend hobby miner. Little mining has been done to date.

The stratigraphic section is comprised of a 4 foot vegetation mat covering approximately 15 feet of frozen black muck which in turn overlies 6 feet of gravel. Bedrock is highly decomposed. The bottom 4 feet of gravel and 2 feet of bedrock were sluiced. Bedrock was found to contain gold.

Tailings were moved to the edge of the cut, using a D4 Cat bulldozer. Mr. Groner's mining plans are to continue with a small scale operation upstream on Brimstone Creek. One cut measuring 75 by 8 feet was mined in 1988, for an excavation of approximately 15 000 cubic yards, realizing roughly 3600 cubic yards of pay.

A single run conventional sluice box was used. The dump box measured 3 1/2 by 15 feet. The run was 2 by 20 feet. Indoor/outdoor carpeting served as matting with a double layer of expanded metal on the carpeting. A 3 1/2 inch spacer created an undercurrent above the expanded metal with assorted types and sizes of punch plate on the top layer. A maximum of 10 loose cubic yards of pay were washed per hour. The D4 was used for overburden stripping, loading the sluice box, and managing the tailings.

Four to five hundred igpm of process water was pumped from an instream pond on Brimstone Gulch by a 6 by 5 inch pump. Effluent was settled in the Sulphur Creek settling pond, as adequate room for an individual settling facility was a problem.

Gold was reported to be primarily coarse-grained with quartz through much of it. The gold was mostly jagged and irregular with a fineness of approximately 820.

SULPHUR CREEK **115 O 10 (29)**
H. Kruger **63°40'N 138°43'W**
1988

This operation is located on Sulphur Creek, approximately two miles upstream from its junction with Dominion Creek. The camp is situated in the center of a relatively wide section of the main valley. The mining cut is on the left limit of the valley, downstream of the camp.

The typical stratigraphic section is comprised of an average of 14 feet of vegetation and frozen black muck, overlying about 20 feet of gravel. The top 6 to 8 feet of bedrock is weathered and decomposed. Gold was found throughout the gravel and decomposed bedrock.

Personnel included the owner and one other miner.

In 1988, an area of about 250 by 100 feet was mined for an excavation of approximately 38 000 cubic yards, yielding roughly 25 000 cubic yards of pay gravel. Tailings were deposited into mine cuts from previous years.

The ground was stripped by a D7E Caterpillar bulldozer. The cut was then prepared, and pay was stockpiled, also by the D7. A Koehring Model 605 dragline was used for digging drains necessary for the development of the cut, and for getting the effluent to the settling facilities. A Hough Model 120 rubbertired loader fed the sluice box, while a Cat 955 track-loader acted as a contingency unit.

The sluice box was comprised of a 13 by 12 foot dump box with spraybar, and two 8 by 4 foot side-runs, which handled the classified material. As well, there was a 24 by 3 foot center run for the oversize material. The assembly processed approximately 50 cubic yards of pay per hour.

Approximately 1500 igpm water was supplied by an 8 by 8 inch pump, powered by a 671 cu.in. engine.

Seepage from Sulphur Creek fills the older part of the large cut which had been previously mined. This serves as an out of stream reservoir for sluicing.

Effluent from the sluice box is piped to an area of old tailings ponds from historic dredging operations. Effluent re-enters Sulphur Creek by seepage flow through the dredge tailings.

Gold was reportedly fine-grained and flaky in character, with very little coarse particles. Fineness varied between 810 and 830.

SULPHUR CREEK **115 O 10 (30)**
Teck Mining Group Ltd/ **63°43'N 138°49'W**
Granville Joint Venture **1985, 1986**

This large operation was located upstream along Sulphur Creek, above the retired (1963) Yukon Consolidated Gold Corporation Dredge No. 8. The unconsolidated section is typically 30 feet of black muck overlying four feet of gravel on a weathered rusty greyish bedrock.

Personnel for 1985 and 1986 included nine miners, six support staff and the property manager, Gerry Klein. The equipment included three D8K Cat bulldozers, four Cat 627 motor scrapers (21 cubic yard capacity), a Cat 235 excavator, a Cat 966 loader, a Cat 140G grader and numerous 6 inch hydraulic monitors. The sluicing plant consisted of a hopper with level conveyer feed to a vibrating (1 inch) screen deck, and a modified Model 300 Ross three run sluice box lined with 1 inch riffles over Nomad matting. A Cat D4 diesel engine powered the screen deck assembly.

Process water at a rate of 3500 igpm was supplied by a 10 by 12 inch Morris pump, powered by a Cat 3406 diesel.

In 1985 it was reported that 128 414 cubic yards of overburden were stripped with three scrapers and two bulldozers, using one D8K and a hydraulic monitor (#2 Giant). In total, over 215 000 cubic yards was reportedly stripped and 134 857 cubic yards was sluiced. The sluice section included the four foot gravel section and three feet of decomposed bedrock. In 1986, 384 000 cubic yards of stripping was reported along with 117 000 cubic yards sluiced. Of the stripped overburden, 160 000 cubic yards was moved with the equipment as in 1985, and 224 000 cubic yards was moved with the D8K and the hydraulic monitor.

The sluice water effluent was treated in a series of large downstream ponds.

Gold recovered was typically medium-grained and flat in shape, and the fineness was reported as 810.

In 1986 an underground wooden stable was unearthed at bedrock level. This contained the remains of a horse with halter. Reclamation of mined ground on this property is considered exemplary.

INDIAN RIVER **115 O 11 (31)**
Gold City Resources Ltd **63°44'N 139°08'W**
1988

Gold City Resources Ltd mined in three locations along the Indian River in 1988; at the mouth of Quartz Creek, at the mouth of Mckinnon Creek, and at the mouth of Ruby Creek. Nineteen miners and 16 others worked in two shifts of twelve hours per day. The stratigraphic section is entirely frozen and generally consists of 5 feet of black muck and 13 feet of sand and gravels. The bottom 3 feet of gravel and two feet of bedrock was sluiced.

Ten cuts were mined in each of the three operations. Average cut size was 400 feet square and 18 feet deep.

Heavy equipment used in 1988 included three D10N bulldozers and one 355 Komatsu bulldozer.

Wash plants consisted of four triple-run Pearson Rockboxes with punchplate in the main dumpbox and expanded metal over Nomad matting. Water was supplied to each sluice box at the rate of 3500 igpm. Each operation processed 200 cubic yards per hour. A 10 by 10 inch Cornell pump powered by a 3406 Cat engine, fed one plant while two 10 by 12 inch Morris pumps each powered by a 3408 Cat engine, fed the other two operations. Water was supplied through a recirculation system with no returns to the river.

Gold recovered was fine-grained with very little associated quartz. Fineness averaged 800.

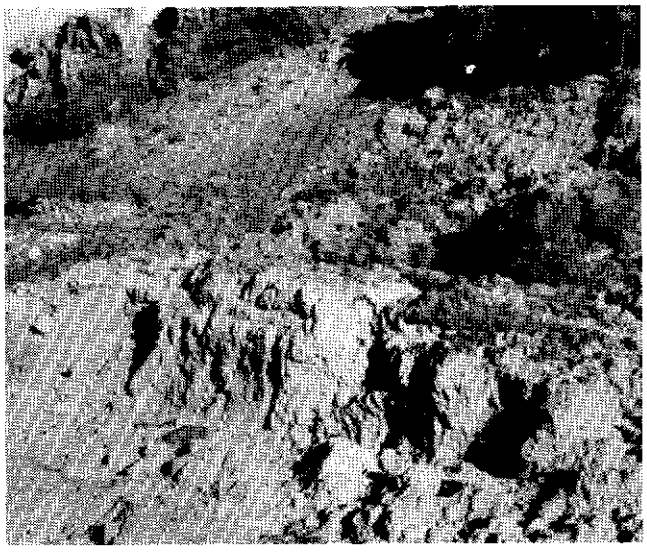
INDIAN RIVER **115 O 11 (32)**
Auramet International Ltd **63°45'N 139°09'W**
1986

These claims were owned by Mr. P. Risby and operated by Auramet under a lease agreement. The first year of operation was 1986.

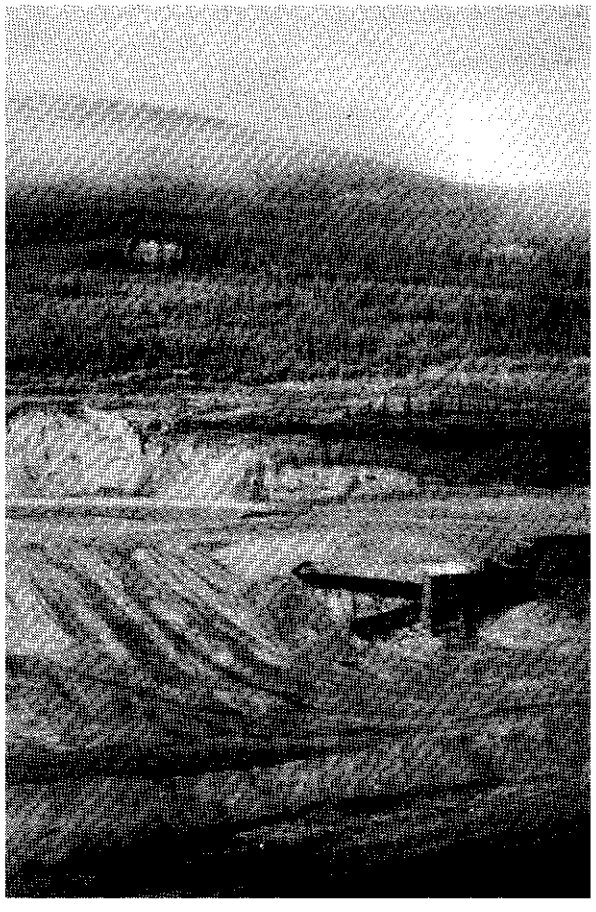
A total of eleven employees, including camp help, worked at this operation in 1986.

The main mining pit is located approximately 3600 feet upstream from Quartz Creek, on the right limit of the Indian River.

Heavy equipment on the property included one D9H Cat, used to strip overburden and stockpile pay gravel for the 235 hoe, one Cat 966 loader, used to remove tailings simultaneously with one Hough model 120 loader, and one D7 Cat bulldozer, used to build roads and haul the test plant to different locations.



Teck Mining Corporation operated on Sulphur Creek in 1985 and 1986, above the retired YCGC dredge no. 8. This photograph shows a typical pay zone of altered bedrock which is overlain by thin gravel and thick muck sequences.



After finishing their mining activities on Sulphur Creek, Teck Mining Corporation moved to Gold Run Creek. This photograph shows a typical exposure of thick sand which overlies a thin gravelly pay zone. The sand is interpreted as both surface aeolian (wind-blown) sand and underlying thicker deltaic sandy sediments.

The washing plant consisted of a trommel and triple run sluice. The trommel, fabricated from a 50 foot section of 6.5 foot diameter sewer pipe, is chain driven by a 6 cylinder Ford diesel, and revolves at 11 RPM.

Screening takes place in the final 8 feet of barrel length. Material minus 1.5 inches enters a sluice run 4 by 12 feet lined with 3 inch riffles over matting. From this run the material discharges directly into the dump of a 3 run box. The dump, measuring 8 by 14 feet in length, screens material to minus 3/8 inches in the bottom 8 feet of its length. This material is split between two side runs 4 by 24 feet in length lined with a double layer of expanded metal over Nomad matting. Material minus 1.5 inches, plus 3/8 inches in size flows down the main run (4 by 24 feet) lined with 3 inch angle riffles over matting. The grade of the side runs is set at 2 inches to the foot, and the main run is set at 3 inches to the foot.

Bulk testing was carried out at several individual locations along the Indian River, ranging from a point 1.5 miles below the left limit tributary of Montana Creek to a location approximately 0.5 miles upstream of the right limit tributary of Ophir Creek.

Mining activities included the following three areas of work, described below separately: Lengthy ditches were dug, from the pit to the Indian River downstream, in order to partially drain the cut area. Approximately 60% of the cut area was frozen. The stratigraphic section of the deposit averaged 3 feet of silt overlying 5 feet of uneconomic brown gravels over 7 feet of grey pay gravels.

The total section of brown gravels along with the silt layer were wasted. Where frozen, as much as possible, the waste section was allowed to thaw prior to stripping. A portion of the material was ripped frozen prior to pushing it off. The brown gravels were described as fine-grained with 60% of the fraction being minus 1/4 inch. Reportedly, fine gold (minus 100 mesh) was present throughout.

The sluice section consisted of the total 7 feet section of grey gravels and 7 feet of bedrock. The grey gravels were described as being of larger screen size than the upper brown gravels with approximately 35% being minus 1 inch. The remaining material was generally always smaller than 4 inches in size. Boulders as large as 6 inches in diameter were very rare. Organic peat stringers containing roots and Pleistocene mammal bones were present. Bedrock was of two types, decomposed sericite schist and competent biotite schist.

Production was rated at 200 cubic yards per hour while sluicing gravels, reduced to 140 cubic yards per hour while sluicing bedrock. Wash water was pumped at a rate of 3500 igpm by an 8 by 10 inch Nissan pump, powered by a Nissan 6 cylinder Deutz diesel. Seepage averaged 300 to 500 igpm. Occasional old hand shafts were found.

Claim 29480 pit - Material type and mining method was similar to the major pit. Completion of the pit was planned for 1987.

A bulk testing program was carried out on selected locations over a ten and a half mile stretch of the Indian River, from below Montana Creek to above Ophir Creek. The upper portion of the sluice plant was used as a test box when the plant was not in use. It consisted of a 4 by 12 foot length of sluice (lined with 3 inch riffles over matting) and a small dump area. The sluice was skidded with the D7 Cat bulldozer and fed at a rate of 100 cubic yards per hour with a 235 hoe.

The majority of the gold recovered is minus 60 mesh to plus 100 mesh in size. Assays in the valley range from 770 to 820.

INDIAN RIVER — **115 O 11 (33)**
D. Congan — **63°44'N 139°08'W**
1985, 1986

This property is located on the right limit of the Indian River valley, directly across the river from Quartz Creek.

The stratigraphy is typically 16 feet deep, with a very thin organic mat overlying a 15 foot gravel section. A 1 to 1 1/2 foot thick organic lens intersects the gravel section in some areas. The entire gravel portion was deemed to be pay material.

Two miners and one camp helper worked on this operation in 1985 and 1986.

During 1985, a cut was developed and bulk-testing was carried out, using a D9G Cat bulldozer to rip and push stripping and pay, and a Cat 966 loader to feed the box and handle tailings. The sluice plant consisted of a standard three run sluice box, fed at a rate of 50 to 70 cubic yards per hour. In 1985 sluice water was pumped from the undrained pit by 2 and a 3 inch Briggs & Stratton pumps. Effluent was settled in a natural slough.

In 1986, using the same equipment, a 300 by 300 foot cut was mined, yielding approximately 3,000 cubic yards of pay. Two thousand igpm was supplied by an 8 by 10 inch Gould pump, powered by a Model 453 Detroit diesel. Sluice water was derived from the Indian River.

Gold was reported to be fine-grained and flat.

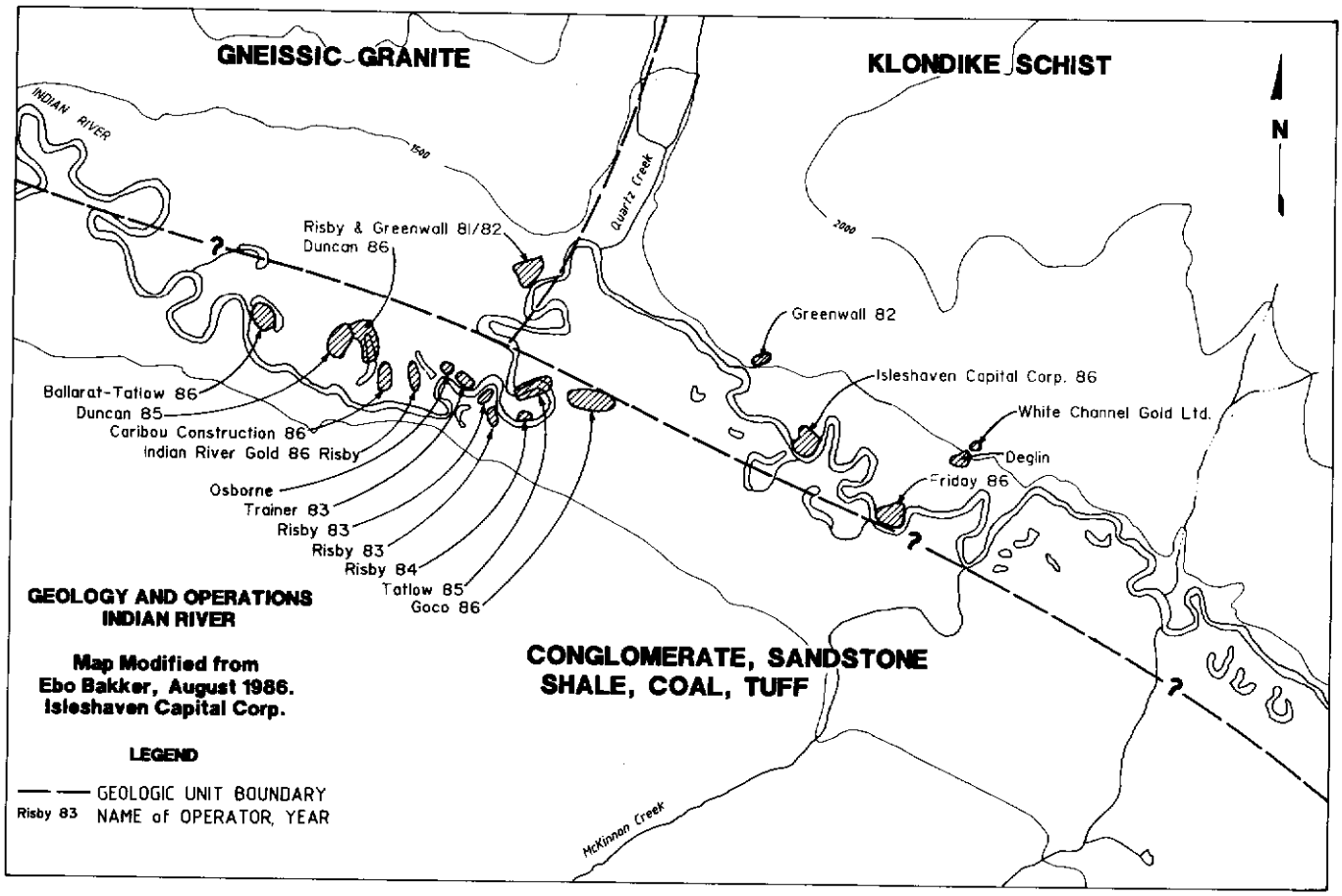
UPPER BEAR CREEK — **115 O 14 (34)**
Russell Placers — **63°59'N 139°15'W**
1986, 1987, 1988

This property is located on the upper reaches of Bear Creek, approximately 4600 feet upstream of its confluence with Lindow Creek. The valley here is narrow with steep gradient and steep sidewalls.

Work on the property began in the summer of 1985 when two exploratory shafts were sunk in frozen ground. Large boulders, hit at 15 foot depth and seepage water from thaw entering the shaft ceased operations. Seepage water was pumped with a 1.5 inch Honda pump.

In 1986 the property was operated on a single shift full-time basis by Mr. T. Russell, assisted by his wife Hellen. Mr. L. van Kalsbeek, accompanied by his wife Gail, assisted Mr. Russell on a part-time basis.

Figure 5
GEOLOGY AND MINING OPERATIONS, INDIAN RIVER, 1986



The above figure shows basic geology and mining operations along the Indian River area in 1986, when over 9800 crude ounces of gold were recovered. Since 1987, the Indian River has been the top producing river in the Yukon, with over 58 000 ounces of gold reported between 1985 and 1988.

Heavy equipment included one 450 Case loader, with a 1 cubic yard four way bucket and a 580 quick attach hoe, used primarily to dig the drain, feed the plant and haul tailings. One rental D9H Cat bulldozer was used to rip and push the frozen overburden.

The washing plant consisted of a dump and single run box. The dump, measuring 3 feet wide by 14 feet long, was lined its full length with minus 1/2 inch punch plate over 1 1/4 inch riffles and Nomad matting. The riffles had holes drilled intermittently in their top surface to keep them from packing. The run, measuring 2 by 16 feet, was lined with 2 1/2 inch riffles over Nomad matting.

The box was fed at a rate of 20 cubic yards per hour. One thousand five hundred igpm were recirculated from an instream recycle/settling pond below. The pond, measuring 14 feet wide by 25 feet long by 8 feet deep, was mucked out after each 1.5 weeks of sluicing. Pump type used was a 6 by 6 inch trash powered by a 4 cylinder Ford diesel.

The frozen deposit was 27 feet deep, consisting of 1.5 feet of black muck overlying a gravel section heavily mixed with slide rock, organic debris and large boulders. Boulders, some well rounded, some angular, approached a cubic yard in size.

A cut area, rim to rim 45 by 120 feet along the creek length by 17 feet deep, was ripped and pushed. A drain was established. The remaining 10 foot section was partially sluiced. Bedrock had not yet been reached, other than with the hoe. Dendritic, crystalline and some flat gold are present. Fineness is reported to be 710.

BEAR CREEK **115 O 14 (35)**
Teal Minerals Ltd **63°59'N 139°16'W**
1986

The 1986 operation was located on Bear Creek, approximately 2 miles upstream of its mouth, in the area of Discovery Pup. Teal mined the property under the management of L. van Kalsbeek in three separate areas in 1986, which was the first year of operation.

The property was worked on a double shift basis with a crew of six, four men on a day shift and two on a night shift. Day shift work generally consisted of stripping overburden and sluicing, and night shift was spent sluicing.

Heavy equipment included two D9H Cat bulldozers, used primarily to strip the cuts, push ore to the 966, and blade tailings; one Komatsu D355 bulldozer used to do the same work as the above bulldozers; and one Cat 966 loader, used primarily to feed the plant.

The washing plant consisted of a Derocker classifier and single run sluice, 3 by 25 feet. Feeding rate was an average of 75 cubic yards per hour with 2500 igpm. Water was recycled with a Paco 10 by 10 inch pump powered by a Cat 3208, 8 cylinder diesel engine.

The three mine sites worked in 1986 were as follows:

1. Discovery Pup
An 800 foot length of gulch was mined, rim to rim, beginning downstream at its mouth. The cut was approximately 150 feet wide at the mouth, narrowing to approximately 80 feet wide at the upper end. The 800 foot length was taken out in two 400 foot cuts with the plant being moved once. The deposit consisted of approximately 20 feet of black muck over 10 to 15 feet of gravels. The muck was ripped and wasted in a frozen state, leaving the total gravel section plus 2 feet of bedrock to be sluiced.

2. Right limit Bear Creek cut, approximately 3000 feet upstream of Discovery Pup
The cut measured 1000 feet along the valley direction by 45 feet into the valley wall. The deposit, approximately 37 feet deep, consisted of 30 feet of black muck overlying 6 to 8 feet of gravel. The muck was ripped and pushed off while the total gravel section and 2 to 3 feet of bedrock were sluiced.

3. Right limit Bear Creek cut, 1500 feet downstream of Discovery Pup
The cut measured 250 feet along the valley direction by 60 feet wide. The deposit, approximately 40 feet deep, consisted of a 33 foot section of muck mixed with debris and slide bedrock, over 6 to 8 feet of gravels. The sluice section was comprised of the total gravel layer plus 2 to 3 feet of bedrock. Workers commuted daily from camp situated in the Bonanza valley at the mouth of Cripple Gulch.

Gold was reported to be low grade, although much was crystalline (dendritic) in nature.

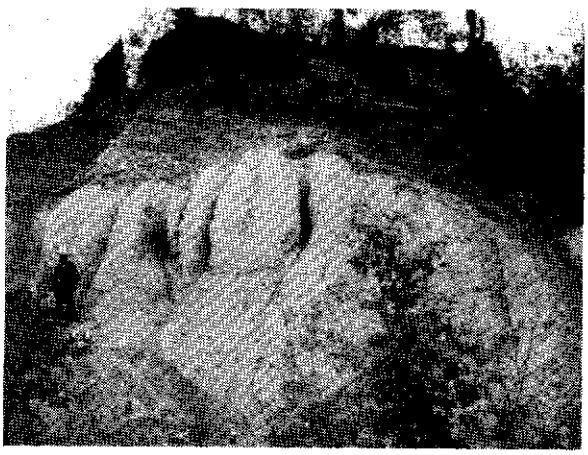
UPPER BONANZA CREEK **115 O 14 (36)**
J. Bryde **63°55'N 139°09'W**
1985, 1986

J. Bryde continued to work his Upper Bonanza Creek property alone in 1985 and 1986. The active area was approximately 700 feet upstream of Carmack Fork.

The stratigraphic section was comprised of 2 feet of black muck, with gravel intermixed, overlying 1 foot of gravels plus a limited amount of bedrock. Bedrock was roughly 90% competent, "slabbing off" in fairly thick, large pieces. Magnetite was reported to be plentiful.

In 1985, work consisted of widening the 1984 cut by 3 feet along its right limit wall (120 feet cut length) and taking 3 feet of additional bedrock. A total of 300 cubic yards were sluiced throughout the seasons. In 1986, the sluicing of a 140 cubic yard stockpile was completed, followed by a terrace level cut on the

This north-facing view of Bonanza Creek in 1986 shows the White Channel Tertiary gravels which lie as terraces above the present creek channel.



An example of clay-enriched White Channel Gravel on Dago Hill. This clay enrichment is not linked to sedimentation and had been interpreted to be the result of alteration processes involving types of groundwater fluids. It is important to identify this type of gravel from both a mining perspective (e.g. clay content) and for property scale exploration techniques (e.g. grain size and concentration of gold).

In the Quartz Creek drainage basin, a volcanic ash marker bed occurs within a thick sequence of black muck.

valley's right limit. The cut, measuring 120 feet along the valley direction by 40 feet back by 3 feet deep, had been partially stripped during the past season.

An Insley dragline equipped with a 1/2 cubic yard bucket was used to do all work in 1985, excluding some rental dozer cut preparation work while sluicing. The dragline was used to fill the sluice dump box with pay material (7 cubic yards per fill). The time cycle to load the box, wash the material and remove the tailings was one hour. The dump box was filled daily, representing 49 to 56 cubic yards washed when in full production.

A new sluice plant was brought onto the property in 1985, consisting of a dump and single run sluice. The 7 yard capacity dump box was lined with punch plate, screening to minus 3/8 of an inch, overlying expanded metal and long wire matting. The sluice run, measuring 22 inches by 8 feet in length, was equipped for its total length with an undercurrent. This was fed by minus 3/8 of an inch material from the punch plate in the dump throat. The undercurrent was lined with expanded metal and long wire matting. The upper level of the run was lined with 2 inch riffles over matting.

The dragline, used for doing all the mining work in 1985, was accompanied by a newly acquired early model D8 2U Caterpillar bulldozer in 1986.

Wash water was pumped from a small instream reservoir by a 6 inch Gorman Rupp trash pump powered by a 271 Jimmy diesel, at a rate of 600 igpm.

Gold character varied from smooth to rough, assaying in a wide range, to as high as 850.

UPPER BONANZA CREEK **115 O 14 (37)**
J. Conklin **63°55'N 139°09'W**
1988

Located on Upper Bonanza Creek near Bunker Hill, three miners and one camp worker worked one shift during the 1988 season. One D8H Cat bulldozer was used to dig pay gravels, a backhoe fed the sluice box, a front-end loader removed and stacked tailings and one 355 Komatsu bulldozer was used as a spare.

Pay gravels were excavated from near the valley center and from the left limit hillside. Depth of frozen black muck varied from a minimum of 4 to 6 feet up to a maximum of 30 feet on the hillside. Nearer the valley center the gravel layer varied from 8 to 25 feet. The gravel layer becomes progressively thinner upslope. The bottom 8 feet of gravel plus from 3 feet to as much as 7 or 8 feet of bedrock were sluiced. Waste gravel and overburden were removed by hydraulic monitor during the spring runoff and by mechanical stripping later in the season. Tailings gravel was used to backfill the side cut on the left limit.

The wash plant was a Pearson Derocker with a single sluice run. A 6 by 6 inch Jaeger pump, powered by a Ford diesel delivered approximately 1700 igpm which was used to process approximately 80 cubic yards per hour.

Five mining cuts were sluiced in 1988 for a total of approximately 90 000 cubic yards. Dimensions of cuts varied from 20 feet wide to 80 feet wide and from 100 feet long to 200 feet long.

Water was pumped from an instream reservoir and settling occurred in an out-of-stream settling pond. A creek bypass channel was maintained on the right-hand side of the valley.

Gold recovered was mostly fine-grained with a fineness of 810.

BONANZA CREEK **115 0 14 (38)**
(SKOOKUM GULCH) **63°55'N 139°20'W**
K. Daunt **1986**

This property is located along the left limit of Bonanza Creek, at the mouth of Skookum Gulch. K. Daunt continued to work the property alone. The area worked was a left limit bedrock terrace immediately downstream of Skookum mouth. The 500 foot face was undercut for a width of approximately 30 feet.

Heavy equipment included one Allis Chalmers HD16 bulldozer which was used to undercut the face and a JCB loader. This loader, equipped with a 1.5 cubic yard front bucket and a 0.3 cubic yard backhoe, was used to stockpile material for the monitor feeding the sluice.

The sluice plant consisted of a single run sluice and dump. The dump, 7.5 by 12 feet in length, was lined with slick plate except for the throat area where punch plate with 1/4 inch slotted holes overlay expanded metal and straight wire matting. The upper 8 feet of run were lined with 1/4 inch slotted punch plate over alternate sections of 1.5 inch riffles over matting and sections of expanded metal over matting. The remaining length of the box was lined with 1.5 inch angle iron riffles directly over matting.

Muscovite schist bedrock was overlain by six feet of gravel, 20 feet of slide rock intermixed with gravel, and one foot of organic matter. The total gravel section (6 feet) and 1.5 feet of bedrock was sluiced. Bedrock rose sharply at the back of the cut and pay ceased. The entire terrace had been drifted from the creek side at bedrock level by early hand miners.

Sluicing rate was estimated at 50 cubic yards per hour with a water use rate of 1500 igpm, supplied by a 6 by 6 inch Morris pump, powered by a Perkins 6 cylinder diesel.

The gold had a fineness of 760 and was fairly coarse-grained (100% larger than 18 mesh).

BONANZA CREEK **115 O 14 (39)**
Kohlman Explorations Ltd **63°59'N 139°22'W**
1985, 1986, 1987

The property is located on a left limit terrace of Bonanza Creek, approximately 3000 feet upstream of Sourdough Gulch.

The owner and two others worked the property on a single shift basis.

The area mined varied in depth and consisted of 5 to 30 feet of black muck overlying 6 to 20 feet of gravels. The frozen muck was both ripped/pushed and hydraulically monitored, exposing the total section for sluicing.

Heavy equipment on the property included a D9G Cat bulldozer, used primarily to rip and push overburden and feed the Cat 980 loader that was feeding the plant.

The washing plant consisted of a 14 foot screening unit and single sluice tray measuring 5 by 26 feet. The rate of feed was 40 to 50 cubic yards per hour.

Two thousand seven hundred igpm sluice water was pumped to the plant with an 8 by 10 inch pump powered by a Deutz 6 cylinder diesel engine.

The majority of the gold was fine-grained, some with quartz attached. Fineness reported was 780 to 800.

BONANZA CREEK **115 O 14 (40)**
(ADAMS CREEK) **63°56'N 139°20'W**
G. Caley **1988**

Adams Creek is a left limit tributary of Bonanza Creek approximately one mile below Grand Forks. This operation is located in the center of the narrow Adams Creek valley approximately one mile upstream of the confluence with Bonanza Creek.

Two miners worked one shift in 1988 using a D7 Cat bulldozer to dig and push pay gravels and a 950 front-end loader, with a 3 cubic yard bucket, to remove and stack tailings.

The wash plant was a 30 by 9 foot dump box, followed by a single run sluice 27 inches wide by 30 feet long, lined with standard Hungarian riffles over Coco matting. A 10 by 12 inch pump powered by a 671 G.M. diesel delivered approximately 850 igpm to process 75 cubic yards per hour.

One mining cut, approximately 100 by 400 feet, was completed in 1988. The ground was quite deep in the valley center, up to a maximum of 63 feet. The top 50 feet of gravel and muck were stripped mechanically and stockpiled at the upstream and downstream ends of the cut. The bottom ten feet of gravel, plus up to 3 feet of bedrock were sluiced.

Water was pumped from an instream recycle pond below the sluice box and secondary settling occurred in an instream settling pond approximately 1/4 mile downstream.

Rough, angular gold was recovered with a fineness of 650.

UPPER BONANZA CREEK **115 O 14 (41)**
(READY BULLION GULCH) **63°53'N 139°08'W**
D. Coomes **1985, 1986**

This operation is located along Ready Bullion Gulch, immediately upstream from its confluence with Upper Bonanza Creek.

Gravel in this vicinity has been reported to be 12 to 14 feet deep, overlain by a thin layer of soil. Layers of black muck averaging 16 inches thick were interspersed at intervals through the brown gravel. Bedrock was noted to be appreciably sloping down to the left valley limit and was characterized by undulating surface.

The property owner operated alone in 1985 and 1986.

Stripping, mining, feeding the plant, and handling of the tailings were performed by a D6 9U Cat bulldozer, a Cat 966 loader, and when longer hauls necessitated, a 12 cubic yard dump truck in 1985 and 1986. A new sluice assembly was incorporated in 1985, and a Gradall "G 1000" for stripping in 1986.

The sluice plant consisted of a 22 by 8 foot dump box and a 4 foot wide single run sluice box. The bottom 4 feet of the dump box was lined with 5/8 inch by 3 inch punch plate over expanded metal, while the top 10 feet of the sluice box incorporated (the same) punch plate over double expanded metal, on top of Coco matting. The remainder was lined with 2 inch Hungarian riffles over intermittently spaced matting. Feed rate was reported to be 50 cubic yards per hour.

In 1985, two older cuts were expanded and a haul road was constructed. In 1986 one of these cuts was once again widened, and a pit was worked approximately 700 feet downstream of the mouth of Ready Bullion Creek, on Upper Bonanza Creek.

Gold character and fineness were not recorded. Concentrates reportedly contained high proportions of magnetite and pyrite.

BONANZA CREEK (49 PUP) **115 O 14 (42)**
E. Rauguth **63°58'N 139°22'W**
1985, 1986

This operation is situated on 49 Gulch (Pup), a left limit tributary of Bonanza Creek. The operation was moved to this location in August, 1985, subsequent to the closing of the Glacier Creek operation.

The property was mined on a single shift basis by Mr. Rauguth and two others.

Heavy equipment used in 1985 and 1986 included: two Terex 8240 bulldozers used to work the cut and feed the sluice; one Cat 977 Traxcavator used as a standby machine; one Cat 988 loader used to remove tailings and occasionally to feed the sluice; and one D6 Cat bulldozer used as a standby machine.

The sluice plant consisted of a dump and single run box. The dump, measuring 10 feet wide by 22 feet, was lined with slick plate only. The sluice run, 3 by 40 feet, was lined with 5/8 inch punch plate for the upper 6 feet of its length, and with 2 inch Hungarian riffles over expanded metal and Coco matting for its remaining length.

In 1985 two cuts were mined. The first cut, measuring 30 feet by 100 feet along the valley direction, was located approximately 300 feet upstream of the mouth of 49 Pup. The stratigraphic section consisted of 5.5 feet of blocky sliderock, sandy gravels and black muck over an 8 inch layer of red-brown gravels on bedrock. The section averaged 4 feet thick on the Bonanza rim side of the cut, to 8 feet thick on the backwall. The total section was sluiced. Bedrock level was approximately 20 feet above Bonanza Creek level.

The second cut, adjoining the upstream end of the first on the same terrace level, measured 50 feet wide by 400 feet long. Bedrock sloped upwards into the hillside here, unlike the first cut. The pay decreased as the bedrock slope increased.

In 1986, the operation saw production from three separate pits, and continued to use the same manpower and equipment as in 1985.

Two sluice plants used similar configurations to process the pay gravels. A 5/8 inch punch plate-lined dump box fed a 20 by 3 foot wide twin run sluice. The sluice gradient was 3.5 inches per linear foot.

The sluice plants were provided with 2000 igpm of process water by a variety of pumps, including a 6 by 8 inch Monarch, powered by a 200 HP Deutz diesel; a 6 by 8 inch Dayton, powered by a 190 HP Cummings diesel, and a 10 by 12 inch Pack, powered by a Detroit diesel.

Some clays present resulted in difficult washing of the gravels. The cuts mined in 1986 were as follows:

(1) An irregular shaped cut, approximately 80 feet in length along the valley direction, located on the 20 foot elevation terrace level, just upstream of 49 Pup mouth. The total section, representing 5 to 12 feet of mixed slide material over 8 inches of red-stained gravels, was sluiced. The pay was said to be primarily in the 8 inches of red-stained gravels.
(2) A 700 by 200 foot cut upstream of 49 Pup mouth paralleling and adjoining the 1985 cuts.
(3) A small 20 foot terrace level cut from the mouth of 49 Pup, along the Bonanza left limit rim, and 200 feet downstream. The bedrock surface was cleaned approximately 60 feet towards the center of the cut pinching to zero at both ends. The material section was its thickest towards the center of the cut, approximately 18 feet. The gravel pinched out towards the downstream end of the cut, leaving only "sliderock".

BONANZA CREEK **115 O 14 (43)**
(GRAND FORKS) **63°55'N 139°18'W**
H. Reinink **1985, 1986**

This property is located at one fractional claim on the right limit of Bonanza Creek, immediately below the mouth of Eldorado Creek. The claim encompasses ground originally covered by the old Grand Forks townsite. A legal survey of the claim and boundaries was approved on December 18, 1985, excluding a cemetary on the hillside. The claim is adjoined to the west, by the Klondike Visitors Association claim.

Work began in February of 1985 when Mr. Reinink sunk seven shafts to bedrock, on the right limit rim, each 7 feet deep. Wood fires were used to thaw the ground with two fires daily burning in either two or three holes simultaneously. The rate of advance was one foot per fire per hole.

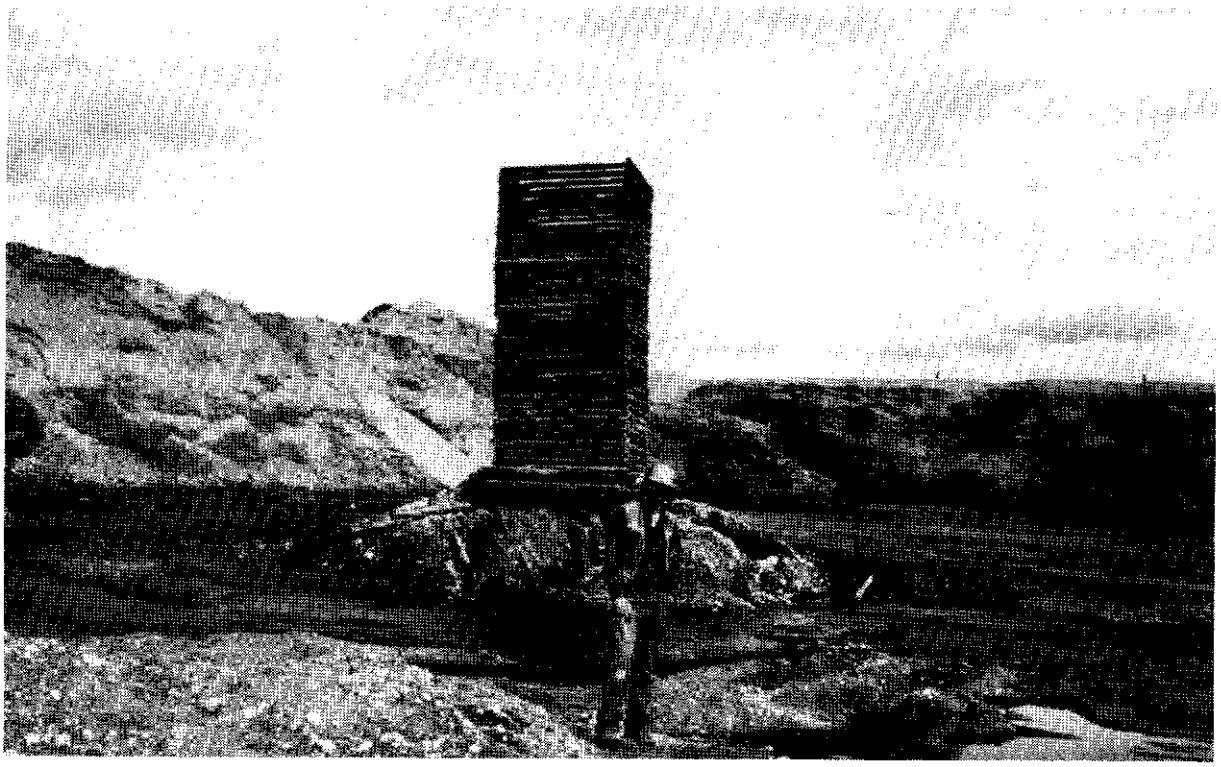
The stratigraphic section was described as sliderock overlying 18 inches of yellow gravels, overlying 6 inches of muck, overlying 6 to 12 inches of red-stained gravels, overlying bedrock.

Two additional shafts, 8 feet in depth, were sunk to bedrock later in the season. Also 3 pits in the creek bottom were put in with a rental backhoe, reaching bedrock at the 23 foot level. Material was sluiced into the pits.

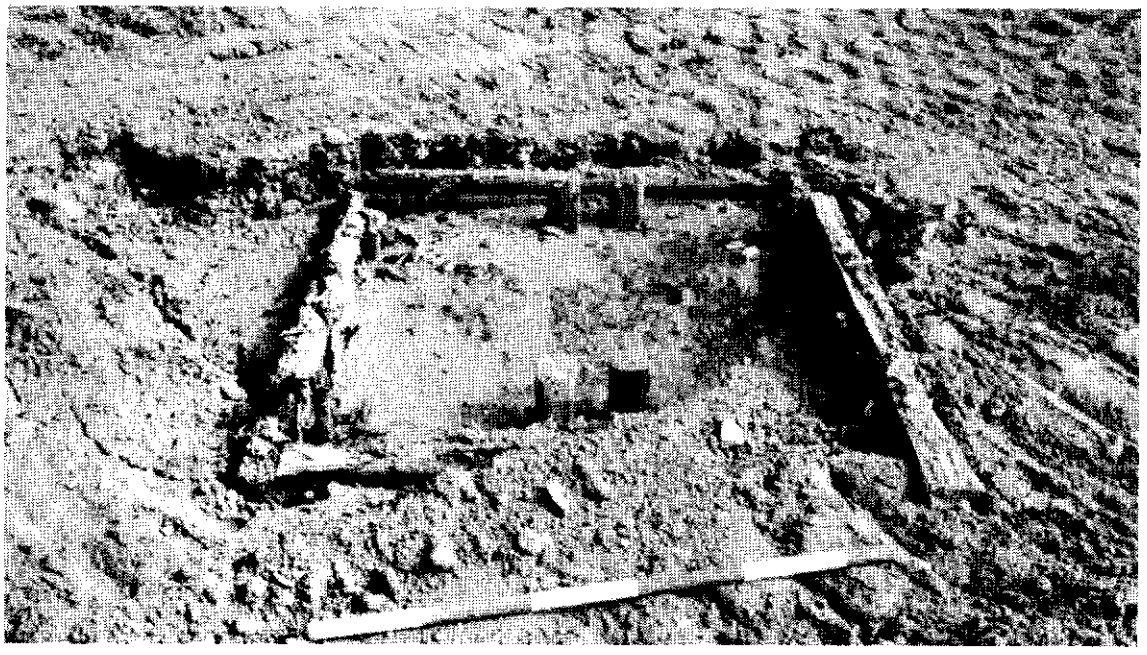
In September 1985 a rental D8K Cat bulldozer was used to strip an area 15 by 50 feet. Pay gravels were stockpiled, of which Reinink hand shovelled 15 yards through a small sluice, prior to freeze up. A 2 inch pump delivered sluice water from Bonanza creek. The production rate was estimated at 0.5 cubic yards per hour. The property has proven to be unfrozen, except for seasonal frost.

Nine additonal shafts were started in October 1985 of which 3 reached bedrock at depths of 14 feet, 15 feet and 16 feet, along the valley rim. Difficulty with seepage water was encountered, and two shafts had to be "frozen down" while the third was pumped out.

In 1986 the material excavated from the shafts was sluiced. A rental Allis Chalmers HD 16 bulldozer (D7



These photos show two recently excavated shafts which were built during the early days of the Klondike Gold Rush. These historic artifacts are often encountered during modern placer mining operations and most miners go to great lengths to preserve them.



equivalent) was used to strip a small area adjacent to the 1985 work. Two cuts 10 and 15 feet square were sluiced by hand. Material sluiced from the smaller cut consisted of the lower 2 feet of gravels plus 6 inches of bedrock (9.25 yards). The sluice section in the larger cut represented the lower foot of gravels plus 6 inches of bedrock (12.5 yards). Material from the stockpile sluiced totalled an additional 50 cubic yards. The pay material was hand shovelled into the box of a half-ton pickup equipped with a sluice box. The loaded truck was driven to the creek where the water from a 2 inch Honda pump washed the material through the sluice. The sluice measured 8 inches wide by 4 feet and was lined with one half inch riffles spaced 5 inches apart.

Reportedly, the majority of gold was smaller than 18 mesh.

BONANZA CREEK **115 O 14 (44)**
(LITTLE SKOOKUM GULCH) **63°55'N 139°19'W**
B. Wright, I. Thomas **1986**

This operation is located on a left limit bedrock terrace immediately upstream of Little Skookum Gulch. The general level of the terrace is estimated to be 70 feet above Bonanza Creek level. A single Little Skookum Gulch discovery claim was being worked under lease from the owner, Mr. J. Waiste.

A crew of two miners plus one camp person worked the property on a single shift basis.

Heavy equipment included a Cat 920 loader and a D5 Cat bulldozer. The D5 bulldozer stripped overburden and fed the loader while in pay, and the loader fed the plant.

The sluice plant consisted of a dump and twin run box. The dump, measuring 7 feet wide by 12 feet long, was lined for its lower 8 foot length with minus 1/2 inch punch plate over expanded metal and Nomad matting. The dump was reported to account for 85% of the gold recovery.

The main run, measuring 3 by 49 feet, was lined with 3 inch angle riffles over expanded metal and Nomad matting for the first 25 feet of its length. The following 8 feet was lined with punch plate screening to minus 1/2 inch. This fraction entered a side run, 30 inches wide by 14 feet long, lined with expanded metal over Nomad matting. The remaining length of the main run was lined in the same fashion as the upper portion. Grade on the main run was set at 3 inches to the foot while the side run was set at 1.25 inches to the foot.

Production rate was estimated at 70 cubic yards per hour with a water use of 2500 igpm. Water was pumped up from a return box set in an instream Bonanza reservoir. A 12 by 14 inch Worthington pump, powered by a 300 horsepower 6 cylinder Cummings diesel, delivered water at a 70 foot head through 1000 feet of 12 inch Victaulic pipeline.

Three separate cuts were worked; one on the terrace level, the other two at different elevations of the valley rim above the terrace. A total of 26 000 loose cubic yards were sluiced. At the 70 foot terrace level a bedrock surface area of approximately 100 square feet had been mined. The 50 foot section above bedrock was mostly muck with pockets and stringers of red sandy gravels, containing pay. The section was condensed with a 6 inch tipped monitor (delivering approximately 3000 igpm at 1950 RPM on pump) prior to sluicing. The other two cuts were worked dry.

Tailings discharged over the hillside under gravity. Wastewater was settled in a pond above the Bonanza valley level.

B. Wright reports evidence of a circa 1950's(?) drill and blast underground operation. Two adits at the present face were found approximately 15 feet apart. The adits extended 120 and 75 feet respectively back from the face. The adits, approximately 5 1/2 feet high by 6 feet wide, were untimbered. Production rooms went off from the adit, and drill holes in the faces were present.

The gold recovered was described as 20% larger than 20 mesh, 60% betweem 20 and 100 mesh, and 20% minus 100 mesh.

BONANZA CREEK **115 0 14 (45)**
G. Hakonson **63°59'N 139°22'W**
1986

This operation was established immediately after ceasing operations on Chief Gulch. The bench being worked was located on the left limit of Bonanza Creek between Sourdough and Forty-nine Gulches.

The bedrock surface at bench level is 175 feet above the valley floor.

The property was worked on a single shift basis by three persons. Heavy equipment included two D8 Cat bulldozers and one D9L Cat bulldozer.

Sluice water was pumped from a small instream reservoir on Bonanza Creek, located on the left limit of the valley at the upstream end of the bench. The pump used was a 10 by 12 inch Peerless driven by a Cat 3306 six cylinder diesel engine, delivering 2000 igpm to process 120 cubic yards per hour.

The sluice plant consisted of a dump box 27 feet long lined with punch plate, expanded metal and matting and a single sluice run 28 feet long.

The stratigraphic section consisted of 1 foot of topsoil, overlying up to 3 feet of slide bedrock, overlying 8 to 12 feet of gravels at the backwall, pinching out to zero gravels at the Bonanza rim.

The slide bedrock was angular, blocky granite mixed with clay, which proved impossible to wash, consequently it was stripped off.

The total gravel section, along with some bedrock was sluiced. This bedrock was multicolored: pale blue, brown, green, yellow and was finely shattered. White channel quartz boulders 2 to 3 feet in diameter were found on bedrock.

A cut 600 feet along the Bonanza rim by 250 feet back was worked. The area had been previously worked by hand. Open cut work was present; the hill had been previously supplied with ditch water.

The sluice, set on the Bonanza rim, discharged tailings to the valley immediately below the pump pond, and effluent was not settled due to the lack of room for facilities.

UPPER BONANZA CREEK **115 0 14 (46)**
(VICTORIA GULCH) **63°54'N 139°12'W**
V. Trainer **1985, 1986, 1988**

This property is located on Victoria Gulch, at the mouth of "7 Pup". The stratigraphy was a mixture of silt, some organic debris, black muck, slide rock and gravel, overlaying partially decomposed bedrock. The entire section was deemed pay material.

Three miners plus the working manager ran this operation in 1985 and 1986. In 1988 another employee was added.

In 1985, one D8H Caterpillar bulldozer removed tailings and dozed the pay material to a J.C.B. 1 3/8 cubic yard excavator for feeding to the sluice apparatus. Material was fed at a rate of 80 cubic yards per hour over a grizzly for initial classificaiton to minus 1 foot, then into a 16 by 8 foot dump box and to the 20 by 2 foot single sluice run. This was lined with angle iron riffles over Astroturf. The 1500 igpm was delivered to a manifold-monitor on the dump box, by a 6 by 6 inch pump, powered by a Perkins 6 cylinder diesel.

A second D8 Caterpillar was added to the fleet in 1986, otherwise the operation remained relatively unchanged.

A 4 cubic yard Fiat Allis loader, a much larger 2000 igpm 12 by 6 inch pump with a 420 HP Caterpillar diesel engine, and a new sluicing plant which processed approximately 120 cubic yards per hour of pay were added to the operation in 1988.

The wash plant consisted of a Derocker ahead of a 24 by 4 foot single sluice run, with 3/4 inch and 3/8 inch punch plate over 3 inch and 2 inch riffles, on top of Nomad matting.

The 1986 cut was approximately 1000 by 45 feet by an average of 16 feet deep. Since the entire section was sluiced, this represents approximately 22 000 cubic yards of pay processed.

In 1988 three cuts were developed. The first, 1000 feet by about 20 feet by 16 feet deep, the second about 500 by 20 by 16 feet deep, and the third about 500 by 100 by 16 feet deep. All materials plus an average of two feet of decomposed bedrock were sluiced, for a season production figure of roughly 50 000 cubic yards.

Tailings gravel was stacked on valley sides below the sluice using dozers and a loader. Settling occurred in a large instream settling pond at the downstream end of the ground.

Gold recovered was typically angular flakes with a few nuggets and very little quartz attached, plus about 20% flour gold. Fineness was 760 to 815.

ELDORADO CREEK **115 O 14 (47)**
Eldorado Mining (D. Johnson) **63°54'N 139°18'W**
1985, 1986, 1988

This property development was proceeding upstream along Eldorado Gulch towards the mouth of Little Eldorado Creek in 1985 and 1986, then upstream to Nugget Gulch in 1988, moving back downstream to French Gulch, also in 1988.

The stratigraphy varied somewhat between the three report years. In 1985, the Little Eldorado cut averaged 60 feet of frozen black muck overlaying 5 feet of red-stained, sandy pay gravel. In 1986, bedrock was overlain by 6 feet of gravels and 65 feet of frozen black muck. In 1988 an average of 50 feet of frozen black muck, over an average of 4 feet of pay gravel was typical in the three cuts mined. Bedrock encountered was generally consistent in the entire area, with incompetent, "rippable" schist extending down 4 to 6 feet.

Two miners and one camp helper worked on a single shift basis in 1985, while in 1986, one miner was added to the operation. Another miner was added in 1988, to bring the total single shift crew to six, including the working manager, Mr. D. Johnson. A single "right limit cut", measuring 700 feet along the valley, by 200 feet wide, (see Note 1, this report) was mined in 1985, for an excavated volume of roughly 200 000 cubic yards, producing approximately 25 000 cubic yards of pay, including 3 to 4 feet of decomposed bedrock.

In 1986, development was continued on a 400 by 200 foot cut, which had been "pioneered" in 1985. The volume of the excavation had been estimated at approximately 175 000 cubic yards, with roughly 25 000 cubic yards of pay, including 4 feet of bedrock. (see Note 2, this report)

All of the gravel plus 4 feet of decomposed bedrock were processed from three different mining cuts in 1988, totalling roughly 400 000 cubic yards of material. Of this a reported 100 000 cubic yards was processed as pay, including, once more, 4 feet of decomposed schist bedrock.

The 1985 operation remained relatively unchanged from 1984, though in 1985 virgin ground was mined, rather than dredge tailings. Stripped black muck was ripped and piled with two D8K Cat bulldozers. Pay was processed in a Pearson Rockbox, lined with 3/4 inch punch plate, "splitting-off" to an "oversize center run" 23 by 3 feet, and two sluice runs 23 by 4 feet.

In 1986, the black muck was ripped and "dry-stacked", down to roughly 20 feet above bedrock. At this point, the remaining muck was ripped with the two D8K Cat bulldozers, and pushed to a single 4 inch 1800 igpm monitor. The sluicing operation remained unchanged from 1985, however, the monitoring and sluicing programs operated alternately. The strip-monitor operation was on a double shift basis, while sluicing was carried out on day shift only. An additional D8K Caterpillar was brought on-stream in 1988, along with a Cat 920 loader with a 1 3/4 cubic yard bucket for the removal of tailings. A 10 by 12 inch slurry pump, powered by a Caterpillar 3306 diesel engine delivered roughly 4000 igpm for stripping and sluicing. The plant reportedly operated at a rate of 130 cubic yards per hour. Water was recycled from two long, narrow holding ponds, and secondary settling occurred in a third, larger instream settling pond at the downstream end of the property.

Gold recovered was reportedly fine-grained, with some larger nuggets. Characteristically angular, some of the gold had quartz attached. Fineness was stated to be 750 in 1988.
NOTE 1
"The area had been heavily worked by hand with two large "ballrooms" measuring 150 feet in the valley direction by 70 feet wide. The two rooms, totally unsupported, were separated by a 6 inch width of unworked ground. On a section of high bedrock within one of the rooms was found a "livingroom" with a sawn plank floor, chair and candles in place. Nearby were mittens, shoes, chain, new shovels and 5 new picks. Many drifts were found full of hand tailings as a result of the "old timers" sluicing into the shafts of excavated pay material..." (L. A. Olynyk, Placer Technician/Claims Inspector 30 September, 1987.)
NOTE 2
"Upstream of the "ballrooms" mined out in 1985, a 300 by 5 foot wide drift was unearthed. The drift formed an arc beginning and ending under the dredge workings extending 180 feet towards the right limit rim in it's centre. Pleistocene bones were recovered both seasons from either the gravel/muck interface, bedrock/gravel interface or within the gravel section itself." (L. A. Olynyk, Placer Technician/Claims Inspector 30 September, 1987.)

ELDORADO CREEK **115 O 14 (48)**
(GAY GULCH) **63°53'N 139°16'W**
J. Simpson **1985, 1986**

The property is located on Gay Gulch, approximately 3000 feet upstream of the Eldorado Creek valley. Deposits present average 22 feet deep, consisting of 8 feet of muck overlying 14 feet of gravels banded with muck and silt. Large angular quartz boulders are present.

Heavy equipment included a rental D8 Cat bulldozer, used to strip the cut and stockpile pay for the Cat 450 loader. This was used primarily to push tailings. A Komatsu DS31 loader, equipped with a 1 cubic yard bucket was used to feed the plant.

The washing plant consisted of a vibrating screening deck and single run sluice. The plant was driven by a 5 HP electric motor powered by a generator set run by an International 4 cylinder diesel. Material screened to minus 1 1/4 inch was sluiced in a single run 2 feet in width.

J. and M. Simpson worked the property on a single shift basis with the help of one other person in 1985, and with no extra help in 1986.

The plant was fed at a rate of 30 cubic yards per hour. Sluice water was delivered under gravity from an instream reservoir above, at a head of 40 feet. An 8 inch pipe was necked down to respective 2 inch and 3 inch lines. One line fed a spray manifold on the screening deck while the other fed a 2 inch tipped monitor, also used to wash material on the deck.

In 1985 a rim to rim cut was taken. The 8 feet of muck was stripped with a monitor while 14 feet of gravel section was sluiced, along with 8 feet of highly fractured bedrock. Production was estimated at 13 000 cubic yards, including 10 000 cubic yards sluiced.

R. and B. Johnson of Beron Placer Co. Ltd reworked downstream of the Gay Gulch claims JDS 1 and 2. These claims had been mined previously by Simpsons. Beron worked further into the gulch side limits and deeper into bedrock. Sluice water was abundant, and no water shortages were experienced in 1985.

Two months in the early spring of 1986 were devoted to ground sluicing the overburden. Once this was completed a rental D8 Cat bulldozer was brought onto the washing plant ramp. The plant was elevated this year out of the cut, approximately 35 feet above the bedrock level. Pay gravels were ramped to the plant while tailings discharged directly to the mined-out cut below. Water was scarce, with the creek delivering only enough to sluice for 3 hours daily. Water was stored in a 90 foot diameter reservoir, 500 feet upstream. Pay was reported to be in the deepest bedrock channel, varying from side to side of the present valley. Effluent was settled in ponds below, established by Beron Placers.

Gold was found in three distinct colours and ranged from fine to coarse-grained. Fineness was 780.

ELDORADO CREEK (CHIEF GULCH)
Eldorado Placers/ G. Hakonson
115 O 14 (49)
63°52'N 139°14'W
1985, 1986

This property is situated near the mouth of Chief Gulch, a small Pup emptying into Eldorado Creek.

Typically, 56 feet of black muck overlies roughly 4 feet of pay gravels upon bedrock. Bedrock changed distinctly about 1600 feet from the mouth of Chief Gulch. The lower 1600 feet was reportedly competent granite, while above this, a highly decomposed schist was found.

Two miners and one camp attendant operated on this property in 1985.

In 1985, one D9L Caterpillar bulldozer and one D8H Cat bulldozer ripped and stripped the top 40 feet of black muck, and fed the plant. The remaining 16 feet of black muck was hydraulically stripped with the aid of a "boom dam". Two feet of the schist bedrock encountered was sluiced, along with the 4 feet of gravel section.

The sluice plant consisted of a 24 by 8 foot dump box, lined with punch plate over expanded metal and square screen or matting, and a single run consisting of 3 inch riffles over matting. Sluice water was supplied by a Peerless 10 by 12 inch pump, driven by a Caterpillar 3306 diesel.

Three cuts were mined in 1985, representing 1300 feet of gulch length mined immediately above the 1984 cuts. All cuts were nominally 60 feet deep and measured 400 by 70 feet, 400 by 70 feet and 500 by 125 feet, for a total mined volume of approximately 200 000 cubic yards This yielded roughly 20 000 cubic yards of pay, including 2 feet of bedrock in some areas.

In 1986 the upper cut from 1985 was cleaned up prior to ceasing operations on Chief Gulch, and moving the equipment to Lower Bonanza Creek.

Sluice water was settled in Eldorado Creek Valley below.

Gold was described as being smooth, well rounded, and highly polished. Size ranged from medium-grained to large nuggets. Fineness was not reported in 1985 or 1986.

ELDORADO CREEK (FRENCH GULCH)
J. Archibald
115 0 14 (50)
63°53'N 139°20'W
1985, 1986

The property is located on French Gulch, a left limit tributary of Eldorado Creek, entering at claim 17 above the mouth.

The deposit mined was 21 feet deep and consisted of 13 feet of black muck with seams of silt and sand, over 8 feet of gravels. The total gravel section plus a minimum of decomposed sericite schist was sluiced.

In 1985, Mr. Archibald worked the property alone using two machines. A Cat 980B loader was used primarily to feed the plant and haul tailings and one D6B Cat bulldozer was used primarily to strip overburden and stockpile pay for the loader.

The washing plant type was a dump and single run sluice. The dump box measured 8 by 28 feet and was lined in part with 2 inch angle-iron riffles. The sluice run, measuring 3 by 24 feet, was lined with 3 inch angle-iron riffles.

Wash water was pumped to the sluice at a rate of 2500 lgpm by a Byron Jackson 10 by 12 inch pump, powered by a 671 Detroit deisel engine. The processing rate averaged 67 loose cubic yards per hour.

In 1986, Mr. Archibald mined the property with the help of one other person. In addition to the 980B loader and the D6B Cat bulldozer, a D8K Cat was employed. With the addition of this third machine, the mining method changed. The D8K ripped and pushed frozen overburden while the D6C fed the sluice plant and the 980 B hauled tailings.

The processing rate was increased from 67 cubic yards per hour to 70. The pump type and process water rate remained the same as in 1985. The deposit mined was the same as in 1985, however, the sluice section included 6 feet of bedrock in additon to the 8 foot section of gravels.

The gold size was described as divided evenly between larger and smaller than 12 mesh, and was generally angular, with a fineness of 690.

UPPER ELDORADO CREEK
G. Hakonson
115 O 14 (51)
63°52'N 139°14'W
1985

This operation is located along the upper reaches of Eldorado Creek upstream from the mouth of Chief Gulch.

The deposit was 18 to 20 feet deep and thawed due to prior years' stripping. Bedrock was overlain by 3 to 4 feet of gravel containing some 36 inch diameter quartz boulders on the bedrock surface. The gravels were overlain by 1 to 2 feet of black muck overlain by 13 to 15 feet of schist colluvium.

The thawed top 10 feet were pushed using a D9L Cat and a D8H Cat. The remaining waste section,

small broken schist and muck, was hydraulically stripped with water from a "splash dam". Two cuts were taken, each 400 feet of valley length by 100 feet rim to rim. The sluice rate was estimated at 300 cu.yd. per hour. Water use was estimated at 2500 igpm and supplied by a 10 by 12 inch Peerless pump driven by a Cat 6 cylinder diesel.

The gold recovered was described as 60% being minus 12 mesh, varying from very angular to smooth, fineness was 850.

The Eldorado property was mined out in 1985, and Mr. Hakonson concentrated on Chief Gulch and Lower Bonanza in 1986.

HUNKER CREEK **115 O 14 (52)**
Daval Mining **63°59'N 139°00'W**
1985, 1986

This property is located at "Claim 40 Below Discovery" on Hunker Creek, between (left limit tributaries) Colorado Creek and Not Much Gold Creek.

The deposits present are of two types. Tailings from 1916/1917 dredge operations cover the valley bottom. On a bench above creek level along the left limit of the creek, 25 to 55 feet of frozen black muck intercalated with sand and colluvium lenses overlays 6 to 8 feet of gravel and slabby bedrock.

D. and A. Gould worked the property on a single shift basis.

Both the 1985 and 1986 cuts were along the left valley wall. The 1985 cut averaged 45 feet in depth, by 300 by 90 feet, and represented a volume of roughly 45 000 cu.yd, of which about 5000 cubic yards was processed. The bottom 4 feet of gravel and first 2 feet of bedrock constituted the pay section.

The 1986 cut adjoined that of 1985 on the downstream end, and measured 200 by 25 by 45 feet deep. The total cut volume was about 8300 cubic yards. The sluice section remained the same, but the volume reduced to about 1000 cubic yards.

In 1985, a leased D8K Cat bulldozer was used to rip and push the frozen black muck, tailings and pay gravel, while a D3 Cat bulldozer fed the plant. The D8K was exchanged for a D9 Cat in 1986, and a Cat 950 loader was added, to mine and haul pay gravels to the D3 for sluice loading.

The sluice plant consisted of a 12 by 7 foot dump box lined with punch plate, and a single run 30 by 2 foot sluice box. The upper 8 feet of the sluice run was lined with punch plate over expanded metal and Coco matting. The remainder was lined with 1 1/2 inch riffles directly over Coco matting.

Sluice water was pumped directly from Hunker Creek by a 6 by 6 inch Gorman Rupp, powered by a 4 cylinder Deutz diesel.

Effluent was settled in a single pond downstream.

Gold was reportedly well worn, with some quartz attached, and medium to fine-grained. Fineness was reported to be 820.

HUNKER CREEK **115 O 14 (53)**
J. Gould **63°59'N 139°02'W**
1988

This property is located at the upstream end of Nugget Hill, between Independence and Hester Creeks. The Gould family has mined this property since 1903 (three generations). Four people ran a double shift operation through the 1988 mining season.

The operation is advancing into the hillside, continuing from previous years.

Depth to bedrock varies considerably across the cut. An organic mat approximately one foot in thickness covers about five feet of black muck, which overlies 10 to 30 feet of typical White Channel gravels. The variance is relative to the irregularities in bedrock profiles.

Gold was reported throughout the White Channel gravels and about two feet into the partially decomposed bedrock.

Three cuts were mined in the 1988 season, (#1: approx. 250 by 250 by 30-35 feet, #2: approx. 300 by 250 by 30 feet, and #3: approx. 200 by 100 by 10 feet) for a total production of approximately 40 000 cubic yards. Tailings, where possible, were stacked in the exhausted cuts.

The addition of a trommel (scrubber) has reportedly increased production significantly over previous years. The trommel measures 4 feet in diameter by 30 feet in length. A manifold in the dump box begins breaking up the material as it passes into the top of the scrubber. The first 26 feet is solid, with the last 4 feet being lined with 1 inch punch plate. The material to be sluiced is pre-classified to minus 1 inch, with oversize going directly to tailings.

Two 1 1/2 inch nozzles at the end of the trommel, aid in the washing and breaking up of the pay gravels. Two 20 by 4 foot shaking sluice runs receive the classified material. Nomad matting with one layer of expanded metal is used in the runs.

An International TD25 bulldozer was used for stripping, with the occasional help of a rented D9 Cat bulldozer when needed. Loading the wash plant was accomplished by a Cat 930 loader, with a 966D loader handling the tailings.

The required 1000 igpm water was supplied by way of a 5 by 6 inch Cornell high pressure pump. This was powered by a John Deere 225 HP diesel, which was replaced for awhile by a Cat 3208 diesel. At spring melt, and at times of heavy rainfall, runoff was captured by the Independence Creek ditch. Otherwise water was delivered through an 8 inch pipeline from Hunker Creek, running 1600 feet with a 400 foot lift.

Initial settling was aided using flocculents in a presettling pond and recirculation system on Nugget Hill, with final settling occurring in the tailings ponds along Hunker Creek.

Gold was described as mainly fine-grained, typically flat and smooth. Larger particles tended to be more angular with quartz attached. Fineness ranged from 800 to 870, indicating the possibility of several sources. The majority of the gold, however, reportedly had a fineness of 800 to 840.

HUNKER CREEK **115 O 14 (54)**
(HESTER CREEK) **64°00'N 139°01'W**
A. Kosuta **1986**

This property is situated at the mouth of Hester Creek valley. Pay is believed to be primarily Hunker reconcentration. Deposits present were approximately 34 feet deep and consisted of roughly 10 feet of hydraulic tailings, from past Paradise Hill operations, overlying approximately 20 feet of silty black muck banded with thin layers of gravel, over 3 to 6 feet of gravel, containing White Channel quartz boulders up to 12 inches in diameter.

The owner and three family members worked the property on a single shift basis.

Working the downstream limit of the previous cut, in 1985, Mr. Kosuta expanded the cut towards the right limit. A cut size of approximately 100 feet up Hester by 50 feet into the right limit was taken. The 1986 cut was located parallel to the 1985 cut, widening out into the right limit of Hester Pup mouth. Its size was approximately the same as the '85 cut, averaging 50 by 100 feet. Its downstream limit adjoined the Hunker Creek dredge limit. Excavation volumes for each 1985 and 1986 approximated 5000 cubic yards and yielded roughly 1000 cubic yards of pay each year.

During the winter of 1985/86 Mr. Kosuta established two exploratory drifts along bedrock, into the right limit of his 1985 cut wall. A single wood evening fire, covered at night, was used to gain an advance of 1.5 to 2 feet daily. Drift advances were 27 feet and 36 feet respectively (4 feet high by 3 to 4 feet wide) and were untimbered. One drift was mucked out with shovel and wheelbarrow while the other with shovel and bucket.

Heavy equipment used to mine in 1985 and 1986 included a D5 B Cat and a D6 B Cat, used primarily to strip the cut and push tailings, and a 941 Cat Traxcavator, equipped with a 1 1/2 cubic yard bucket, used primarily to mine the cut, stockpile pay and feed the box. In 1986, a late model 3 cubic yard dump truck was added, and used to haul pay to the sluice box.

The sluice plant, remaining unchanged since 1984, consisted of a dump box and single run sluice with production estimated at 40 to 50 cubic yards per hour. Its location had not changed since 1984 (Hunker valley), neither had the method of water acquisition (water pumped from Hunker and gravity water from Hester). As the drain was not excavated sufficiently, the cut had to be sump pumped out while working the lower depths. In addition to bedrock, the sluice section was comprised of an average of 6 feet of gravels.

HUNKER CREEK (EIGHTY PUP) **116 B 3 (55)**
Tamarack Inc. **64°01'N 139°05'W**
1985

This operation was located on Eighty Pup, approximately 2000 feet upstream of the Hunker Creek valley. The deposit mined was 68 to 84 feet deep and consisted of one foot of gravel overlain by black muck, all frozen.

Mr. Frank Short, property manager, and two miners worked this property on a single shift basis.

The overburden was stripped hydraulically as in past years. The use of monitors, however, was discontinued as their use proved less cost effective than mechanical ripping and pushing.

Stripping water at a rate of 5000 igpm was pumped up to 80 Pup from Hunker Creek to a head of 150 feet. A 14 by 16 inch pump, driven by a Cat model D938 V12 diesel (950 HP) was employed. The engine, running at 1000 RPM, consumed 24 imperial gallons per hour.

Effluent continued to be settled upstream of Eighty Pup in a large settling area 80 feet wide by 1/2 mile long. The area, consisting of old dredge tailings, follows the left limit of the Hunker valley upstream to Seventy Pup. The settled muck supports vegetation, which has reportedly attracted over 40 families of ducks to settle.

The 1985 cut measured 150 to 200 feet (rim to rim) by 730 feet in length by an average of 76 feet deep. Stripping volume, calculated at a 75 foot depth, totals 355 000 cubic yards. This volume represents 900 D9H Cat bulldozer hours ripping and pushing to the stream of water and 500 pump hours.

The sluice section was comprised of the total gravel section (1 foot deep) plus an average of 4 feet of

bedrock. Nine thousand cubic yards of material were sluiced, at a rate of 60 cubic yards per hour, using 4000 igpm pumped from Hunker Creek.

The washing plant consisted of a Pearson Rockbox.

Heavy equipment included one D9H Cat, used to rip and push the frozen muck to the artificial stream, one Hough 100 loader, used to feed the plant, and one 966 loader, used to haul tailings.

The bulldozer was equipped with a triple shank ripper outfitted with a standard D9 curved shank in the center slot and straight D8 shanks on the outer ends. Mr. Short said that this configuration worked very well for his application. A preference was stated for having the material ripped to chunks small enough in size to promote optimum thawing. Working a single shift allowed sufficient thawing time for the big chunks to keep the drain free from blockage daily.

The operator reports evidence of old underground workings on the property. Within the cut area were found 37 vertical shafts and a series of eight support cogs. The cogs, each measuring 8 feet square, were constructed from green logs and were 4 feet high. The series of 8 cogs, or support cribs, ran up the valley center for 72 feet. The cogs were likely used to support the ceiling during summer drifting and were spaced 1 foot apart. Generally a 30 foot center cut, the length of the valley, was taken.

In 1986 the crew size and mining method remained the same. The cut size measured 1120 feet long by an average of 207 feet (250 feet wide for the lower 800 feet and 100 feet wide for the upper 320 feet) by an average of 72.5 feet deep (65 feet by 80 feet). The frozen deposit consisted of 1 foot of gravel overlain by black muck. The sluice section consisted of 1 foot of gravels and an average of 2 feet of bedrock. Less bedrock was sluiced than the previous year. A total of 6000 cubic yards of material was sluiced.

The stripping volume in the 1986 season totalled 614 000 cubic yards. This represents 1200 D9H bulldozer hours (ripping and pushing) and 800 pump hours. The D9H Cat reportedly achieved efficiency of 512 cubic yards per machine hour, while the pump achieved 768 cubic yards per machine hour.

Two new pieces of equipment were placed on the property in 1986; a Koering model 505, 1.5 cubic yard capacity hoe, used to feed the plant at a rate of 60 cubic yards per hour and a 4 foot diameter by 24 foot scrubber, used to prewash the sluice material before entering the Pearson box.

LAST CHANCE CREEK, HENRY GULCH
J. Alton

115 O 14 (56)
63°57'N 139°10'W
1985, 1986, 1988

This operation is located at the upper end of the right fork of Last Chance Creek. The valley here is narrow with steep sidehills and mining was restricted to a narrow cut at the valley center.

The stratigraphy is typically comprised of 1 foot of vegetation over 10 to 13 feet of frozen black muck mixed with talus slide rock. This in turn overlies 6 to 25 feet of frozen gravel on partially decomposed bedrock.

Three people ran this operation on a single shift basis in 1985. A double shift was established in 1986, necessitating two additonal workers for night shift. In 1988, personnel were reduced once more to three miners, working day shift.

Three cuts were mined in 1985. The first measured 200 by 100 feet by 35 feet deep, with 25 feet of gravel. The bottom 6 feet of gravel and 4 feet of bedrock were sluiced. A sidehill cut 400 by 25 feet back by 35 feet deep yielded 9 feet of pay, of which 3 feet was bedrock. A cut 150 by 125 by 20 feet was developed at Henry Gulch, the lowest left limit tributary of Hunker Creek, of which 7 feet of gravel and 4 to 5 feet of bedrock were sluiced, along with an intercepted fractured reef, from which an additional 10 to 12 feet was processed. The total volume excavated in 1985 was estimated to be 40 000 cubic yards, of which approximately 15 000 cubic yards was pay.

The 1985 Henry Gulch cut was extended in 1986, 450 feet up the valley by 125 feet wide by 15 feet deep. The entire 6 to 7 foot gravel section was processed, along with 4 to 5 feet of bedrock, yielding roughly 16 000 cubic yards of pay from the 25 000 cubic yards excavation.

The 1985 heavy equipment roster was geared towards a "Cat and car operation", utilizing two Caterpillar 12 cubic yard pull scrapers to strip and develop the cuts, and to haul pay. These were pulled by two D7 Caterpillar bulldozers, which also served to feed the plant and push tailings.

A single run 16 by 3 foot sluice box, behind a 22 by 7 foot side-feed dump box handled the 1985 pay. Two layers of expanded metal over Nomad matting lined the first 5 feet of the dump box, with a 1 inch under-current, under 5/8 inch punch plate, over the expanded metal. The top 5 feet of the sluice run incorporated 2 inch angle iron riffles on top of double expanded metal and Nomad matting. The lower end held "stepped" punch plate to reclassify material into another short section of sluice run, once again with punch plate, expanded metal and Nomad matting. Production ran from 60 to 80 cubic yards per hour, using about 1000 igpm.

In 1986 a Caterpillar 980 loader was incorporated for hauling pay gravels and tailings. The 1985 plant was exchanged for an 18 by 13 foot vibrating screen deck and triple sluice trays. The pay material was washed

and classified in the forward "shunting" deck under high pressure spray from a manifold and monitor equipped with a 2 inch tip. Cross-riffles were added to the deck to slow down the material for more thorough washing. Minus 3/4 inch material dropped through punch plate to two 18 foot by 2 1/2 foot sluice runs and one 22 by 3 foot sluice run, all lined with double expanded metal over Nomad matting. Gradient was set at about 11.5%. This plant was fed at a rate of approximately 35 cubic yards per hour.

Water usage was reduced in 1986, with an 8 by 10 inch Fairbanks Morris high pressure slurry pump, supplying 700 igpm.

The sluice arrangement from 1985 was adapted once more in 1988, with the addition of a 6 by 6 inch Gardner Denver pump powered by a 371 cubic inch engine. This supplied the 1500 igpm sluice water required. The pull scrapers were not used in 1988, but a 3/4 cubic yard Lima dragline was used for cleaning out the small 150 by 80 foot settling pond (necessitated by lack of settling space).

The increased water consumption in 1988 came from a large (17 000 000 gallon capacity) instream reservoir.

Gold from this property was reported to be medium to coarse-grained, with a fineness of 650.

LAST CHANCE CREEK **115 O 14 (57)**
(15 PUP) **63°55'N 139°09'W**
T.P. Resources Ltd **1988**

This operation was located on Last Chance Creek, approximately three miles upstream from its confluence with Hunker Creek. The stratigraphic section consists of approximately 20 feet of frozen material, comprised of about 15 feet of black muck, and 5 feet of gravel overlying bedrock. The five foot seam of gravel is mixed, grading from sand to boulder size. The bedrock varied from yellow porphyry to black carbonaceous schist. The total gravel section and approximately 3 feet of bedrock were sluiced.

Three full time miners, a cook/expediter and a working manager, Mr. Mike Olynyk, were employed on the operation. Stripping and bulldozing were performed on both day and night shifts, while sluicing was restricted to day shift.

Black muck was ripped and bulldozed, then wasted against the valley wall limits. Pay was then stockpiled at night, or dozed to an EL300 hoe at the Derocker and sluice runs during day shift. Stripping and stockpiling of pay were done with a D9H Cat bulldozer, with occasional help in the stripping from the hoe, which primarily was used in draining the cut, and feeding the Derocker. One cut measuring about 470 by 190 by 20 feet deep was developed for about 65 000 cubic yards, yielding about 21 000 cubic yards of pay.

The Derocker, measuring 10 by 20 feet, and the 20 by 5 feet single-run sluice box processed about 80 cubic yards per hour. The 2300 to 2500 igpm of water was supplied via a Morris 8 by 10 inch pump, powered by a Cat 3208 diesel. Water was pumped from an instream reservoir, to the sluice plant, from where it passed through the cut and into the drain, to be settled below in an instream pond.

Gold was well-rounded, free of quartz, with some being dendritic in nature. Fineness averaged about 700.

LAST CHANCE CREEK **115 O 14 (58)**
(15 PUP) **63°55'N 139°09'W**
T.P. Resources Ltd **1988**

After the completion of the cut on Last Chance Creek, T.P. Resources Ltd. commenced an operation on Treasure Hill, a bench above the left limit of 15 Pup.

Two full-time miners, a working manager and a camp cook worked a single shift operation.

Typically, this is an area of thawed brownish White Channel gravel, with a total depth to bedrock of 35 feet in the centre of the hill, pinching out on the rims.

Prior to the arrival of T.P. Resources Ltd., the centre piece of the hill had been hydraulically mined by Canadian Klondike Mining Co. Ltd., under the management of Joseph Boyle from 1910-1916.

T.P. Resources mined two distinctly different deposits. The smaller deposit consisted of 15 Pup rim gravels. After stripping off 2 feet of organics the total gravel section (3 feet) and 2 feet of bedrock were sluiced. The second deposit consisted of the upper 2 feet of bedrock remaining in Canadian Klondike Mining Company's hydraulic pit. As the greater portion of the pay lay on the bedrock surface it was necessary to process the bedrock with the surface vegetation intact. The Derocker deck screened the alders without problem.

Including both deposits a surface area of approximately 500 by 300 feet was mined. At a washing rate of 100 cubic yards per hour, 25 000 cubic yards of material were washed.

A D9 Cat bulldozer was used for stripping, stockpiling of pay and handling of tailings. An EL300 hoe fed the 10 by 20 foot Derocker as well as doing minor tasks.

A 250 foot lift from the intake resevoir to the washing plant required two pumps in series to deliver the 1800 igpm required. An 8 by 10 inch Morris powered by a Cat 3208 diesel, pushed the water to a Cornell 6 X 8 powered by a Cat 3306 diesel.

An instream resevoir on Last Chance Creek captured the water for sluicing. Except in periods of heavy rain,

the main stream flow rarely allowed for a complete day of sluicing. Effluent was not returned to the intake resevoir due to the type of material being sluiced.

Settling was done on the adjacent T.P. Resources property where operations had ceased for the season.

Gold was characteristically well worn and rounded, with a small percentage having quartz attached. Fineness was about 700.

QUARTZ CREEK **115 O 14 (59)**
(LITTLE BLANCHE CREEK) **63°49'N 139°03'W**
Ballarat/Tatlow Joint Venture **1985, 1986**

This property is located at the mouth of Little Blanche Creek. A low level bench, situated on the right limits of both Quartz and Little Blanche Creeks, was mined. The property is owned by W. Rasmussen and leased to Ballarat/Tatlow.

The deposit mined was 65 feet deep and consisted of 55 feet of gravel mixed with clay, overlying 10 feet of White Channel gravels. The sluice section consisted of the total section of white channel gravels plus 2 feet of decomposed schist bedrock. The total section was frozen.

A single cut, 20 000 bedrock yards in size, was mined unfrozen. Materials were handled with a single D9L Cat bulldozer. The property was mined on a single shift basis by two persons.

One hundred and thirty cubic yards per hour were washed with 2800 igpm in a three channel sluice with runs 4 feet wide. The process water was delivered by a Warren pump, powered by a Cat 3208 diesel.

The gold was described as being both angular and smooth, with no quartz attached, and with an average fineness of 760.

QUARTZ CREEK **115 O 14 (60)**
(LITTLE BLANCHE CREEK) **63°51'N 139°08'W**
P. Monfette **1988**

This operation is situated on Little Blanche Creek, roughly five miles upstream from the mouth of Quartz Creek.

The stratigraphy was found to be comprised of 2 to 3 feet of organic mat over 12 feet of gravel. One foot of "hardpan" was encountered beneath this, with another 10 feet of gravel below the "hardpan". Bedrock was reached at 25 feet.

This was a one person, two season operation.

Mining was exclusively done in the winter, and methods used were those of the "old-timers". Mr. Monfette had "hand-sunk" a single shaft on the right side of Little Blanche Creek. The 4 by 4 foot cribbed shaft descended to bedrock in 4 foot steps, for safety reasons. A 6 by 6 foot drift followed along bedrock for approximately 30 feet.

All material was brought to surface with two 5 gallon hand buckets. The frozen ground was thawed (using a home-made, wood-fired boiler and steam point) and mucked by hand. Material was then stockpiled for sluicing the following summer.

The sluice box was a 6 foot by 10 inch long tom, lined with matting and expanded metal. Twenty to thirty igpm sluice water was supplied via a small Tanaka pump, from water collected in an "old-timer's" shaft downstream, and was then settled again in the shaft.

The recovered gold was coarse and porous in character, and was dull yellow in colour. Fineness was believed to be about 650.

UPPER QUARTZ CREEK **115 O 14 (61)**
Ballarat/Tatlow Joint Venture **63°50'N 139°02'W**
1985, 1986

This property is situated at the confluence of Mack Fork and Little Blanche Creek on Quartz Creek's left limit. The deposit consists of a four foot layer of reddish gravels, overlain by approximately 110 feet of frozen black muck.

Work at this site began in 1983, when miners from other Ballarat/Tatlow Joint Venture operations established a large water reservoir upstream from Mack Fork. A drainage ditch along the extreme left limit valley wall was constructed to carry the muck, ripped and pushed into the drain, downstream to the settling pond. Water from the reservoir would quickly carry the material downstream.

In 1985 and 1986, they continued stripping the ground in preparation for mining. One person alternately worked two heavy equipment machines. A D9L Cat was used to rip and push the frozen black muck into the drainage ditch, while a D9G Cat was used in conjunction with a monitor to strip ground favouring the valley right limit.

Water for the monitor was pumped from the reservoir above Mack fork. The flow from Little Blanche Creek was directed along the right limit of Quartz Creek to fill the reservoir. The muck was settled in a 500 by 1500 foot pond located downstream from the mouth of 19 Pup.

ALLGOLD CREEK **115 O 15 (87)**
B. Ould **63°56'N 138°38'W**
1985

The property is situated on Allgold Creek, approximately one claim length below the right limit tributary of Lucky Creek.

The deposit mined was 20 feet deep and consisted of 10 feet of black muck, overlying 5 feet of mixed silt and sand gravels, overlying 5 feet of well-sorted gravels. The sluice section consisted of the lower 4 feet of gravels and 2 feet of bedrock.

Mr. Ould and one to two other persons worked the property on a single shift basis.

Heavy equipment on the property included two D8H Cat bulldozers, used primarily for ripping and pushing overburden, stockpiling pay and removing tailings, and one 1 cubic yard capacity excavator, used primarily to load the washing plant.

The sluice plant consisted of a double deck screening plant and sluice. The 4 by 12 foot screening deck classified material to minus 1/2 inch. The sluice was equipped with pulsating riffles. Sixty cubic yards per hour were washed with 1200 igpm pumped from a 6 by 8 inch Monarch, powered by a 200 Cummings diesel.

The majority of the gold recovered was coarse and well-rounded, fineness was 890.

UPPER BONANZA CREEK (HOMESTAKE GULCH) **115 O 15 (62)**
A. & M. Roberts **63°55'N 139°16'W**
1985, 1986

This property is located on Homestake Gulch, a right limit tributary of upper Bonanza Creek. The two owners worked the property by themselves during 1985 and 1986.

The valley width at the property is approximately one hundred feet, with bedrock forming a sharp V-shaped trough favouring the left limit. The practical working cut proved to be a minimum width of 35 feet, and approximately five feet of bedrock on the sides of the cut were excavated to maintain a level surface.

The stratigraphic section was a 22 foot thick sequence of interlayered seams of "muck", silt, organic debris, and reddish sandy gravels, overlying bedrock. The sluice section consisted of the lower three feet of gravels plus three feet of highly weathered bedrock.

An IH 125C tracked loader was used to do all of the mining chores; stripping, feeding the sluice, moving tailings, etc.

A new sluice plant replaced the one used in 1984. The new box consisted of a 4 1/2 by 12 foot dump lined with slick plate. The run, 18 inch by 20 foot, was lined with 2 inch riffles over rubber carpet, graded at 1.75 inches to the foot.

A total of 1324 cubic yards of material was sluiced from the 1984 stockpile, old timers tailings and a cut 20 feet square. Material was sluiced at a rate of 15 cubic yards per hour, 3 hours per day.

Sluice water was delivered to the box from two sources. Recirculated water from the 1984 pit, pumped by a 4 inch Monarch trash pump, powered by a 16 HP Briggs engine, was delivered to a side manifold on the dump box. Also, gravity water from an upstream reservoir, via a 4 inch line, was delivered to the box. Tailings were stacked on the right limit.

In 1986 the operation continued upstream from the 1985 work area. Eighteen hundred cubic yards of overburden were stripped from an area approximately 210 feet along the valley direction by an average width of 35 feet. The lower portion had been stripped to a depth of 14 feet while the upper portion had been stripped to a 5 foot depth. This work fell on the upper section of the "Marlene claim".

Heavy equipment used to mine included the addition of a Bucyrus 20B Dragline, equipped with a 2 cubic yard bucket. The Dragline was used to feed the box then deposit tailings onto the left limit sidehill. The 1H 125 worked the cut and stockpiled pay for the Dragline.

The cuts taken in 1986 measured 120 by 30 feet plus a small one, 10 by 20 feet. The stratigraphic section was as earlier described for the 1985 season.

Many old shafts and drifts were present on the property. Within the 1986 cut a 4 1/2 foot wide by 4 1/2 foot high drift, leading to a room 15 by 20 feet, could be recognized. Recovered underground was a woman's coat containing a Dwights Baking Soda cookbook and a personal 1898 camp expense diary.

Gold assayed 664 fine and was in the range of 30% plus 12 mesh.

DOMINION CREEK **115 O 15 (63)**
J. Coghlin **63°46'N 138°31'W**
1985

This property is located along the left limit of Dominion Creek, approximately 2000 feet below Kentucky Creek. The deposit mined consisted of one 300 by 500 foot cut, with 19 feet of frozen black muck overlying two feet of gravel on another 11 feet of black muck and 8 feet of gravels on bedrock.

Two miners working a single shift used a D8K Cat to rip and strip the overburden as well as feed the hoe, a John Deere 644 loader to remove tailings, and a C475 Bantam hoe to feed the box.

The wash plant consisted of a feeder hopper with three nozzles on a single bar, a double 4 by 10 foot screen deck, with five spray bars, and a 42 inch by 24 foot sluice run. Along the run various sections of punch plate over expanded metal and astroturf, and 2 inch Hungarian riffles over expanded metal on

matting were used. Water was supplied to the plant from an upstream reservoir, using a 12 inch Gorman pump, powered by a 3208 Cat diesel at a rate of 1200 igpm. The 8 foot gravel sluice section was processed at 60 to 80 cubic yards per hour.

Effluent was treated in three downstream ponds after 1/2 mile of drainage ditch.

Gold was reported as very fine-grained "flour" with 10% being coarse. Fineness was 830.

No work was reported on the property in 1986.

DOMINION CREEK **115 O 15 (64)**
I. Hamilton **63°51'N 138°54'W**
1985, 1986

This property is located along the headwaters of Dominion Creek, approximately 500 feet upstream of the mouth of Little Dominion Creek.

The deposits mined in 1985 and 1986 were 12 feet deep and consisted of an 8 foot section of creek gravels mixed with old tailings, overlying 4 feet of pay gravels. Bedrock was slabby schist. The sluice section consisted of the lower 4 feet of gravels and 2 feet of bedrock.

The owner and two other persons worked the property on a single shift basis.

Heavy equipment on the property in both seasons included one D7E Cat bulldozer, used primarily to strip overburden, stockpile pay and push tailings, and a Bantam C 475 excavator, used primarily to feed the washing plant.

The washing plant consisted of a triple channel sluice box. The centre run measured 3 by 20 feet while the side runs were 20 inches by 20 feet. The processing rate was 100 cubic yards per hour. Sluice water was supplied by a 10 by 10 inch pump powered by a 3 cylinder Jimmy diesel engine.

The gold was mostly fine-grained with a fineness of 800.

DOMINION CREEK **115 O 15 (65)**
J. Taylor **63°49'N 138°40'W**
1985, 1986

This property is located on a left limit terrace of Dominion Creek, across from the mouth of Portland Creek.

The deposit being mined is 15 feet deep and consists of 8 feet of muck overlying 7 feet of gravels. The lower 2 feet of gravels plus 1 1/2 feet to 2 feet of bedrock were sluiced.

Mr. Taylor worked the property alone in 1985, and in 1986 was joined by one other worker.

Heavy equipment on the property included one D8 Cat, model 14A, used to strip the cut and feed the sluice, and one John Deere 450 tracked Loader used to haul tailings.

The sluice plant consisted of a dump and single run sluice. The dump, 4 by 8 feet, was lined with slick plate. The 2 by 12 foot run was lined with expanded metal over matting.

Rate of feed was 30 cubic yards per hour, using sluice water delivered to the plant by three, 3 inch Honda pumps, operating simultaneously.

Gold size was reported as being 4% plus 6 mesh; 62% minus 6/plus 60 mesh; 34% minus 60/plus 150 mesh; with a fineness of 800.

CARIBOU CREEK **115 O 15 (66)**
J. Stuart **63°49'N 138°48'W**
1985, 1986

The property is located on Caribou Creek, approximately 4000 feet upstream from its confluence with Dominion Creek. The deposit was frozen, and approximately 17 feet to bedrock. It consisted of 12 feet of black muck overlying 4 to 5 feet of gravels. The sluice section consisted of the lower 3 feet of gravels and 2 feet of bedrock, and the waste section was both ripped/pushed and stripped hydraulically.

Mr. Stuart and three other persons worked the property on a single shift basis in 1985, and added two other persons in 1986. All other aspects of the mining operations remained relatively the same.

Heavy equipment on the property included one D-9G Cat bulldozer, used primarily to strip overburden, one D8H Cat, used primarily for pushing tailings, and one Hein-Werner C-14A, one cubic yard capacity excavator, used primarily to feed the sluicebox.

The washing plant consisted of a dump and single run sluice. The dump measured 8 feet wide by 22 feet in length and was lined with punch plate and gold saving devices. The sluice run, measuring 36 inches by 24 feet, was lined with 2 inch angle-iron riffles, expanded metal and Astroturf.

The processing rate was 80 cubic yards per hour with water use of 2500 igpm, supplied by an 8 by 10 inch pump, powered by a Volvo 6 cylinder diesel, 150 HP engine. Water for sluicing was partially recycled, and final settling was achieved downstream of the recycle pond.

The gold was described as being fairly smooth and as having a fineness of 840 to 850. The grain size distribution of the gold was reported to be 20% +8 mesh, 30% -8/+16 mesh, and 50% -16 mesh.

GOLD RUN CREEK **115 0 15 (67)**
Teck Mining Corp./ **63°42'N 138°38'W**
Granville Joint Venture **1986, 1988**

This operation is located on the right limit of Gold Run Creek approximately 1/2 mile below the right limit tributary of 24 Pup.

The deposit consists of an average section of 15 feet of frozen organics (black muck), 15 feet of frozen aeolian sand, over 5 feet of economic gravels. Two feet of bedrock were mined along with the 5 foot gravel section.

In 1986, eleven miners and eight helpers worked two ten hour shifts in an overburden stripping program, in preparation for 1987 mining. To accomplish the stripping objectives, they used two D8K Cat bulldozers, (one ripping and one push-loading scrapers) and three Cat 627B scrapers to haul overburden to stockpiles. Using these five machines, they stripped 350 in place cubic yards per hour.

In 1988, seventeen miners and four others were employed to mine the property. The heavy equipment consisted of ten machines, as follows: three D8K Cat bulldozers were used to mine pay gravels and push-load the scrapers; four Cat 627-B scrapers to haul the pay gravels and tailings; one Cat 966 loader to feed the plant; one Cat 235 hoe for drainage ditches and mining duties; and one Cat 140G grader for road building and maintenance.

This combination of equipment produced 170 cubic yards of pay gravels through the sluice plant. The section mined was essentially one large, expanding cut, which was approximately 300 feet wide by 2000 feet in length in 1988. The pay gravels were processed by screen deck classification, and a three run sluice equipped with expanded metal and nomad matting. Three thousand five hundred igpm of process water were supplied by two 10 by 12 inch Morris pumps, powered by Cat 3406 engines.

The operation involved a large total recirculation system for process water and effluent. The company has an excellent track record for mine abandonment (on its Sulphur Creek property) and is taking measures to ensure the same results here.

The gold recoverd on this property is reported to be 870 fine.

UPPER DOMINION CREEK **115 0 15 (68)**
Quality Box Co. Ltd **63°51'N 138°53'W**
(B. Ould) **1986**

The property is located on the headwaters of Dominion Creek, above the right limit tributary of Little Dominion. The valley is narrow here with steep sidewalls and creek gradient.

Deposits mined were approximately 15 to 20 feet deep and consisted of 5 to 10 feet of black muck, overlying 5 feet of sand, silt and gravel lenses, overlying 5 feet of sandy gravels.

B. Ould, and one to two other persons, worked the property on a single shift basis. The work consisted of reworking the bedrock in areas that had been previously mined.

Heavy equipment included two D8H Cat bulldozers, used primarily to rip and push the bedrock to a stockpile and remove tailings, and one 1.0 cubic yard capacity hydraulic excavator used primarily for feeding the sluice plant.

The sluice plant consisted of a double deck screening plant and sluice. The screening deck measured 4 by 12 feet and classified material to minus 1/2 inch. The sluice was equipped with pulsating riffles. The feed rate was 60 cubic yards per hour. Twelve hundred igpm were pumped to the plant by a 6 by 8 inch Monarch, powered by a 220 Cummings diesel engine.

The gold was rough, commonly with quartz attached, and fine-grained, with a fineness of 790.

ELDORADO CREEK **115 O 15 (69)**
(NUGGET GULCH) **63°52'N 139°19'W**
Beron Placers Company Ltd **1986, 1987**

This property is located on upper Eldorado Creek just downstream of Nugget Gulch, and on Nugget Gulch itself in 1987. The ground has been extensively mined in the past, but some remnants of virgin ground remain, at valley side limits near bedrock. Beron mined virtually all of the surficial material between the valley limits, including old tailings and some overburden.

The mining processing and tailings disposal equipment was run by two operators on a single shift basis, with two camp support personnel.

The section consisted of up to 30 feet of black muck overburden which rested on 2 to 10 feet of gravels. Some sloughing of the muck occured during thawing, and this material was sluiced as well. Bedrock, largely soft graphitic schist (Klondike Schist), was ripped to two feet deep and processed. The mined section on Eldorado Creek (1986) consisted of 20 to 25 feet of a mixture of in-place creek gravels, old tailings, settling pond sediments, weathered bedrock and some black muck.

The cut was mined with a D8K Cat bulldozer with ripper and a D6 Cat bulldozer. The bulldozers pushed material 100 to 150 feet to a stockpile area, which was fed to the sluice by a Cat 950 loader. Production from this cut in 1986 was approximately 38,000 cubic yards. A bedrock drain was constructed using a C-366 Bantam hydraulic excavator to remove

groundwater seepage. No maintenance of the drain was required. The mining operation moved to Nugget Gulch in 1987, using the same mining and processing equipment and personnel.

The processing plant, one of the more advanced set-ups in the Yukon, consisted of the following components:
1. A vibrating grizzly-feeder, hydraulically driven, with a 12 by 4 foot hopper and two 4 by 4 foot grizzlies (3" classification), and high pressure wash water spray nozzles;
2. A vibrating, 9 foot sluice section for coarse gold;
3. A vibrating single deck 1/4 inch punch plate which discharged oversize via a 50 foot pivoting conveyor;
4. Two 4 by 10 foot sluice runs, set at a gradient of 1.5 inch per foot, and equipped with expanded metal and nomad matting. This system processed an average of 132 cubic yards per hour, washed with water supplied via a 12 inch aluminum pipeline from a reservoir approximately 1500 feet upstream.

The tailings disposal portion of the operation was the subject of government research projects in 1986, 1987 and 1988. Detailed accounts of this operation are available in publications of the Canada/Yukon Mineral Resources Subagreement, by Sigma Resource Consultants and Wright Engineers Ltd. The system of tailings disposal involved slurry pumping of sluice box effluent, via (variously) a Furikawa 6 by 8 inch pump powered by a Deutz 78 HP engine and a Warman 8 by 10 inch pump powered by a Mitsubishi 112 HP engine. Both pumps experienced wear problems, and various combinations of materials for impellers and liners were experimentally used. The discharge from the pumps, via an 8 inch diameter polyethelene pipeline, was treated by a 24 inch diameter Linatex rubber-lined hydrocyclone. The hydrocyclone underflow (fine gravel and sand) was deposited in a fan on the right limit of the valley, and was occasionally bladed by the D6 Cat bulldozer. The hydrocyclone overflow (silty water) discharged via a pipeline and the drainage ditch to the downstream settling pond.

GOLD BOTTOM CREEK **115 O 15 (70)**
L. Millar **63°57'N 136°58'W**
1985, 1986

This property is located on Gold Bottom Creek 500 feet upstream from its confluence with Hunker Creek. The valley here is narrow with steep sidewall gradient.

L. Millar and his two sons began work on the property in 1985.

The deposit mined here was 30 feet deep and consisted of a mixed gravel and muck section overlying a cleaner gravel section. Deposits are predominantly unfrozen. The sluice section consisted of the lower 5 feet of gravels, and one to two feet of bedrock.

The heavy equipment included one D8H Cat bulldozer, used primarily to strip the overburden, and one Koehring 666 excavator equipped with a 1.75 cubic yard bucket, used primarily to feed the plant.

The sluice plant consisted of a dump box and a single run sluice. The run, measuring 36 inches by 20 feet, was lined with Hungarian riffles over expanded metal and Nomad matting.

The rate of feed was 50 cubic yards per hour with sluice water pumped at a rate of 1500 igpm by a 6 inch trash pump, powered by a Deutz 4 cylinder diesel.

Ninety percent of the gold was plus 60 mesh in size, and the fineness was reported to be 850.

GOLD BOTTOM CREEK **115 O 15 (71)**
K. Yardley **63°54'N 136°59'W**
1986

The property is located on Gold Bottom Creek approximately 5.2 miles upstream from the Hunker valley. The 1986 operation was located at 6 Above Discovery, approximately 3000 feet downstream from the confluence of Soap Creek and the left fork of Goldbottom Creek.

In 1986 Mr. Yardley and one other miner operated the property on a single shift basis, with one camp helper. Three left limit cuts and one right limit cut were mined.

The lower left limit cut was 20 feet deep, consisting of 12 feet of muck overlying 8 feet of gravels. The sluice section here consisted of the total gravel section plus 2 to 3 feet of bedrock. The upstream cuts were 15 feet deep,: 5 feet of silt and sand overlying 10 feet of gravels. The lower 5 feet of gravels, and 2 to 3 feet of bedrock, were sluiced.

Bedrock type was described as highly decomposed chlorite schist. Large, well washed boulders were said to be concentrated in the gravel section 5 feet above bedrock.

The thawed ground encountered could be attributed, in part, to having been previously stripped or worked by previous operators. In addition, the area had also been heavily drifted by early miners.

The mining cuts were as follows:
Right limit - measuring approximately 75 feet wide by 300 feet along the length of the valley, had been previously worked by B. Bratsburg. One foot of bedrock and 2 feet of gravels, washed into the cut area by stream flow, were mined.

Left limit, paralleling cut No. 1 20 feet deep (12 feet muck, 8 feet gravels) sluice section: 8 feet gravels, 2 to 3 feet of bedrock. Left limit, adjoining cut No. 2 at its upstream end. (75 feet by 100 feet up valley)

15 feet deep (5 feet of sand and silt, 10 feet of gravels) sluice section: 5 feet of gravels, 2 to 3 feet of bedrock. Left limit, adjoining cut No. 3 at its upstream end (75 feet by 100 feet up valley). Sluice sections were identical to Cut No. 3.

The heavy equipment used in this operation included one D8H Cat bulldozer, used primarily to strip the cut and feed the hoe, one Cat 225 hoe, used primarily to feed the plant, and one Cat 950 loader, used to haul tailings.

The washing plant consisted of a trommel screening unit and twin sluice runs. The 50 inch diameter trommel, measuring 24 feet in length, screened material to minus 5/8 of an inch. Undersize material was sluiced in twin runs measuring 48 inches by 22 feet in length. The runs, designed with three 4 inch drops, were lined with expanded metal over a combination of Nomad matting and green long wire matting. Grade on the trommel was set at 1.5 inches to the foot while the sluice runs were set at 2 inches to the foot.

Washing rate was 40 to 50 cubic yards per hour with 1000 igpm supplied by a 10 inch pump.

Sluice water was recycled from the lower pond of three in series. Ponds one and two acted as pre-settling ponds. Pond one was mucked out on a continuous basis while pond two was cleaned daily. Pond three, the pump pond, was seldom cleaned.

GOLD BOTTOM CREEK (SODA PUP)
O. Lunde
115 O 15 (88)
63°57'N 138°59'W
1985, 1986

This operation is situated approximately 500 feet upstream from the mouth of a left limit tributary to Gold Bottom Creek, Soda Pup.

The stratigraphic section typically consisted of 18 feet of black muck over 7 feet of gravel. The first 2 feet of bedrock was partially decomposed.

Personnel during 1985 included the owner and one other miner, along with one camp worker. Total personnel was reduced to two in 1986. A day shift operation was run through 1985 and 1986.

The black muck covering the 1985 and 1986 cuts was strip-thawed as Mr. Lunde, 3 or 4 years prior, had taken off the surface cover to a level below the tree roots.

In 1985 one cut was developed where the ground had been stripped the previous fall. The cut measured 43 000 bedrock feet and represented a sluice volume of roughly 8000 cubic yards including 1.5 feet of bedrock, from an excavation of approximately 32 000 cubic yards. Stripping was completed in preparation for the 1986 season.

A right limit cut above the mouth was mined in 1986, measuring 23 000 bedrock feet, and producing about 4200 cubic yards from the 25,000 cubic yard cut. The lower 3.5 feet of gravels plus 1 to 2 feet of bedrock were sluiced. Quartz cobbles 8 to 12 inches in diameter, were found embedded in the bedrock.

A D7F Cat bulldozer was used to strip, manage tailings and feed the sluice box. Stripping was performed generally the previous fall, and in the fall of 1986, a D8H Cat was rented to assist in stripping for 1987.

The sluice plant consisted of a 24 by 8 foot dump box and a single sluice run 20 by 2 feet. The dump box was lined with 5/8 inch punch plate over expanded metal and Nomad matting, while the sluice run was lined with 2 1/2 inch riffles slanted back 15 to 20 inches over Astroturf.

Sluice water was supplied by an 8 by 8 inch pump powered by a 6 cylinder diesel engine.

HUNKER CREEK (24 PUP)
G. & E. Ahnert
115 0 15 (72)
63°54'N 138°55'W
1985, 1986

The property is located on 24 Pup, a small left limit tributary to the right fork of Hunker Creek. The Pup valley gradient is steep, with moderate to steep sloping sidewalls. Water is in short supply late in the season.

In 1985, G. Ahnert mined the property alone by hand, while E. Ahnert supplied camp support. The pay gravel was picked and shovelled to a riffle-lined flume at a rate of one cubic yard per day. Weathered bedrock was picked and sledged before sluicing. The process water was controlled by a gate at an upstream reservoir, and effluent was settled in a small pond located a few hundred feet below.

No monitoring was done in 1985, as was done in past seasons. At the end of the season, a rental D8H Cat bulldozer was used to rip and remove overburden, covering an area 100 feet by 150 feet by 6 feet deep.

In 1986, most of the season's work was devoted to testing work rather than mining. The testing consisted of drilling ten 1 1/8 inch holes to bedrock with a "Californian" rock drill, sinking one 10 foot shaft to bedrock, and pit work. For shafting, cold water under hydraulic head pressure from a reservoir above was directed through a 1 inch plastic hose and a 1 inch steam point nozzle. The pit work consisted of hand digging a series of three to four foot deep pits in previously stripped ground.

A limited amount of stripping was done with a John Deere 400 loader, in preparation for 1987 work.

Gold at this property was coarse-grained, 60% larger than 1/4 dwt, with a fineness of 825. Some wire gold was reported.

HUNKER CREEK **115 O 15 (73)**
J. and I. Fraser **63°59'N 136°58'W**
1985, 1986, 1988

This operation is located on a left limit terrace, midway between Gold Bottom and Not Much Gold Creeks.

The stratigraphy is typically comprised of 2 feet of vegetation over 55 to 63 feet of frozen black muck, overlying a frozen gravel section averaging 4 to 5 feet in depth. Bedrock was generally "wavy" and decomposed to about 2 feet, but often much deeper.

Personnel varied from three to five in 1985, including one person in camp. The crew was reduced to four people in 1986, but increased again to five people in 1988.

In 1985 one sidehill cut was mined into a face 400 feet long and 100 feet back yielding approximately 8000 cubic yards of pay from an excavation of roughly 40 000 cubic yards. The entire gravel section along with 1 to 2 feet, and sometimes up to 5 feet, of decomposed bedrock was sluiced.

A similar cut 300 feet long, and 107 feet deep into the hill, was developed in 1986. This yielded approximately 9000 cubic yards of pay from this 40 000 cubic yard cut.

Approximately 4300 cubic yards of pay was processed in 1988, from a sidehill cut, measuring 300 by 60 feet. The volume of this excavation is estimated at roughly 25 000 cubic yards.

The operation in 1985 relied on hydraulic monitoring in June and July, for stripping frozen muck. Two units were used, reportedly consuming 1000 igpm each, supplied by a 6 by 6 inch pump driven by a GMC 4031C diesel. Pay was bulldozed from the exposed cut to the sluice assembly by a D6C Caterpillar bulldozer, while a D4 Caterpillar bulldozer fed the plant.

The 1985 sluicing apparatus, used later in the season, was comprised of an 18 by 12 foot dump box and a single 24 by 4 foot sluice run. The run was lined for the first 8 feet with punch plate over expanded metal and matting, with 3 inch riffles in the remainder. The plant was fed at a rate of 30 cubic yards per hour, with an estimated 1300 igpm from the same pump that was used for monitoring earlier in the season.

In 1986 the equipment and methods remained relatively unchanged, except that the sluice plant was exchanged for another, in hopes of better recovery.

The D4 Cat bulldozer was eliminated in 1988 and in 1989 a Caterpillar 950 loader was aquired. The plant remained unchanged and consisted of a 22 by 7 foot dump box ahead of a 24 by 4 foot single sluice run. The lower two-thirds of the dump box contained various sizes and types of punch plate overlaying expanded metal. The first 8 feet of the sluice run was lined with punch plate over a 1 inch "undercurrent", overlaying a double layer of expanded metal, on top of Nomad matting. The lower 16 feet contained 3 inch angle iron riffles. This plant was fed at an approximate rate of 40 cubic yards per hour. A 10 by 12 inch pump powered by a Caterpillar D6 engine provided the 1300 igpm sluice water.

An instream reservoir acted as the water source from 1985 to 1988.

Effluent travelled through a 1000 foot long drain, into a 500 by 150 foot settling pond towards the middle of the valley. Reportedly however, most of the settling occurred in the drain.

Gold was reported to be mainly fine-grained, with very little quartz attached was relatively flat and smooth. Fineness averaged 810 in 1985, 820 in 1986 and 810 in 1988.

GOLD BOTTOM CREEK **115 O 15 (74)**
(SOAP CREEK) **63°53'N 138°59'W**
P. Erikson **1985, 1986**

This property is located on Soap Creek immediately upstream from its confluence with Gold Bottom Creek.

Stratigraphy was typically 2 feet of black muck overlying 10 feet of gravels. Bedrock varied from competent to highly decomposed.

The owner operated the mine with the aid of camp help through 1985 and 1986.

In 1985, two cuts measuring 500 by 35 feet were stripped down to 4 feet above bedrock, using a D7 Cat and D6C Cat. The next four feet of gravel, and the top 2 feet of bedrock were then fed through the sluicing plant at a rate of approximately 35 cubic yards per hour. The total volume mined in 1985 was approximately 15 000 cubic yards, while the processed volume was roughly 6000 cubic yards.

Moving directly upstream in 1986, three cuts were mined: two measuring roughly 100 by 20 feet, the third about 300 by 30 feet, representing a total mined volume of approximately 5500 cubic yards, which yielded 2000 cubic yards of pay.

The sluice plant consisted of a 20 by 7 foot dump box and a single sluice run 20 feet by 28 inches, set at a gradient of 2 inches per linear foot. Water use was estimated at 1000 igpm, derived from a reservoir which trapped total creek flow, giving 3 to 5 hours of sluicing daily.

Effluent was settled in a series of three ponds in 1985, and was not recirculated. Due to extremely dry conditions in 1986, recirculation was necessary, with final settling taking place in a series of 4 ponds below the recirculating pond.

HUNKER CREEK **115 O 15 (75)**
(LITTLE GEM GULCH) **63°57'N 138°55'W**
J. & C. Holdings Ltd **1988**

This operation is on Hunker Creek at the mouth of Little Gem Gulch. Mining in 1987 was at the confluence of Hunker Creek and Little Gem Creek. A cut downstream of the 1987 workings was mined in 1988. The work was done on present day stream gravels along the right limit of the valley.

The depth to bedrock was approximately 32 feet with overburden frozen only in some areas. The section consisted of 1 1/2 feet of vegetation covering 20 to 25 feet of black muck. Four to five feet of gravel lies beneath the black muck. Bedrock was a decomposed schist which captured gold and required sluicing. Approximately 2 to 3 feet of the bedrock and all of the gravels were sluiced.

This was a family operation with one employee. Three people operated on a single shift basis.

Equipment included a D9H Caterpillar bulldozer for stripping off waste and stockpiling pay for the Bantam 1 1/2 cubic yard hoe, which fed the plant.

A 20 by 10 foot dump box dropped the pay down a 5 foot step to the throat of a 24 foot by 42 inch single run conventional sluice box. Three quarter inch punch plate overlaid expanded metal and matting for the first six feet, while the remaining 18 feet contained 2 1/2 inch angle iron riffles. Sixty to eighty cubic yards per hour was processed.

Approximately 25 000 square feet of bedrock was mined in 1988, yielding approximately 6500 cubic yards of pay.

Water seepage from Hunker Creek and run-off from Little Gem Gulch filled the 1987 cut. This out-of-stream reservoir was used for water supply and for settling. Two pumps were used: one 8 by 6 inch pump and a 4 inch slurry pump which supplied 1800 to 2000 igpm to the sluice box.

Gold was mainly fine-grained. Very little of the gold was flat and smooth. Fineness was approximately 840.

HUNKER CREEK **115 O 15 (76)**
(ENSEL HILL) **63°57'N 138°53'W**
H. Liedtke, J. Erickson **1985**

This property is located on the high level right limit bench along Hunker Creek immediately upstream from Rogers Gulch. Deposits present consist of 1 foot of sandy muck overlying eleven feet of reddish brown sandy gravels. Channel structures were present in the gravel. Bedrock is blocky mica-feldspar-quartz schist, which is decomposed in places to sand-textured material. The property was intensively worked by early hand miners.

The owners (Liedtke and Erickson) continued to work the property with the help of two employees.

An estimated 80 cubic yards per hour were processed in a dump and single run sluice. Punch plate was present in the bottom half of the dump and intermittently in the run. Approximately 1500 igpm was pumped from Hunker Creek by a 10 by 12 inch Morris pump, driven by a Cat 3400 diesel, through 1200 feet of 10 inch pipeline.

A D8H Cat bulldozer was used to mine the cut and stockpile pay for the 966 loader feeding the box.

The entire deposit was thawed.

Effluent from sluicing was discharged over the end of Ensel Hill into Rogers Gulch. It was partially settled in a reservoir in the valley before crossing under Hunker Road and entering Hunker Creek.

Gold was reported to have a fineness of 835. Nuggets were flat on one side and rough on the other and many had quartz adhering to them.

The hill was mined-out mid-season and the operation dismantled and moved to Dominion Creek where stripping and test pit work was carried out.

HUNKER CREEK **115 O 15 (77)**
(MINT GULCH) **63°56'N 138°53'W**
H. Liedtke & J. Erickson **1987**

H. Liedtke and J. Erickson mined a small area at the mouth of Mint Gulch. A total of 1000 cubic yards of material was sluiced. Heavy equipment included one Cat 966 loader used to feed the plant and one D8 Cat bulldozer used to strip the cut and push tailings.

SULPHUR CREEK **115 O 15 (78)**
L. Gibson **63°43'N 138°05'W**
1988

The Lucky Lady Placers operation is located in the centre of Sulphur Creek valley just upstream of Brimstone Creek.

The stratigraphic section consists typically of a shallow layer of vegetation overlaying 26 feet of frozen black muck, with a nominal thickness of some 6 feet of gravels down to bedrock. (a "false bedrock" of decomposed clays appeared intermittently).

Two full time miners operated a single shift throughout the mining season.

All of the gravel section and up to 4 feet of the bedrock were sluiced. Initially, all of the tailings were bulldozed back to the mining limits, however, towards the end of the season there was adequate space allowed for the placement of tailings in the old cut. One cut was developed in 1988, measuring 300 by 250 feet by 36 feet deep, for an excavation of approximately 100 000 cubic yards, and for a sluiced production of approximately 28 000 cubic yards.

Equipment used in the 1988 season included a D9 Caterpillar bulldozer, used for stripping and stockpiling of pay, a Poclain model 160 excavator for feeding the sluice box and for digging of drains, and a Caterpillar 977 track loader for removing tailings. Sluicing was done with a Pearson triple run Rock Box. The dump box measured 20 by 16 feet, with a main centre run measuring 20 by 3 feet, and two 20 by 4 foot sideruns. The capacity of this assembly is reported to be 100 "loose" cubic yards per hour.

The 3500 igpm of water required for this operation was provided via a 12 by 12 inch pump, powered by a Gorman Rupp engine. An out-of-stream reservoir and a drain from Sulphur Creek were the water sources. Effluent was settled in the downstream "community settling pond".

The gold was reported to be mainly fine-grained, with occasional traces of mercury. Fineness ranged from 810 to 830.

SULPHUR CREEK **115 O 15 (79)**
Meadow Gold Placers Ltd **63°49'N 138°56'W**
1985, 1986

This operation is located on Sulphur Creek approximately 1000 feet downstream of Green Gulch.

The stratigraphy exposed in 1985 and 1986 typically consisted of 3 feet of surface tailings over 40 to 50 feet of black muck, banded with shallow gravel lenses, overlying 10 feet of gravel interspersed with some black muck. In 1986 the typical section was similar. Three feet of slabby schist was processed with the gravels in 1985 and 1986.

A crew of three miners worked the property on a single shift basis in 1985, while one person mined for most of 1986, later to be joined by two others.

In 1985 a single cut, rim to valley rim, measuring approximately 250 feet across the valley by 350 feet in length, was mined. Exact measurements of the area worked reflected a total of 92 500 bedrock feet mined. From this area approximately 63 400 cubic yards were stripped (ripped and pushed) and 52 300 cubic yards sluiced.

The operation continued upstream in 1986, with a single cut yielding about 10 000 cubic yards of pay from the 70 000 cubic yard excavation.

Three D8H Caterpillar bulldozers were used to carry out all of the mining tasks in 1985, including stripping, feeding the sluice plant, and bulldozing of the tailings. The "muck-lensed" gravel was condensed with 6 inch monitor prior to sluicing. In 1986, the three D8H Cat bulldozers were eliminated, and one D8K Cat bulldozer was brought in. A D9L Caterpillar bulldozer was rented in the fall to strip roughly 70 000 cubic yards for the 1987 mining program.

Processing rate was 65 cubic yards per hour. Water was recirculated with a 10 by 12 inch Bingham pump, powered by an International TD-18 diesel, at a rate of 2500 igpm. Water was delivered to the box via 600 feet of 10 inch pipe.

The sluice plant consisted of a 30 by 8 foot side-fed dump box and a double run sluice box. The dump box was lined with punch plate over expanded metal and Coco matting. The side run was 30 inches wide for the first ten feet, and 18 inches wide for the remaining ten feet, and was lined with expanded metal over Coco matting in some sections. Other areas were lined with 1/4 and 1/2 inch square mesh over Coco matting. The main run was lined with 2 1/4 inch to 3 inch riffles over expanded metal and Coco matting and was 20 by 3 feet in size. Coarser material was sent down the main run, while finer material was diverted into the side run.

Settling of effluent beyond the recirculating pond was done cooperatively with the downstream neighbour M. Crockett. Two ponds were used on that ground approximately 6000 feet downstream. One pond was situated immediately above the mouth of Meadow Gulch, while the other was located immediately below.

The gold was reported to be predominantly angular, much of it with quartz attached. Some pieces of ragged quartz with gold embedded were found. Fineness ranged from 810 to 850.

BONANZA CREEK **116 B 3 (80)**
M. Orbanski **64°02'N 139°23'W**
1988

Located in a wide, flat valley section of Bonanza Creek approximately one mile upstream from the confluence of Bonanza Creek and Klondike River, this large-scale mining operation was one of the closest to Dawson City. The mining camp was located in the Klondike River valley a short distance away. Twelve miners and fourteen camp workers were employed for two shifts.

A new section of the Bonanza Creek road was constructed on the left side of the valley over old dredge tailings and this served to divert the creek away from the operation. The mining cut was dug

from the right limit at the base of the hillside in ground not mined by previous dredging.

One D7 Cat and two D9 Cat bulldozers were used to strip overburden and pay gravels, and to help load the motor scrapers. Three 631C motor scrapers were used to haul pay gravel and to spread tailings. One 966 front-end loader was used for loading the scrapers which delivered pay gravel to a grizzly and hopper, which discharged to the trommel. The trommel was 8 feet in diameter, with holes from 1/4 to 3/4 inch and twelve sluice runs each 30 inches wide by 30 feet long.

A 12 by 14 inch Worthington pump powered by a Cat diesel engine D343 delivered approximately 3500 igpm, which was used to process approximately 300 cubic yards per hour.

The stratigraphic section was up to 45 feet deep with approximately 24 feet of frozen black muck overburden on top of 15 to 25 feet of gravel. All gravels plus 4 feet of bedrock were sluiced. Waste overburden was mixed with tailings gravel and spread over old dredge tailings piles in the valley middle. Approximately 480 000 cubic yards of material were processed in 1988 and approximately 500 000 cubic yards of waste material were moved.

Water was pumped from a large dredge pond at the downstream end of the property and effluent was settled in dredge tailings piles before seeping back into the pump pond. No water was taken from or discharged into the Bonanza Creek.

Gold recovered was all flakes and "flour" gold, with no nuggets. Fineness was 780.

BONANZA CREEK **116 B 3 (81)**
(TRAIL HILL) **64°01'N 139°22'W**
C. Denver **1986**

The properties are located on, or near, Cripple Hill on an elevated white channel gravel bench on the right limit of Bonanza Creek, approximately 1.5 miles upstream of the Klondike valley.

Claims were owned by Mr. P. Foth, and leased to Cal Denver for mining.

Four separate areas were worked: Cripple Hill centre high level gravels; Cripple Hill rim, facing Bonanza Creek; Cripple Hill rim, facing Trail Gulch; and Trail Gulch.

Deposits on the hill vary in thickness from zero feet deep on the rims where the gravels pinch out, to 150 feet deep in the centre of the hill.

Heavy equipment included one Komatsu D355 bulldozer (D9 plus 10% size equivalent) and one D9H Caterpillar bulldozer. Both bulldozers were used to strip the cuts and stockpile for the 966. A 966 Cat loader was used primarily to feed the washing plant, and a Cat 988 loader used for shop use.

The washing plant consisted of a large Pearson dump box, a trommel screening unit and twin sluice trays. This unit replaced a Derocker and 60 inch by 30 foot run mid season. The trommel, 30 feet in length, was a scrubber for the first 21 feet of length followed by 9 feet of square mesh, screening to minus 1 1/4 inches. The undersize fraction entered either the two 48 inch by 30 foot sluice trays lined with either 1 1/4 inch or 2 inch Hungarian riffles over Nomad matting. The trommel, gear driven at 4.5 RPM, was powered by a 25 HP electric motor powered by a 75 KW Kato generator set, driven by a 6 cylinder Perkins diesel.

The feed rate was estimated at 120 cubic yards per hour, using 3000 igpm of process water. Sluice water was obtained from a large pond situated on the right limit of the Bonanza valley, approximately 100 feet upstream of the mouth of Cripple Creek. The pond derived its water from Bonanza Creek seepage through the dredge tailings. Water was pumped at an approximate head of 100 feet by a Morris 10 by 12 inch pump, powered by a 350 Cummings diesel via a 12 inch aluminum pipeline.

HUNKER CREEK **116 B 3 (82)**
J. & C. Holdings Ltd **64°01'N 139°09'W**
1985, 1986

This property is situated along the left limit of Hunker Creek, approximately 2000 feet downstream from the mouth of Henry Gulch.

The deposit being mined is approximately 108 feet deep and consists of roughly 100 feet of black muck, with intermittent silt layers and ice lenses, overlying 6 to 8 feet of gravels. The sluice section consists of the total gravel section plus 3 to 4 feet of bedrock.

The operation averaged four workers, including one in camp, on a single shift basis.

Heavy equipment on the property consisted of one D9H Cat bulldozer which was used primarily to rip and push off the muck overburden, load the sluice box, and remove tailings.

The sluice plant consisted of a 24 by 10 foot side-feed dump box and a 2 by 24 inch single run sluice. The run was lined for the first 8 feet of its length with 1/2 inch angle-iron. Processing rate was 100 cubic yards per hour, using 2500 igpm water, pumped to the spray bar on the dump box by a 10 by 12 inch Peerless, powered by an 8V71 GMC diesel (318 HP).

The gold recovered was described as flat with occasional pieces having quartz attached. Eighty percent of the gold is reported to be +60 mesh in size. Fineness information was not available.

HUNKER CREEK **116 B 3 (83)**
L. Somerton **64°01'N 139°10'W**
1988

This operation is located at the base of the left limit near the mouth of Hunker Creek. Mining is at the base of the hillside and is proceeding into the hill slowly. A 2 foot layer of moss and ice lenses covers a layer of gravel that ranges between 6 and 10 feet thick. Fractured, decomposed bedrock was found beneath the gravels. All of the gravel and 2 to 3 feet of the bedrock were sluiced.

Two people ran the operation, with various family members taking turns working the mine.

One cut measuring 50 feet long by 10 feet wide was mined in 1988, yielding about 4000 cubic yards of pay.

Equipment consisted of a John Deere 350 rubber-tired tractor hoe, which fed the homemade sluice box, handled the tailings and stripped overburden. A John Deere 450 hoe was used for a short period as well.

A 4 by 6 foot dump box preceded the 18 foot by 12 inch sluice run, with a "floating" 3/4 inch pipe grizzly, which classified the gravels. This assembly had a capacity of 10 cubic yards per hour.

An out-of-stream reservoir captured spring water, which was pumped to the sluice box by a 3 inch Yamaha and a 2 inch Briggs & Stratton gasoline pump.

The gold recovered was characteristically very fine-grained, rounded and smooth. An abundance of magnetite was present. Fineness was reported to average 820.

HUNKER CREEK **116 B 3 (84)**
(DAGO HILL) **64°01'N 139°07'W**
M. Church, Preido Mines Ltd **1985, 1986**

This property is located at the downstream end of Dago Hill, a high left limit bench of Hunker Creek just upstream from Dago Gulch. Deposits present consist of typical White Channel gravel, which comprises most of the section, overlain by brown gravel (Klondike Wash). The average depth of the deposits is approximately 68 feet, with some sections up to 100 feet thick near the center of the hill. Previous mining on the property has been done by underground and hydraulic methods.

The 1985 and 1986 mining seasons saw no significant changes from 1983 and 1984 operations. The mining equipment and methods are described in "Yukon Placer Mining Industry 1983-1984, R.L. Debicki, 1986, p. 114.

HUNKER CREEK **116 B 3 (85)**
(DAGO HILL) **64°01'N 139°07'W**
Miben Mining Co. **1985, 1986**

This property is situated on the upstream end of Dago Hill, immediately downstream from the Hunker Creek left limit tributary, Last Chance Creek.

The 1985 operation was located on the west, or downstream side of Dago Hill. The stratigraphy consisted of 75 feet of gravels, the top 20 feet of which were deemed uneconomic. The 1986 operation was located on the east, or upstream side of the hill, with an 80 foot gravel layer over semi-competent bedrock. The bottom 18 to 20 feet was considered economic.

The two owners and one other miner worked the property in 1985 and 1986, on a single shift basis.

Equipment included one D9G Cat bulldozer used to strip overburden; a Cat 824 bulldozer with rubber tires used to push away from the face while monitoring, and to create an effluent channel from the face to the box; and one D7 Cat bulldozer used to push the pay to the box. Prior to hydraulically monitoring the face, the upper 20 feet of uneconomic gravels were stripped in a thawed state with the D9G Cat bulldozer, into an old cut, leaving an average sluice section of 55 feet.

Preido Mining Co. Ltd, under contract, stripped an approximate 60 foot depth of uneconomic gravels during the 1985 and '86 seasons, over a cut size 800 feet in length by 300 to 450 feet in width. A portion of the cut was sluiced, with the cut to be completed in the 1987 season. In addition to the 18 to 20 foot gravel sluice section, approximately 6 to 12 inches of bedrock were sluiced, depending on its impermeability and washing characteristics. Some clay presented washing problems.

There were 4000 to 4500 igpm through a single 4 inch monitor tip used to wash down a horseshoe shaped cut approximately 150 feet wide by 80 feet back, favouring the rim of Hunker Creek. The Cat 824 bulldozer would push the material lying at the face towards the trough to the box. The trough was continuously kept open by the loader and monitor. The water carried the material to the box at a rate of approximately 100 to 125 cubic yards per hour. During the final sluicing stage the monitor was directed away from the face and the water turned down. The D7 Cat would pile up the pay midway between the face and the box for reconcentration by the monitor. After a thorough wash, the pile would be bladed to the box with the D7 bulldozer at a rate of approximately 100 cubic yards per hour. Water was delivered to the box by a spray manifold.

The sluice plant consisted of a large 8 by 14 foot dump box, lined with punch plate, and a sluice run 29 inches wide by 300 feet in length. The upper 60 feet was lined with 3 inch angle iron riffles over coco matting, while the remaining 240 feet were lined with

wear iron. The exception was a 4 foot section of main run, located approximately 20 feet from the lower end of the box, which was lined with minus 1/2 inch punch plate. The minus 1/2 inch material fed a bank of 5 sluice trays; 4, sized 36 inches by 16 feet each, with the center tray being 48 inches by 16 feet. The undercurrent and tray combination reportedly was very effective at recovering fine gold. The trays were lined with expanded metal over matting. Grade on the main run was 1 1/2 inches to the foot while the side trays were set at 1 inch to the foot.

The tailings discharged overbank directly to the Hunker valley.

KLONDIKE RIVER **116 B 3 (86)**
(JACKSON HILL) **64°02'N 139°22'W**
White Channel Underground Mining Ltd **1988**

This underground placer mine is situated on a high bench of White Channel gravels on the right limit of Bonanza Creek just upstream from the Klondike River.

The mine operates in two phases: underground drill and blast mining of frozen gravels in winter, and sluicing of the stockpiled ore in summer. These operational phases are described below:

1. Underground Operations:

Four portals are collared in the lower face of a White Channel high bench. There is a well developed network of untimbered drifts in the competently frozen material, the deepest of which extends some 800 feet back from the portal. The drifts are 25 feet wide by 12 feet high, allowing the use of standard surface heavy equipment. A Cat 631 scraper is used to clean the portals in the spring. Two Chapman tank drills are used to drill off the face for explosives loading, and muck is cleared and transported to stockpile areas by two Amico 920 scoop trams with 10 cubic yard buckets. Approximately 40 000 cubic yards of gravel were recovered in 1988, and 75 000 cubic yards in the winter of 1988/89. Gravel from the bottom 15 feet of White Channel plus 2 to 3 feet of bedrock was considered as ore.

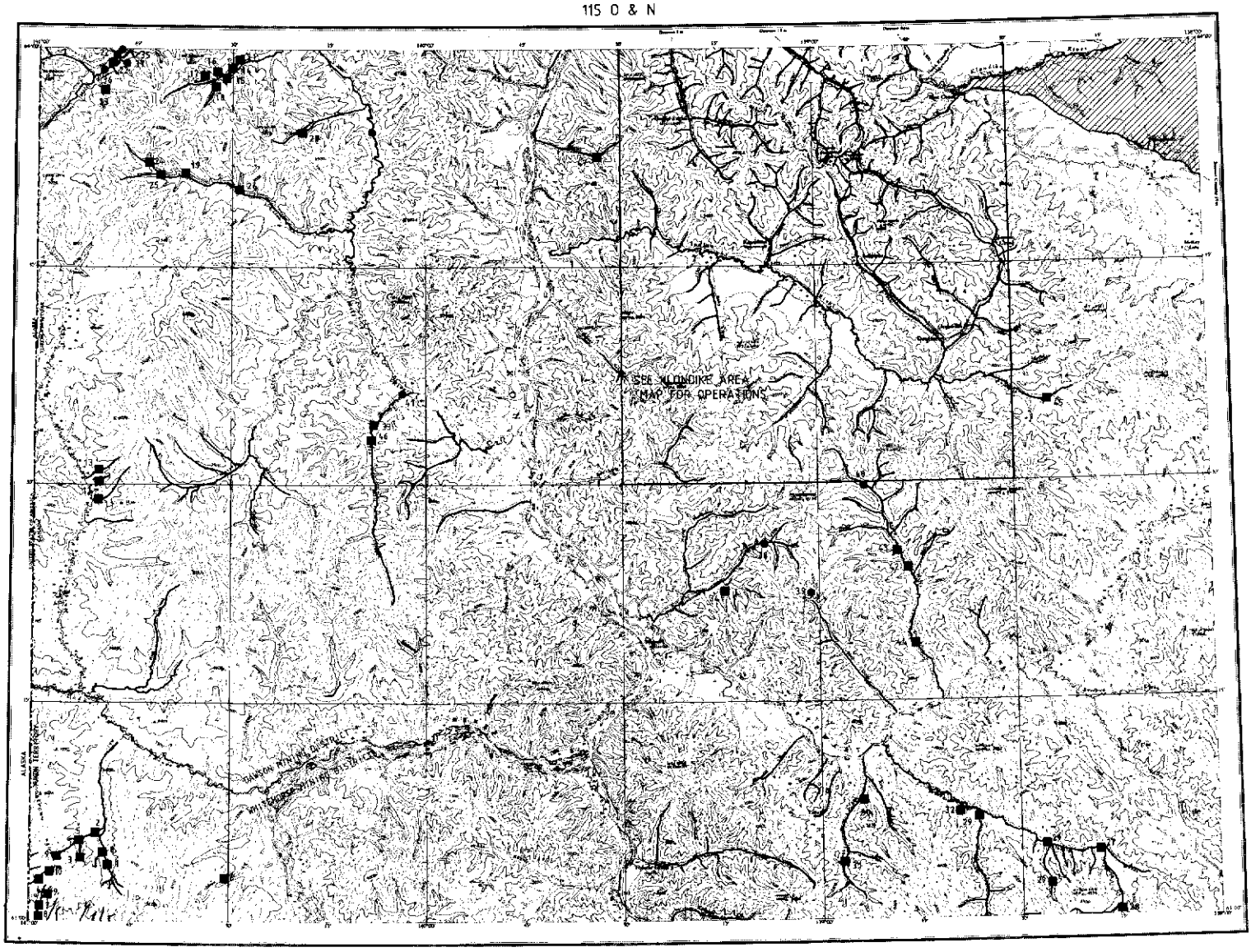
2. Sluicing Operations:

A D9 Cat bulldozer was used to push stockpiled ore to the Cat 980 B loader, which in turn loads the sluice plant. The plant consists of a dump box leading to a 40 foot long sluice run; a screen shaker system classified material to minus 1/2 of an inch, which is directed to twelve 20 foot by 4 foot sluice runs. Approximately 100 cubic yards per hour was processed in 1988, using approximately 7500 igpm.

A 16 by 16 inch Peerless pump, powered by a Cat 3406 diesel engine, delivered water to the sluice from an old dredge pond in the Klondike River valley. The tailings were exhausted over the bench rim to a fan at the base of the hillside. The process water effluent was settled in an old dredge pond before seeping back in to the Klondike River.

The gold recovered was predominantly fine-grained and "flour" gold, with an average fineness of 835.

115 O & N



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

STEWART RIVER
YUKON TERRITORY

5 0 5 10 15 20 25 30
Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

CLAYMORE CREEK **115 N 2 (1)**
Canadian Occidental Petroleum Ltd **63°05'N 140°50'W**
1978

References: No previous reference

Claims: P 3233-34, 3314-27, 3131, 3222-27, 3235, 3304-13, 3359-63, 3192-3221, 3380-3433, PL4158, PL 4159

Source: Summary by R.L. McIntyre from assessment report 120045 by M.P. Hendrick and D.M. Robertson.

History:

This property was originally discovered by Claymore Resources in 1975. Canadian Occidental Petroleum Ltd optioned the ground in 1978.

Current Work and Results:

The 1978 program involved 396 feet of drilling in six holes, using a Bucyrus-Erie T-22 cable tool rig. Hole depths ranged from 34 feet to 120 feet. One hole encountered weathered bedrock at 82 feet. Discontinuous permafrost and its attendant sloughing problems, caused four of the holes to require casing. Each 2 foot sample interval was bailed into a trough and collected. The samples were processed by a Goldsaver wheel, with concentrates panned, cleaned and amalgamated on site. Grades were disappointing, averaging 0.002 oz/cubic yard and the option was dropped. Approximately ten miles of road were constructed as part of the drilling program.

GREAT BEAR, **115 N 2 (2)**
CLAYMORE CREEKS **63°07'N 140°50'W**
Claymore Resources Ltd **1976**

Reference: Morin et al (1977, p. 33-54)

Claims: P 3192 - P 3227, P 3233 - P 3235, P 3304 - P 3327, P 3359 - P 3363, P 3380 - P 3433

Source: Summary by W.P. LeBarge of assessment report 120038 by J. Kenyon.

Description:

Great Bear Creek and Claymore Creek, tributaries of the Ladue River, drain the Moosehorn Range near the Alaska-Yukon border. The gradient of Great Bear Creek is about 700 feet/mile in the upper 3 miles and 150 feet/mile in the remaining 2 miles draining into Claymore Creek. Claymore Creek has an average gradient of 50 feet/mile. Valley widths vary from 200 feet in upper Great Bear Creek to 2000 feet in lower Claymore Creek. A typical section consists of 1 to 2 feet of vegetation which is underlain by 2 to 6 feet of frozen black muck and clay, which is in turn underlain by frozen, generally well-rounded and well-sorted gravel. Bedrock consists of biotite hornblende granodiorite of the Klotassin Batholith, which is cut by gold-bearing quartz veins. The veins strike north to northwest and contain arsenopyrite, galena, sphalerite, sulphosalts and coarse native gold.

Current Work and Results:

The 1976 program consisted of surficial mapping and the excavation of 5 bulldozer trenches along Great Bear Creek. These were sampled in successive 3 and 6 foot vertical sections. Samples consisting of approximately 6 standard gold pans were concentrated by hand and magnetic fractions were removed. Gold was separated out and weighed. Gold content ranged from trace values to 0.11 oz/yard^3.

GREAT BEAR CREEK **115 N 2 (3)**
4229 Yukon Ltd **63°04'N 140°55'W**
1983

References: No previous reference

Claims: P 22961 - P 22971; P 22972 - P 22979; P 22960, P 22962, P 22980

Source: Summary by T. Bremner of assessment report 120022 by R.D. Morton.

History:

In 1975, Great Bear Mining Co. exposed 3 gold-bearing quartz veins assaying up to 224 g/t Au, on the upper slopes of the Moosehorn Range above Great Bear Creek. Following the discovery, placer claims were immediately staked along the creek. Subsequent mining on Kenyon Creek, immediately west of the Great Bear Creek property, has proven the placer potential of the area.

Description:

The property lies on the northeast slope of the Moosehorn Range. Bedrock consists of foliated granodiorite of the Triassic? Klotassin batholith, crossed by veins of quartz containing sphalerite, galena, arsenopyrite and some visible free gold. Because the area escaped Pleistocene glaciation a stratum of weathered granodiorite, up to 13 feet thick, overlies the fresh bedrock and fills the stream valleys. The claims are underlain by extensive permafrost.

Current Work and Results:

The 1983 evaluation of the DC claims included trenching, bedrock petrography and geochemistry, a radiometric survey, and examination of heavy mineral concentrates. Angular eluvial gold was present in all trenches on the property. Mapping showed the depth to bedrock varies between 0 - 33 feet, with bedrock

slabs exposed in felsenmeer. Study of air photographs and satellite imagery indicated the upper part of the claim block has the highest gold potential because the slopes are less steep and the soil cover is thicker. The detritus filling the upper part of the creek appears to have been directly devised from faulted and veined zones in the granodiorite.

KENYON CREEK **115 N 2 (4)**
Claymore Resources Ltd **63°03'N 140°59'W**
1975,1976

Reference: Morin et al (1977, p. 33 - 54)

Claims: P 3127-P 3128, P 3133-P 3134, P 3143 - P 3153, P 3165-P 3169, P 3188-P 3189, P 3328 - P 3329

Source: Summary by W.P. LeBarge of assessment reports 120039 by A. Rich and 120040 by J. Kenyon.

Description:

Kenyon Creek drains the western slope of the Moosehorn Range and flows southwesterly a distance of 5 miles into the McArthur River in Alaska. Gradients range from 700 feet/mile in the first 3 miles to 350 feet/mile in the last 2 miles. All material beneath a cover of 1 to 2 feet of vegetation is frozen. Gravels in upper Kenyon Creek are poorly sorted and clasts are subangular. Boulders generally comprise 10% of the total volume, cobbles 25%, pebbles and gravel 45% and clay 20%. Sorting increases downstream and boulders are generally confined to the top 4 feet of the sequence. Both coarse and fine gold occur throughout the gravel sequence, in increasing concentrations with depth. The greatest accumulation of gold is in the bottom 3 feet of gravel above bedrock. Bedrock consists of granodiorite which is weathered to a depth of 6 feet in places. Gold is generally found in only the first foot of decomposed bedrock.

Current Work and Results:

A total of 23 trenches were excavated in the upper 3 miles of the creek in the summer of 1975. Gravels were sampled in 3 foot vertical sections along the horizontal length of the trenches, and gold was panned and weighed. Grades ranged from trace values of gold to 0.90 oz/yard over a 3 foot vertical sample. In 1976, a pilot sluicing operation was conducted between June and September. The plant was mounted on skids, and consisted of 2 parallel sluice boxes with removable ladder-type riffles. A large hopper feeding onto an inclined vibrating 1 inch mesh screen was mounted above the sluice. A 6 inch mesh grizzly was mounted above the hopper which was fed by a front end loader. Water was added to the hopper forming a slurry which then dropped onto the screen. Water sprayed on the screen washed fine fractions through to the sluice. Particles greater than 1 inch were carried away by conveyor to a point 20 feet from the operation. A storage dam was constructed 800 feet above the sluice and the tailings dam was constructed 400 feet below the sluice. A 6 inch pipe recycled water from the tailings pond directly to the plant. Approximately 2000 ounces of raw gold was recovered during the pilot plant operation.

GREAT BEAR CREEK **115 N 2 (5)**
Aries Resources Ltd **63°05'N 140°51'W**
1978

References: No previous reference

Claims: PABLO, ROD, RAE, OWE

Source: Summary by T. Bremner of assessment report 120021 by P.S. White.

History:

Gold-bearing quartz veins were discovered on the Moosehorn Range in 1970 & 1971. In 1975 Claymore Resources began a successful placer mining operation on Kenyon Creek, which drains the west slope of Moosehorn Mountain. Aries Resources staked the DEA quartz claims and placer prospecting leases on the east slope of Moosehorn Mountain in 1975. In 1978 the DEA placer leases were restaked as the PABLO, ROD, RAE and OWE placer leases.

Description:

The property is underlain by Permian? schist, gneiss, foliated biotite granodiorite and sheared greenstone, intruded by Cretaceous monzonite stocks, and associated quartz veins. The area is unglaciated and talus, sand, gravel and boulders derived from nearby quartz veins contain placer gold. Bedrock is close to surface on the property, the overburden is frozen, and low gravel volumes are expected.

Current Work and Results:

Test pits were dug at 650-820 foot intervals and several 0.04 cubic yard samples of gravel or sand were taken. The samples were concentrated using a rocker and gold pan, and assayed. Gold values of up to 0.709 g/t Au (average 0.18 g/t) were reported from 10 of the 38 samples assayed.

7 MILE CREEK **115 N 1,2 (6)**
Great Bear Mining Ltd **63°04'N 140°54'W**
1975

References: No previous reference

Claims: PL 3643-PL 3645, PL 3663, PL 3766, PL 3743-PL 3761

Source: Summary by R.L. McIntyre from assessment report 120036 by D.H. Waugh (D.H. Waugh and Associates Ltd).

Description:

Gold-bearing quartz veins occupy zones of shearing and intense alteration in a quartz monzonite stock. This intrudes Paleozoic (?) metamorphic rocks, and provides a source for eluvial and alluvial placer gold deposition on and downstream of the DEA property. This placer program was a small part of an extensive hardrock exploration program. Six placer leases cover streams draining from the DEA hardrock property. Thirteen leases are located in the main branch, main tributary and benches of Seven Mile Creek, and eight leases extend up Copper Creek.

Current Work and Results:

The leases which cover the drainage and tributaries of the Great Bear lode gold property were sampled by panning of bulldozer cuts and trenches in both stream and bench gravels. Heavy concentrates were amalgamated. Vein wash material assayed an average of 0.48 oz/cubic yard, and gravel material ranged from trace gold to 0.004 oz/cubic yard on Seven Mile Creek. One of 10 pan samples returned 0.024 oz/cubic yard. Seven Mile Creek and Copper Creek valleys contain large gravel volumes and abundant water supply. A program of bulldozer trenching and sluicing, plane table surveying, and seismic surveys was recommended. The report also contains an extensive description of the lode gold mineralization in Great Bear's DEA claims.

SWAMP CREEK — **115 N 2 (7)**
Canada Tungsten Mining Corp. Ltd, Claymore Resources Ltd — **63°05'N 140°55'W** — **1976, 1989**

Reference: Morin et al (1977, p. 33-54)

Claims: P 3128 -P 3132, P 3135 - P 3142, P 3154 - P 3164, P 3170 - P 3177, P 3345 - P 3346, P 3485 - P 3489, P 5800 - P 25812, P 27418

Source: Summary by W.P. LeBarge of assessment reports 120041 by J. Kenyon and 120113 by S. Bartlett (Canada Tungsten Mining Corp. Ltd).

History:

Lode gold was first discovered in the Moosehorn Range by Quintana Minerals in 1970. Claymore Resources Ltd discovered placer gold in Kenyon, Swamp and Great Bear Creeks in 1975. In 1975 and 1976 exploration work was carried out on Kenyon Creek. Five bulldozer trenches were excavated by Claymore Resources in 1976. Permafrost conditions prevented bedrock from being reached, however each trench was sampled in 3 foot vertical sections along their horizontal lengths. Samples were pan concentrated and gold was separated out and weighed. Grades ranged from trace values of gold to 0.17 oz/yard. In 1976 test mining began. Goldwin Consulting Ltd optioned the claims in 1977 and from 1977 to 1986 a total of 20 029 oz of gold was produced from 314 473 cubic yards of gravel along Kenyon Creek. In 1987 production shifted to Swamp Creek and 3343 oz of gold was recovered from 25 000 cubic yards of gravel. In 1988 Canada Tungsten Mining Corp. Ltd purchased Goldwins' option on the Moosehorn area placer claims and produced 4404 oz of gold from 55 263 cubic yards of gravel.

Description:

Swamp Creek drains the western slope of the Moosehorn Range and flows southwesterly a distance of 6 miles where it crosses the Yukon-Alaska border. The creek has a gradient of 700 feet/mile for the first mile on both the left and right forks. Below this point, the valley widens and the gradient changes to 150 feet/mile. Gravels are frozen beneath 1-2 feet of vegetation and 2-4 feet of black muck and clay. Sorting is poor, clasts are subangular and are comprised of 20% boulders, 30% cobbles, 30% sand and gravel and 20% clay. Depth to bedrock in the lower valley is in excess of 20 feet.

Current Work and Results:

In 1989 Canda Tungsten mounted a program involving reserve definition rotary drilling and a combined total magnetic field and gradient survey was undertaken. A total of 2200 feet of rotary drilling was completed in 77 holes. A total of 515 samples were collected in 2 foot intervals within the drillholes. Samples were concentrated with a centrifugal concentrator and amalgamated with mercury. Free gold was precipitated and shipped to Vancouver for weighing. Pay gravel reserves outlined by rotary drilling were calculated to be 2 085 526 cubic yards grading 0.009 oz/cubic yard. Overburden was calculated as 3 182 894 cubic yards of gravel and black muck for a stripping ratio of 1.5 to 1. The magnetometer survey covered 33 miles in 15 lines. Station intervals were 16 feet along lines spaced 165, 245 or 495 feet apart. Pay gravels contain a large amount of magnetite and were found to display a strong and highly irregular magnetic gradient signature.

DISCOVERY, SWAMP, GREAT BEAR, CLAYMORE CREEKS — **115 K 15, 115 N 2 (8)**
Claymore Resources Ltd — **63°05'N 140°50'W** — **1975**

References: No previous reference

Claims: PL 3496 - PL 3505, PL 3672 - PL 3674, PL 3603 - PL 3604

Source: Summary by R.L. McIntyre from assessment report 120035 by John D. Godfrey.

History:

Hardrock exploration by Quintana Minerals Corp. resulted in the discovery of auriferous float in the Moosehorn Range in 1970. The placer potential was realized in 1975 by Claymore Resources while engaged in a hardrock exploration program. The placer leases were staked in February of 1975. This area is held to be the only new placer area discovered in the Yukon since the 1930's (G.W. Gilbert, pers. comm.)

Description:

Extensive weathering and residual soil development of the auriferous granodiorite in the area has produced fairly extensive eluvial placer gold deposits. These residual placers, typified by concentrations of crystalline and wire gold, have consequently been reworked at stream level as alluvial placers. Successive periods of uplifting in the area, and consequent stream downcutting, has produced breaks in slope of stream gradient, known as "knick-points".

Current Work and Results:

A program of geological reconnaissance on Discovery, Swamp, Great Bear and Claymore Creeks sought to understand the complex relationships between the vein lode gold occurrences and the alluvial and eluvial placers they have created. Nineteen separate sites were either panned to check continuity of paystreaks, or small scale bulk tested. Grades from one half cubic yard samples ranged from 1.1 to 3.8 ounces per cubic yard; panning of alluvial gravels yielded grades as high as 5 ounces per cubic yard. Exploration centered on knick points in the stream gradient, and areas upslope from known stream placer gold concentrations. The overall positive results of this limited testing program led to the recommendation of a churn drilling program to test residual and placer gold accumulations on both sides of the Moosehorn Range in Discovery Creek and Swamp Creek.

DISCOVERY, SWAMP, CLAYMORE CREEKS **115 N 2 (9)**
Claymore Resources Ltd **63°04'N 140°55'W**
1975

References: No previous reference

Claims: P 3304 - P 3327, P 3233 - P 3234, P 3485-P 3512, P 3129, P 3135 - P 3142, P 3154 - P 3164, P 3130, P 3132, P 3170 - P 3177, P 3345 - P 3346, P 3165 - P 3169, P 3133, P 3143 - P 3152, P 3128, P 3153, P 3178 - P 3179, P 3235, P 3328 - P 3329, P 3134, P 3186 - P 3189, P 3127, P 3181 - P 3189, P 3131, P 3380 - P 3432, P 3192 - P 3221, P 3359 - P 3363, P 3222 - P 3227.

Source: Summary by R.L. McIntyre from assessment report 120043 by W.G. Stevenson (W.G. Stevenson and Associates Ltd).

Current Work and Results:

Mr. W.G. Stevenson visited the property at the request of the Vancouver Stock Exchange to verify reports of spectacular placer gold grades from Discovery, Swamp and Claymore Creeks. The sampling program consisted of eight hand dug pits approximately one foot deep, from each of which five to six pounds of material was bagged for assay by Chemex Labs Ltd. Chemex Labs crushed, pulverized, screened and performed fire assays on both coarse and fine material of the total sample. Six samples from Discovery Creek, in the vicinity of Claymore Resources Ltd sluicing operation, returned values of from 0.005 ounces per cubic yard to 3.05 ounces per cubic yard. One sample, fifty feet north of Discovery Creek channel, assayed 0.005 ounces per cubic yard. One sample from a tributary of Claymore Creek assayed 0.008 ounces per cubic yard. These results tend to confirm earlier reported grades.

KENYON, DISCOVERY CREEKS **115 N 2 (10)**
Claymore Resources Ltd **63°04'N 140°55'W**
1975

References: No previous reference

Claims: PL 3569, PL 3570, PL 3571, PL 3572

Source: Summary by R.L. McIntyre from assessment report 120044 by G. A. Krueckl.

Current Work and Results:

A winter drilling program was undertaken on this property to delineate placer reserves indicated during previous small scale testing. Thirty-two reverse circulation drill holes were completed by a Nodwell mounted Heli-Drill 500. A Schramm 425/250 compressor provided air for sample recovery. The average hole depth was 20 feet, but very decomposed granodiorite bedrock was drilled into as much as 20 feet in some holes. The stratigraphy of the gravels shows 6 to 10 feet of clay-rich gravels, which overlies three to ten feet of clean, washed gravels. A fine sand underlies these gravels, which is thought to be severely weathered bedrock. Sample splitting was performed in the field and in laboratories in Edmonton. The 1/16 sample was sent to Loring Laboratories for twin pulp and amalgamation assaying. Gold was found in most of the holes but values were erratic and did not correspond to recoveries from nearby test pits. It was felt that the drill program, which encountered numerous mechanical difficulties and problematic ground conditions (discontinuous permafrost and flowing groundwater), was unsuccessful. The program was not believed to reflect the true grade and volume of the deposit.

SPUD CREEK **115 N 7 (11)**
R.G. Hilker **63°29'N 140°50'W**

Mariposa Gold Corporation **1988**

Reference: No previous reference.

Claims: SPUD 1-40 (P 34728 - P 34767)

Source: Summary by W.P. LeBarge of assessment report 120100 by R.G. Hilker, P.Eng.

Description:

Spud Creek is a left limit tributary of the North Ladue River, which flows south along the unglaciated Yukon Plateau near the Yukon-Alaska border.

Current Work and Results:

Exploration in 1988 consisted of surficial geological mapping, pan sampling, research and compilation of 1981 drill data. In 1981, 20 reverse circulation downhole hammer drillholes were completed totalling 789 feet. Black muck was encountered in thicknesses of 4 to 22 feet, underlain by up to 40 feet of gravels. Bedrock was encountered at depths from 19 to 52 feet. Gold grades were calculated to be 0.028 oz/cubic yard.

SODA CREEK **115 N 7, 10 (12)**
R.G. Hilker **63°30'N 140°50'W**
Mariposa Gold Corporation **1988**

Reference: No previous reference.

Claims: SODA 1-40 (P 34634 - P 34673)

Source: Summary by W.P. LeBarge of assessment report 120098 by R.G. Hilker, P. Eng.

History:

Prospecting in the North Ladue River area first began in the late 1800's, but on a much lesser scale than on the nearby Sixtymile River drainage. Old shafts and cabins on Rice Creek and along the North Ladue River are evidence of previous work. In 1976, a limited program of churn drilling was conducted in the main valley in which 373 feet was drilled in 4 holes. In 1981 a program of trenching and drilling of creek and bench gravels was conducted. Three holes totalling 137 feet were drilled on Soda Creek. Four to twelve feet of black muck was encountered followed by 30 to 50 feet of gravel resting on decomposed bedrock.

Description:

The North Ladue River is situated in the unglaciated Yukon Plateau in extreme western Yukon. Soda Creek is a left limit tributary to the North Ladue River, which flows south draining the western Dawson Range and the Moosehorn Range. The headwaters of Soda Creek lie on the same ridge as that of Matson Creek, a tributary of the Sixtymile River which has been mined for placer gold. Gravels in the area are commonly overlain by several feet to several tens of feet of black organic muck. Most north-facing slopes are permanently frozen. Bedrock is comprised of Paleozoic and older chlorite-muscovite schist, quartz-muscovite schist, and muscovite-quartzite of the Klondike Schist.

Current Work and Results:

In 1988, exploration consisted of surficial geological mapping, pan sampling, line cutting, research and compilation of 1981 downhole hammer drilling data. Gold grades from 1981 drilling on Soda Creek varied from 0.003 to 0.025 oz/cubic yard of gravel.

GEMINI CREEK **115 N 10 (13)**
R. Hilker **63°31'N 140°50'W**
Mariposa Gold Corporation **1988**

Reference: No previous reference.

Claims: GEM 1-30 (P 34674 - P 34703)

Source: Summary by W.P. LeBarge of assessment report 120099 by R.G. Hilker, P. Eng.

Description:

Gemini Creek is a left limit tributary of the North Ladue River, which lies in the unglaciated Yukon Plateau near the Yukon-Alaska border. Gravels are usually frozen and overlain by several feet of black organic muck. Bedrock consists of chlorite schist and muscovite quartzite of the Paleozoic or older Klondike Schist.

Current Work and Results:

Exploration in 1988 consisted of surficial mapping, pan sampling, research and compilation of 1981 drill data. In 1981 a 6 5/8 inch reverse circulation downhole hammerdrill encountered black muck to depths of 6 and 13 feet and gravel layers 27 to 36 feet thick. Bedrock was reached in one hole at 40 feet. Gold grades were calculated to be 0.005 to 0.192 oz/cubic yard.

BOUCHER CREEK **115 N 15 (14)**
Gold Creek Mining Ltd **63°58'N 140°30'W**
1979

Reference: No previous reference

Claims: PL 4216, P 4635, P 7379, PL 4534

Source: Summary by W.P. LeBarge of assessment report 120016 by J.B. Sawyer (Sawyer Consultants Inc.)

History:

The Boucher Creek area, as part of the Sixtymile river area, has been mined intermittently since 1892. Tailings piles, shafts and pits occur along Boucher Creek and probably date back to the turn of the century.

Description:

Paleozoic? quartz-biotite chlorite schist and quartz feldspar pegmatites comprise the bedrock beneath Boucher Creek. The valley of Boucher Creek is moderately wide and the creek is immature with a gradient of about 82 ft/mile. Tributaries are typically narrow and shaped with gradients of 130 to 164 ft/mile. Stream gravels and benches left by previous channels appear to be about 492 feet wide surrounding the present Boucher Creek channel.

Current Work and Results:

In September and October of 1979 gravels along Boucher Creek were sampled and mapped for volume estimates. Overburden was estimated to range in thickness from 1 to 3 feet, while auriferous gravel varied in thickness from 6.5 to 20 feet. Very broad calculations estimated the volume of pay gravel to be 5 281 000 cubic yards with an average grade of 0.18 g/m^3 Au.

BOUCHER CREEK **115 N 15 (15)**
J. Vroom **63°58'N 140°32'W**
1988

Reference: No previous reference.

Claims: PL 7554

Source: Summary by W.P. LeBarge of assessment report 120091 by M. Mollot.

Description:

The lease is situated on a small unnamed tributary of Boucher Creek, on the unglaciated Klondike Plateau in the Sixtymile River area. Bedrock along this unnamed gulch consists of dark grey to black Nasina quartzite and pale green chloritic Klondike Schist.

Current Work and Results:

Exploration in 1988 consisted of a magnetometer survey which covered 4.6 line-miles. Total magnetic field and vertical magnetic gradient were measured at 16 foot intervals along lines spaced 82 feet apart, over a 3280 foot baseline. One zone of high total magnetic field and high vertical magnetic gradient was delineated 65 feet from the baseline.

BOUCHER CREEK **115 N 15,16 (16)**
L. Mollot **63°58'N 140°33'W**
1988

Reference: No previous reference.

Claims: PL 7486, PL 7487

Source: Summary by W.P. LeBarge of assessment report 092475 by R. Hulstein (Aurum Geological Consultants Ltd).

Description:

Boucher Creek lies in the unglaciated Klondike Plateau, in a narrow v-shaped valley flowing from a long smooth topped ridge of uniform elevation. Gravels are frozen and overlain by a layer of organic black muck. Bedrock consists of dark grey micaceous Nasina quartzite.

Current Work and Results:

In 1988 a magnetometer survey was conducted on the leases, in search of buried placer concentrations of magnetite which are occasionally coincident with gold. Station intervals of 16 feet were located on lines 82 or 164 feet apart on a 3937 foot baseline. Three magnetic highs were detected in linear anomalies which followed the valley direction.

BOURDELAIS CREEK **115 N 15 (17)**
A. Vroom **63°58'N 140°34'W**
1988

Reference: No previous reference.

Claims: PL 7556

Source: Summary by W.P. LeBarge of assessment report 120092 by M. Mollot.

Description:

Bourdelais Creek is a tributary of Boucher Creek which flows northward into the Sixtymile River. Bedrock consists of dark grey to black graphitic Nasina quartzite and pale green chloritic Klondike Schist.

Current Work and Results:

The 1988 exploration season involved proton precession magnetometer measurements of total magnetic field and vertical magnetic gradient over 3.6 line-miles of grid. Station intervals of 16 feet were located on lines 82 feet apart on a 3280 foot baseline. Three zones of high magnetic response were located 33 to 65 feet from the baseline.

BUTLER GULCH **115 N 15 (18)**
J. Vroom **63°58'N 140°33'W**
1988

Reference: No previous reference.

Claims: PL 7555

Source: Summary by W.P. LeBarge of assessment report 120089 by M. Mollot.

Description:

The lease is located in unglaciated terrain on Butler Gulch, a tributary to Boucher Creek which flows into the Sixtymile River. Bedrock consists of argillaceous chert and chlorite-muscovite schist.

Current Work and Results:

In 1988 exploration consisted of a gradiometer survey in which total magnetic field and magnetic gradient were measured. Lines with stations spaced 16 feetapart were located along a baseline at 65 foot intervals. High values of total magnetic field and vertical magnetic gradient were outlined in several zones 26 to 230 feet from the baseline.

CENTRAL FIFTYMILE CREEK — **115 N 15 (19)**
P. Mollot, L. Mollot, E. Setrakov — **63°52'N 140°37'W**
1988, 1989

Reference: No previous reference.

Claims: PL 7564

Source: Summary by W.P. LeBarge of assessment reports 120093 by M. Mollot and 120116 by R.L. McIntyre (Yukon Engineering Services Ltd).

Description:

Fiftymile Creek is an east-flowing right-limit tributary to the Sixtymile River, situated in the unglaciated Klondike Plateau. Several feet of black organic muck and gravel are underlain by foliated chlorite-biotite granodiorite and muscovite-quartz monzonite of the Pelly Gneiss.

Current Work and Results:

Magnetic minerals and associated gold concentrated in alluvium were the target of exploration in 1988 and 1989. A combined gradiometer and total field magnetometer survey was conducted on part of the lease in 1988. Measurements were taken at 16 foot intervals on lines spaced 164 feet apart along a 0.6 mile baseline. Two linear magnetic anomalies were outlined 65 to 148 feet from the baseline. In 1989, a grid was established on a right limit bench on the lease. Total magnetic response was measured every 16 feet along crosslines spaced every 164 feet on a 2460 foot baseline. Two linear magnetic anomalies were detected on the bench, running parallel to the present creek channel and lying on both sides of the baseline. The magnitude of the magnetic response was consistent with that generated by alluvial concentrations of magnetic minerals.

ENCHANTMENT CREEK — **115 N 15 (20)**
A. Perrin, L. Mollot, — **63°54'N 140°19'W**
E. Setrakov — **1988,1989**

Reference: No previous reference.

Claims: PL 7573

Source: Summary by W.P. LeBarge of assessment reports 120096 by M. Mollot and 120119 by R.L. McIntyre (Yukon Engineering Services Ltd).

Description:

Enchantment Creek is a right-limit tributary of the Sixtymile River, which lies in the unglaciated Klondike Plateau. Several feet of black organic muck and gravel are underlain by foliated chlorite-biotite granodiorite and muscovite-quartz monzonite of the Pelly Gneiss.

Current Work and Results:

The target of exploration in 1988 and 1989 was placer concentrations of magnetite and associated gold. Combined total magnetic field and gradient were measured over the 1988 grid, which consisted of stations spaced at 16 foot intervals along crosslines spaced 164 feet apart on a 0.6 mile baseline. Two combined total magnetic field and gradient anomalies were detected a distance of 65 to 115 feet from the baseline. Several other anomalies, representing either high magnetic gradient or high total magnetic field, were also outlined. The 1989 grid was established on the left limit bench of Enchantment Creek, approximately 1.2 miles from the 1988 grid. Total magnetic field was measured in 16 foot intervals on crosslines spaced 65 feet apart on a 984 foot baseline. Several linear magnetic anomalies were outlined which were possibly representative of abandoned channels within the bench gravels.

HUOT GULCH — **115 N 15 (21)**
D. Vroom — **63°59'N 140°29'W**
1988

Reference: No previous reference.

Claims: PL 7557

Source: Summary by W.P. LeBarge of assessment report 120090 by M. Mollot.

Description:

Huot Gulch is a small tributary of Boucher Creek which in turn flows into the Sixtymile River. Three main types of bedrock underlie the area of the lease: foliated muscovite-chlorite granodiorite (Pelly Gneiss); hornfelsed argillaceous chert with interbedded chloritic

phyllite and marble; and chlorite-muscovite (Klondike) schist.

Current Work and Results:

A magnetometer survey was conducted on the lease in 1988. Total magnetic field and vertical magnetic gradient were measured at 16 foot station intervals along lines spaced 82 feet apart. The 1.5 line-mile survey delineated 4 zones of high magnetic response 0 to 65 feet from the baseline.

MILLER CREEK **115 N 15 (22)**
Klondike Underground Mining Ltd **63°59'N 140°48'W**
1986, 1987, 1988, 1989

Reference: Debicki and Gilbert (1986, p. 33-35, 93)

Claims: PATSY 1-7

Source: Summary by W.P. LeBarge of assessment report 120120 by T.G. Davenport and personal communication with Richard Coke, mine manager.

History:

Miller Creek has been prospected since 1887 and mined for placer gold intermittently since 1892. Underground placer mining in frozen gravels has taken place since 1981.

Description:

Miller Creek is situated in an unglaciated valley which is 6.5 miles long and 600 feet wide at the mouth, where it drains into the Sixtymile River. The gradient is approximately 100 feet per mile. Bedrock consists of graphitic and micaceous quartzite, graphitic biotite-muscovite schist and grey marble. Volcanic rocks of andesitic composition occur at the confluence of Sixtymile River and Miller Creek. Three main types of gravel occur: 1) gold-bearing bench gravels which lie in terraces above the present creek levels; 2) recent creek gravels which lie in and adjacent to the present stream channel and contain moderate gold values, and 3) gold-enriched creek gravels which have reconcentrated gold derived from the bench gravels.

Current Work and Results:

In 1986 a detailed geological appraisal was conducted on the Alma underground placer mine of Klondike Underground Mining Ltd. The mine was surveyed and geologically mapped with particular attention given to bedrock-gravel contacts, gold content in workings and pillars, stream paleo-flow directions and gravel types. Past and present mining follows an ancient channel which is separated from the present channel by a 300 foot thick ridge of bedrock. The gradient of the ancient channel is approximately 200 feet per mile. Frozen gravel is mined in the winter, stockpiled and thawed, then sluiced in the summer. The winter of 1985-86 saw 30 000 cubic yards of gravel mined which produced only 500 ounces of gold. In the 1986-87 season, 5 000 cubic yards of gravel grading 0.16 oz/cubic yard produced 870 ounces. Twenty-nine hundred ounces of gold were produced from 25 000 cubic yards in the 1987-88 season, for an overall grade of 0.12 oz/cubic yard. Slightly lower grades were encountered in the 1988-89 mining season, with 20 000 cubic yards of gravel grading 0.11 oz/cubic yard producing 2200 ounces of gold. The best gold grades occur in gravel three feet above bedrock and within the first two feet of bedrock.

MOSQUITO CREEK **115 N 15 (23)**
Tammi Resources Ltd **63°57'N 140°50'W**
1982

References: No previous reference

Claims: P 13720 - P 13749

Source: Summary by R.L. McIntyre from prospectus 120046 by Gordon R. Hilchey (Gordon Hilchey and Associates Ltd).

History:

There is no record of previous mining on Mosquito Creek, but the Sixty Mile area, specifically Miller Creek (approximately 2 1/2 miles distant) was discovered in 1892. The thirty creek claims of the present property were staked by K. McFarland on July 24, 1981.

Current Work and Results:

This prospectus was generated from the authors' knowledge of the general area, literature search and study of ground photographs. The report deals with probable potential for economic gold deposits, and a bulldozer trenching program to determine its viability is recommended.

UPPER FIFTYMILE CREEK **115 N 15 (24)**
R. Ellis, L. Mollot, **63°53'N 140°38'W**
E. Setrakov **1988, 1989**

Reference: No previous reference.

Claims: PL 7565

Source: Summary by W.P. LeBarge of assessment reports 120094 by M. Mollot and 120117 by R.L. McIntyre (Yukon Engineering Services Ltd).

Current Work and Results:

Exploration in 1988 consisted of a magnetometer survey which measured total magnetic field and gradient at 16 foot intervals in crosslines spaced 164 feet apart along a 0.6 mile baseline. Linear magnetic anomalies were detected a distance of 65 to 148 feet from the baseline. In 1989 a grid was established at

the confluence of the two main headwater branches of upper Fiftymile Creek. Total magnetic field was measured at 16 foot intervals along 26 crosslines spaced 65 feet apart on a 1640 foot baseline. Magnetic anomalies in the order of 20 gammas were detected at varying displacements to the creek.

WESTERN FIFTYMILE CREEK **115 N 15 (25)**
L. Mollot, E. Setrakov **63°52'N 140°39'W**
1988, 1989

Reference: No previous reference.

Claims: PL 7566

Source: Summary by W.P. LeBarge of assessment reports 120095 by M. Mollot and 120118 by R.L. McIntyre (Yukon Engineering Services Ltd).

Current Work and Results:

Combined total magnetic field and gradiometer surveys were conducted on the property in 1988. Measurements were taken in 16 foot intervals in crosslines spaced 164 feet apart along a 0.6 mile baseline. Linear magnetic anomalies were detected 33 to 115 feet from the baseline. In 1989 the baseline was extended 1410 feet and crosslines were located every 65 feet. Total magnetic field was measured at stations spaced every 16 feet. Placer concentrations of magnetite may have been responsible for three magnetic anomalies, however a strong magnetic overprint from bedrock rendered interpretation difficult.

FIFTYMILE CREEK **115 N 16 (26)**
L. Mollot, E. Setrakov **63°50'N 140°28'W**
1989

Reference: No previous reference.

Claims: PL 7563

Source: Summary by W.P. LeBarge of assessment report 120115 by R.L. McIntyre (Yukon Engineering Services Ltd)

Current Work and Results:

In 1989, a total field magnetometer survey was conducted on a right limit bench of Fiftymile Creek, for the purpose of extending known anomalies on adjacent leases. Measurements were taken at 16 foot intervals along six 656 foot crosslines spaced every 65 feet on a 328 foot baseline. A large magnetic anomaly was detected. The maximum absolute magnetic response was as high as 230 gammas, which is likely the result of bedrock magnetic mineralization rather than magnetic minerals in alluvium.

SCROGGIE, WALHALLA **115 O 1 (27)**

ALBERTA CREEKS **63°03'N 138°20'W**
Auramet International Ltd **1984,1985**

Reference: No previous reference

Claims: PL 7164, PL 7165, PL 7174

Source: Summary by W.P. LeBarge of assessment report 120073 by T. Reimchen (Pegasus Earth Sensing Corporation).

Description:

The Auramet property lies upstream of the Blackridge Gold/Cruiser Mineral property along Scroggie Creek. Two levels of bench gravels have been incised by recent small creeks in deep constricted channels.

Current Work and Results:

The 1984 and 1985 exploration programs consisted of surficial geological mapping, air photo interpretation, limited seismic surveys and bulk sampling of nearby placer leases. Two pits on the property were excavated and sampled by hand. Surficial mapping and air photo interpretation delineated approximately 8.5 million cubic yards of bench gravels and 9.2 million cubic yards of creek gravels on the Golden Saddle leases. No bulk sampling was conducted on the leases but nearby leases contained gold grades ranging from 0.15 g/m^3 to 0.95 g/m^3 gold.

ALBERTA CREEK **115 O 1, 115 J 16 (28)**
B. Lueck, K. Rodgers **63°00'N 138°15'W**
1988

Reference: No previous reference.

Claims: PL 7643, PL 7644

Source: Summary by W.P. LeBarge of assessment report 120101 by B. Lueck.

Description:

Alberta Creek is a left limit tributary to Walhalla Creek, which drains Pyroxene Mountain and flows into Scroggie Creek and the Stewart River. Two main types of surficial deposits are present: recent stream gravels and Tertiary bench gravels. Bedrock beneath Alberta Creek is mapped as Mesozoic granodiorite and Proterozoic ultramafics, gneiss, schist, and quartzite.

Current Work and Results:

In 1988 a program of pan sampling, shafting and magnetometer surveying was undertaken. Total field and gradiometer measurements were taken in 30 foot intervals along lines spaced 30 feet apart. Two anomalies were detected and two shafts were excavated at the junction of two small tributaries of Alberta Creek. One shaft encountered 3 feet of silt

and muck followed by 12 feet of poorly sorted boulder gravel and 5 feet of moderately well sorted pebble and cobble gravel. The other shaft encountered 5 feet of muck and an equal amount of moderately well sorted gravel. Bedrock was not reached in either shaft. The best gold colours were panned out of the poorly sorted boulder gravel, thought to be a slump deposit from a nearby low bench.

SCROGGIE,WALHALLA, SHARP CREEKS — **115 O 1, 2 (29)**
Blackridge Gold Ltd, Cruiser Minerals Ltd — **63°10'N 138°35'W**
1984, 1985

Reference: No previous reference

Claims: P 24849 - P 24875, P 24879 - P 24882, P 28150 - P 28255, PL 7131, PL 7132

Source: Summary by W.P. LeBarge of assessment report 120074 by T. Reimchen (Pegasus Earth Sensing Corp.).

History:

The Scroggie-Walhalla Creek area has been explored and mined intermittently since 1898. On August 27, 1898, J.G. Stephens and H. LeDuke staked placer claims 6.7 miles above the junction of Scroggie and Walhalla creeks. On the same day 2 claims above the Discovery claims were staked by the Scroggie brothers. Mr. E.B. Scroggie held the claims between 1900-1906, mining between 107 and 169 ounces of gold. In 1911, Albert LeBoeuf staked claims on a high bench above the junction of Sharp and Walhalla creeks. Equal amounts of platinum and gold were discovered from this bench according to a GSC report of the time. Between 1898 and 1915, the estimated amount of gold recovered from Scroggie Creek was between 2667 and 4005 ounces with fineness values ranging from 890 to 930. Albert LeBoeuf and a Mr. Green mined the junction between Scroggie and Walhalla Creeks intermittently in the 1920's and 1930's. Numalaka Mining Company Ltd prospected the area in 1944 and did exploratory drilling in 1945. George Fant and Ivon Norbeck mined Walhalla Creek between 1951 and 1955, recovering 1597 ounces of crude gold. During 1980 and 1981, Herman Axel mined the bench on the south side of Scroggie Creek 1 mile downstream of the Scroggie-Walhalla Creek junction. Further upstream Territorial Gold Placers mined during the same period. Approximately 1475 ounces of crude gold was recovered during this time.

Description:

The Scroggie Creek area lies within a part of the Yukon Plateau which is unglaciated and typified by young, small, v-shaped creeks. Deep, constricted channels have incised older stream gravels which form terraces above present creek levels.

Current Work and Results:

In 1984 a program of satellite photo interpretation, surficial geological mapping, and bulk sampling was conducted. Several areas of bench gravels were noted and mapped along Scroggie and Walhalla Creeks. ownstream of the Scroggie and Walhalla Creek junction 14 channel samples were excavated from a bench. After screening and concentrating the gravel was analyzed for gold content by jig concentration of free gold. An average of 0.52 g/m^3 Au was recovered from the 8.9 feet of gravel sampled, while the upper three feet yielded 0.035 g/m^3 Au. Four samples of gravel were taken from the upper four feet of a bench on the south side of Walhalla Creek, at the junction with Sharp Creek. After screening and panning these samples yielded an average of 0.17 g/m^3 Au. The 1985 program continued the surficial geological mapping and bulk sampling and also included an aerial photographic survey and a seismic survey. Nine test pits were excavated from sites along Scroggie Creek downstream of the confluence of Walhalla and Scroggie Creek. Five bulk samples were taken from gravel near bedrock in this area. Heavy minerals from the bulk samples were concentrated by a Spriggs jig and mercury amalgamation. An average of 0.95 g/m^3 Au was recovered by this process. Fire assay amalgamation tails recovered another 1.6 g/m^3 on average. The seismic survey was conducted along bench gravels in 7 lines and was successful in delineating 3 main units based on seismic wave velocity. Loose beach gravels, dense bench gravels and bedrock were interpreted as increasing seismic wave velocities with depth. The area of the seismic survey appeared to have a uniform covering of gravel averaging 8.9 feet in thickness. As a result of the 1984 and 1985 programs an estimated 21 million cubic yards of mineable bench gravels and 12 million cubic yards of creek gravel were delineated, with grades ranging from 0.15 g/m^3 to 0.95 g/m^3. Overburden averages 9.8 feet in thickness throughout the section.

BARKER CREEK — **115 O 2 (30)**
Territorial Gold Placers Ltd — **63°07'N 138°50'W**
1981

References: No previous reference

Claims: PL 5405

Source: Summary by R.L. McIntyre from assessment report 120047 by Barker Creek Placer Exploration Company.

History:

The Barker Creek Discovery Claim was staked in November, 1898, by F.M. Barker. This claim was dropped then later staked by L. Marret in 1903, and others in 1906. The area covered by the lease was put into production in 1908, and has been mined intermittently since.

Description:

The placer lease covers a bench on Barker Creek. The average depth to bedrock is five to ten feet, covered by one to three feet of overburden. The gravels are reported to be coarse, with some decomposed bedrock in the lower section.

Current Work and Results:

A hand testing program was carried out to assess the economic potential of bench gravels on the creek. The total section of hand-dug pits and trenches, fourteen in all, was sluiced. Most pits reached bedrock. No attempt was made to calculate volumes or gold weights, hence no grade calculation was made. The program was designed to discover presence or absence of gold in the areas tested, and in most cases significant quantities of black sand with predominantly fine-grained gold was found. A follow-up program of more rigorous bulk testing or drilling was recommended.

BARKER, AGATE CREEKS — **115 O 2 (31)**
Havilah Gold Mines Ltd — **63°03'N 138°56'W**
1987

Reference: Debicki (1983, p. 107)

Claims: P 11010 - P 11013, P 11015, P11016

Source: Summary by W.P. LeBarge of assessment report 120082 by A. Rychter.

Current Work and Results:

In 1987 a proton precession magnetometer survey was conducted on the claim group. Lines were spaced 100 feet apart running perpendicular to the creek, with station readings taken every 25 feet. Several elongate magnetic anomalies were detected along Barker and Agate Creeks. West Coast Paving Ltd processed a 60 000 cubic yard bulk sample from the left limit bench at the junction of Barker Creek and McRae Creek. A total of 898 ounces of gold was recovered.

SCROGGIE CREEK — **115 O 2 (32)**
4955 Yukon Ltd — **63°07'N 138°39'W**
1984

Reference: No previous reference.

Claims: P 24849 - P 24875, P 24879 - P 24882

Source: Summary by W.P. LeBarge of assessment report 120059 by T. Reimchen (Reimchen Urlich Geological Engineering).

Description:

Situated in unglaciated terrain, Scroggie Creek is narrow and flat-bottomed, and its tributaries have constricted v-shaped valleys. Recent stream action has incised older gravels which commonly form terraces above present stream levels. Bedrock is mainly composed of Cretaceous granite and Nasina Series schist, gneiss and limestone. Massive green pyroxenite occurs above the creek on Pyroxene Mountain.

Current Work and Results:

In 1984 a program of geological mapping, bulldozer trenching, sampling and heavy mineral concentrating was conducted. Mapping outlined 2 main types of gravels along Scroggie Creek, bench gravels and creek gravels. Creek gravels lie adjacent to the present stream and are generally thin (4 to 9 feet) with depth to bedrock ranging from 6 to 17 feet. Bench gravels lie in a pronounced terrace which runs along the west side of the valley and is elevated 100 to 125 feet above the present stream level. Three layers of gravel are interbedded with silt and sand layers within the terrace. Clasts are moderately well-rounded and consist mainly of locally derived granite, schist and greenstone. Granitic clasts increase towards the top of the section and greenstone clasts increase nearer to bedrock. Imbrication of clasts indicates a paleo-flow direction to the northwest. Depth to bedrock beneath the terrace ranges from 20 to 40 feet. Grades of gold were estimated to be between 0.017 oz/yard and 0.022 oz/yard with a total mineable volume ranging from 3.7 to 4.5 million yards of gravel.

TEN MILE CREEK — **115 N 09 (33)**
Clear Mines Ltd — **63°32'N 140°05'W**
1984

References: No previous reference

Claims: CLEAR 1-22 (P 24695 - P 24716)

Source: Summary by R.L. McIntyre from assessment report 120060 by David P. Taylor.

Current Work and Results:

A pick and shovel sampling program was carried out on the Clear claims (first tier bench of Ten Mile Creek), in three bulldozer trenches. The trench walls were cleaned off to a depth of 6 inches into the face to allow lithologic description, facies identification and sample interval determination. A total of thirty-nine samples of 0.7 cubic feet volume (total approximately 1.0 cubic yard) were collected, described and shipped to Vancouver for processing. They were wet screened to four size fractions (+1/2", -1/2", +1/4", -1/4", +3/16", -3.16"), assessed for volume by water displacement method, concentrated by wet spiral, with final amalgamation for gold recovery. Twenty-four samples were sent to General Testing Laboratories in Vancouver for Inductively Coupled Plasma (ICP)

assay of thirty elements. The results of the testing indicated presence of gold in most samples, ranging in grade from nil to 0.1 grams per cubic yard, with an overall average of 0.014 grams per cubic yard. Additional observations and assaying failed to indicate economic quantities of elements other than gold.

TEN MILE CREEK **115 N 09 (46)**
Clear Mines Ltd **63°32'N 140°05'W**
1981

References: No previous reference

Claims: PL 5889

Source: Summary by R.L. McIntyre from assessment report 120050 by F.J.R. Syberg.

Current Work and Results:

A two-day hammer-seismic geophysical survey completed 1.39 line miles on Ten Mile Creek, a tributary to the Yukon River. The geometrics Nimbus 125, with hammer and plate energy source, proved insufficient to accurately delineate bedrock deposits in this stratigraphic section. A detailed refraction seismic survey using a combination of hammer/plate and explosive energy source was recommended, in order to achieve greater than 98 feet depth determinations.

MOOSEHORN CREEK **115 O 6 (34)**
Stetson Resource Management Corporation **63°23'N 139°15'W**
1987

Reference: Debicki (1983, p. 105), Debicki and Gilbert (1986, p. 90).

Claims: RICH 1-21

Source: Summary by W.P. LeBarge of assessment report 092006 by E. Pezzot and C. Candy (Geoscience Data Analysis Ltd).

History:

Henderson Creek was extensively prospected for gold during the late 1800's and early 1900's, and at that time 16 claims were staked on Moosehorn Creek. Old shafts and pits remain as evidence of activity during that time. Moosehorn Creek was inactive until 1984 when 2 shafts were excavated down to bedrock where samples of gravel were obtained. Large amounts of black sand were observed in the gravels, as well as coarse gold which graded 0.053 oz/cubic yard in one sample and 0.022 oz/cubic yard in another sample.

Description:

Moosehorn Creek is a left limit tributary of Henderson Creek, which drains into the Stewart River southwest from Henderson Dome. Depth to bedrock is approximately 11 feet with 6 feet of black muck underlain by 5 feet of sandy gravel. Bedrock is decomposed quartz-biotite gneiss.

Current Work and Results:

In 1987, a program involving magnetometer and hammer seismic refraction surveys was conducted on the claim group. Measurements were taken at 16 foot intervals along crosslines spaced 33 feet apart on a 1312 foot baseline. The magnetometer survey delineated a linear magnetic anomaly paralleling Moosehorn Creek a distance of 492 feet south of its present location. The hammer seismic survey outlined a reflective layer (representing either decomposed bedrock or permafrost) with an apparent depth of 12 feet below the surface.

BLACK HILLS CREEK **115 O 7 (42)**
Black Hills Gold Ltd **63°25'N 138°45'W**
1981

Reference: Debicki and Gilbert (1986, p. 88-89)

Claims: P 5040, P 5051

Source: Summary by W.P. LeBarge of assessment report 120048 by A. Parker (Ace Parker Mines and Minerals Corp. Ltd).

Description:

Black Hills Creek and its tributaries drain Eureka and Henderson Domes southward into the Stewart River. A Tertiary channel deposit lies on a bench above Black Hills Creek. In a number of areas this deposit has been reworked into recent stream gravels. On leases P 5040 and P 5051, the bottom of the bench deposit generally lies between 15 and 100 feet above the level of the present stream. The top of the bench lies between 50 and 150 feet above the present stream level. The gradient of the old channel is approximately 20 feet/mile. Bedrock in the area has been mapped by Bostock as Yukon Group metasediments.

Current Work and Results:

In 1981 a program of percussion drilling was conducted on bench and stream gravels along Black Hills Creek, downstream of the mining property of Territorial Gold Placers. Drill holes spaced 100 feet apart were situated along lines 6000 feet apart which ran perpendicular to the drainage. Drilling outlined auriferous frozen stream gravels along the length of Black Hills Creek measuring 18 feet thick, 400 feet wide and are covered by organic material which averages 7 feet in thickness. Selected pan samples from recent gravels on bedrock contained up to 0.008 oz raw gold/pan (1.44 oz raw gold/cubic yard). On the west side of Black Hills Creek drilling also outlined an auriferous bench deposit 900 feet long and from 150 to 600 feet wide. Averaging 14 feet in thickness,

this deposit is discontinuously frozen and is covered by black organic material 18 feet thick. Assays resulted in proven reserves of 1 322 000 cubic yards averaging 0.03 troy oz raw gold/cubic yard.

BLACK HILLS CREEK **115 O 7 (43)**
Coleton Construction Ltd **63°26'N 138°49'W**
1988

Reference: Debicki and Gilbert (1986, p. 88-89)

Claims: P 30115 - P 30119

Source: Summary by W.P. LeBarge of assessment report 120111 by Coleton Construction Ltd.

Current Work and Results:

In 1987 a program of stripping, trenching and pan sampling was undertaken. Six feet of black organic muck was encountered followed by 14 to 16 feet of gravel overlying bedrock. Up to 4 colours of gold per pan were recovered near bedrock.

BLACK HILLS CREEK **115 O 7, 10 (44)**
(CHILDS GULCH) **63°20'N 138°45'W**
Territorial Gold Placers **1981**

References: No previous reference

Claims: CHILDS 1-21

Source: Summary by T. Bremner of assessment report 120049 (drill logs) by T. Donnelly.

Current Work and Results:

Twelve 6 inch diameter holes were drilled from south to north along the creek bed to an average depth of 21 feet, using a Becker hammer drill. Almost all the holes encountered a layer of black muck 3 to 16 feet thick overlying 4 to 14 feet of gravel. Weathered micaceous quartzite or schist bedrock was found in almost all the holes at an average depth of 16 feet. Gold, mostly fine to very fine, was recorded from a 1 to 6 foot interval spanning the top 12 to 24 inches of bedrock and the immediately overlying gravel. Gold values averaging $26.92/cubic yard were estimated.

AUSTRALIA CREEK **115 O 10 (45)**
Hughes Lang Corporation **63°35'N 138°25'W**
1988, 1989

Reference: No previous reference.

Claims: P 35230 - P 35328, PL 8045, PL 8048, PL 8051, PL 8053, PL 8054, PL 8198

Source: Summary by W.P. LeBarge of assessment reports 120103 and 120112 by S. Tomlinson (Mark Management Ltd).

History:

Australia Creek was briefly explored for gold during the Klondike Gold Rush of 1898, but only the nearby Sulphur, Gold Run, and Dominion Creeks were mined. No further evaluation was conducted until the 1960s when Yukon Consolidated Gold Corporation completed a limited churn drilling program at the mouth of Australia Creek. In the 1970s 13 rotary drill holes were drilled on nearby Wounded Moose Creek.

Description:

Australia Creek is a mature tributary to the Indian River, situated in a broad valley within the unglaciated Klondike Plateau. Recent stream action has resorted and redeposited Tertiary bench gravels which lie along both sides of the main valley. Bedrock consists of quartz-muscovite schist, minor graphitic schist, an orthogneiss unit and scattered mafic and felsic dykes.

Current Work and Results:

Exploration in the winter of 1988-1989 consisted of an extensive program of reverse circulation rotary drilling. A total of 4300 feet of rotary drilling was completed in 88 drill holes between November and January. Drill cuttings were logged and samples were taken in 2 foot intervals. A gravity concentrator was used to concentrate the heavy mineral fraction, and mercury amalgamation recovered any gold which was then weighed in Vancouver laboratories. Several holes returned values of gold greater than 0.01 oz/cubic yard over intervals of 2 to 6 feet. A bedrock high corresponding to a granite dyke is the possible cause of several shallow intercepts of extremely high gold values ranging up to 0.53 oz/cubic yard.

ENSLEY CREEK **115 O 14 (47)**
Tamarack Inc. **63°53'N 139°32'W**
1986

References: No previous reference

Claims: PL 6905, PL 6906

Source: Summary by R.L. McIntyre from assessment report 120075 by Tamarack Inc.

History:

The Lower Discovery Claim was staked on November 29, 1897 by S. Ensley.

Current Work and Results:

Seven 6 inch diametre holes were drilled for a total footage of 189 feet. Depth to bedrock averaged 27 feet, and black muck overburden averaged 11 feet.

MILLER CREEK **115 N 15 (22)**
Klondike Underground Mining **63°59'N 140°48'W**
1988

This underground mining operation is located at the mouth of Miller Creek, which empties into the Sixtymile River.

The deposit consists of an alluvial fan which joins the Sixtymile River at Miller Creek. The mine operates in two phases, drill and blast mining of frozen gravels in winter, and sluicing of stockpiled ore in summer.

Two 12 by 12 foot portals are collared at the base of the alluvial fan terrace, at bedrock level. The adits are 600 and 800 feet into the deposit, running along the bedrock surface.

Two Jarvis Clark scoop trams with 3.5 and 5 cubic yard buckets were used to muck the blasted faces. One air track drill was used to drill off the face for explosives loading. A D7 E Cat bulldozer was used to level the stockpile, and in road maintenance.

A crew of eight miners and one cook worked two shifts to accomplish the mining.

In 1988, 26 000 cubic yards of stockpiled pay gravels were sluiced. This represented an advance of 400 feet into the deposit.

The underground mining operations were interrupted in the winter of 1988/89 by a large explosion in the compressor room of the mine. There were no serious injuries, but the loss of the generator and compressor necessitated a Medevac of personnel in -47°C weather. The equipment has been replaced and mining has resumed.

The gold from this operation is described as 60% fine and 40% coarse-grained with a fineness of 830.

SIXTYMILE RIVER **115 N 15 (35)**
Brisbois Bros. **63°59'N 140°47'W**
1988

This four man operation was located on the left limit valley wall of the Sixtymile River, immediately downstream of the mouth of Miller Creek.

Two D9 Cat bulldozers were used to dig pay gravels and load the sluice box and one 992 front-end loader was used to remove and stack tailings. A 988 front-end loader was also used as a spare.

The mining cut was approximately 45 feet deep with up to 15 feet of frozen black muck on top of 30 feet of gravel. The bottom 5 feet of gravel plus 2 feet of bedrock were sluiced. Overburden and waste gravel were stripped mechanically and stockpiled. Two cuts were completed in 1988 measuring approximately 600 by 100 and 400 by 150 feet.

The wash plant was a standard dump box lined with punch plate followed by a sluice run lined with riffles and plastic matting. Approximately 4000 igpm of water were used to process from 80 to 120 cubic yards per hour.

A 12 by 14 inch pump powered by a D 343 Cat diesel engine, pumped water from a pump pond on a ditch from the Sixtymile River. Settling occurred in several out-of-stream settling areas in old mining cuts in the Sixtymile River valley.

Gold recovered included fine and coarse gold with some large flakes and nuggets with quartz attached. Fineness was 830 to 840.

SIXTYMILE RIVER **115 N 15 (36)**
Neil Duncan **63°59'N 140°48'W**
1988

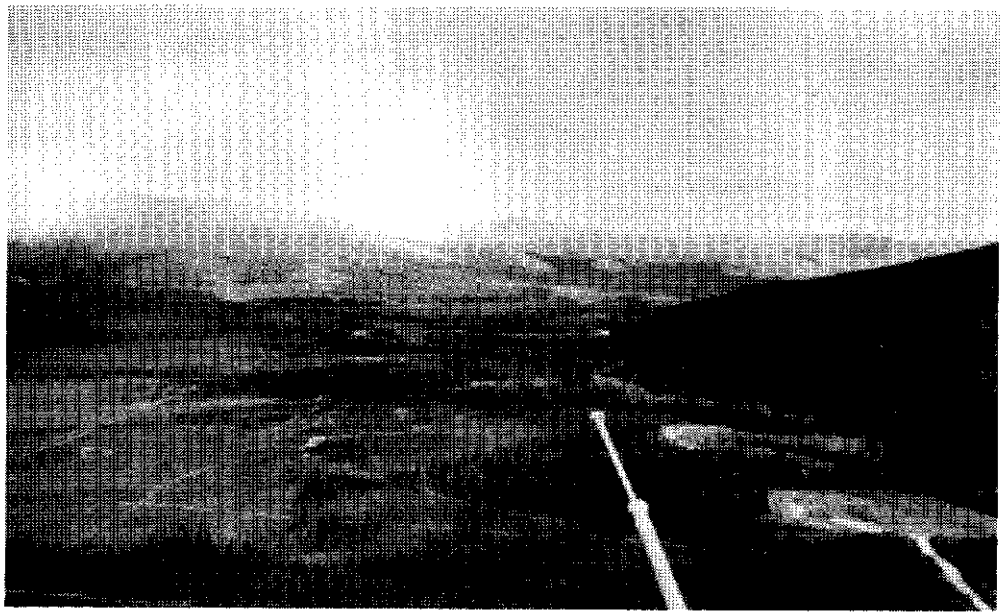
Located in the center of a wide, flat valley section of the Sixtymile River, approximately one mile upstream from the confluence with Miller Creek. Neil Duncan and four other miners worked a one shift testing program during the 1988 season. This was their first year on the site.

One D9H Cat bulldozer was used to dig and push pay gravels and a 7251 B front-end loader fed the sluice box.

The sluice box was an 8 by 10 foot dump box and single sluice run 24 inches wide by 20 feet long. A 6 inch pump, powered by a Perkins diesel, provided up to 2000 igpm maximum. Only 300 cubic yards per day were sluiced from two cuts near the valley center. One cut approximately 100 feet wide by 300 feet long was parallel to the length of the valley and the second cut, also approximately 100 feet by 300 feet, was at right angles to it. From 1 to 5 feet of frozen black muck overlay a gravel layer which varied from 2 to 10 feet deep. This gravel layer had variable colour and size distribution over an uneven bedrock base. The bottom 3 to 5 feet of gravel plus 3 feet of decomposed bedrock were sluiced. Overburden and waste gravels were stripped and stockpiled by bulldozer.

Water was pumped from an old drainage ditch connected to the Sixtymile River and settling occurred out-of-stream in a low, swampy area. Discharge was by seepage only.

Gold consisted of flattened flakes with very little quartz attached. Fineness was 810.



Unmined placer gold reserves still exist in the Sixtymile drainage, as the photo above illustrates.

Aardvark Placers (Chuck MacDougall) mined terrace gravels beneath a thick muck sequence along the Sixtymile River in 1986.

SIXTYMILE RIVER **115 N 15 (37)**
Granges Exploration **63°59'N 140°46'W**
1988

This operation was located near the middle of the broad, flat valley of the Sixtymile River just downstream of Miller Creek. Five miners and one camp helper worked one shift for most of the 1988 season.

Heavy equipment included one D9 Cat bulldozer, one D8H Cat bulldozer, one D8K Cat bulldozer and one 980 loader.

The wash plant was a standard Ross box with triple sluice runs 3 feet wide by 20 feet long each. A 10 by 10 inch pump, powered by a Cat 3208 diesel engine, delivered approximately 3000 igpm and 165 to 170 cubic yards per hour were processed.

The stratigraphic section was only 10 feet deep and partially frozen. Up to 3 feet of black muck overburden is underlain by 3 feet of variable waste gravel and a 3 to 4 foot layer of pay gravel. The bottom 3 feet of gravel plus about 1 foot of bedrock were put through the sluice box. Waste gravels and overburden were stripped mechanically and stockpiled away from the river.

Four pay cuts of approximately 200 by 180 feet each were mined in 1988. Water was supplied via the ditch from the Sixtymile River, and settling occurred in old mining cuts near the valley centre.

Fine gold was recovered with a small amount of coarse gold but no nuggets. Fineness was 800.

HENDERSON CREEK **115 O 6 (38)**
Northway Mining **63°26'N 139°08'W**
1988

D. Sandberg and three other miners worked two shifts in 1988, mining along the south fork of Henderson Creek in a fairly wide part of the valley. Heavy equipment included 3 Cat bulldozers (one D9L, one D8K and one D7F) plus one 988B front-end loader.

The sluicing plant consisted of a 6 foot diameter trommel and sluice runs. Mining cuts averaged 15 feet deep with up to 10 feet of frozen overburden on top of a 5 foot gravel layer. The overburden was stripped mechanically and stacked, and all gravels plus about one foot of bedrock were sluiced. Two mining cuts were completed in 1988, both about 150 feet wide with one about 940 feet long and the other about 2000 feet long.

Water was pumped from an instream recycle pond below the sluice, and settled further in downstream settling ponds.

Gold recovered had a fineness of 750 and was a mixture of medium- and coarse-grained gold.

MAISY MAY CREEK **115 O 6 (39)**
Queenstake Resources Ltd **63°22'N 139°00'W**
1988

This property is located along Maisy May Creek, which has a gentle gradient and a moderately wide valley. The stratigraphy consists of one foot of vegetation underlain by up to 20 feet of frozen black muck and 5 to 6 feet of frozen gravel. The bottom 4 feet of gravel and 3 feet of bedrock was sluiced.

Nine miners and five others worked 2 shifts in 1988. Heavy equipment included two D9L bulldozers for stripping waste and stockpiling pay, a 980 C loader for moving tailings, and a Cat EL 300 backhoe for feeding the wash plant. Other equipment for miscellaneous tasks included a Komatsu 355 bulldozer, a Hough loader and a Hi-Hoe backhoe.

The wash plant consisted of a 5 by 35 foot trommel with 3/8 to 5/8 inch punch plate. A single run sluice under the trommel split into 4 runs which deposited tailings on each side. Water was supplied at the rate of 3500 igpm by a pump, powered by a Cat 3406 engine. Processing rate averaged 160 cubic yards per hour. Seven and one-half cuts were mined in 1988, with the average size of each approximately 350 by 300 feet. The pump pond was fed by the total flow of Maisy May Creek, and effluent was settled in abandoned mine cuts downstream of the operation.

Fine-grained, flat gold was mainly recovered. Nuggets often had quartz attached. Gold fineness averaged 780.

BLACK HILLS CREEK **115 O 7 (40)**
E. Wallin **63°30'N 138°52'W**
1986, 1988

This operation is situated near the mouth of Child's Gulch, a tributary of upper Black Hills Creek.

The stratigraphic section consists of approximately 8 feet of frozen vegetation and black muck, underlain by 2 to 18 feet of frozen gravels, averaging 8 feet in thickness. Bedrock is decomposed granite.

In 1986, five miners plus the working manager and a camp worker were employed. In 1988 only four miners worked on the operation, with considerably less production.

The entire gravel section plus 2 to 3 feet of bedrock were mined in 1986, for a reported volume of roughly 1800 cubic yards of pay. In 1988, the bottom five feet of the gravel section, plus 2 to 3 feet of decomposed granite were sluiced. The mining cut measured 300 by 150 by 18 feet and yielded approximately 5000 cubic yards of pay from a 22 000 cubic yard excavation.

In 1986, a Komatsu Model 355 bulldozer handled the stripping and pushing of tailings, while a D8K Cat bulldozer helped in the stripping and fed the sluice box. A Ross 300 three channel sluice box processed the pay at a rate of 150 to 200 cubic yards per hour.

A Komatsu Model 300 excavator was added to the equipment list in 1988, and an additional Komatsu Model 355 bulldozer replaced the D8K. The excavator fed a Derocker which was installed ahead of the Rossbox.

In 1988, one cut measuring 300 feet long, 110 feet wide and 18 feet deep yielded about 5800 cubic yards of pay from a 22 000 cubic yards excavation.

Water for sluicing was supplied by way of a 3500 igpm Morris slurry pump, driven by a Cat 3406 diesel engine. The source was an instream reservoir in Child's Gulch. Settling was done in two instream ponds, which were exhausted cuts from previous years.

Recovered gold was typically medium- to coarse-grained, with quartz attached to some of the nugget-sized particles. Fineness was approximately 750.

TEN MILE CREEK **115 O 12 (41)**
Oak Bay Manor **63°37'N 140°03'W**
1988

This mine is located on a five mile section of Ten Mile Creek beginning at its' confluence with the Sixtymile River. Gold-bearing gravels are being mined from rim to rim in this moderately narrow (200 to 300 foot) valley bottom.

Mr. Cook employed twelve miners and one camp worker doing two shifts in 1988.

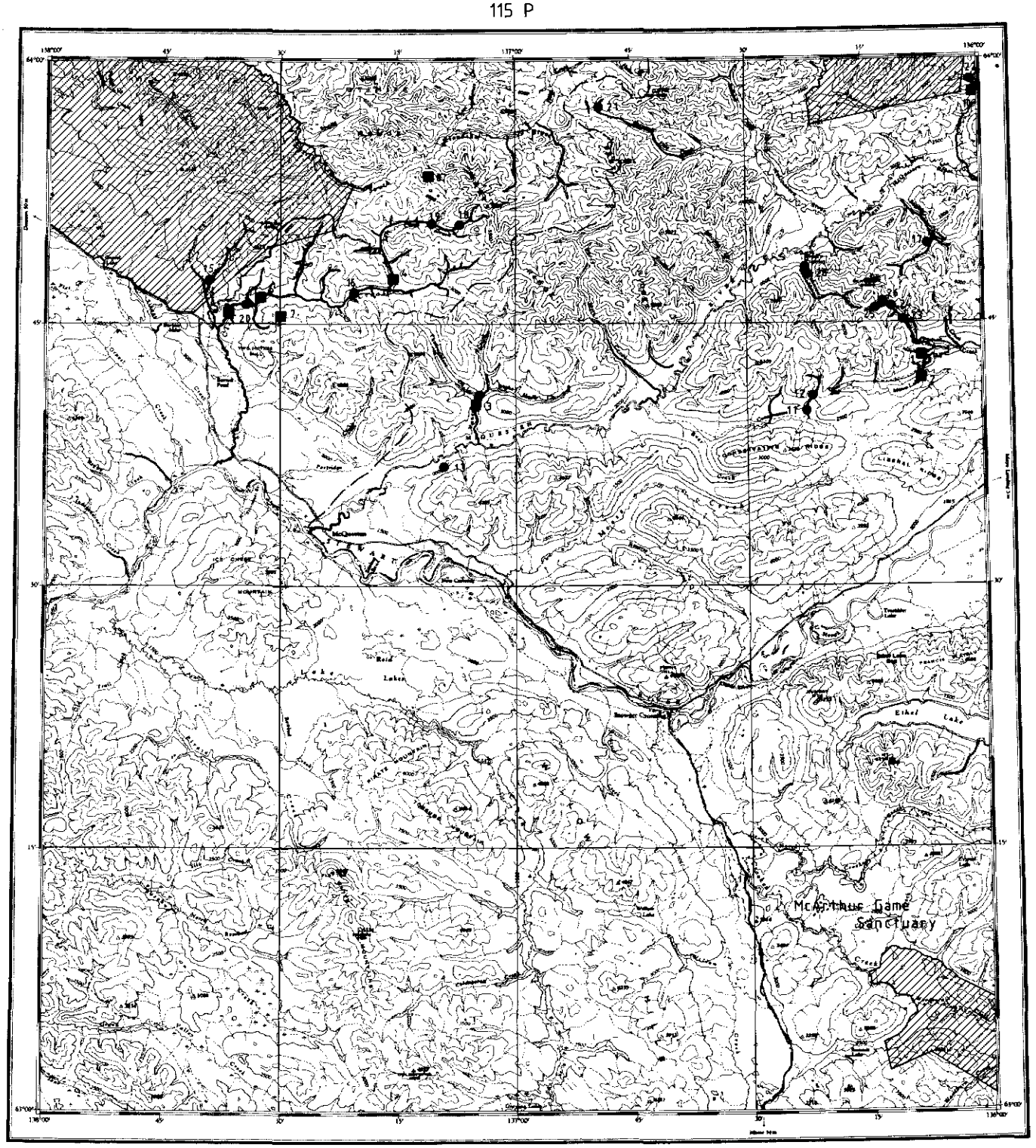
Heavy equipment included one D9L, one D8L and two D8K Cat bulldozers, and two 980 C front-end loaders. Bulldozers were used for mechanical stripping of overburden and gravels and front-end loaders were used to feed the pay gravels into the sluice plant. The plant was a Derocker and single sluice, 4 feet wide by 35 feet long sloped at 2 1/4 inches per foot.

The mining cuts averaged 40 feet deep with 20 feet of frozen black muck over 10 feet of waste gravel on 10 feet of pay gravel. The bottom 10 feet of gravel plus 2 feet of bedrock were sluiced. Waste gravel was stripped mechanically and stockpiled; frozen overburden was stripped mechanically and hydraulically during spring flood.

A 10 by 25 inch Paco pump, recycling approximately 2000 igpm, was used to process approximately 200 cubic yards per hour. Settling occurred in an in-stream recycle pond and in downstream settling ponds in old cuts.

Gold recovered included a mixture of fine-grained, flaky and angular chunks, with some nuggets with quartz attached.

115 P



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

McQUESTEN

YUKON TERRITORY

5 0 5 10 15 20 25 30

Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

MINTO, MCINTYRE CREEKS **115 P 9 (1)**
Goldorex Minerals Inc. **63°43'N 136°07'W**
1988

References: No previous reference

Claims: P 2954-56, P 15740-42, P 15131, P 2830-33, P 15498-99, P 2106, P 15934

Source: Summary by R.L. McIntyre from prospectus 063202 by G. von Rosen (Gearex Engineering).

History:

Minto Creek Discovery was staked 19 May, 1903 by J. G. Scrivener et al. Hand operations and hydraulic mining have occurred on Minto and McIntyre Creek until about 1916. The next recorded production occurred in 1965, when Mr. F. Erl worked a low bench of coarse boulder gravels by sluicing methods, and later with a jig. In 1968-72 Messrs. G. Heitman and W. Hinneck worked this property by mechanical methods, having some difficulty recovering the fine, flaky gold present. This bench, now known as the Heitman Bench, was worked intermittently with varying degrees of success, until Goldorex Minerals gained possession in 1987.

Description:

The property consists of sixteen creek claims at the confluence of Minto and McIntyre creeks. A veneer of some finer-grained gravels overlies the 15 foot sequence of boulder gravels in the sequence at Heitman Bench. Overlying these is a mildly auriferous overburden layer consisting of buff-coloured sands and silts, gaining in thickness towards the west, to a maximum of 20 feet. The boulder gravel pay zone, with well-rounded boulders to greater than two feet in diameter, is relatively devoid of fine silt and clay.

Current Work and Results:

Although only a small portion (about 6%) of the claim area was tested in this 1987 program, some definitive results were obtained. A 150 cubic yard bulk sampling program was sluiced to return an average value of 0.014 troy ounces per cubic yard. A thirty-three cubic yard bulk sample returned 0.029 troy ounces per cubic yard. The last phase of 1987 testing, consisting of thirty-two cubic yards of material from thirty-four pits, returned average values of 0.02 troy ounces per cubic yard. In addition to the above, a new and as yet untested deposit of coarse boulder gravels was discovered on McIntyre Creek.

UPPER MINTO CREEK **115 P 9 (2)**
Trlex Resources Ltd **63°42'30"N 136°07'W**
1983

References: No previous reference

Claims: PL 5754

Source: Summary by R.L. McIntyre from prospectus 120053 by Gordon R. Hilchey (Bacon, Donaldson and Associates Ltd).

History:

Gold was discovered on Minto Creek in the spring of 1903, on low benches approximately one mile north of Minto Lake. The area was mined hydraulically in 1915 and 1916, and mechanically in the late 1960's and early 1970's. Placer prospecting lease No. PL 5754 was recorded on January 12, 1981, and since transferred to the Lake Minto Gold Corporation.

Description:

Placer lease 5754, a one mile prospecting lease, covers a high western bench on the left limit of Minto Creek, approximately 250 feet above that creek. The surficial geology consists of approximately sixty feet of sand and boulder gravel overlying Yukon Group schist bedrock. The area has been subjected to at least one continental glacial advance, the present-day stream having concentrated the gold present in the tills and outwash sands. Gold recovered from previous adjacent mining operations in the creek is reported to be fine, thin flakes, typical of glaciated deposits.

Current Work and Results:

The work involved in the preparation of this prospectus involved a short site visit, aerial photograph interpretation, literature search, and a summary of a private report by M.C. Robinson.

VANCOUVER, THOROUGHFARE, **115 P 11 (3)**
RIGHT HOOK CREEKS **63°40'N 137°05'W**
Eagle's Nest Mining **1981**

Claims: PL 5302-06 (22 miles of prospecting leases)

Source: Summary by R.L. McIntyre from assessment report 120055 by D.W. Litchfield.

Description:

This property comprises four 5-mile and one 2-mile prospecting creek leases. The sedimentary sequence consists of a late Tertiary White Channel gravel layer resting on granite bedrock, overlain by brown or rust brown gravel containing foreign rocks such as chert, diorite, quartzite and greenstone. Overlying this unit is a package of glacial till, and glacio-fluvial outwash materials of varying thickness. The intervening ridges between Vancouver, Right Hook and Thoroughfare Creeks are composed largely of Yukon schist,

quartzite and phylite, with some small local intrusions of granite and granodiorite. Vancouver Creek heads in a massive granitic intrusion.

Current Work and Results:

In July of 1981, ten site-specific areas were surveyed by resistivity methods. An abundance of water and/or permafrost caused many technical problems. Data interpretation proved to be difficult, and absolute depth values were not calculated from the data. Instrument readings could not differentiate between fractured bedrock and permafrost. A follow-up drilling or seismic geophysical program was suggested.

CLEAR CREEK **115 P 12 (4)**
Birch Industries Inc. **63°47'N 137°15'W**
1978

References: No previous reference

Claims: PL 4034

Source: Summary by R.L. McIntyre from assessment report 120056 by E.P. Sheppard.

Description:

This property consists of one placer lease on upper Clear Creek. The subject gravels form a bench on the right limit, and are thought to be analagous to the White Channel gravels of the Klondike. The area has a complex geological history of pre-glacial, peri-glacial and post-glacial surficial deposition, and tectonic uplifts have further modified stream drainages. The stratigraphy consists of moss and peat over black muck, with a thin layer of silt and sand overlying the gravels. The gravel section is six feet in depth on average.

Current Work and Results:

In 1978, an area 1640 by 900 feet, was stripped by bulldozer and designated as Bench 1. Sampling was done by digging one half to one cubic yard test pits and sluicing gravels. The sluice concentrates were panned for gold content. The test pits which reached bedrock returned much better assays than those which didn't, indicating a bedrock enrichment of gold. The surface of an area encompassing 340 000 cubic yards of bench gravels was stripped in preparation for mining, which has a calculated grade of 0.040 troy ounces/yd.[3]

CLEAR CREEK **115 P 12, 13 (5)**
Barlow Lake Gold Mines Ltd **63°45'N 137°45'W**
1981

References: No previous reference

Claims: PL 5257

Source: Summary by R.L. McIntyre of assessment report 120057 by R. Horst (Geosearch Enterprises).

History:

The property was staked by B. Brady on July 17, 1980 and subsequently assigned to Barlow Lake Gold Mines Ltd

Description:

The property comprises one 2 mile first tier bench prospecting lease, above Clear Creek approximately 2 miles downstream from the forks on Clear Creek. Geologic evidence suggests that this bench is comprised of Tertiary White Channel Gravels.

Current Work and Results:

Soil sampling of the Ao Horizon (humic layer) was performed in the vicinity of an old hydraulic cut in the White Channel gravels. A total of 218 samples were taken on a 656 by 2625 foot grid, and all were assayed for gold content. The assay results confirmed anomalously high gold concentration in the White Channel gravels of 3-13 ppb; usual background for gravels is in the range of >1 to 3 ppb. Follow-up work of more detailed geochemical sampling and overburden drilling was recommended.

CLEAR CREEK **115 P 13 (6)**
Birch Industries Inc. **63°46'N 137°33'W**
Crescent Mines Ltd **1978**

Reference: Debicki (1983, p. 111)

Claims: PL 4034, BIRCH 1-3

Source: Summary by W.P. LeBarge of assessment report 120056 by E. Sheppard.

Current Work and Results:

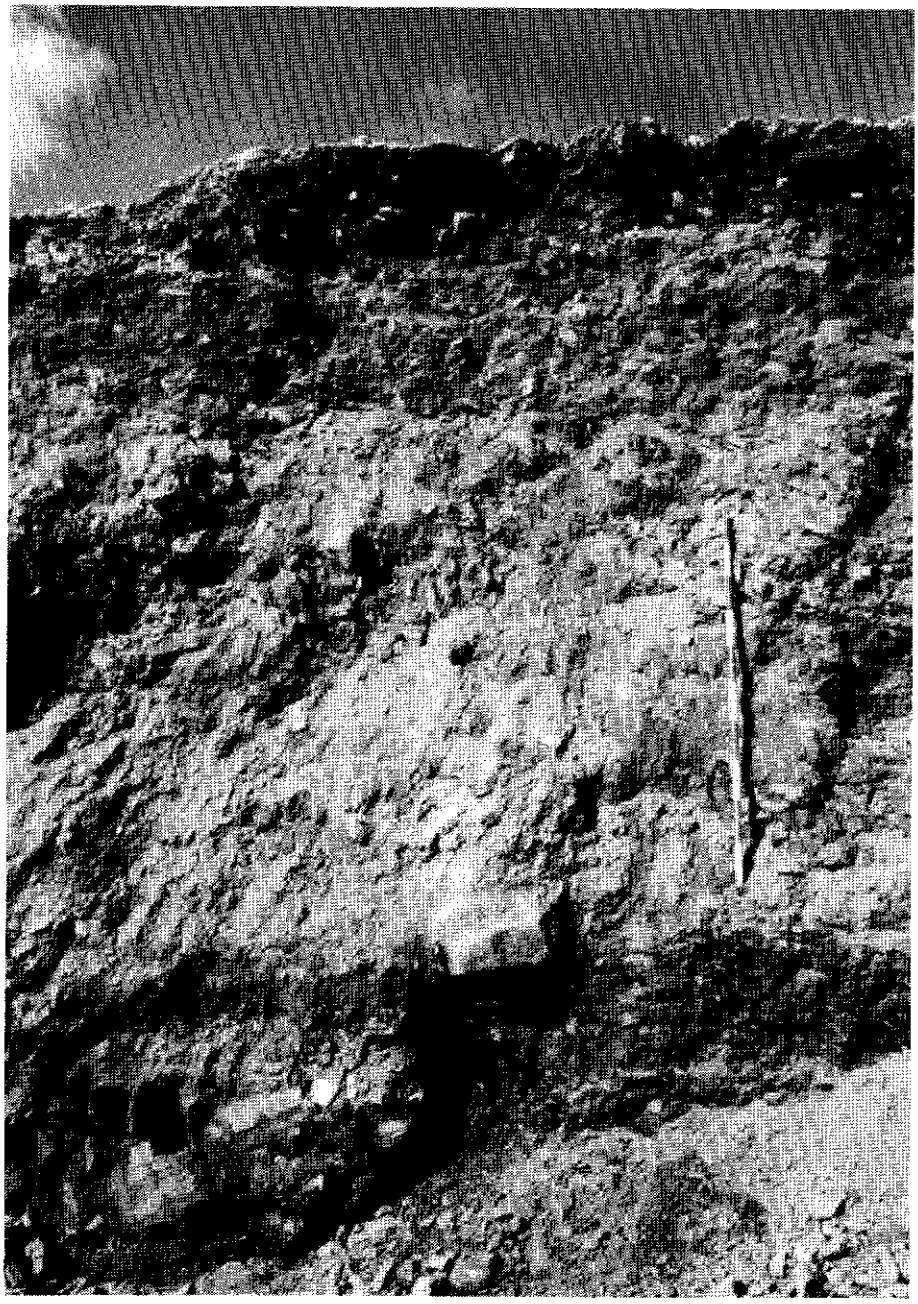
In 1978 a bulldozer began stripping the overburden and 10 test pits were dug by a backhoe. Ten cubic yards of material were sampled and pan concentrated. Concentrates were then assayed for gold, with grades ranging as high as 41.6 ounces per cubic yard. The best values were obtained from samples taken within 11.8 inches of bedrock.

CLEAR CREEK TRIBUTARY **115 P 13 (7)**
Raleigh Energy Corporation Ltd **63°45'N 137°30'W**
1981

References: No previous reference

Claims: PL 5678

Source: Summary by R.L. McIntyre from assessment report 120058 by F.J.R. Syberg.



The above section is an example of a glacial placer deposit which was mined by Nels Harper on left Clear Creek.

Current Work and Results:

A two day hammer and plate seismic geophysical survey was conducted on 0.87 line-miles of grid on this one mile creek lease. The results were inconclusive due to undisclosed reasons, and a recommendation to perform follow-up seismic work was presented.

LITTLE SOUTH KLONDIKE RIVER **115 P 14 (8)**
Canada Tungsten Mining Corp. Ltd **63°54'N 137°11'W**
1981

Reference: No previous reference.

Claims: PL 5533

Source: Summary by W.P. LeBarge of assessment report 120123 by K. Hansen (Bema Industries Ltd).

Current Work and Results:

The exploration program consisted of trenching, sampling, geochemistry and examination for gold, scheelite and cassiterite. Five trench samples of 1-2 cubic yards each were concentrated in a longtom sluicebox and panned to a heavy mineral concentrate. Visual inspection of each 8 1/2 ounce concentrate revealed from 3 to 20 colours of gold (all less than 40 mesh in size) and moderate amounts of scheelite.

SWEDE, SECRET CREEKS **115 P 16 (10)**
Canada Tungsten Mining Corporation Ltd **105 M 13**
63°58'N 136°00'W
1981

References: No previous reference

Claims: PL 5156 (2 mile), PL 5327 (3 mile)

Source: Summary by R.L. McIntyre from assessment report 120079 by G.D. Nordin (Bema Industries Ltd).

Current Work and Results:

During the period of August 20 to 30, 1980 twenty-four backhoe trenches were excavated on the Swede and Secret Creek placer leases. A Cat 235 backhoe was used in the trenching operation. On Swede Creek placer lease 5327, trenches T-1 to T-14 removed 3403 cubic yards of gravel, and on Secret Creek placer lease 5156, trenches T-15 to T-24 removed 2172 cubic yards, for a total of 5575 cubic yards. Bedrock depths averaged 19.7 feet. No description of processing or gold revovery is provided.

BEAR CREEK **115 P 9 (11)**
P. Tyerman **63°39'N 136°22'W**
1987

The property is located on Bear Creek (also known as Van Bibber Creek and Carlson Creek) in the Minto Lake area. Mining in 1987 was concentrated in a deep channel deposit on the lift limit of the creek, in a narrow valley, at the top of the Suzy 1 discovery claim.

The depth to bedrock varies from 30 to 60 feet. The overburden stratigraphy is not frozen and consists of 1 foot of organic material and 20 feet of sand underlain by 20 feet of fine schist gravel interlayered with boulders and clay layers. The pay section consists of six feet of rusty-coloured channel gravels over a decomposed schist bedrock.

The crew consisted of three miners, working one 8 hour shift, and a cook. The gravels were transported from the cut to the wash plant by a D-65S Komatsu loader with a 3 cubic yard bucket. A D-60A Komatsu bulldozer was used for stripping and removing the tailings. The overburden and tailings were stockpiled for future road construction. Working space was limited as the creek channel is quite narrow.

The wash plant consisted of a 20 by 8 foot dump box, a wet grizzly made of railway iron on 3 inch centers and a single run sluice 34 inches wide by 20 feet long. The box was lined with angle iron riffles, 8 feet of 1.2 inch punch plate and burlap sacking. A gold screw was used to clean up the concentrate. Approximately 250 yards were processed per day. One cut of 12 000 cubic yards was mined in 1987.

A pipeline constructed from 45 gallon drums conveyed water a short distance from the creek to the sluice box. The effluent was treated in a series of small instream ponds.

Recovered gold was flat and flaky, with approximately 80% medium-grained and 20% fine-grained.

UPPER CARLSON CREEK **115 P 9 (12)**
H. Lunny **63°39'N 136°22'W**
1988

This operation is located on the upper portion of Carlson Creek about 2 miles upstream of the main valley. Mining began this year and consisted of 3 small test cuts along the right limit of the creek upstream of previously mined areas. About 2000 cubic yards were sluiced and 1000 cubic yards were stripped.

The depth to bedrock was 30 feet. The ground was not frozen and consisted of 2 feet of black muck, 2 to 4 feet of 3 foot diameter boulders, 20 feet of gravel and clay, and 2 feet of compacted gravel and decomposed bedrock. Very little material was sluiced.

The operation was family run with one miner working a 10 hour shift and a cook.

A John Deere 410 with a 1/2 cubic yard bucket was used to dig drains and test holes. A D7 Cat bulldozer with a straight blade was used for stripping and pushing pay. A 55 Michigan loader with a 1.5 cubic yard bucket was used to feed the box and remove tailings.

The wash plant consisted of a 6 cubic yard half round dump box and a 26 by 3 foot single run sluice box. The box was lined with slotted plate, Hungarian riffles, expanded metal and Coco matting. The processing rate was 8 cubic yards per hour.

A small dam across the creek backed up water into a short 6 inch diameter pipe which supplied the dump box. Effluent was treated in a slough in the main Carlson Creek valley. There was no discharge from the slough into the creek.

The gold was fine-grained and flat with an unknown fineness.

MCQUESTEN RIVER **115 P 11 (13)**
J. Rustenburg **63°37'N 137°08'W**
1988

This operation was located about 10 miles upstream from the mouth of the McQuesten River on the left limit. The mine site was in the floodplain about 1 mile from the McQuesten River but was not joined by an active channel. Depth to bedrock was about 125 feet through old river gravels. Approximately 25 feet of this deposit will be mined. Six feet of black muck and some of the gravel was frozen. About 7 feet of overburden was stripped off of a small area in 1988, but no material had been sluiced as of September 15, 1988.

The crew consisted on one miner working a ten hour shift.

A 65 Hough loader with a 3.25 cubic yard bucket was used to strip overburden.

A water dredge, consisting of a 30 by 12 foot dump box lined with 1/2 inch punch plate was under construction. The suction pump is a 6 inch by 8 inch Monarch powered by a 120 HP Cat motor. The 1/2 inch material will be transported via a pipe to various secondary processing systems including a 3/16 inch classifying screen, a centrifugal spinner, a sand screw, a spiral and a boil box. The final configuration of the system will be determined through experimentation. The dump box will float in the pond

and the other equipment will be mounted on barges. The dredge will create and fill in its own pond as mining progresses.

Ground water will fill the pond and be used by the dredge at a rate of 1500 igpm. The effluent will also be settled out in the pond.

The gold was fine-grained with a fineness of 870.

VANCOUVER CREEK **115 P 11 (14)**
A. Lewis **63°39'N 137°05'W**
1987, 1988

In 1987 the property mined was located on the right limit in the main channel of Vancouver Creek, about half a mile downstream of its confluence with Thoroughfare Creek. The valley is fairly wide at this point and the stream gradient moderate. The deposit consisted of five to fifteen feet of moderate sized gravel, overlain by five feet of unfrozen river gravels. The bedrock is decomposed schist.

A crew of three miners and one cook worked a twelve to fourteen hour shift. A D-8K Cat was used for stripping, breaking ground and stockpiling pay for the 966D loader. The loader had a 4.5 cubic yard bucket that fed the excavator and removed tailings. A 235 Cat excavator with a 1.25 cubic yard bucket fed the wash plant and dug test holes.

The wash plant included a 10 by 24 foot Derocker, a 20 feet long by 4 feet wide single run sluice and a 4 foot by 8 foot 2 cell jig. The sluice box had a grade of 1.5 inches per foot. Punch plate with 1/2 by 3/4 inch slotted holes lined the box. Material that passed through the punch plate fell into the jig. The jig was operated by two tires mounted on opposite sides of the jig. The tires acted in unison as diaphrams imparting a pulsating motion to the water which moved back and forth across the top of the jig. The bottom portion of the jig was filled with small rounded pebbles. One tube from the bottom of each cell discharged into a long tom lined with expanded metal and Nomad matting.

The processing rate was 100 cubic yards per hour. Approximately 20 000 cubic yards were processed in 1987.

Water was pumped directly out of the creek at a rate of 2000 igpm by a Cornell 6 by 8 inch pump, powered by a 3306 Cat motor. Effluent was treated in a long drain that ran through a low lying marshy area.

In 1988 the operation moved down Vancouver Creek to the left limit in the main channel, about 1 mile upstream of its confluence with the McQuesten River. Three cuts were mined in 1988 for a total of 65 000 cubic yards sluiced and 12 000 cubic yards stripped. The average depth to bedrock was 16 feet but gold was not found deeper than 9 feet. The material consisted of 1 foot of organic material (not frozen), 4 feet of moderate sized stream gravel, 3 feet of sandstone with granite boulders, 2 feet of gravel, 1 foot of clay and gravel down to the decomposed schist bedrock. Nine feet of gravel below the organic material was processed.

The crew was made up of a cook and six miners, working two 12 hour shifts.

A D9L Cat was used for stripping, removing tailings, breaking ground and stockpiling pay for the 235 Cat excavator, with a 1.25 cubic yard bucket, which fed the wash plant and dug test holes.

The sluice box was lengthened to 44 feet with a grade of two inches per foot. Two and one half by two and one half inch Hungarian riffles, 1/2 inch punch plate, expanded metal and Nomad matting lined the box. The jig processed 50% of the minus 1/2 inch material. The processing rate was 200 cubic yards per hour.

Water was pumped out of a pond adjoining the creek at a rate of 2500 igpm by a 10 by 12 inch Morris pump, powered by a 3408 Cat motor. Effluent was treated in a series of small out-of-stream ponds at the beginning of the season. A mined-out area was converted into a pond later in the season.

Approximately 25% of the gold was larger than 10 mesh, 50% was between 10 and 28 mesh and the remaining 25% was smaller than 28 mesh. The gold was flat and of unknown fineness.

BARLOW CREEK **115 P 13 (15)**
R.E. Moore **63°47'N 137°40'W**
1986

Mr. Moore and six others, including one in camp, operated in 1986, the first year of operation.

Heavy equipment consisted of one D8K bulldozer, one Hough 120 C loader (used primarily to feed the plant), and one Northwest crane.

The depth of the placer deposit was unknown; the operators dug to a depth of 60 feet without reaching bedrock. The total section was sluiced to a 60 foot depth, consisting of grayish sandy gravels, and was not frozen.

For the earliest part of the season two Knelson concentrators were used for primary sluicing, and were later replaced with a Yuma jig plant. Recovery was hindered as a result of high concentrations of diesel fuel saturating the gravels.

Wash water was pumped with a 6 inch pump, powered by a 671 Jimmy diesel.

The gold was reported to be fine-grained in size.

CLEAR CREEK **115 P 13 (16)**
4757 Yukon Ltd **63°46'N 137°22'W**
1987, 1988

This property is located on Clear Creek approximately 2 miles downstream from its confluence with the left fork of Clear Creek. In 1987 mining occurred on the right limit approximately 2000 feet downstream of Smith Gulch. Three blocks were mined totalling 72,000 cubic yards, processed at approximately 60 cubic yards per hour using a three run sluice 25 feet long by 6 feet wide. Water was supplied by one 30 HP Flygt 4 by 6 inch pump at a rate of 1600 igpm. Four blocks on the right limit were mined in 1988 for a total of about 80,000 cubic yards sluiced and 15,000 cubic yards stripped. Deposits in the area consist of 10 feet of river gravel that has been reworked by glaciation. This is overlaid by 4 feet of silt and black muck which is frozen in places. Bedrock is decomposed schist. The gravel and up to 6 feet of bedrock were processed.

The operation was family run and consisted of four miners and one helper in 1987 and five miners and one helper in 1988. One 12 hour shift was worked. The mine has been in operation since 1983 and at the present rate of production has 14 years of established reserves.

In both years a 1985 D9H Cat bulldozer was used to strip overburden and stockpile paydirt. Ground was stripped 1 to 2 years in advance. Two 966D loaders with 4 cubic yard buckets were used to feed the wash plant and remove tailings, which were used as a protection dike on the bypass channel. The sluice box was moved approximately once a month as mining proceeded upstream.

The sluicing plant consisted of a 10 by 24 foot Derocker with spray bar, and a 35 foot long, four run sluice. The sluice runs were equipped with punch plate, riffles, expanded metal and rubber matting, and set at a grade of 2 inches per running foot. The sluice runs accepted material less than 1.25 inches. The Derocker was run by an electric motor powered by a 100 kW 3304 Cat generator. Approximately 80 cubic yards per hour were processed.

The generator also ran two 6 inch Flygt submersible pumps which supplied water to the sluice box and spray bar at a rate of 1900 igpm. Water was pumped directly out of a diversion ditch. Effluent was treated by a series of long, out-of-stream ponds.

The gold recvered was flat and fine-grained with few nuggets. The fineness was 889. Dore bars were refined on site.

MORRISON CREEK **115 P 13 (17)**
F. Schomig **63°50'N 136°06'W**
1988

This operation is located on Morrison Creek about 2 miles upstream from Seattle Creek. Two small cuts were mined in 1988 measuring 60 by 30 by 25 feet and 60 by 30 by 14 feet respectively, for a total of 2600 cubic yards sluiced. The ground was not frozen and had been previously stripped. Material consisted of stream gravel and boulders up to 8 feet in diameter. The bedrock was fractured granite and schist along a well-defined fault contact. An average of 25 feet of gravel and 1 foot of bedrock were sluiced.

Two miners worked one ten hour shift.

A D8K Cat bulldozer with an angle blade was used for stripping overburden and removing tailings. Tailings were stacked on mined-out areas. A Linkbelt excavator LS 5000 with a 1.5 cubic yard bucket was used to feed the box and dig a ditch through a canyon to facilitate drainage of the upstream ground.

The wash plant consisted of a grizzly and a 2 by 24 foot long single run sluice. The grizzly was made out of rails spaced 4 inches apart. The sluice box was lined with 2 inch Hungarian riffles, 1 layer of expanded metal and Coco matting. The grade of the sluice box was 2 inches to the foot. The processing rate was 30 cubic yards per hour.

Water was provided to the sluice box at a rate of 600 igpm through 300 feet of 6 inch diameter collapsible hose. Effluent was treated in two 50 by 100 foot out-of-stream ponds.

The gold was angular with 50% larger than 2mm in diameter. Sponge gold and gold included in quartz was present. Scheelite, galena, hematite and magnetite were found in the concentrates.

LEFT FORK, CLEAR CREEK **115 P 14 (18)**
T. Bazylinski **63°51'N 137°06'W**
(River Rat Mining) **1987, 1988**

This property is located along the headwaters of the left fork of Clear Creek, approximately 2.5 miles upstream from the mouth of Lewis Gulch. Mining proceeded 250 feet upstream in 1988. The valley bottom is relatively wide and has a moderate gradient. Deposits average 20 feet thick including 1 foot of organic overburden, 4 feet of blue clay, 4 feet of oxidized stream gravel, 3 feet of clay and 6 to 8 feet of decomposed schist. All material was sluiced except for the organic overburden.

Work was carried out by T. Bazylinski and one helper working one 8 hour shift in 1987, and by three miners and one helper, working one 10 hour shift in 1988.

A D8H Cat was used for stripping overburden, removing tailings and stockpiling pay. A John Deere 644 loader was used to feed the trommel.

The wash plant consisted of an 8 by 12 foot wet grizzly with vertical steel bars spaced 7 inches apart and a trommel feeding a single, reverse run sluice. The trommel was 4 feet in diameter by 22 feet long and classified material to minus 1.5 inches with 4 feet of screen. The sluice was 4 feet long by 20 inches wide with expanded metal over Nomad matting. The processing rate was between 35 and 45 cubic yards per hour. In 1987 the operator processed a 10 000 cubic yard stockpile, and in 1988 the operator sluiced 30 000 cubic yards from one long cut.

Water was supplied to the wash plant at a rate of 500 igpm by an 8 inch diameter by 700 foot long gravity fed pipe. The pipe line was supplied by an in-stream reservoir 65 feet above the wash plant. Effluent was treated in two out-of-stream ponds measuring 15 by 30 yards and 40 by 15 yards respectively. The ponds were constructed of coarse tailings. The water filtered through the tailings before returning to the creek.

Recovered gold was angular with an equal mixture of coarse and fine grains. Fineness averaged 820 in 1987, but dropped to 730 in 1988.

LEFT FORK, CLEAR CREEK **115 P 14 (19)**
Blackstone Placer Mining **63°51'N 137°07'W**
1987, 1988

This property is situated along the upper part of the left fork of Clear Creek. Mining proceeded 500 feet upstream from where operations ceased in 1987. The ground had been stripped previously for a dredge which never operated there. Some of the area had been Cat mined. The deposit consisted of 12 feet of channel gravels and bedrock was mainly decomposed schist. The ground was not frozen and some competent bedrock occurred as "reefs" across the valley bottom. The creek gravel, including old tailings and 1 foot of bedrock, was sluiced.

Work was carried out by Nelson Harper and five family members (four miners and one other). One ten hour shift was worked per day.

Three D8 Cats and one D7 Cat were used for stripping overburden, stockpiling pay and building protection berms, roads, and miscellaneous other tasks. Two Hough 90E loaders, each with 4 cubic yard buckets, were used to feed the sluice box and remove tailings. Tailings were leveled and used to construct a protection berm beside the creek. The berm also functioned as a road.

The wash plant consisted of a 5 foot diameter trommel and two sluice runs. The trommel was fed by a 5 cubic yard hopper and lined with four 6 inch high inner rings and six sections of 6 by 6 by 60 inch screens. Minus 0.5 inch material was fed into a 4 foot by 20 foot sluice which was lined with coarse expanded metal. The second sluice run took minus 2 inch material, was 2 feet wide by 10 feet long and was lined with 2 feet of 2 inch angle riffles and 8 feet of 1 inch angle riffles. Nomad matting was used under the riffles and expanded metal. The sluice box was set at a grade of 1.5 inches to the foot.

In 1987, a processing rate of 60 to 90 cubic yards per hour gave a total of 18 000 cubic yards. In 1988, 80 000 cubic yards were processed at a rate of 50 cubic yards per hour.

Water was pumped to the wash plant at a rate of 1500 igpm through a 600 foot long steel pipeline (200 feet was 12 inches diameter and 400 feet was 8 inches diameter) by a 6 inch Allis Chambers pump. Powered by a 60 HP diesel, the water turned the trommel. A small instream pond supplied water to the pipeline. Water was in good supply all summer. Effluent was treated by a series of out-of-stream ponds measuring approximately 25 by 30 yards each. New ponds were added as needed.

The gold was described as 90% fine and 10% coarse with occasional nuggets. The fineness was reported to be between 790 and 820.

CLEAR CREEK **115 P 15 (20)**
Van Bibber Placer **63°47'N 137°33'W**
Development **1988**

This operation is located on Clear Creek about 2 miles upstream from Barlow Creek. Two plants operated on this ground in 1988: one on claims P 34227 and P 34228 and the other on claims P 34233, P 34234 and P 34235. The ground was similar in both locations. It was frozen in spots and the average depth to bedrock was 8 feet with 2 to 5 feet of black muck overlying 6 feet of stream gravel. Granite boulders averaging 3 feet in diameter and reaching 7 feet in diameter, were mixed in with the gravel. The bedrock was comprised of quartz-pebble conglomerate. Six feet of gravel and 3 to 6 feet of bedrock were sluiced for a total of 50 000 cubic yards processed in the downstream operation and 30 000 cubic yards in the upstream operation. About 30 000 cubic yards were stripped in the downstream operation and 20 000 cubic yards in the upstream operation.

The total crew was made up of thirteen miners and four others working one ten hour shift.

Equipment for the downstream operation consisted of a D9H Cat bulldozer with a U-blade used for stripping, ripping and pushing up pay. A D7F Cat bulldozer with a straight blade was used to push tailings. A 966C Cat loader was used to feed the box.

The upstream operation used a D9L Cat bulldozer, a 988 loader and a PNA excavator.

The design of both wash plants were similar and consisted of a 10 by 14 foot flat bottom dump box and a 3 run sluice. The grade on the sluice box was

2.5 inches to the foot. The middle run was lined with 10 feet of 1.25 inch Hungarian riffles and 6 feet of expanded metal. The two side runs accepted minus 1/2 inch material which was run over 3 inch Hungarian riffles and Coco matting. The processing rate was about 100 cubic yards per hour.

The downstream operation used a 10 by 10 inch Craver pump powered by a 318 Cat motor, to pump water directly out of Clear Creek at a rate of 2000 igpm. The upstream operation used a 10 by 12 inch Morris pump, powered by a 3406 Cat motor. Effluent for both operations was treated in a series of out-of-stream ponds measuring about 500 by 100 by 2 feet.

The gold was flat and fine-grained. The fineness was 838.

GEM CREEK **115 P 15 (21)**
E. Wiez **63°57'N 136°49'W**
1988

The operation is located on Gem Creek about 6000 feet upstream of its confluence with Sprague Creek. Mining proceeded upstream from the 1987 workings. Three cuts were made for a total of 15 000 cubic yards sluiced and 7 000 cubic yards stripped. The ground was not frozen and consisted of 4 feet of black muck and 5 feet of Tertiary pay gravels mixed with decomposed granite boulders. Bedrock was decomposed schist and slate. Five feet of old channel gravel and two feet of bedrock were sluiced.

A crew of one miner and one helper worked 14 hour shifts.

A D 60E Komatsu bulldozer with angle blade was used to strip, break out pay and build ponds. A 2000 Trojan loader with a 3.5 cubic yard bucket was used to feed the box and stack the tailings.

The wash plant consisted of a 7 by 14 foot dump box which screened minus 1/8 inch material to an undercurrent side run lined with 2 layers of expanded metal and Nomad matting. The main sluice run processed minus 4 inch material and was 14 feet long by 2 feet wide with riffles and Nomad matting. The processing rate was 30 cubic yards per hour.

Water was pumped out of Gem Creek at a rate of 500 igpm by a 4 inch MTM trash pump, powered by a Lombardini motor. Effluent was treated in two small out-of-stream ponds.

Gold was angular with 90% smaller than 10 mesh and a fineness of 895. Concentrates contained barite, scheelite, fine magnetite and possibly platinum.

GILL GULCH **115 P 16 (22)**
T. Takas **63°59'N 136°01'W**
1988

This operation is located at the mouth of Gill Gulch in the Haggart Creek valley. Two cuts were mined in the face of a bench in the centre of the Gulch. Both cuts measured about 80 by 75 by 35 feet deep. Approximately 5000 cubic yards were sluiced and 10 500 cubic yards were stripped. The ground was frozen in patches and consisted of 1 foot of organic material and 34 feet of stream gravel and decomposed schist bedrock with quartz veins. Approximately 9 feet of gravel and 1 foot of bedrock were sluiced.

The crew was made up of four miners and one helper working a 12 hour shift.

A D8H Cat bulldozer with an angle blade was used to strip overburden and push up pay. Overburden was frozen up to 8 feet deep in places and had to be ripped. A Volvo loader with a 4 cubic yard bucket was used to feed the plant. A 977 Cat loader with a 3 cubic yard bucket was used to remove tailings. A 175 Michigan loader with a 3 cubic yard bucket was also used to feed the plant and remove tailings. Tailings were used to build up the settling pond dam.

The wash plant consisted of a 5 cubic yard hopper feeding a 5 feet diameter by 20 feet long trommel and a short double run sluice lined with 2.5 inches Hungarian riffles over Astroturf matting.

A Volvo 6 by 6 inch pump supplied water from Haggart Creek to the trommel at a rate of 1000 igpm. Effluent was treated in a large out-of-stream pond which discharged into Haggart Creek.

The gold was limonite-coated and fine-grained with some small nuggets. The fineness was 870.

HIGHET CREEK **115 P 16 (23)**
Bieller Placers Ltd **63°45'N 136°10'W**
1987, 1988

This property is located on Highet Creek at the mouth of Hayden (Dredge) Creek, approximately 3.5 miles upstream from its' confluence with Minto Creek. Two cuts were mined in 1987, one at the downstream portion of the property and the second just below the camp site. Thirty to fifty feet of unfrozen overburden was stripped. Upstream and downstream areas, adjacent to 1987 cuts, were mined in 1988. In both cases 10 to 25 feet of frozen side hill material were ripped and stripped. The overburden ranged from 7 to 25 feet thick and consisted of interlayered organic blue and grey clay and glacio-fluvial gravels, including quartzite boulders, up to 3 feet in diameter. The lower 10 feet of gravel and boulders plus 2 to 3 feet of schist bedrock were sluiced.

The crew consisted of five miners and one helper working ten hour shifts, with double shifts worked 50% of the time.

A D9L Cat bulldozer and a 637 Cat scraper with a 20 cubic yard capacity were used for stripping. When sluicing, the bulldozer pushed the pay into a stockpile which was fed to the box by a UH-20 Hitachi tracked excavator with a 4 cubic yard bucket. Tailings were removed and stacked in the old cuts by a 988 Cat loader with a 7 cubic yard bucket.

The wash plant was a modified Ross 200 with a hopper and wet grizzly. The sluice box was 40 feet long and 9 feet wide with three top runs and one bottom run processing at 250 cubic yards per hour. A total of 210 000 cubic yards were sluiced in 1987 and 40 000 cubic yards were sluiced in 1988. In 1988, the stripping to sluicing ratio was about 3 to 1. The upstream cut measured 300 by 140 feet; 12 feet were sluiced and 25 to 30 feet were stripped. The downstream cut measured 500 by 140 feet; 8 feet were sluiced and 35 to 40 feet were stripped.

Water was supplied directly out of the creek to the wash plant at a rate of 2500 igpm by a 8 by 10 inch Morris pump, powered by a Cat 3208 engine. An electric powered sump pump kept the cut dry. Effluent was treated by a 300 by 400 by 30 foot deep settling pond, constructed in the spring of 1988 and located about 1.5 miles downstream in the Highet Creek valley. Some wash-out problems were experienced during high water in the spring. Water was in abundant supply all year.

Ninety-five percent of the gold in the upstream cut was smaller than 20 mesh. In the downstream cut, 20% of the gold was larger than 4 mesh and larger nuggets were more common. The fineness was 815.

HIGHET CREEK **115 P 16 (24)**
E. Bleiler **63°46'N 136°11'W**
1987, 1988

This property is located on Highet Creek, opposite 90 Pup. Work in 1987 was conducted on bench deposits on the right limit of Highet Creek, 1 claim upstream from McRae Gulch. Two cuts were mined on the bench deposits of McRae Gulch in 1988.

The first cut consisted of 8 feet of Highet Creek gravels overlain by 8 feet of "blue mud" and 15 feet of sand. The second deposit was made up of 20 to 25 feet of coarse gravels with 2 foot diameter boulders. Eight feet of gravel and 2 feet of the decomposed schist bedrock were processed.

Two miners worked the property in 1987, and in 1988 one miner worked one 9 hour shift per day.

A D8H Cat bulldozer with a U-blade was used for stripping, removing the tailings and feeding the sluice box. A 955K Cat tracked loader, with 1.75 cubic yard bucket, was used to move equipment. The overburden and tailings were pushed into mined-out areas and flattened.

The wash plant consisted of an 8 by 14 foot flat bottom dump box and a single run sluice, which was 40 feet long and 4 feet wide. The grade on the box was 1.5 inches per foot. The sluice was lined with 3 inch iron riffles over Astroturf and Coco matting. Punch plate with 3/4 inch diameter holes covered the riffles at intervals to prevent "washing out" by larger material. Approximately 30 cubic yards per hour were processed.

In 1987, two cuts of 8000 and 5000 square feet were mined for a total production of approximately 6900 cubic yards. Two cuts of 10 000 and 4800 square feet in area were mined in 1988 for a total production of approximately 4500 cubic yards sluiced. Mining was completed on August 12, 1988.

Water acquisition was by a gravity-fed pipeline supplied by Highet and McRae Creeks. Water use averaged 500 igpm and was plentiful for the 1988 season. Effluent was treated in a large downstream pond operated by Blieler Placers Ltd.

Gold was very fine-grained with very few pieces of coarse gold. Fineness was 840.

HIGHET CREEK **115 P 16 (25)**
Erl Enterprises **63°46'N 136°13'W**
1987, 1988

This property is located along the upper reaches of Highet Creek, 3 claims upstream from the mouth of Rudolph Gulch. The elevation at this location is 3300 feet. The valley bottom is narrow and the stream gradient steep. Two locations were mined in 1987, one on the left limit in the creek channel and the other on a right limit bench deposit. Channel deposits consisted of 4 to 6 feet of gravel overlain by 20 feet of slide rock. Bench deposits consisted of 2 feet of pay gravel overlain by 6 feet of slide rock. Only the pay gravels were sluiced. Gold deposits were reported to be very irregular.

In 1988 one cut measuring 300 by 60 by 10 feet deep was mined on the bench along the right limit of Highet Creek. Deposits consisted of 5 feet of gravel mixed with quartzite and granite boulders, overlain by 2 feet of gravel and yellow clay layers and 2 feet of black muck. The bedrock in the area is decomposed schist. The ground was not frozen. Five to 6 feet of gravel and 1 foot of bedrock was sluiced. The stripping to sluicing ratio was 3 to 1.

F. Erl worked alone on the property 11 hours per day.

A D 82U Cat was used for stripping, and a 950 rubber-tired Cat loader, with a 2 cubic yard, bucket was used to feed the box and remove tailings. A 1969 941 Cat loader with a 1.5 cubic yard bucket was used for testing.

The wash plant consisted of a wet grizzly 4 feet long by 5 feet wide and a single run sluice 20 feet long by

3 feet wide. The sluice box was lined with angle iron riffles spaced 1.25 inches apart, expanded metal and Coco matting, processing 30 cubic yards per hour. Approximately 830 cubic yards were processed in 1987 and 4700 cubic yards in 1988.

In 1987 water was supplied directly from Highet Creek and by a pipeline feed from a 700 foot "oldtimers" ditch. In 1988 water was gravity-fed to the sluicing plant directly from a small reservoir in Highet Creek. Using 1800 feet of 6 inch diameter metal and PVC pipeline, water was supplied to spray bars on the grizzly. No shortage of water was experienced in 1988.

Effluent was treated in two instream ponds measuring 100 by 100 feet and 50 by 40 feet respectively. Effluent was also treated by two out-of-stream ponds, 50 by 40 feet, which were cleaned out regularly.

Most of the bench deposit gold was fine-grained with an estimated 10% being coarse. The fineness was reported to be 840. Some scheelite was also found in the concentrates.

HIGHET CREEK **115 P 16 (26)**
W. Gordon **63°46'N 136°11'W**
1987

The property is located along Highet Creek at the mouth of Rudolph Gulch. In 1987, work was conducted in the Highet Creek approximately three claims downstream from Rudolph Gulch.

The stratigraphic section is not frozen, and consists of 10 to 12 feet of gravel and clay overburden, and 3 to 8 feet of pay gravels mixed with large granite boulders over decomposed schist bedrock.

Wilf Gordon and his wife Jean operated the mine for an average of 15 to 20 hours a week from June to September.

The principal piece of equipment was a Michigan 35 loader which was used to feed the box and remove the tailings. A Michigan 55 loader and a TD-14 International bulldozer were also used occasionally for stripping and tailings removal. Tailings were used to fill in mined-out areas.

The pay gravels were processed in a single run sluice box 20 feet long by 2 feet wide, fed by a dry grizzly and a half-round dump box 18 feet long by 8 feet wide. The first 10 feet of the box consisted of punch plate and expanded metal. Coco matting lined the bottom half of the box. Larger material was pulled by hand through the box. The processing rate was 10 to 20 cubic yards per day resulting in a total of 1000 cubic yards sluiced in the season.

A diversion dam in Highet Creek directed flow through two pipes. One pipe fed the sluice box, the other diverted overflow back into the creek. Flow into the pipes was regulated by a plywood gate. Approximately 800 igpm was used. Water shortage can be a problem and the total creek flow was often used.

Fine to medium grained, well travelled gold with an average fineness of 820 was recovered at this property.

JOHNSON CREEK **115 P 16 (27)**
R. Barchan **63°48'N 136°23'W**
1987, 1988

This property is located on Johnson Creek, 1 mile downstream from the junction of Sabbath Creek. Mining in 1987 and 1988 continued upstream on the right limit of Johnson Creek. One miner worked an 11 hour shift on this property.

The deposit consisted of 4 to 5 feet of pay gravel overlain by 20 feet of old tailings and black muck. The overburden to pay ratio was 2 to 1. Bedrock was decomposed schist, thinly bedded quartzite and localized conglomerate which required ripping. The pay gravel and 3 feet of bedrock were sluiced. Most of the area had been stripped and thawed previously.

A 275B loader with a 6.5 cubic yard bucket was used for feeding the wash plant and removing tailings. The overburden was pushed with a D8 Cat bulldozer. Tailings were used to fill in old cuts from previous workings.

The 1987 process plant consisted of a 16 by 9 foot dry grizzly feeding a 3 by 20 foot sluice with one 3 by 8 foot side run. In 1988 this was changed to a 10 by 17 foot Derocker which fed a single run sluice 16 feet long and 3 feet wide. The sluice was lined with 2 inch flat bar at 2 inch spacing over top of 7 layers of expanded metal and Astroturf. The grade on the box was set at 1.7 inches to the foot.

The processing rate was 70 cubic yards per hour in 1987, and 80 to 90 cubic yards per hour in 1988. Four cuts were mined in 1988; 70 000 cubic yards were stripped and 30 000 were sluiced.

Water was gravity-fed by 40 feet of 14 inch diameter pipeline from Johnson Creek to the Derocker at a rate of 700 igpm. Effluent was treated by one out-of-stream pond 150 by 200 by 6 feet.

The gold was uniformly fine-grained with an average fineness of 830.

JOHNSON CREEK **115 P 16 (28)**
C & I Construction **63°47'N 136°21'W**
1987

This property is located along Johnson Creek, approximately 1 mile downstream from the mouth of Sabbath Creek. In previous years mining was done

on the right limit of the creek which has deposits of black muck and colluvium overlying gravel. Mining moved from this location in 1987 due to problems with frozen ground. The operation was re-established 2 claims up from the bottom of the property. Deposits in this area consist of 10 feet of stream gravel overlain by 7 feet of old tailings. Bedrock is schist and broken quartzite.

C. Clippert worked an 8 hour shift with assistance by family members.

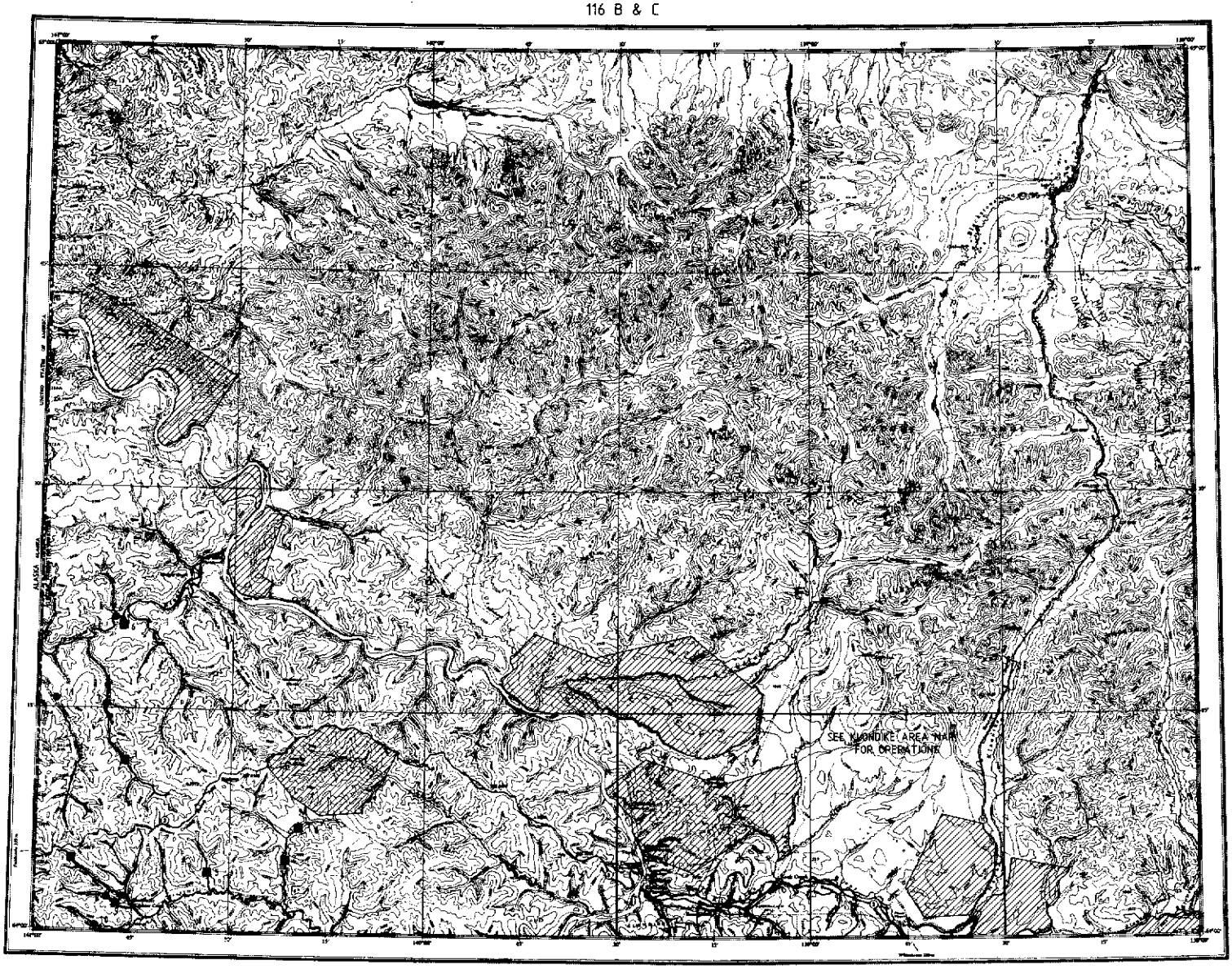
A D8H crawler Cat was used for stripping overburden and building water use structures. A Clark 175B loader equipped with a 4 cubic yard bucket was used to feed the sluice and remove tailings. Tailings were used to build the settling ponds.

The wash plant consisted of a 16 by 8 foot dump box and dry grizzly with horizontal bars, and a 24 by 3 foot single run sluice. The first 8 feet of sluice was lined with angle iron riffles on 3 inch spacing. Punch plate with 1/4 inch holes was used in the last 16 feet along with Coco matting and expanded metal. The box had a gradient of 1.25 inches per foot and processed about 72 cubic yards per hour for a total of 4500 cubic yards in 1987.

Water to the sluice box was supplied pipeline from an out-of-stream reservoir at a rate of 2800 igpm. A diversion ditch from Sabbath Creek supplied water to the reservoir. Effluent was treated in two shallow out-of-stream ponds which were cleaned out frequently.

The gold was flat, flaky and of unknown fineness.

116 B & C



Lands withdrawn from staking due to Native Land Claims (see specific claim map for accurate location and additional sites of withdrawal).

DAWSON
YUKON TERRITORY

5 0 5 10 15 20 25 30
Kilometres

Heavy lines indicate placer claims and leases in good standing as of December 31, 1989. Circles indicate placer operations active between 1985 and 1988. Squares indicate placer exploration activities between 1975 and 1988. Numbers beside the symbols relate to the text.

CALIFORNIA CREEK **116 C 1 (1)**
Wilshire Mortgage **64°07'N 140°20'W**
1985

Reference: No previous reference

Claims: PL 6853 - PL 6854, P 4677, P 4678, P 7689 - P 7782, P 9734 - P 9786.

Source: Summary by W.P. LeBarge of placer drilling report 120069 by Midnight Sun Drilling Co. Ltd

Current Work and Results:

A rotary drill program, completing 1215 feet in 61 holes, was undertaken in 1985. Frozen silt and gravel were encountered down to bedrock, which averaged 6 to 10 feet but ranged as deep as 30 feet. Samples were taken every 2 feet and nearly all intervals contained gold. The highest value assayed for gold (screened to minus 12 mesh) was 0.0229 oz/t taken in the 2 feet above bedrock at a depth of 16 feet. Six samples contained nuggets plus 2 mesh or greater in size, but these were not associated with any fine gold.

CALIFORNIA CREEK **116 C 1 (2)**
George Karens **64°05'N 140°22'W**
1985

Reference: Debicki (1983, p. 166)

Claims: P 27853 - P 27879

Source: Summary by W.P. LeBarge from personal comunication by George Karens.

Current Work and Results:

In July and August 1985, an exploration program involving bulldozer trenching and bulk sampling was completed under the supervision of Al Ollson and Steve Takacs. Thirteen trenches were excavated with a D7 Cat. Frozen coarse gravels 8 to 11 feet thick were encountered. Calculations by Al Ollson indicated grades of $7 to $47 (approximately 0.02 to 0.12 ounces) per cubic yard, with an average of $18 (approximately 0.045 ounces) per cubic yard.

BROWNS CREEK **116 C 2 (3)**
ABAC Resources Ltd **64°11'N 140°47'W**
1987

References: No previous reference

Claims: P 28562 - P 28567

Source: Summary by R.L. McIntyre from prospectus 092487 by G. Krueckl (Krueckl and Associates Mining Consultants Ltd).

History:

Browns Creek, tributary to the Fortymile River, has been intermittently prospected since the Fortymile area was discovered in 1886. The subject claims of this prospectus have not previously been mined.

Description:

The property consists of six creek claims on upper Browns Creek, approximately 7 miles upstream from its confluence with the Fortymile River. These unglaciated gravels consist of a typical section of two to eight feet of overburden (muck and colluvium); two to six feet of coarse gravels; and decomposed bedrock (quartz-mica schist) with little clay. The area is underlain by Nasina series metasediments.

Current Work and Results:

A small scale testing program by hand methods processed material from two sites approximately 1700 feet apart (Pan #1 and Pan #4). From test site #1 (Pan #4 claim) 1 1\2 cubic yards returned 0.04 troy ounces of gold per cubic yard. From test site #2 (Pan #1 claim) 2 1\2 cubic yards returned 0.024 troy ounces of gold per cubic yard.

LITTLE GOLD CREEK **116 C 2 (4)**
Kostem Resources Ltd **64°05'N 140°56'W**
1982

References: No previous reference

Claims: P 14700 - P 14707

Source: Summary by T. Bremner of assessment report 120027 by G.R. Hilchie.

History:

Gold was first discovered in this area in 1893 and considerable hand mining followed. Mining with heavy equipment began in 1948 or 1949. The lower half of Little Gold Creek has been mined with heavy equipment but there is no evidence of any old work on the Kostem Resources property. In 1981 two pits were excavated on the property with unknown results.

Description:

The property lies at the head of Little Gold Creek. The valley is about 75 feet wide, the floor and sides covered with colluvium (slide material) are overlying quartz-sericite schist bedrock. Frozen muck from 1 to 5 feet thick forms part of the valley-floor deposits.

Current Work and Results:

In 1982 a 3 day survey was made of the property. The survey consisted of short traverses off the claim lines which were used as baselines. Weak hydrothermal alteration was observed in the area of one of the 1981 bulldozer pits. Quartz float with pyrite veining was observed in several places on the property.

TWELVEMILE CREEK **116 C 2 (5)**
Englefield Resources Ltd **64°04'N 140°34'W**
1987

References: No previous reference

Claims: PL 7334

Source: Summary by R.L. McIntyre from prospectus 121007 by Gordon G. Richards.

History:

The Sixtymile River area has been placer mined intermittently since discovery on Miller Creek in 1892. The baseline was established on Twelvemile Creek in 1914, and evidence of old workings exist in the form of old cabins and abandoned equipment. In 1981, test mining with a bulldozer was performed on a right limit bench by Mr. G. Horae, reportedly recovering approximately 150 troy ounces of gold.

Description:

The Sixtymile area is underlain by Klondike schist and Nasina quartzite of Precambrian and Paleozoic age. The river is a mature, meandering stream with a wide, flat valley of shallow gradient. Twelvemile Creek is a tributary to the Sixtymile. The area escaped the three continental glacial advances and has been subjected to periods of uplift throughout geologic time; hence "black muck" frozen organics overlie the gravels, and above-creek benches persist in the valley.

Current Work and Results:

The prospectus was generated from literature search and the authors' knowledge of the general area. A three phase exploration program was recommended, consisting of stripping, test pitting by bulldozer or backhoe, and reconnaissance geological mapping.

FORTYMILE RIVER **116 C 7 (6)**
Fortymile Placers **64°21'N 140°47'W**
1987, 1988

References: Debicki and Gilbert (1986, p.107-108); Debicki (1983, p. 163)

Claims: P 11187 - P 11190, P 11205, DL 83/5

Source: Summary by W.P. LeBarge of assessment reports 120107 and 120110 by W. Claxton and L. Chapman.

History:

Gold was first discovered on the Fortymile River in 1886. In 1887 14 000 oz of gold were mined and the historic town of Fortymile was established. In the early 1900's, a dredge worked the Fortymile River eight miles upriver from its confluence with the Yukon River. In the 1930's, dredging took place 11 miles upriver, at the junction of Bruin Creek and Fortymile River. Fortymile Placers has been actively exploring the Fortymile River since 1974, and placer mining operations have taken place since 1980.

Description:

Situated in the unglaciated Yukon Plateau near the Yukon-Alaska border, the Fortymile River is a mature, meandering river with a gradient of 10 feet/mile. The main channel is approximately 200 feet wide and the valley width averages 2000 feet. Bedrock is submerged beneath the water table an average of 150 feet beyond the main channel. Submerged gravels are thawed and depth to bedrock averages 12 to 15 feet. Bench gravels lie entirely above the water table and are usually frozen with a layer of black organic muck 6 inches to 30 feet deep. Although much of the gold recovered in the past has been coarse nuggets, very fine grained gold occurs throughout the entire gravel section. Tests conducted by Energy, Mines and Resources concluded that over 90% of the gold sampled from Fortymile gravels was minus 100 mesh in size. Metallurgical tests on the gold have yielded a fineness of 845. Bedrock consists of Nasina Series micaceous quartzite, quartz-mica schist, graphitic schist and scattered occurrences of serpentinized ultramafics.

Current Work and Results:

During the 1987 season exploration consisted of 2 phases: 1) excavation and sampling with hand tools, and 2) trenching favourable ground with mechanized equipment. A total of 182 samples were gathered from bars and benches along the Fortymile River during the initial phase of the program. During the trenching phase, 116 pits and trenches were excavated in 14 separate deposits. Seven benches were trenched, six along the Fortymile River and one bench at the mouth of Marten Creek. Three of the benches were successful in reaching bedrock, at depths which varied from 5 to 17 feet. Some of the bench trenches encountered gold values in gravels several feet above bedrock. Seven bars were trenched, with depths to bedrock averaging 10 to 12 feet. All bars tested were found to contain economic grades of gold, with gold concentrations increasing downstream. Gold reserves in deposits tested were calculated to be 91,250 cubic yards grading 0.007 oz/cubic yard in bench gravels, and 1 983 750 cubic

yards grading 0.005 oz/cubic yard in bar gravels. In 1988, trenches on point bars were resampled in larger volumes, bedrock which had been previously exposed during mining operations was bulk sampled, and a bulk sample of bar and adjacent bank ground was processed. The larger samples of gravels from the bar trenches resulted in more consistent grade calculations. Decomposed graphitic schist was trenched to a depth of 20 feet and processed with a sluice and heavy mineral concentrating wheel. A total of 4011 cubic yards of bedrock was sluiced and 42.7 oz of gold were recovered. The character of the gold differed from the gold which had been mined above the bedrock, in that much of the gold (over 35%) was greater than 10 mesh in size, and several pieces were angular and attached to quartz. The fineness was reported to be 865. The bulk sample of bar and bank gravel graded 0.017 oz/cubic yard and a total of 297 975 cubic yards were delineated.

FORTY MILE RIVER **116 C 7 (6)**
Forty Mile Placers **64°21'N 140°47'W**
1988

Bill Claxton and four other miners worked two shifts on a high bench in the middle of a large loop in the Fortymile River.

A D6C bulldozer was used to mine pay gravels, a 920 rubber-tired loader with a 1 3/4 cubic yard bucket was used to feed the sluicing plant and a 213 backhoe excavator was used for mining and cleaning drainage ditches.

The unfrozen mined materials consisted of about 3 feet of "pea" gravel, overlying a layer of mixed broken rock and gravel which was up to 17 feet deep. All gravels were sluiced from the surface down, plus up to 3 feet of bedrock. One cut was completed in 1988 approximately 300 by 500 feet. This high bench cut was completed in 1988 and operations were expected to move to an instream river bar in 1989.

The wash plant consisted of a 4 by 5 foot double screen deck, which classified materials to minus 3/16 inch, followed by a single sluice run 2 by 16 feet. A 3 by 3 inch submersible electric pump was floated in the Fortymile River, and supplied approximately 90 igpm which was used to process approximately 50 cubic yards per hour.

Settling occurred in an out-of-stream slough on a low bench in the river loop and discharge was by seepage only.

Gold recovered was mostly fine-grained with only 5% larger than 10 mesh. Fineness was 845.

BROWNS CREEK **116 C 1 (7)**
J. Conklin **64°15'N 140°50'W**
1986

The property is located on Browns Creek approximately 6 miles from its' mouth. Valley width is approximately 150 feet.

The first year of operation was 1986. Two miners and one helper in camp operated the property on a single shift basis.

Heavy equipment on the property included a D8H Cat bulldozer, used to rip frozen ground and strip overburden, and a Bucyrus Erie backhoe, equipped with a 1.25 cubic yard bucket, used to mine the cut and feed the plant.

The washing plant consisted of a trommel classifier and dual sluice runs. The 4 foot diameter trommel, measuring 38 feet in length, classified material over 6 feet of its length to two different sizes. Slots, cut in the barrel over a 3 foot section, classified material to minus 3 inches. The following 3 foot section was lined with 1 1/4 inch screen. Undersize material was directed to dual sluice trays; one tray measuring 32 inches by 20 feet, the other 24 inches by 20 feet. The trays were lined with 3 inch Hungarian riffles over expanded metal and carpet.

The processing rate was approximately 20 cubic yards per hour with 1000 igpm water use. Sluice water was pumped from the creek with a 6 inch Jaeger pump, powered by a Ford 4 cylinder diesel.

Two distinctly separate deposits were worked. The first was a low level, left limit bench remnant. The deposit was very small and was mined out after the sluicing of 500 yards of material. Ground depth was 4 feet, consisting of 1 foot of overburden on 3 feet of gravels. The total gravel section was sluiced in addition to two feet of bedrock. Coarse, rough gold was recovered.

The second area worked was in the valley bottom. The deposit mined was 14 feet deep, consisting of 2 feet of overburden overlying 12 feet of gravels. The total gravel section plus 2 feet of bedrock were sluiced, representing 15 000 cubic yards over an area of 30 by 100 feet. As the cut was without a drain, a 3 inch Keene pump worked continuously to keep the cut dry.

The creek gravels were completely thawed, while the bench material was frozen. The bench materials were ripped in places although most were allowed to thaw prior to removal.

GLACIER CREEK **116 C 2 (8)**
E. Rauguth **64°02'N 140°47'W**
1985

This property is located along the left limit of Glacier Creek, approximately 2 miles upstream from its confluence with the Sixtymile River.

Mr. Rauguth worked the property with two others on a single shift basis.

A Terex 8240 bulldozer was used to strip off the top 3 feet of overburden. The upper gravels were monitored through the box until the material became too heavy to move efficiently. Production monitoring was estimated to be 40 cubic yards per hour. The remaining material was fed to the box with the Cat 977 Traxcavator at a rate of 80 cubic yards per hour. A Cat 988 loader was used to stack the tailings.

The gravels were described as well washed with well rounded small boulders and no sliderock. The total gravel section plus bedrock was sluiced. Deposits were frozen.

Bill Claxton and Leslie Chapman (Fortymile Placers) have been mining in the Fortymile area since 1974. The above photo shows Pleistocene nonglacial terrace gravels which were mined by Fortymile Placers in 1986.

Prior to mining the cut, a monitor equipped with a 3 inch tip was used to cut trenches into the deposit to outline the pay limits. The monitor was supplied by Glacier Creek water with an 8 by 10 inch Worthington pump, powered by a 6 cylinder 190 Cummings diesel. The same pumping arrangement was used while sluicing.

Water consumption was rated at 2000 to 2500 igpm. The sluice plant consisted of a dump and single run box. The dump, measuring 10 feet wide by 22 feet long, was lined with slick plate only. The sluice run, 36 inches by 20 feet, was lined with 2 inch Hungarian riffles over expanded metal and Coco matting, and had a slope of 2 inches to the foot.

A terrace cut, under the old left limit Glacier Creek ditch and between the upper end of the airstrip and the Glacier ditch, was mined. The cut was 120 feet long in the direction of the valley by 45 feet wide, 20 feet deep along the creek side and 35 feet deep along the hillside. Bedrock level on this bench was estimated to be 40 feet above the valley height and rose only slightly into the hillside.

The gold was described as smooth with approximately 70% of the fraction being larger than 16 mesh in size. The fineness was 810.

Mining of the property was discontinued in August rather than proceed further into the hillside where the gravel section thickened. The operation was moved to the mouth of the 49 Pup on Bonanza Creek.

GLACIER AND LITTLE GOLD CREEK — **116 C 2 (9)**
D. & P. Cuevos — **64°02'N 140°49'W**
1988

Daniel and Peggy Cuevos and two other miners operated on Glacier Creek and on Little Gold Creek during the 1988 season.

Equipment on the property included three D8 Cat bulldozers to dig and push pay gravels and tailings, and a 966 front-end loader to feed the wash plant. The crew sluiced on Little Gold Creek in June, July and August and on Glacier Creek in September.

The stratigraphic section on Glacier Creek was 30 to 40 feet deep, with 25 to 30 feet of frozen muck, rock and gravel mixed over a layer of clay and gravel from 5 to 10 feet thick. This bottom layer plus about 1 foot of bedrock were sluiced from one cut approximately 90 by 300 feet. The overburden layer was stripped and stockpiled by bulldozers.

The stratigraphic section on Little Gold Creek was 12 to 15 feet deep, with 4 to 6 feet of frozen black muck on top of 8 to 10 feet of gravel. The bottom 5 feet of gravel plus 1 foot of bedrock were sluiced. Gold recovered was a mix of both fine-grained and coarse gold, fineness was 860. Three mining cuts were completed each approximately 120 feet wide for a total length of 1380 feet.

The wash plant consisted of an 8 by 24 foot dump box, lined with 1/2 inch punch plate, with triple sluice runs of 2 by 18 feet each. By pumping approximately 3000 igpm per minute, with a 12 inch pump powered by a 4 cylinder Deutz diesel, they processed 100 to 120 cubic yards per hour.

Water was recycled from a pump gate valve in a creek bypass channel and settling occurred in out-of-stream ponds.

Gold was mostly flattened and fine-grained. A few small nuggets with quartz attached were also recovered.

MILLER CREEK — **116 C 2 (10)**
Sixty Mile Enterprises — **64°00'N 140°51'W**
1988

W. Yaremco and five other miners worked a 12 hour shift mining from a low bench deposit on the left limit of Miller Creek. The property was approximately two miles upstream from the confluence of Miller Creek with the Sixty Mile River. These deposits were previously worked by old-time, hand miners and the ground had many old shafts still frozen in place.

One D9L Cat bulldozer was used to dig pay gravels and one D8L Cat bulldozer was used to remove and stock tailings gravel. A 980 C front-end loader was used to feed the wash plant and one 966 C front-end loader was used as a spare.

The sluicing plant had a grizzly and dump hopper, leading to a 48 inch diameter trommel with three 6 foot wide sluice runs. This lead to a single sluice 24 inches wide by 40 feet long. Two 8 by 10 inch pumps, powered by 3304 and 3306 Cat diesel engines, were used to deliver approximately 2000 igpm. The processing rate was about 65 cubic yards per hour.

The mining cut was located on the left limit bench with 10 to 15 feet of frozen black muck overlying a gravel layer up to 40 feet deep. The bottom 4 feet of gravel plus 2 feet of bedrock were sluiced. Overburden and waste gravel were stripped mechanically and stockpiled. One cut was mined in 1988, approximately 300 feet long by 100 feet wide. A total of approximately 24 000 cubic yards were sluiced in 1988.

Water was pumped from an instream reservoir at the upstream end of the workings, and effluent was settled in a large out-of-stream settling pond approximately 600 feet long by 100 feet wide. Discharge from the settling pond was by seepage only.

Gold recovered had a fineness of 835 to 855 and was mostly coarse gold with nuggets and quartz, with only 10% fine flour gold.

MOOSE CREEK **116 C 2 (11)**
R. Mallone **64°16'N 140°58'W**
1988

A two man, small scale placer testing program was carried out for about ten days in July, 1988 on this tributary of the Fortymile River, about halfway up the creek on previously mined ground.

One D9 Cat bulldozer was used to dig and push pay gravel and tailings, and a 988 front-end loader was used to feed the sluice and stack tailings. A 34 foot long sluice, with a 24 inch wide center run and two 12 inch side runs, used about 2000 igpm to process approximately 100 loose cubic yards per hour.

Two pumps were used: an 8 inch pump powered by a Cat diesel was used for recycling water and a 6 inch pump, powered by a Deutz diesel, was used to pump creek water. Settling occurred in a large, out-of-stream recycling pond and two smaller, downstream settling ponds, with a creek bypass channel maintained around the entire operation.

The mining cut was only 2 to 3 feet deep, prepared by previous Cat mining operations, and approximately 150 feet long by 75 feet wide.

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