TECHNICAL REPORT

Yukon Mining Incentives Program

Presented by: Brian Lueck
1992

YMIP 92-052

INDEX

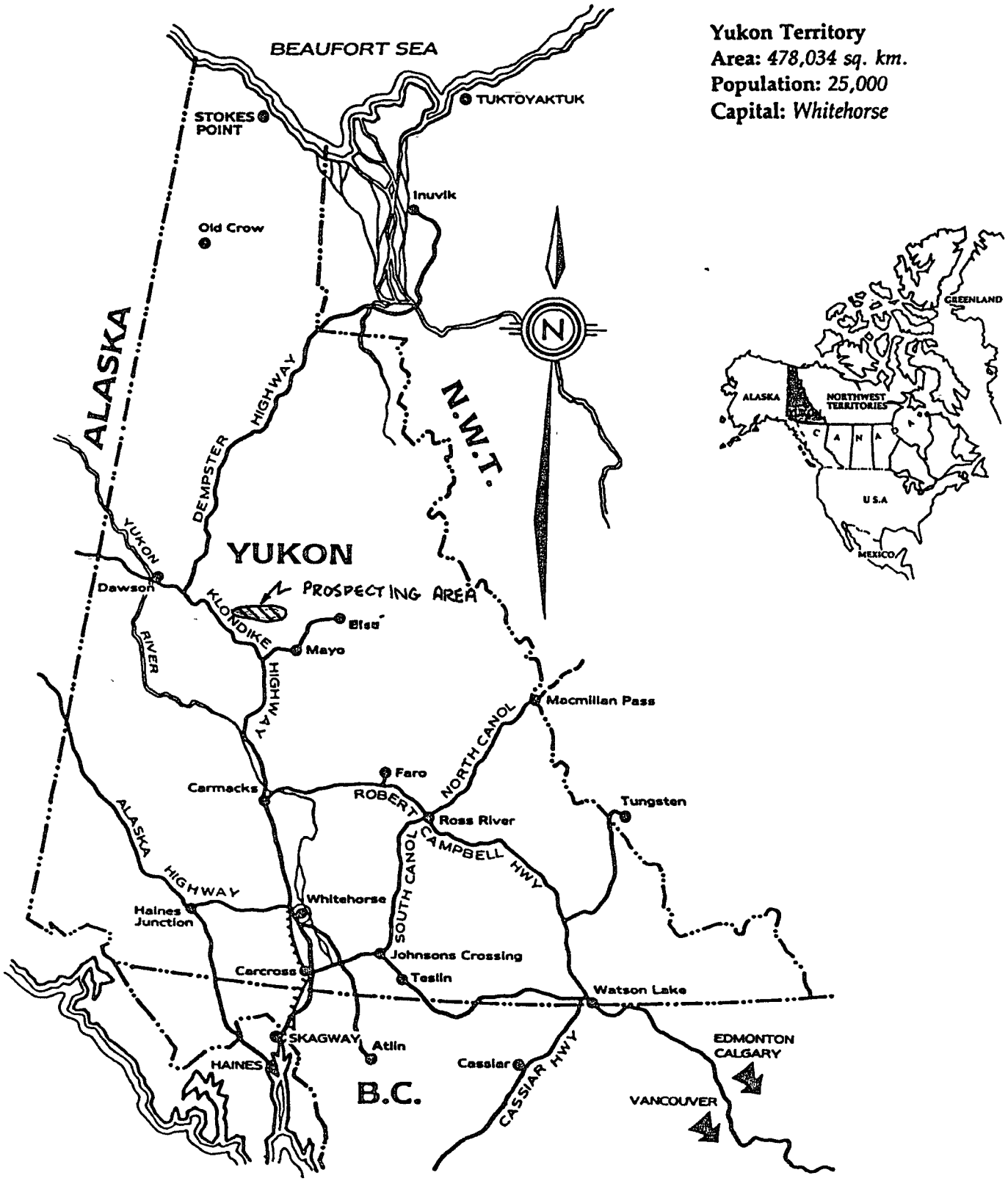

BEAUFORT SEA
TUKTOYAKTUK
STOKES POINT
Inuvik
Old Crow
ALASKA
DEMPSTER HIGHWAY
N.W.T.
YUKON
YUKON
Dawson
PROSPECTING AREA
KLONDIKE
Elsa
Mayo
RIVER
HIGHWAY
Macmillan Pass
NORTH CANOL
Faro
Carmacks
ROBERT
Ross River
Tungsten
ALASKA HIGHWAY
SOUTH CANOL
CAMPBELL HWY
Whitehorse
Haines Junction
Johnsons Crossing
Carcross
Teslin
Watson Lake
SKAGWAY
Atlin
HAINES
B.C.
Cassiar
CASSIAR HWY
EDMONTON
CALGARY
VANCOUVER
N
Yukon Territory
Area: 478,034 sq. km.
Population: 25,000
Capital: Whitehorse
GREENLAND
ALASKA
NORTHWEST TERRITORIES
YUKON
CANADA
U.S.A
MEXICO

FIGURE 1

INTRODUCTION

The hardrock prospecting target for this area is a large, low grade disseminated gold deposit. the model is along the style of mineralization found at the Fort Knox deposit in Alaska, the Brewery Creek deposit in Yukon and the Dublin Gulch deposit also in Yukon.

These types of deposits occur within intrinsic rocks. These rocks generally occur as stocks and dykes which intrude various schist and/or sedimentary rock units.

These deposits are associated in particular with the tri-tungsten granites and their associated suite of elements (Sn-W-Mo-As-An-Bi).

The search for mineralization relied on geochemistry, geology and known placer gold occurrences to help target certain areas for prospecting. Open ground was also a large consideration and prospecting was limited to unstaked areas.

SUMMARY

The search for mineralization on the 115 P map sheet was localized to an area north of the McQueston River where a group of previously unstaked igneous rocks intrude the Selwyn Basin stratigraphy. There is a regional Au, As, Cu anomaly, as well as magnetic high anomalies, associated with these intrusives.

The first area visited was on the lower end of Hobo Creek, where a number of granodiorite stocks intrude slates and gritty quartzites of Palaeozoic age. There is a regional magnetic "bump" associated with these plugs. Upon examination, these plugs were staked as a viable target.

Much evidence of placer gold mining was seen and it was decided to return later to the upper end of Hobo Creek where an abandoned placer camp furnished excellent accommodations. During this visit, all the creek valleys and southern slopes, as well as some higher bare areas, were traversed. A great deal of placer gold could be found shovel testing in this area, so the creek valleys were staked for placer gold. An altered intrusive plug at the headwaters of Arizona Creek was also staked. Silt sampling on this trip pinpointed an area of high geochemical Au, As response. It was decided that a further visit was necessary to this area to evaluate the significance of the anomaly.

Upon revisiting the area, a group of claims were staked to cover a granodiorite stock which is intruded by a volcanic breccia, just north of Kid Mountain. It was decided to prospect the area South of Red Mountain, nearer to the headwaters of Clear Creek as a number of other intrusive plugs were open there.

This area was accessed by 4x4 via the road up to Clear Creek. Although much hiking was done in this area, very little was seen to warrant any type of staking or sampling program.

LOCATION And ACCESS

The prospecting area is located North of the McQueston River and north-east of the Tintina Trench. The area is criss-crossed by a network of old trails and gravel roads. Most trails are rough, even by 4x4 standards, with the exception of the Clear Creek road over Barlow Dome. There is an access 4x4 road which climbs up the left fork of Clear Creek, over the West Ridge and down Josephine Creek. This trail is washed out at the headwaters of Josephine Creek. This trail could be improved to a 4x4 road into Hobo Creek with a minimum of cat work.

Access into Red Mountain and Hobo Creek is currently by helicopter. A one thousand (1,000 M.) metre airstrip is built on the bench between Arizona and Hobo Creeks; although it could use some work, it looks like a safe strip on which to land a small plane.

PHYSIOGRAPHY And VEGETATION

The prospecting area is situated at the margin of unglaciated terrain. Much of this area experienced no glaciation or only pre-reid glaciation, except where alpine glaciers of the McConnell time period capped the Syenite Range and the West Ridge.

The area can be described generally as the core of an elevated plateau. Ridge and highland areas are often cored by intrusive rock. Creek valleys are generally wide and flat bottomed, except near headland regions. The area has been uplifted periodically and bench gravel deposits are found everywhere.

Extensive old bench gravels are found near the headwaters of Arizona and Drapeau Creeks. These "old gravels" are thought by Bostosky to correlate with the time period of the White Channel gravels, or even earlier.

Vegetation in the prospecting area is generally sparse, due to its alpine nature, recent burns and permafrost. Burned areas are very thick and full of deadfall. These areas are best avoided if possible.

REGIONAL GEOLOGY:

The prospecting area is underlain by Ordovician slates, ~~cherts and~~ quartzites, and Proterozoic schists and gneiss of the Yukon Group. Both of these formations are intruded by numerous small stocks and dykes of various composition. The most common stocks are granodiorite in composition.

LOCAL GEOLOGY, MINERALIZATION AND SAMPLING:

The prospecting area can be conveniently broken up into three areas for the sake of discussion. One area is to the south, around Clear Creek and within the schists of the Yukon Group. This area will be referred to as the *Clear Creek Area.* The second area lies within the drainage basin of Hobo Creek, up to the area just above the confluence with Arizona Creek. This will be referred to as the *Hobo Creek Area.* The third area lies near the headwaters of Hobo Creek, north of Red Mountain. This area will be referred to as the *Red Mountain Area.*

CLEAR CREEK AREA:

This area was accessed by road and then by foot. A number of small unmapped intrusives were pinpointed by outcrop was very limited and little or no mineralization of interest was discovered outside of areas which were not previously staked.

Pan sampling of tributaries was done to test for placer gold occurrences. The headwaters of Sixty-Five Pup show good colour, yet not intrusives are seen anywhere in the drainage highland. Regular colour was also found at the headwaters of Josephine Creek. This can be attributed to the mineralized stocks at the pass.

Soil and pan sampling of this area was generally disappointing, in terms of results. Although intrusive rocks are present, the area which was prospected does not appear to be significantly mineralized.

HOBO CREEK AREA:

This area is underlain by Palaeozoic (Ordovician) sediments of the Road River Formation *(Gabriels et all, 1980).* Interbedded slate and quartzite, including re-crystallized chert are the only types of sedimentary rock which were observed.

The slate is well fractured with a closely spaced cleavage. It is predominantly black in colour, except where fracturing and alteration have bleached it to a tan colour and a phyllitic texture.

Quartzite and chert are tan in colour and have a blocky fracture. Stockwork quartz veins are found everywhere within the quartzite and chert. There are no sulphides or alteration associated with these veinlets and their textures indicate that they are syn-deformational joint fittings of locally derived silica.

There are seven separate mappable plugs of intrusive rock in this area. Outcrop, however, is poor and the exact mappable boundaries of the intrusives are not always clearly defined.

The plugs are predominantly biotite granodiorite in composition and range in texture from fine grained equigranular to large phenocrysts of feldspar in a subhedral matrix.

The results of sampling in this area are tabled in Table 1. Overall, they were disappointing in that no sampling identified any significant gold mineralization either in rock or soil.

PLACER PROSPECTING IN THE HOBO CREEK AREA:

Hobo Creek and its tributaries have a long history of placer testing with some productive mining. The earliest work in the area was done by a hand miner on lower Arizona Creek. A few remnant logs are all that is left of the old cabin, but evidence of a small open cut, by hand, was seen (piled rocks, remnant dams, caved drifts and shafts).

The ground was then tested by Al Genier and Ray Lizotte. A number of pits were taken on lower Hobo Creek and its northern tributary (see Fig. 3)

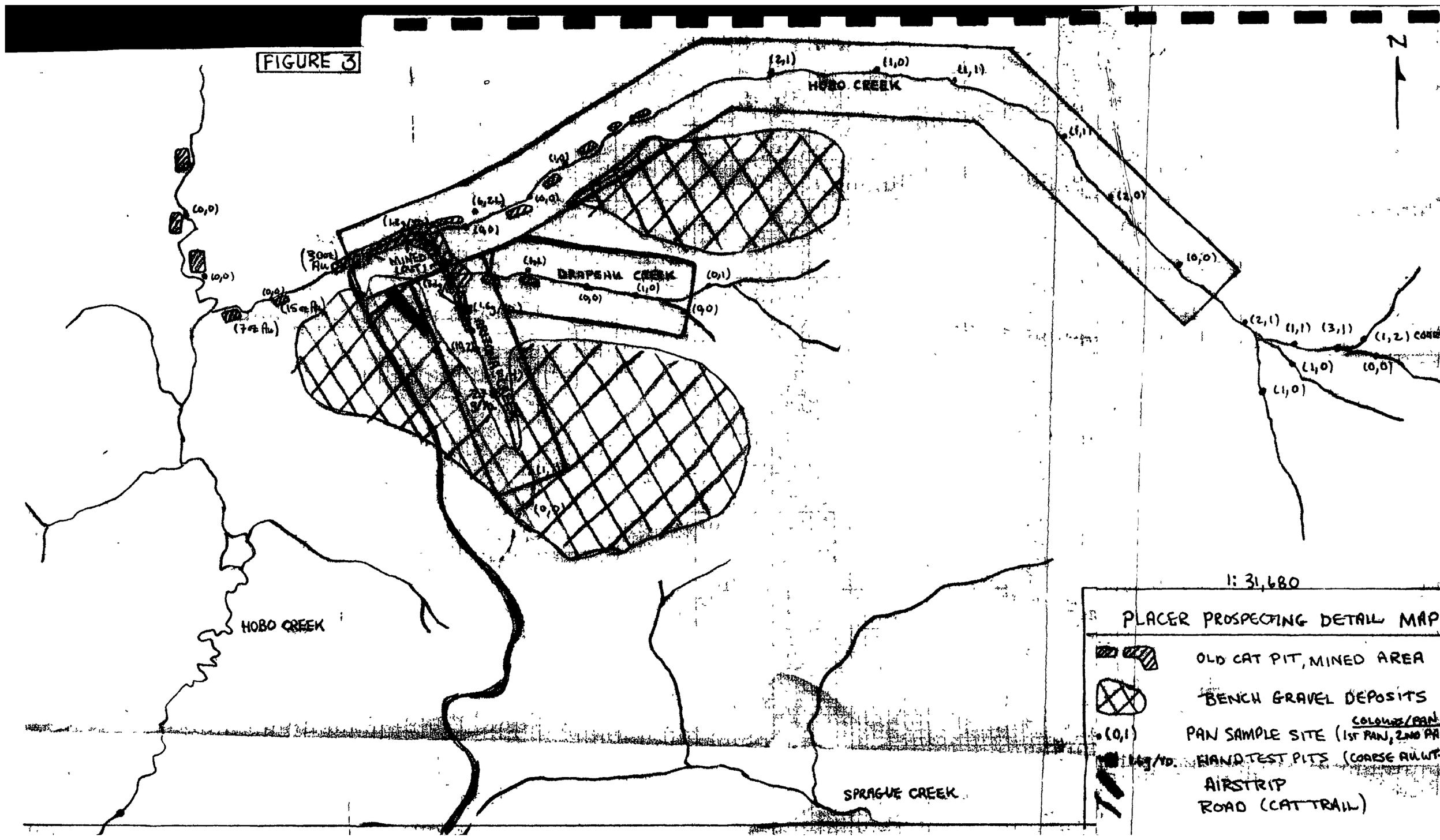
The main west tributary of Hobo Creek showed promise. It was eight to twelve feet to bedrock and Ray Lizotte's first pit showed seven (7) ounces of gold. The next pit, approximately one thousand feet upstream, showed fifteen (15) ounces of gold out of the same size pit, to bedrock. The next pit, another one thousand feet upstream, held thirty (30) ounces of gold. In the mid 1970's, Al Genier and his brothers mined out the section of Hobo Creek immediately upstream from Ray Lizotte's last pit and then turned upstream on Arizona Creek and mined out a total of approximately three thousand feet of creek channel. The ground was reported to have averaged approximately one ounce of gold per foot of creek channel mined. This is uncertain, however, as the cleanup was stolen.

Further testing above the forks on Hobo Creek was done by Ray Lizotte, followed by Earl Chestney. Very little gold was found in these pits. However, none of the pits reached bedrock. The deepest pit dug was eleven feet. This was Earl Chestney's last pit upstream on Hobo Creek and it contained sub-economic quantities of gold above bedrock. This occurrence is significant in that the creek gravels are shown to be gold bearing above Arizona Creek.

Current Prospecting:

Approximately sixty samples were taken throughout this area. As well, several hand pits were dug with the excavated gravel being run through a cleanup box and the recovered gold being weighed. Pits were dug on Arizona , Drapeau and Hobo Creeks.

FIGURE 3


N
HOBO CREEK
DRAPEAU CREEK
MINED AREA
HOBO CREEK
SPRAGUE CREEK
COARSE
1: 31,680
PLACER PROSPECTING DETAIL MAP
OLD CAT PIT, MINED AREA
BENCH GRAVEL DEPOSITS
PAN SAMPLE SITE (COLOUR/PAN 1ST PAN, 2ND PAN)
HAND TEST PITS (COARSE AU WT./YD.
AIRSTRIP
ROAD (CAT TRAIL)

Results:

Pan sampling was undertaken initially to evaluate the potential of the gravel for placer gold deposits, and as an indicator of source areas for hardrock gold mineralization.

Panning showed two distinct areas which fed gold into the Hobo Creek Valley. These two areas are the upper end of Arizona Creek and the most northerly pup at the headwaters of Hobo Creek.

Both of these areas contain source rocks of igneous origin, intruded into the sedimentary rocks. Sampling of the small plug at the headwaters of Arizona Creek did not indicate significant gold mineralization. Although the creek is a proven placer gold producer, silt samples on Arizona showed less than 2 ppb Au. This would indicate that the high level Pleistocene Gravels which Arizona Creek has downcut into are the source of the gold on Arizona Creek. These gravels are thought to be the oldest gravels in the Yukon (Bostock, 1948) Topography suggests that they were derived from the area around Red Mountain.

The second pan sampling anomaly occurs to the north of Red Mountain, on the northern tributary at the headwaters of Hobo Creek. The headwaters and drainage basin of this pup are underlain by both intrusive and volcanic rock, which intrude or erupt through the enclosing sedimentary rocks.

This area differs greatly from the headwaters of Arizona Creek. The stock here is well mineralized and shows extensive brecciation. Quartz, tourmaline, pyrite, arsenopyrite and minor molybdenite are seen as space fittings within the breccia zone. Malachite staining was also visible, but no primary copper mineralization was seen.

Aside from the apparent hydrothermal alteration, a large gold silt anomaly occurs on this pup of 1,230 ppb, the largest on the McQuesten mapsheet. As well, a coincident Gold, Silver, Lead, Copper and Zinc anomaly occurs with this sample.

The above data suggests that the granodiorite stock and volcanic rocks in this area are a primary target for stockwork gold, plus/minus base metal deposits. The gravels draining this deposit also make an excellent placer gold prospect.

Placer testing on Arizona Creek consisted of digging pits to bedrock in thawed areas (old cat disturbances) near the creek. Creek gravels were very shallow (two to four feet deep) and excavation to bedrock was relatively simple.

Pits, with test results, are plotted on Figure 3. Results of yardage tests on Arizona Creek averaged 2.5 g or unrefined recoverable gold per yard of excavated gravel (including bedrock section). This indicates that the creek gravels, as a whole, represent an economical, viable placer deposit.

Pitting on Drapeau Creek was inconclusive. Several pits were dug near the creek on previously disturbed ground. All pits flooded about three to four feet down. Excavated gravels were panned or sluiced. The tests showed negligible gold in the upper gravels of Drapeau Creek. Pitting to bedrock is necessary to properly evaluate this placer prospect.

Pitting and shovel testing on Hobo Creek was limited to the area around the old Cat workings. A pit was dug and shovelled into a sluice box on the bench of Hobo Creek, about eight feet above the stream surface. One point two (1.2 g) grams of gold were recovered from approximately one yard of bedrock material. Overall, this bench would average less than this grade. About one thousand feet upstream from this pit, good colour (although very fine) was seen from a small bench on Hobo Creek. A Cat trail exposed heavily oxidized and cemented rusty-black gravels. It was almost like concrete on the oxidized surface. The test was abandoned after it was apparent that our pick was of no use. This area warrants equipment testing.

Several other shovel tests were done on tailings and previously excavated gravels that were piled at the edges of the Cat pits. All tests showed negligible quantities of gold, except a shovel test of tailings from the last pit upstream which held .14 g/yd of gold.

RED MOUNTAIN AREA:

Pan sampling of Upper Hobo Creek indicated that gold was being derived from the headwaters of the most northerly pup of Hobo Creek at Red Mountain.

Prospecting and Mapping of the headwater region was undertaken as a follow-up program. The results of mapping with sample locations are shown on Figure 4.

The geology can be described briefly as an area where a small stock and several dykes and smaller plugs of biotite granodiorite intrude predominantly slates. A circular body of brecciated tuffaceous volcanic rock is in contact on one side with the intrusive. The contact is extensively brecciated for several hundred feet. Silicification, tourmalinization, pyritization, pervasive bleaching and other styles of alteration are seen throughout this zone. Arsenopyrite is common.

The intrusive shows sheeted and/or stockwork mineralization in the blocky, fresh looking granite. This zone has not been sampled, as no sulphides were immediately visible. Extensive sampling was done on breccia zones or where arsenopyrite was visible. Heavy sulphide zones were also sampled.

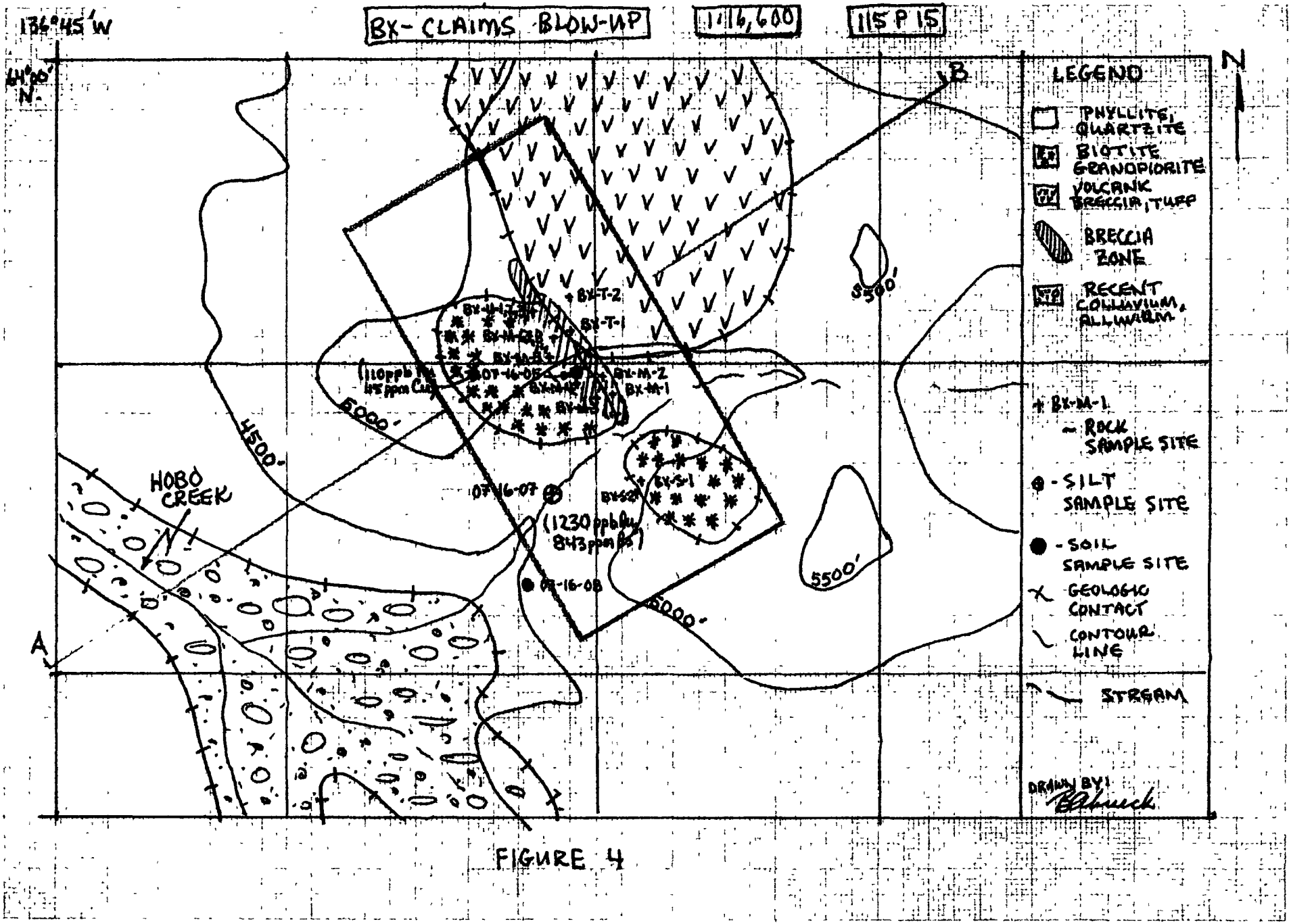
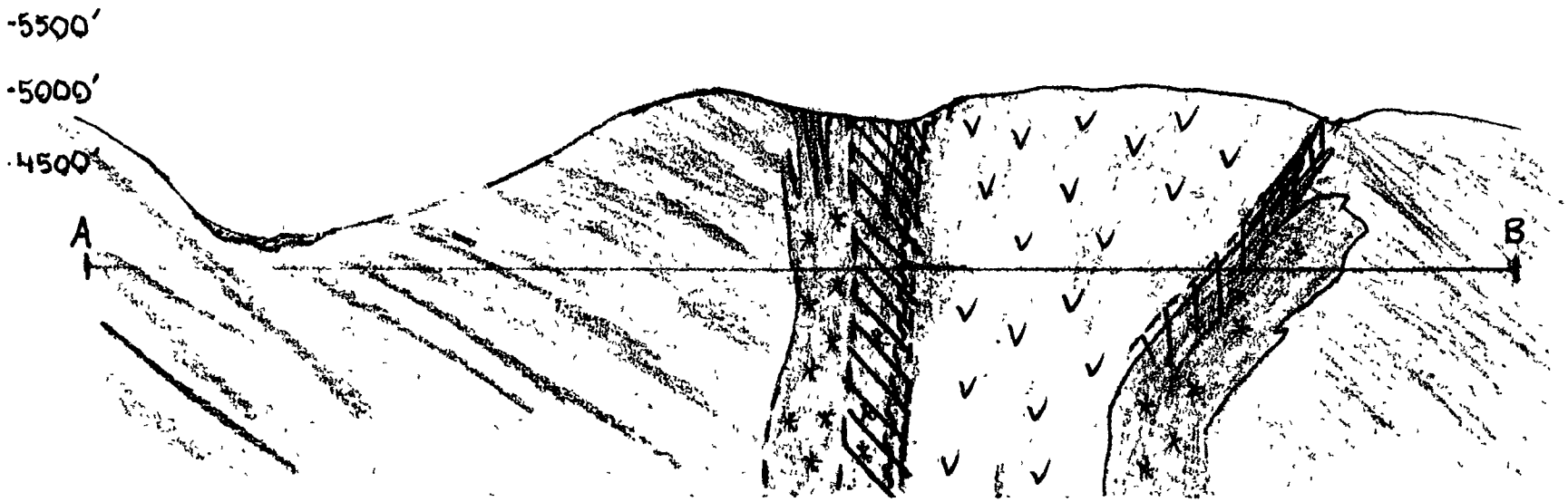

136°45' W
BX-CLAIMS BLOW-UP
1:16,600
115 P 15
64°00' N.
A
B
N
LEGEND
PHYLLITE, QUARTZITE
BIOTITE GRANODIORITE
VOLCANIC BRECCIA, TUFF
BRECCIA ZONE
RECENT COLLUVIUM, ALLUVIUM
+ BX-M-1 - ROCK SAMPLE SITE
- SILT SAMPLE SITE
- SOIL SAMPLE SITE
GEOLOGIC CONTACT
CONTOUR LINE
STREAM
DRAWN BY:
HOBO CREEK
4500'
5000'
5500'
BX-T-2
BX-T-1
BX-M-2
BX-M-1
BX-S-1
(1230 ppb Au, 843 ppm Ba)

FIGURE 4

BX CLAIMS - BRECCIA PIPE CROSS SECTION (FIG.5)

LEGEND



Results and Discussions:

The results of sampling are appended in this report.

Sample descriptions are seen in **Table 2.**

Low grade gold mineralization is widespread in common altered rock from this area. Most of the altered rock sampled was intrusive rock, but altered, arsenopyrite bearing quartzite also showed .021 oz/ton Au and 25 g/T Ag. This is significant in that the sampled material is common and widespread. It would appear that the best material to sample is the fresh looking intrusive with minor alteration and veining. This is most likely to produce large tonnage deposits of gold. Disseminated molybdenite was seen in the intrusive adjacent to narrow sheeted quartz veins.

The area of the BX claims is interpreted to be an epizonal stock of 2-mica granodiorite which intruded sedimentary rocks of the Devonian Period, sometimes in the Mesozoic. The volcanic rocks are proximal, vent facies, vesicular tuffs and breccia. The circular expression of this outcrop, which transects topographic relief, suggests breccia pipe, with steep contacts.

Mineralization appears to be relate to a classic "Porphyry" system, with stock-associated brecciation and stockwork mineralization. Future work requires further prospecting in order to locate material which averages over 1 g/T of gold. The large gold content of the silt (1.2g/T) suggests that this mineralization exists. The target hosts good potential for Fort Knox or Dublin Gulch style mineralization.

Soil sampling and magnetometer surveys would be helpful in pinpointing mineralized areas at depth, or covered by soil, talus and vegetation.

Structure:

Within the Devonian rocks, there is a slaty cleavage which strikes between 280° and 340° and dips 30° to 45° to the northeast. Bedding could be observed in several creek cuts and strikes 290° on average with a near vertical dip to the northeast.

A prominent, vertical east-west striking fracture is pervasive. Shear zones could also be seen in outcrop. Small offsets of beds could be seen also. This shear orients at 75° and dips to 70° to the northwest. The sense of offset is down-dip or down to the northwest (normal fault).

Conclusions:

Prospecting in the Hobo Creek, Red Mountain area has been fruitful, both in pinning down source hardrock gold mineralization as well as potentially economic placer gold mineralization.

Recommended follow-up prospecting includes both placer evaluation and hardrock prospecting. Placer deposits need to be bulk tested with a backhoe and small sluice box to determine feasibility.

Hardrock following on the BX Claim block area would focus on evaluating the gold mineralization for drill targets. This would include extensive rock sampling, soil sampling and geophysical surveys.

LEGEND (FIG. 2)

RECENT ALLUVIAL DEPOSITS

BENCH GRAVELS (PLIESTOCENE?)

VOLCANIC BRECCIA (TUFF)

GRANODIORITE, DIORITE, SYENITE, QUARTZ MONZONITE, GRANITE

DEVONIAN - INTERBEDDED QUARTZITE, BLACK SLATE, QUARTZ SANDSTONE

YUKON GROUP - QUARTZ-MUSCOVITE SCHIST, QUARTZITE

TRAVERSE LINE

GEOLOGIC CONTACT

(0,1) • PAN SAMPLE SITE (COLOURS/PAN) (1ST PAN, 2ND PAN, ...)

(54) * ROCK SAMPLE SITE (PPB AU)

(15) O SOIL SAMPLE SITE (PPB AU)

(150) ⊕ SILT SAMPLE SITE (PPB AU)

TABLE 1 - SAMPLE TABLE FOR FIGURE 2

HBR1	Muscovite - Calcite Altered Granodiorite
HBR2	Calcite Veined, Rusty Altered Granodiorite
BHR3	Fresh Granodiorite - Porphyritic Feldspars
06-02-01	Chlorite Altered Granodiorite
05-31-06	Calcite-Muscovite Altered Granodiorite
06-01-01	Pyritic Biotite Granodiorite
06-02-23	Rusty, Fractured Biotite Granodiorite
05-29-03	Blocky, Calcite Veined Granodiorite
05-31-01	
05-31-02	
05-31-03	
06-01-02	-------- Soil Samples ("B" Horizon)
06-02-01	
06-02-02	
06-02-03	
06-02-05	
R06-02-05	Fresh Biotite - Hornblende Granodiorite

TABLE 2 - BX CLAIMS SAMPLE DATA

Sample #	Description
BX-M-1	Quartz, tourmaline, arsenopyrite and pyrite in silicified intrusive
BX-M-2	Moderately bleached intrusive with minor malachite stain
BX-M-3	Rusty, chloritic altered granodiorite - pyrite, arsenopyrite, quartz, tourmaline are present
BX-M-4	Common, moderately altered granodiorite - minor tourmaline, arsenopyrite
BX-M-5	
BX-M-6	Bleached white, altered intrusive with stockwork silica veinlets
BX-M-7	Rusty, bleached intrusive rock with stockwork quartz veinlets
BX-M-8	Totally weathered stockwork quartz-silica veining: Goethite matrix
BX-S-1	Rusty, arsenopyrite stained, bleached intrusive rock
BX-S-2	Rusty, fractured quartzite-quartz, arsenopyrite in veinlets
BX-T-1	Common, volcanic breccia - random, average sample of plug
BX-T-2	Sulphide bearing volcanic breccia
BX-U-1	Bleached, silicified, breccia with quartz-tourmaline matrix
BX-U-2	Bleached, silicified, intrusive breccia, with quartz-tourmaline and arsenopyrite matrix
BX-U-3	Same as BX-U-1 : 100 metres due north
07-16-07	Silt sample of pup draining breccia area
07-16-08	Soil sample of gossan near creek
07-16-05	Soil sample of rusty soil above BX-M-4

Northern Analytical Laboratories ltd.

23-Jul-02 e | Assay Certificate | Page1

Brian Lauck | WO #13681

Sample #	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
HB-R1 (GREYCARB IN SHALE)	21					
HB-R2 PYRITIC MONZONITE LS	19	0.6	50	29	29	301
HB-R3 IRON INT	16					
06-02-01 - ROCK	13					
05-31-05	19					
06-01-01	13					
06-02-[illegible]23	19					
06-29-03	16					
06-31-01 T	29	0.4	22	15	46	32
05-31-02 SOILS	32	<0.1	60	14	50	66
05-31-03	18	0.2	105	5	114	105
06-01-02	12	0.3	34	9	97	56
06-02-01	15	0.4	31	6	41	79
06-02-02	14	0.4	20	10	31	42
06-02-03	14	0.5	19	6	28	24
06-02-05	15	0.5	14	12	41	41
RDC-02-05	<5					

Certified by CWojcicki

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

22-Jul-92date | Assay Certificate | Page1

Brian Lauck | WO #13643

Sample #	Au oz/ton	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
Bx-M-1	<0.002	0.3	87	46	11	>2000
Bx-M-2	<0.002	1.0	260	17	107	>2000
Bx-M-3	0.005	0.3	76	582	174	1386
Bx-M-4	0.020	6.3	38	154	29	>2000
Bx-M-5	0.009	1.0	105	964	281	701
Bx-M-6	<0.002	2.4	9	358	9	217
Bx-M-7	0.003	0.6	67	2840	23	>2000
Bx-M-8	0.006	1.2	182	773	27	>2000
Bx-S-1	0.021	25.0	60	3010	21	>2000
Bx-S-2	0.024	0.8	22	1969	4	>2000
Bx-T-1	0.003	4.7	186	971	45	277
Bx-T-2	0.005	0.9	64	56	722	602
Bx-U-1	<0.002	4.4	103	1386	14	>2000
Bx-U-2	<0.002	4.8	102	5650	13	>2000
Bx-U-3	0.002	2.9	712	1420	11	628
07-16-07 UPPER SILT	0.036	1.1	65	121	89	643
07-16-08 LOWER GOSSAN	<0.002	3.2	27	77	43	1127
07-16-05 SOIL	0.005	0.8	115	101	324	673

= 1.12 g/ton = 1.23 ppm

Certified by: [signature]

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: [403] 668-4968 Fax: [403] 668-4890


FIGURE 2
PROVISIONAL MAP
CANADA
CARTE PROVISOIRE
115 P/14
1:50,000
EDITION 1
SYENITE
RANGE
WEST
RIDGE
EAST
MF
MF
CLEAR CREEK
YUKON TERRITORY
SPRAGUE CREEK
YUKON TERRITORY
Figure #2
115 P/15
ONE THOUSAND METRE
UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 8
CONTOUR INTERVAL 100 FEET
MAGNETIC DECLINATION
CONVERSION SCALE FOR ELEVATIONS