YUKON MINING INCENTIVES PROGRAM
Ref: YMIP 92101

Report on Activities
1992 Program

"Grassroots Prospecting"

105B/09,10

July-August 1992

submitted by:

J.David Williams
VANCOUVER, B.C.
tel/fax (604) 684-2854

06 October, 1992

Table of Contents

Figures

Plates

Preface

A "grassroots" prospecting Program in an area northwest of Watson Lake, Y T. was conducted by J.David Williams from 22 July to 22 August 1992 with expected financial assistance from the Yukon Mining Incentives Program sponsored by the Department of Economic Development of the Government of Yukon Territory. An application for financial assistance under the YMIP submitted by J.David Williams was approved on 01 April 1992. This Report on Activities is submitted to the Energy and Mines Branch of The Department of Economic Development to comply with the obligations of the YMIP Agreement. The opportunity to participate in the Mining Incentives Program is gratefully acknowledged.

This report is in two parts: Part A summarizes the results of the Program. It includes a chronology of activity in the field and a list of field expenses. Part B is a technical report which discusses details of the sampling, geology and recommendations for further work.

The area of activity covered in the 1992 Program was substantially smaller than that proposed in the original application for financial assistance due to circumstances beyond the control of the applicant. A reduced Program was conducted over the portion of the proposed target area that was considered to hold the best potential for economic mineralization.

PART A

Prospecting Activity

PART A — Prospecting Activity

Introduction

The 1992 prospecting Program was conducted north of Cabin Creek about 115 kilometers northwest of Watson Lake (see figure 2). About 84 square kilometers were explored in an area that was of interest for several reasons:

- stream sediment surveys indicated anomalous gold, silver, tungsten, lead and zinc values in creeks draining into Cabin creek from the north [GSC OF 563 & 1289]
- placer gold had been discovered in Cabin Creek and Sayyea Creek immediately north of Cabin Creek [Poole, et al]
- bedrock geology as mapped by the GSC [ibid] consists of clastic sediments and limestone with a large quartz monzonite intrusive on the south bank of Cabin Creek providing an environment for contact related deposits
- aeromagnetic data showed the intrusive/sediment contact has a remarkably high expression [GSC Pap 7001G]
- the were no claims in the area and little previous exploration activity was recorded [Yukon Minfile].

Of the total region outlined in the application for financial assistance, this area was judged to hold the greatest potential.

Emphasis was placed on gold prospecting but attention was paid to any mineral potential. A series of 27 stream sediments and 24 rock samples were gathered for multi-element ICP analysis and gold assay. Several samples returned elevated metal values but no assays of economic significance were returned. Details on samples and the geology are contained in Part B of this report.

Plate 1: Camp 1. Looking south near 31,400N, 20,780E

Activity Log

Prospecting was conducted by J.David Williams over 32 days from 22 July to 22 August inclusive. Two days were lost due to bad weather resulting in 30 days worked in the field. The campsite was moved by helicopter about halfway through the project. The helicopter flight served as a resupply flight as well as a camp move.

Work consisted of prospecting, mapping, gathering rock and stream sediment samples and panning. Each working day consisted of a traverse that was intended to maximize the amount of outcrop that could be examined—generally along ridge crests and creek beds. Traverses ranged to 13 kilometers in length. A suite of stream sediment samples was gathered to increase the resolution of the survey released by the Geological Survey of Canada. Rock samples were taken of any material that was judged to hold metal values. Bedrock mapping was done at 1:25,000 scale with special attention to rock type, structure and alteration patterns.

In general, the weather was good. Rain often fell at night which maintained a low level of risk from forest fires. During the last half of August, frost occurred nightly and temperatures fell to well below freezing during the last couple of nights. Because the low temperatures raised the risk of being weathered-in by the first snow of the season, it was decided to suspend the Program. A log of daily activity follows (refer also to figure 3, *Traverse Map*, in map pocket).

Plate 2: Camp 2. Looking northwest near 28,100N, 14,800E

Day	1992	Activity	Results	Stream Sed	Rock sample	Days Worked
1	22 Jul	fly-in by chopper, setup camp1 orientation traverse to hills south of camp	geology of clastic rocks, some containing pyrite & quartz domains			1
2	23 Jul	traverse down camp creek to 3500'El	pyllites change to arenite	5		1
3	24 Jul	traverse over low hills north of camp	almost no outcrop			1
4	25 Jul	weather day	cool with steady rain all day			0
5	26 Jul	traverse to high hills SE of camp	quartz domains in phyllite & arenite occur as barren "sweats"	1		1
6	27 Jul	traverse to high hills NE of camp	massive & fissile limestone/dolostone			1
7	28 Jul	traverse down creek W of camp to Sayyea Cr	phyllite cliffs west of camp; Sayyea Cr contains favorable looking material	3	2	1
8	29 Jul	traverse down camp creek to Cabin Cr	abundant arenite with variable pyrite below 3500'El.	3		1
9	30 Jul	remap structural geology of camp creek to 3500'El	defined syncline axis phyllites deformed more than limestone or arenite horizons			1
10	31 Jul	traverse to high hills NE of camp	continuous limestone - massive and fissile horizons		1	1
11	01 Aug	traverse to distant hills E of camp	poor outcrop exposure of limestone			1
12	02 Aug	traverse down Sayyea Cr	granite boulders in creek; found claimpost & old campsite	2		1
13	03 Aug	traverse to prospect eastern-most creek	creek overgrown with bush; contains limestone & calcrete	1		1
14	04 Aug	return to hills SE of camp	sample bull quartz "sweats" to assess importance to stream sed assays. V. weak alteration & mineralization		4	1
15	05 Aug	traverse to western-most creek	creek overgrown, found skarn zone - originally mapped as diabase dike	1	2	1
16	06 Aug	move to camp2, setup camp	bad weather during afternoon			0
17	07 Aug	orientation traverse camp area	phyllite talus - very little outcrop			1
18	08 Aug	traverse to low hills south of camp	phyllite with arenite horizons & minor limestone beds			1
19	09 Aug	traverse to high ridge east of camp	phyllites & arenites in contact with massive skarn zone		4	1
20	10 Aug	cont'd traverse of 09 Aug	skarn zone contains local patches fg pyrite esp near intrusive contact		3	1
21	11 Aug	cont'd traverse of 10 Aug down slope facing Cabin Cr	skarn zone continuous against intrusive contact in outcrops	2	1	1
22	12 Aug	traverse to high ground N of camp	phyllite-limestone with basalt boulders/flows		3	1
23	13 Aug	traverse along ridge N of camp	quartzite & limestone with structural complications			1
24	14 Aug	traverse along branch of ridge N of camp	similar limestone & arenite/quartzite stratigraphy			1
25	15 Aug	traverse along ridge NE of camp	mostly arenite with 2 large quartz zones		2	1
26	16 Aug	traverse to ridges facing Sayyea Cr	mostly calcareous seds - subcrop on most of ridge	3	1	1
27	17 Aug	traverse down Sayyea Creek	mapped phyllite outcrops near Sayyea Cr	2		1
28	18 Aug	traverse to distant ridges W of camp	weak mineralization, local black shale		1	1
29	19 Aug	traverse to ridges & creeks facing Cabin Cr. W of camp	creeks overgrown with bush	2		1
30	20 Aug	traverse to western-most ridge	unmineralized arenite & limestone			1
31	21 Aug	traverse to creeks facing Cabin Cr at low elev'n W of camp	abundant intrusive boulders - no outcrop below 3500'El	2		1
32	22 Aug	traverse along slope & creek facing Cabin Cr E of camp	almost no outcrop, possible extension of intrusive contact not found	1		1
			TOTAL Samples & Days Worked	**27**	**24**	**30**

Expenses

Access to the area was by helicopter from Watson Lake. A resupply flight and camp move was made on the 06 August which accounts for three round-trip helicopter flights including set-out & pick-up. Expenses for maps, air photos and assaying were also charged against the 1992 Program. Additional expenses were for maintenance to a portable SSB radio to communicate on 4441 kHz to Watson Lake and Stewart Lake. The following table lists expenditures incurred by the project and selected for consideration as eligible expenses under the terms of the YMIP agreement:

Date of Purchase	VENDOR	ITEM	Cost
04 Apr	EMR Canada	topographic maps	26.44
15 Apr	EMR Canada	geology & topographic maps	17.86
21 Apr	DIAND	GSC Open Files	79.18
27 Apr	Yukon Chamber of Mines	prospecting course references	90.00
28 Apr	EMR Canada	topographic maps	51.76
11 Jun	Loomis Courier	delivery of SSB radio	60.24
16 Jun	Communications Canada	SSB radio license	73.00
17 Jun	Spilsbury Communications	SSB radio service	206.30
22 Jun	Mountain Equipment Coop	dehydrated meals	46.85
22 Jun	Acme Analytical Labs	sample supplies	98.31
02 Jun	EMR Canada	air photos	314.61
24 Jun	Burnaby Bag & Burlap	burlap bags	33.90
26 Jun	Safeway	groceries for field	86.23
26 Jun	Safeway	groceries for field	30.91
06 Jul	EMR Canada	air photos	40.98
18 Jul	Safeway	groceries for field	96.40
18 Jul	Safeway	groceries for field	43.18
22 Jul	Frontier Helicopters	set-out	1022.30
06 Aug	Frontier Helicopters	camp move & resupply	1179.58
22 Aug	Frontier Helicopters	pick-up	1100.73
10 Sep	EMR Canada	topographic maps	17.63
11 Sep	Lens & Shutter	film development	41.55
11 Sep	Neville Crosby	plotter supplies (for report)	175.75
14 Sep	Acme Analytical Labs	stream sed & rock sample assays	645.21
TOTAL			**5583.90**

The total cost of items claimed as eligible expenses amount to $5,583.90. Sales receipts for each expense are appended to this document below Note that receipts made out to Integrex Engineering refer to the company name that J.David Williams does business as a consulting geological engineer[1].

[1]City of Vancouver business license #96649

PART B

TECHNICAL REPORT

PART B — Technical Report

Area Location & Description

The 1992 prospecting Program covers an area along the north bank of Cabin Creek about 115 kilometres northwest of Watson Lake (see figure 2). Access to Cabin Creek is by helicopter from Watson Lake where Frontier Helicopters has a permanent base. Flight time in a Bell 206 JetRanger to the area is 30-40 minutes. The Liard River appears to be navigable by a shallow draft vessel from the town of Upper Liard 13 kilometres west of Watson Lake, upstream past Cabin Creek.

Elevations in the Program area ranges from 900m [3,000 feet] along Cabin Creek to 1800m [5,800 feet] on the highest peaks. Only in a few places are mountain slopes too rugged for easy access. Valleys contain small creeks, usually swiftly flowing, that are at most 2m wide.. Cabin Creek contains the greatest flow up to 15m wide averaging half a meter deep.

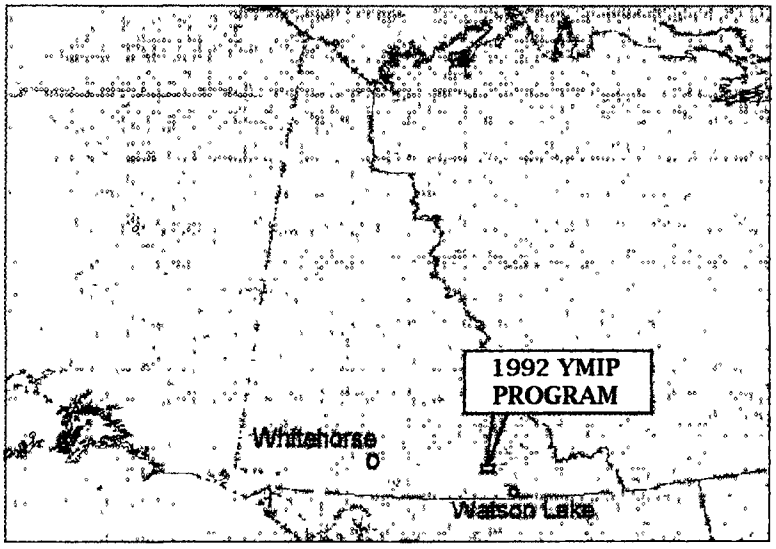
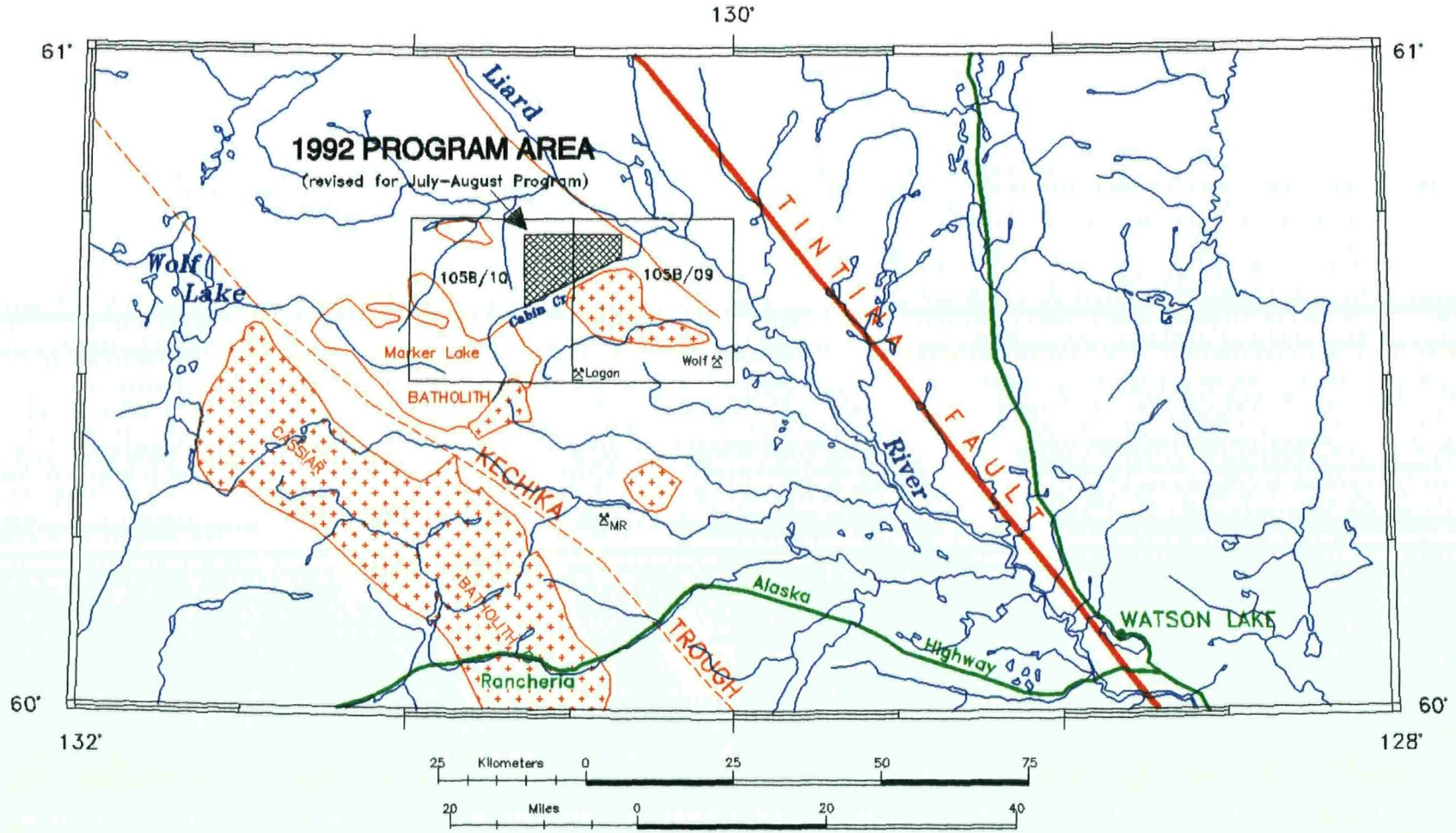


Figure 1: 1992 Program Location

Vegetation consists of buckbrush and conifers below 1400m [4,700 feet]. Above that elevation outcrop or shallow talus dominates over grass and low shrubs. Below the treeline, the density of bush is variable making travel through it slow to extraordinarily difficult. Game trails can provide easier access but they cannot be found in most areas of thicker bush. Outcrops below the treeline are uncommon except along the banks of some creeks.

Temperatures during July and the first half of August are comfortable but frost develops during the night after mid-August and snow can be expected for early September above 1200m [4,000 feet] elevation. Only a few caribou represent large game animals - no bears were seen.

No mineral claims in good standing existed over the duration of this Program and no other work was being carried out by any other interest. The only mineral activity on record was associated with the Ralfs claims from 1979 to 1981 [Yukon Minfile #105B 093]. During that time, mapping, geochemical sampling and geophysics were conducted over the same skarn zone that received some attention in this 1992 Program. (See figure 3 for locations of old campsites, claim lines and grid lines.)



INTEGREX ENGINEERING

DATE	REVISION	INITIAL
26Sep92	Original Release	JDW

LEGEND

Quartz Monzonite Intrusives

selected Mineral Properties

SOURCE:

H.Gabrilese, etal; 'MacMillan River' GSC map 1398A, 1980

COMPOSITION	
1	HIGHWAYS
2	DRAINAGE
3	
4	FAULTS
5	INTRUSIVES
6	
7	

YMIP 1992 PROGRAM

PROGRAM AREA
Regional Map & Generalized Geology

DATE:	SEPTEMBER 1992	SCALE:	BAR SCALE	Figure No.: 02
DRAWN By:	J.D.WILLIAMS, P.Eng.	DWG No.:	02-YMIP	
JOB No.:	YMIP-92101	N.T.S.	105B/09,10	

General Geology

The dominant rock types in the Program area are phyllites, coarser grained clastics and limestones in a belt generally striking northeast and dipping to the northwest at shallow to moderate angles. Poole, etal 1960, mapped these as Cambrian age or earlier. Regional metamorphism is weak. Regional deformation is expressed as gentle north-northeast plunging open folds. Phyllites display tighter folding as well as two cleavage directions. An unmapped portion of the quartz monzonite intrusive that occupies the south bank of Cabin Creek extends north of the creek. Along this intrusive contact a skarn zone was mapped and returned the most interesting assays of the Program. (Refer to figure 4 'Bedrock Geology'.)

Unit1a - Phyllite

Phyllite is the oldest rock unit found in the Project area. It consists of finely laminated dark gray shale, with sections containing variable coarser grained fraction. Coarse grained horizons contain up to 30% lighter gray silt or dispersed sand grains and small pebbles amounting to less than 10% of the rock. Silt exists as lighter colored laminations in zebra textured sections. Phyllite can instead be described as greywacke where a bimodal grain size distribution is displayed by rounded quartz and lithic sand and pebble fragments in a shale matrix. Greywacke horizons tend to be several centimeters thick.

Discrete buff or light brown colored calcareous sandy horizons up to 10 cm thick frequently occur and may account for as much as 20% of an exposure. These sandy horizons highlight bedding attitudes which are usually disrupted in the strongly folded phyllite. Greywacke horizons are not as susceptible to folding as phyllite but invariably demonstrate two nearly coincident cleavage directions that are deflected by flattened and crushed coarse fraction giving the rock a confused tapioca-like texture.

Occasional gritty gray fissile limestone horizons with or without dark shale can be found randomly distributed throughout this unit in packages 10cm to several metres thick. Phyllite is faintly calcareous in places.

Unit1b - Arenite & Calc-arenite

Grading from phyllite and greywacke are separate mappable sections that are composed of arenites ranging in purity from litharenties to impure quartzites. These units tend to be harder and more weather resistant than the surrounding phyllites and generally weakly deformed except for noticeable flattening of the clasts. Calcite fraction is variable but is confined to the gritty or sandy matrix. Coarse grained fraction occurs as rounded sand grains up to 5mm across in both matrix supported and clast supported texture.

Pyrite is frequently evident in amounts up to 5% as prominent euhedral limonite casts or as a pervasive diffuse limonite mottling throughout about 20-30% of the stratigraphy. Nowhere was pyrite recorded in an unaltered state.

Unit1c - Calcareous Shale

No solid outcrop of this unit was found in the north-central part of the Project area where it was mapped. It occurs only as loose talus and subcrop on bald rounded ridges composed of buff and gray colored fine grained calcareous material. This rock may represent a distinct wedge of calcareous material widening to the northeast, or a facies equivalent of phyllite developing into thicker calcareous strata.

A thickening clastic wedge or widening facies equivalent extending to the northeast is consistent with a continental platform that may have existed in that direction during Precambrian time.

Unit 2 - Lower Limestone

This orange brown and blue gray weathering unit is exposed in the cliff face northwest of camp1 and as a thinner unit in the hills northwest of camp2. It is conformable with unit 1 in a contact that is gradational over about 5m. The lower portion is predominantly buff colored but faintly orange weathering, massive fine to medium grained dolostone with abundant anastomosing white quartz and calcite stringers. An irregular and gradual change to medium gray, blue-gray weathering, fine grained massive and fissile limestone occurs toward the upper contact.

In the extreme western part of the map area, this unit appears to predominate and may represent a fault contact with the phyllites. A facies change involving the arenites of unit 1b that widen to the east is thought to be as likely.

In the hills north of camp2, just above the lower contact, a bright orange weathering, gritty buff colored, medium grained material occurs as large domains 2-5m across vaguely concordant to the contact. This rock displays up to 80% euhedral(?) emerald green micaeous flecks of mariposite about 2mm across. A sample [#24220] from an outcrop of this material returned anomalous chromium, cobalt and nickel assays.

Unit 3 - Lower Siltstone

A rapid change to nearly black shale or cherty shale about half a meter thick marks the contact to a hard medium green siltstone Siltstone occurs as faintly bedded horizons 2-10cm thick with abundant thin laminated black and dark green shale horizons comprising about 15% of stratigraphy. Towards the upper contact, shale disappears and the siltstone changes to cleaner composition in light green to cream colored blocky ground with bedding planes 10-25cm thick.

This siltstone is comparatively resistant to weathering. It influences the topography of the area north and west of camp2 by forming the steepest slopes and capping some of the ridges.

Unit 4 - Upper Limestone

This unit is distinctive for sections of prominent blue-gray weathering, dark to medium grained blocky and fissile limestone that form prominent cliff faces, and can be traced in nearly continuous outcrop. At least two and sometimes three sections of this limestone are visible in high ground north and northwest of camp2. They range from 6 to 12m thick and account for about 60% of the total height of this unit. The lower contact with unit 3 is conformable but nowhere is it exposed in outcrop.

Massive or blocky portions of gray limestone contain beige colored weakly dolomitized patches especially along the abundant thin irregular fractures filled with quartz or calcite. The majority of this unit consists of unaltered fissile gray limestone with cleavage planes 1-5cm apart.

Separating the sections of gray limestone are recessive intervals of orange weathering dolostone and black noncalcareous shale. The dolostone is less common in outcrop and has been intensely folded. Black shale can be several metres thick. A variety of black shale that displays a maroon weathering color contains sparse medium to fine pyrite euhedra. A sample of this pyritic material [#24224] returned assays of anomalous barium and phosphorous but was depleted in calcium.

Plate 3: Panorama of Camp1 Area. From left to right looking clockwise northwest to east. Note the limestone cliff face of unit2 in the center frame. Photo taken near the upper contact of unit 1b with unit 1a phyllites at 29,500N, 21,150E. In the northeast distance is the Liard River valley with the Simpson Range forming the skyline.

Unit 5 - Upper Siltstone/Quartzite

Discontinuous lenses of well washed fine sand and silt sometimes coexist with orange weathering dolostone Its contact with unit 4 is often marked by black shale but usually by siltstone interbedded with dolomite over several meters If this siltstone is completely displaced by dolostone this unit would be mapped as part of unit 4

Variations in composition and texture are only faintly expressed At a single location in the extreme west area of the map sheet a sequence of graded bedding indicates the strata are lying upright with tops facing north

Unit 6 - Shaley Limestone (pyritic)

A thin bedded interbedded buff colored limestone and dark gray calcareous shale form the broad rounded high peaks and ridges northwest of camp2 Limestone and shale fractions occur in about equal proportions Although outcrops of this unit are uncommon its talus is distinctive due to the widely distributed pyrite euhedra or casts 2 6mm in size that are evident everywhere

Quartz Monzonite

On the slopes facing Cabin Creek southeast of camp2 medium to coarse grained quartz monzonite outcrops over a distance of about 1800m This intrusive structure is unmapped by Poole etal Along the contact alteration of the host rocks of unit 1 is represented by the skarn zone described below In areas only a few hundred metres west of the exposed intrusive unit 1 displays a gneissic texture with abundant muscovite sometimes with small disseminated ferromagnesian crystals

Alteration of quartz monzonite is nearly absent along the western part of the mapped contact In outcrops along the east contact alteration of the intrusive is extensive resulting in destruction of feldspar and the development of coarse muscovite books in a orange brown granular mass of friable quartz grains This area of altered intrusive also contains small pendants or large xenoliths of silicified host rock containing up to 10% pyrite Two samples of silicified host rock returned [#24215 & 16]—the highest gold values [180 & 230 ppb] of the Program

SKARN

Adjacent to the intrusive contact a zone of skarnified host rocks as wide as 300m extends about 1400m along the crest of the ridge southeast of camp2 before being obscured by overburden It consists of dense medium to coarse grained calcareous diopside and garnet in variable proportions—pyroxene is predominant but garnet can occur as massive lenses or local patches Faint banding of finer grained pinkish garnet in the dark green pyroxene groundmass is common

Other compositions include local areas of white sucrosic limestone with knots of woody textured dark brown garnet An apparently persistent zone of fine grained weakly calcareous cherty thinly banded material that sometimes contains the occasional small grain of pyrite was followed in discontinuous outcrop for several hundred meters

The main skarn zone may extend beyond the area adjacent to the intrusive contact further west in an area where a single subcrop of skarn was mapped Skarn alteration may extend to the west for hundreds of meters along favorable (calcareous?) horizons

To the east of the intrusive another skarn zone was mapped southeast of camp1 [near 28 850N & 20 300E] This outcrop consists of a steep cliff composed of strongly altered sometimes very rusty weathered surfaces with limonite in flecks or as a pervasive stain Unaltered rock is so rare that this fine grained medium to dark gray material was first identified as a diabase dike

Alteration is recognized by silicified and bleached rock medium grained cream or buff colored often fractured or brecciated and healed by quartz infillings and stringers Samples of the most intense limonitic and altered zones [#24208 -09] assayed high in arsenic boron and tungsten

Basalt

Scattered throughout the rocks exposed north and northwest of camp2 resistant weathering blocky basalt outcrops in lenses that range to 10 s of meters in size The basalt is typically unaltered dark green and medium grained with minor pyrite A single location of relatively weak alteration that was sampled [#24218] did not return any values of note Quartz veinlets with minor associated chlorite were sampled [#24219] and it too showed no assays of interest

The host rock is strongly deformed and often discordant at the contacts of the relatively competent basalt lenses The lack of alteration to the host rock such as bleaching or baking or chilling or vesicular texture in the basalt offer no clue as to how the latter was emplaced In only two locations does a concordant horizon of basalt appear to have affected the host rock but in a manner that still makes the mode of emplacement (as a dike or sill) uncertain

Plate 4: Panorama of Camp2 Area. From left to right looking clockwise from south to west. Topography of the bald ridge in the middle foreground of the left frame is controlled by coarse clastics of unit 1b. Most of the main skarn zone and intrusive are on the other side of the ridge facing Cabin Creek but are also just visible in the small clearing and thin bush on the left end of the ridge. High ridges in the right half of the panorama are composed of units 3,4,5 & 6. Note the prominent blue gray weathering limestones of unit 4 in nearly continuous outcrop and talus. Photos taken from ridge of siltstone of unit 3 near 31,300N, 15,400E. Quartz Monzonite forms the south bank of Cabin Creek in the right frame with the Cassiar Mountains in the skyline to the southwest.

Structural Geology

A regional tectonic event produced folds with hinge lines oriented 0-30°Az, dipping 20-30° north. This folding is most evident in the phyllites as chaotic tight folding on a scale of about 20cm, but is visible in every rock unit usually as open folds. The Upper Limestones of unit 4 locally show large amplitude and tight, sometimes recumbent folding. On a larger scale, the pattern of north-northeast open folding is expressed by two broad synclines dominating the structure in each of the eastern and western map areas (see figure 4). The axial trace of the syncline syncline west of camp2 is not as well defined as that east of camp1.

In fine grained rocks susceptible to deformation by folding, especially the phyllites, two cleavages have been developed. The first (S1) is coplanar to bedding (S0) and predates folding. A second cleavage (S2) postdates folding and is oriented coplanar to S1—it is visible as a penetrative feature only where folding had changed the orientation of the bedding planes. In most areas, shearing along S2 has dragged and crenulated bedding planes oriented oblique to it, making detrital textures nearly impossible to detect. Coarser grained phyllites or greywackes that were more resistant to folding show a nearly coincident relationship between the two cleavages, giving these rocks a braided texture as the cleavage planes are also deflected around coarser clastic fragments.

Plate 5: Deformed phyllite. Note folding highlighted by scalloped fold noses to right of grub hoe. Bedding is represented by a thin orange brown arenitic horizon gently dipping left from the grub hoe. Prominent cleavage, S2, penetrates bedding, S0, at a shallow angle. Photo taken near 31,300N, 20,040E, looking northeast. [2807b]

Plate 6: Deformed Phyllite. Thick sequence of gray phyllite containing a single partly boudinaged orange brown arenitic horizon. Note the nearly vertical bedding of S0 in phyllite crenluated by shearing along S2, below and right of the grub hoe. Folding on a larger scale is visible near the top of the image just right of the grub hoe.
Photo of nearly vertical wall 30,700N, 20,800E, looking north.

In areas where the condition of outcrop was not good and only a single cleavage was evident, it was assumed to be S2. In outcrops where bedding could be measured, it was mapped as S0 since S1 is parallel to it or in some cases, as in the siltstones of unit 3 & 5, S1 is either weakly expressed or undeveloped.

In the extreme northwestern corner of the map area, two plainly evident parallel linears from air photos are interpreted as normal faults that have significant vertical displacement. Two traverses crossed one or both of the fault planes confirming that interpretation. Vertical displacement is on the order of 10's of meters; northwest block up with respect to the southeast block. Although no opportunity to measure the attitude of the fault planes occurred, it is expected that they dip steeply. Air photos indicate a continuing pattern of parallel faults with lesser displacement(?) progressing south.

Elsewhere, faulting was noticed in only a few places—displacements are minor; less than a few metres. Another lineament was traced in the east map area from air photos. It has no mappable effect on the geology.

Rock Samples

A total of 24 rock samples were gathered during the Program. These samples were collected from any feature that was judged to be of interest or was expected to hold a potential to contain economic mineralization. No assay of economic significance was returned. The following table lists the locations and descriptions for all samples. (Refer to figure 5 "Sample Locations & Assays" and assay certificate in appendix.)

Each sample weighed 1-3kg and was assayed by ICP for 30 elements. A separate more sensitive assay for gold was performed because the threshold of detection of gold with ICP [2ppm or 2gm/tne] is too high to provide an adequate measure of the potential for mineralization. The more sensitive technique of wet extraction has a limit of detection at 1 ppb.

Gold assays were highest in samples #24215 & 16, which even in the field showed the promise of containing above average potential. The values of 180 & 230 ppb are of interest only to indicate there may be potential elsewhere; perhaps along the intrusive contact below overburden or south of Cabin Creek. It is notable that these samples also returned the highest arsenic assays and #24215 contained the greatest copper, lead and zinc.

Skarn samples [#24208, 09, 11-14 & 17] generally showed the highest zinc values and had variable tungsten response [up to 613 ppm]. The aqua regia extraction technique does not completely liberate tungsten from all its minerals (as with wolframite) but these assays are still too low to be economic.

Plate 7: Site of sample #24215, looking northwest

1992	Sample	Northing	Easting	Elev.[ft]	Description	Type	Comment
28Jul	24201	30,160	18,450	3,760	qtz w/ local ochre stain & 2 small py grains	grab from Sayyea Cr	
28Jul	24202	30,530	18,450	3,690	pred. qtz w/ ~30% pale colored chlte	grab from Sayyea Cr.	downstream from #24201
31Jul	24203	33,040	22,200	4,820	slightly heavier s.g. mat'l showing limonite strgrs	grab broken from single rock	talus in solifluxed ground
04Aug	24204	29,600	20,970	4,860	barren bull qtz 'sweat'; c.g. fractured qtz; minor chlte altn along contacts	chip single loc'n 0.25m sq.	taken from footwall of arenitic horizon
04Aug	24205	29,440	21,110	4,640	v.c.g. miky-translucent qtz 'sweat', variably fractured	chip 1m x 0.2m	from arenite horizon
04Aug	24206	29,360	21,240	4,640	white c.g. bull qtz 'sweats'	chip 4m horiz	taken from several concordant qtz bands
04Aug	24207	29,320	21,270	4,540	white c.g. fractured qtz 'sweat'	chip 3m x 1m	1m wide exposure of qtz
05Aug	24208	28,840	20,250	4,220	penetrative rusty wx'g showing freckles of indigenous limonite in bl'd & var silicified drkgry-cream & buff colored non-calcareous f.g. host rk. Tr v.f.g. py	chip 40cm vertical	SKARN? diabase dike? alt'n & wx'g provide few fresh exposures
05Aug	24209	28,870	20,320	4,240	redbrn-org wx'g, hard, siliceous, noncalc, f-m.g. bl'd, litbrn-orgbrn & buff colored mat'l w/ m. v.hard f.g. drkgry domains. ~10% v.c.g. feldspar bands/veins	chip 1m x 0.2m	same feature as #24208
09Aug	24210	27,790	17,200	4,820	rusty qtz in arenite; qtz bx'd & healed. Bl'g/alt'n of wall rk	chip 0.5m x 0.5m	Qtz at hangingwall of SKARN zone
09Aug	24211	27,800	17,280	4,780	dense, heavy med-drk grn m.g. mod calcareous mat'l w/ faint-prominent pnk m-f.g. garnetiferous or garnet ovoids <5mm across	chip randomly selected subcrop ~10m along ridge x 2m	SKARN
09Aug	24212	27,810	17,400	4,760	drk grn m.g. hard massive var calc mat'l w/ ~50% indistinct drk brn-pnk garnetiferous patches	chip random selection from subcrop across strike ~8m	SKARN
09Aug	24213	27,700	17,150	4,760	faintly banded drkbrn garnet & 2 ~2cm wide qtz veins	chip 30cm long/vert x 10 cm w	SKARN
09Aug	24214	27,810	17,590	4,750	litgrn & medgrn, hard cherty, f.g. w/ 5-20% indistinct m.g. garnet bands & streaks; v. m. fleck of py	chip 0.3m x 0.2m	SKARN

Table summarizing rock samples
(refer to figure 4 for location map & assay certificates in appendix)

1992	Sample	Northing	Easting	Elev.[ft]	Description	Type	Comment
10Aug	**24215**	27,700	17,890	4,650	hard med-drk gry f-m.g. silicic alt'n surrounded by med-c.g. alt'd q.monz. containing var muscovite; upto 10% med. & f.g. py (m. marcasite)	chip 2m x 0.5m	inside intrusive contact
10Aug	**24216**	27,700	17,810	4,650	similar to #24215 but <5% py	chips from subcrop 1m x 2m	inside intrusive contact
11Aug	**24217**	27,400	16,780	4,760	weakly calc, nearly solid garnet, no Sx	chip 0.5m x 0.5m	
12Aug	**24218**	27,840	13,870	4,840	basalt domain w/ local strong bl'g & cte strgrs. tr py, patches rusty wx'g	chip 0.2m x 0.2m	
12Aug	**24219**	28,100	13,720	4,900	3 wht c.g. qtz veins w/ ~15% chlte in massive, blocky basalt domain	chip 30 cm of qtz across 8m	
12Aug	**24220**	28,250	13,670	5,180	gritty orgbrn wx'g, medbrn f.g. dolomitic lst containing up to 80% mariposite flecks ~2mm across & rare unidentified drkbrn glassy mineral	chip 0.3m x 0.3m	related to basalt flows?
15Aug	**24221**	32,020	15,650	5,500	qtz veins following cleavage in sltst containing upto 20% alt'd host frags, chlte & muscovite, no Sx, patches limonite stain	chip from talus blocks or outcrop over 20m radius	
15Aug	**24222**	31,860	15,700	5,580	similar to #24221	chip from talus blocks or outcrop 20m radius	may be same feature as that sampled #24221
16Aug	**24223**	30,890	16,230	4,940	f.g. drk-med gry mudst/phyllite w/ distinct bright redbrn wx'g color caused by ~50% limonite as cubic py? pseudomorphs 2-4mm across	chip 1m x 1m	
18Aug	**24224**	28,700	12,460	5,240	blk fissile non-calc shale w/ unusual maroon wx'g color & m. py casts	chip from outcrop & talus 1m x 1m	

Table summarizing rock samples (cont'd)
(refer to figure 5 for location map & assay certificates in appendix)

Stream Sediment Samples

A total of 27 stream sediment samples were gathered. As with the rock samples all stream sediments were assayed for 30 elements by ICP analysis with separate gold treatment by wet extraction. Each sample consisted of 500-1500gm of sediment collected in a kraft sample bag. Analysis was done on the -80 mesh fraction. An effort was made to collect the finest grain of sediment possible and to minimize the amount of organic material. The following table details each sample. (Refer to figure 5 "Sample Locations & Assays" and assay certificate in appendix.)

Sampling of streams draining into Cabin Creek was avoided below 1100m [3,600 feet] in the west half of the map sheet because of sandy till deposits that formed the creek banks. Almost everywhere at lower elevations and in many places along Sayyea Creek, prospecting and sampling was made difficult by the abundant, sometimes very large intrusive boulders that choked the creek bed.

Based on gold assay, two samples stand out. While most samples returned gold values of less than 10ppb, SS07 & SS21 assayed 240 & 250 ppb respectively. Sample SS07 drains phyllites that are not notable for any particular feature No outcrop exists near SS21, but it may be very close to the same stratigraphic elevation as SS07. Sample SS24 returned 16ppb which is the next highest value in this series and it too is located at roughly the same stratigraphic position in unit 1. These samples should be reassayed to be certain of their grade.

Sample SS25 confirms the GSC survey [OF 563] of elevated silver and zinc, and SS24 agrees with the above background gold assay in the GSC survey. The higher tungsten GSC assays from both streams draining into Cabin Creek in the west half of the map sheet were not confirmed by any sample from this Program. This discrepancy may be due to the only partial liberation of tungsten in aqua regia extraction. However, the anomalous 6 ppm tungsten assay from SS16 compares favorably with the GSC result. Both SS16 & SS17 are closest to the skarn zone along the intrusive contact and returned the highest tungsten assays which matches the results of greater than average tungsten from some of the rock samples taken from the skarn.

1992	Sample	Northing	Easting	Elev.[ft]	Flow Rate	Rock Type	Composition	Comment
23Jul	SS01	31,380	20,810	4,010	slow	phyllite	sand	many rust colored pebbles
23Jul	SS02	31,600	21,960	3,890	slow	phyllite	sand	
23Jul	SS03	30,800	22,470	3,840	slow-moderate	phyllite	sand	
23Jul	SS04	30,640	22,450	3,840	slow-moderate	phyllite	silt & sand	abundant phyllite flakes
23Jul	SS05	30,000	23,590	3,500	moderate	phy,arenite	sand, m.silt	
26Jul	SS06	30,390	21,510	4,180	slow-moderate	phyllite	sand, m.silt	
28Jul	SS07	30,650	20,070	4,380	slow	phyllite	sand, m.silt	
28Jul	SS08	30,230	18,950	3,900	moderate-slow	phyllite?	sand, silt,gravel	q.monz boulders in creek
28Jul	SS09	30,120	18,430	3,760	moderate	various	sand, gravel	
29Jul	SS10	29,350	24,290	3,220	moderate-fast	phy, arenite	sand, gravel	
29Jul	SS11	28,790	24,110	3,000	moderate-fast	till	sand, gravel	
29Jul	SS12	29,090	24,020	3,200	slow-moderate	phy & till	sand, gravel	
02Aug	SS13	32,310	19,190	3,470	moderate-fast	q.monz, till	sand, silt	
02Aug	SS14	33,270	19,180	3,460	fast	q.monz till	sand, silt, gravel	
03Aug	SS15	29,720	24,700	3,180	moderate	limestone	calcreted sand	
05Aug	SS16	28,270	19,770	3,680	moderate	till	sand, silt	q.monz boulders in creek
11Aug	SS17	26,500	16,290	4,200	fast	qtz monz	sand, gravel, silt	some organics in sample
11Aug	SS18	25,910	15,570	3,720	moderate	q.monz, phyllite	silt	
16Aug	SS19	28,890	15,240	4,260	moderate	phyllite	silt	organics in sample
16Aug	SS20	29,220	15,290	4,260	fast	siltstone	silt	organics; not a good sample
16Aug	SS21	29,460	15,440	4,260	moderate	phyllite	gravel, silt	
17Aug	SS22	29,200	16,460	4,040	moderate	phyllite	gravel, silt	
17Aug	SS23	29,370	17,470	3,880	moderate	phyllite	gravel, silt	
19Aug	SS24	27,000	13,720	4,220	moderate	limestone	gravel, silt	
19Aug	SS25	26,360	12,200	4,340	moderate	limestone	gravel, silt, sand	organics in sample
21Aug	SS26	24,810	13,720	3,700	fast	q.monz, phyllite	gravel, sand, silt	
21Aug	SS27	25,260	14,340	3,700	fast	q.monz, phyllite	gravel, sand, silt	

Table summarizing stream sediment samples
(refer to figure 5 for location map & assay certificates in appendix)

Discussion

Environment of Deposition

The suite of sediments in the map area consist of a column of discrete and interbedded fine and coarse grained clastics and limestones that suggest a depositional environment on a gentle subtidal continental slope. Phyllites of unit 1a indicate deposition at distal pelagic or subtidal depths. Interbedded greywackes demonstrate times of more rapid sedimentation and/or higher energy conditions but the occasional sandy limestones are more proximal deposits. Coarse grained arenites of unit 1b may have been even closer to shore in a high energy intertidal setting.

Siltstones of the thick unit 3 and the discontinuous unit 5 are evidence of subtidal sedimentation at a low rate of accumulation. Irregular to laminated limestones of units 2 & 4 are also slope deposits but more proximal to the siltstones. The pyritic shaley limestones of unit 6 indicate a resumption of distal conditions but in an environment possibly fringing a restricted basin.

Mineralization

Stream sediment sampling by the GSC [OF 589 &1289] indicated anomalous gold, silver, lead, zinc and tungsten potential in the creeks draining the north slope of Cabin Creek. The 1992 Program attempted to assess the potential of extending these anomalies into economic deposits. While the geology of the map area is dominated by weakly metamorphosed sediments, there are several features that are of economic importance:

- stream sediment samples SS07, 21 & 24 seem to indicate an anomalous gold belt in the upper part of unit 1
- many sediments contain pyrite, especially the calcareous and coarser grained units 1b & 6
- coarse grained quartz 'sweats' are found everywhere
- abundant limestones exist that also include black shales
- a large skarn zone exists
- an unmapped intrusive contact occurs in the map area

No evidence for anomalous gold in unit 1 was noted during mapping or prospecting. Nor is there any particular feature in unit 1 at that stratigraphic level that is notable. All three anomalous stream sediment samples were taken above the coarser unit 1b and below the contact of unit 2. It is possible that each sample may be returning high gold assays for a different reason. Reassying from reject[2] would confirm the assay value before speculating further.

Pyrite in sediments is a hopeful sign for sedex deposits given the proper depositional environment. However, mapping and sampling by the 1992 Program does not provide cause for the existence of sedex deposits. The maroon weathering, weakly pyritic black shales found in the limestones of unit 4 may indicate an anoxic basinal environment but the amount of sediment involved suggests that that condition was short lived and did not produce metal-rich sediment. Tracing those shales off the map area into a deeper water setting may lead to more promising conditions.

Circulation of fluids after deposition is evident by the white coarse grained bull quartz 'sweats' found all through the sedimentary package of the map area. These sweats are lenses a metre to many tens of metres long and usually at least 20cm wide ranging to 2m. Because of their relative resistance to

[2]All sample rejects and pulps are available for further analysis

weathering, they are disproportionally represented in outcrop, occurring as single lenses, in clusters or in the occasional dense but localized swarms. They occur both as concordant lenses or discordantly. Sweats found in the phyllites are often crushed and distorted in highly deformed sediments indicating that at least some of them were in place before the regional folding event. Alteration of sediments at the contact with quartz is uncommon except in siltstone where weak chlorite alteration is visible especially fragments that are enclosed by quartz. Sweats sometimes show patchy limonite stain but no minerals other than quartz in any significant amount was recognized. Several samples of this material were analyzed [#24210-02, 04-07, 21-22], but none of the samples returned any values of interest.

It was hoped that fluid migration, as evidenced by the quartz sweats, occurred to an extent that produced a significant deposit especially in areas of abrupt porosity gradients involving pyritic sediments. A condition where fluids circulating through the pyritic arenities of unit 1b have been directed along a nearly impervious shale contact might cause significant concentrations of gold, tungsten or even base metals. Deposits of this sort were not found but they could exist in areas of overburden or along strike off the map sheet.

The intrusive contact and its apparently related skarn zone represents the greatest potential for economic mineralization in the map area. Skarn samples assayed high in zinc and tungsten. The contact east of the large skarn zone is obscured by overburden, but the smaller skarn southeast of camp1 is evidence that it may be close by. If the contact were to extend even further east to affect the calcareous pyritic sediments of unit 1b or the limestones of unit 2, the size and grade of potential skarn alteration could be significant. These conditions may also exist in the east part of the map sheet south of Cabin Creek. An attempt at following the intrusive west of the main skarn zone was not successful in that area of continuous and probably thick overburden. Exploration in areas of deep overburden would involve geophysics and diamond drilling.

Significant gold mineralization may be associated in conditions similar to that found at sample locations #24215 & 16 where strong host rock and intrusive alteration exists just inside the intrusive contact. At these sites the geometry of the contact may have a complicated nature, either as a small embayment in the host rock or a pendant or xenolith of phyllite. Conditions of strong alteration could exist anywhere along the contact providing a setting for precious and base metal mineralization. Unfortunately, based on the results from #24215 & 16, a high arsenic content is also likely.

Recommendations & Conclusions

The results of the 1992 Program did not locate mineralization of economic grade but it showed some potential for the existence of favorable mineral deposits. If additional work is to be contemplated several targets are recommended for closer examination:

- investigate the cause of high gold assays of SS07, 21 & 24
- determine the extent of the east skarn zone southwest of camp1
- trace the intrusive and its effect on sediments along the contact

Stream sediment samples #SS07, 21 & 24 that returned the highest gold values should be reassayed from a separate cut from the reject. The area near all these samples contains little outcrop making additional stream sediment sampling and soil sampling the only practical options for further work. Stream sediment samples should be taken at intervals close enough [20-50m] to outline the extent of the anomaly. Taking stream sediment samples with a portable sluice would elevate the resolution of assay results. Soil profiles in these areas are fairly well developed so that A- or B-horizon sampling could provide good coverage.

The east skarn zone may be far more extensive than mapping suggests. Detailed prospecting and mapping, with geophysics (mag, VLF) and soil geochemistry may provide useful data. At the same time, outlining the intrusive contact using geophysical techniques will provide additional clues to the extent of the east skarn. If the contact approaches the calcareous pyritic arenites of unit 1b or the limestones of unit 2, geophysics may register the presence of significant alteration. A similar effort west of the main skarn zone may also be considered.. Locating the contact south of Cabin Creek could help in interpreting the bedrock geology.

Additional work following these recommendations would not be all that expensive. Field conditions during the summer months are good. The only factor that would impede exploration are areas of thick bush. A thorough and carefully conducted follow-up program may be successful in outlining a significant mineral deposit.

Respectfully Submitted,

_____

J.David WILLIAMS
Vancouver, B.C.
October 1992

References

Department of Energy, Mines and Resources, National Air Photo Library; aerial photographs roll no. A2682522-24, 54-62, 78-90, 1:40,000, Sept 1985.

Department of Energy, Mines and Resources, Surveys and Mapping Branch; Provisional Map 105 B/9 *ALLAN CREEK*, Edition 1, 1:50,000, printed 1970.

Department of Energy, Mines and Resources, Surveys and Mapping Branch; Provisional Map 105 B/10, *GRAVEL CREEK*, Edition 1, 1:50,000, printed 1970.

Department of Mines and Technical Surveys, Sheet 105 B, *WOLF LAKE*, Edition 3, 1:250,000, 1979.

Geological Survey of Canada, Open File 563, *Regional Stream Sediment and Water Geochemical Reconnaissance Data, Yukon Territory 1978*, NGR 43-1978, NTS 105B.

Geological Survey of Canada, Open File 1289, *Regional Stream Sediment and Water Geochemical Reconnaissance Data, Yukon 1985*, NGR 88-1985, NTS 105B.

Geological Survey of Canada, Department of Mines and Technical Services, Geophysics Paper 7001G, *WOLF LAKE*, Yukon Territory, Sheet 105 B, Aeromagnetic Series, 1:250.000, 1963.

Indian and Northern Affairs Canada, Yukon Minfile 105B. includes 1991 updates.

Poole, W.H., Roddick, J.A., Green, L.H.; Map 10-1960, *Geology WOLF LAKE Yukon Territory*, Geological Survey of Canada, Preliminary Series, Sheet 105 B, 1:250,000, 1960.

Appendix -- Part B

Assay Certificate for Rock & Stream Sediment samples -- 2 pages

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Integrex Engineering File # 92-2989 Page 1

303 - 1225 Cardero St., Vancouver BC V6G 2H8 Submitted by: J. DAVID WILLIAM

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
C 24201	3	29	2	6	.1	12	2	143	.65	5	5	ND	2	34	.2	2	2	2	.23	.002	2	9	.04	8	.01	3	.07	.02	.01	1	3
C 24202	2	18	2	20	.1	9	3	77	.53	4	5	ND	1	4	.2	2	2	2	.07	.004	2	9	.07	8	.01	2	.14	.03	.02	1	4
C 24203	1	2	4	14	.4	10	2	355	1.04	21	5	ND	3	361	.3	3	2	2	36.70	.006	5	2	.13	11	.01	7	.05	.01	.03	1	2
C 24204	2	14	2	4	.1	9	2	184	.80	2	5	ND	1	36	.2	2	2	1	1.37	.001	2	7	.02	3	.01	2	.03	.01	.01	1	2
C 24205	2	6	2	2	.1	9	1	54	.34	2	5	ND	1	1	.2	2	2	1	.01	.001	2	11	.01	2	.01	2	.01	.01	.01	1	1
C 24206	2	9	2	2	.1	6	1	51	.28	3	5	ND	1	4	.2	2	2	1	.23	.002	2	5	.02	7	.01	3	.04	.01	.02	1	31
C 24207	2	120	24	10	.1	10	1	157	.81	3	5	ND	1	2	.2	10	2	1	.07	.001	2	9	.01	9	.01	4	.02	.01	.01	1	3
C 24208	1	22	10	25	.6	7	1	47	1.45	264	5	ND	7	46	.2	19	2	12	7.94	.051	20	19	.05	34	.01	320	2.03	.06	.25	607	30
C 24209	1	7	4	6	.2	6	1	59	.56	439	5	ND	2	60	.2	8	2	1	10.24	.008	3	6	.01	12	.01	2161	.35	.31	.14	390	49
C 24210	1	7	14	12	.5	5	1	64	1.01	157	5	ND	3	13	.2	12	2	2	.25	.009	13	8	.02	24	.01	20	.38	.01	.13	287	42
C 24211	1	6	2	293	.4	17	4	2148	2.33	2	6	ND	18	59	.6	2	35	23	9.29	.041	45	22	.39	14	.16	23	2.45	.02	.04	63	6
C 24212	2	4	2	249	.3	12	4	1794	2.05	3	5	ND	7	53	.4	2	9	6	6.16	.044	23	8	.28	18	.06	23	2.25	.01	.03	613	3
C 24213	2	4	3	161	.1	12	3	1932	2.45	2	5	ND	9	19	.3	2	11	13	3.98	.028	34	14	.26	18	.08	6	1.62	.01	.02	40	3
C 24214	1	6	4	663	.1	23	6	1143	1.93	2	5	ND	17	512	.7	2	6	18	5.01	.060	22	19	.42	24	.08	12	5.05	.33	.07	25	2
RE C 24210	1	7	14	16	.3	6	1	64	1.00	171	5	ND	5	15	.2	15	2	3	.16	.009	15	8	.02	28	.01	5	.43	.01	.18	285	43
C 24215	11	184	131	411	4.5	9	1	130	1.96	1490	5	ND	2	19	.8	23	7	5	3.53	.005	3	10	.06	28	.01	214	.75	.04	.38	29	180
C 24216	2	65	79	42	2.9	5	1	141	1.52	2029	5	ND	5	23	.2	30	4	3	1.39	.013	6	7	.05	34	.01	12	.89	.01	.46	13	230
C 24217	1	5	2	114	.2	9	2	1073	1.62	10	5	ND	14	21	.2	2	9	13	4.55	.043	31	13	.15	11	.10	7	1.55	.01	.03	2	4
C 24218	1	27	13	129	.1	34	27	840	7.36	9	5	ND	5	51	.3	2	2	123	1.17	.308	10	21	2.41	7	.20	4	3.62	.05	.01	1	6
C 24219	1	50	7	48	.1	17	17	430	3.44	3	5	ND	1	37	.2	2	2	53	.52	.051	4	8	.90	6	.13	2	1.37	.01	.02	1	3
C 24220	1	73	7	229	.5	378	80	619	4.82	238	8	ND	2	361	.6	2	2	11	12.32	.038	3	68	5.78	12	.01	2	.45	.01	.12	1	4
C 24221	1	6	2	42	.2	30	12	208	4.91	12	5	ND	2	10	.2	3	2	13	.31	.030	4	14	1.62	6	.01	3	2.23	.01	.05	2	2
C 24222	1	3	2	5	.1	13	3	68	.99	5	5	ND	3	6	.2	2	2	3	.12	.043	7	7	.16	16	.01	2	.31	.01	.06	1	3
C 24223	1	3	2	67	.4	41	10	148	6.13	3	6	ND	18	238	.5	2	2	26	9.70	.026	8	27	8.19	2	.01	2	3.85	.03	.02	1	2
C 24224	5	59	7	69	.1	36	3	38	2.20	16	5	ND	9	38	.2	2	2	39	.35	.128	32	35	.53	49	.01	2	1.18	.05	.13	1	4
STANDARD C/AU-R	18	59	39	132	7.3	71	31	1121	3.96	40	21	7	39	53	18.6	14	19	60	.50	.090	40	58	.95	177	.09	34	1.94	.07	.15	11	470

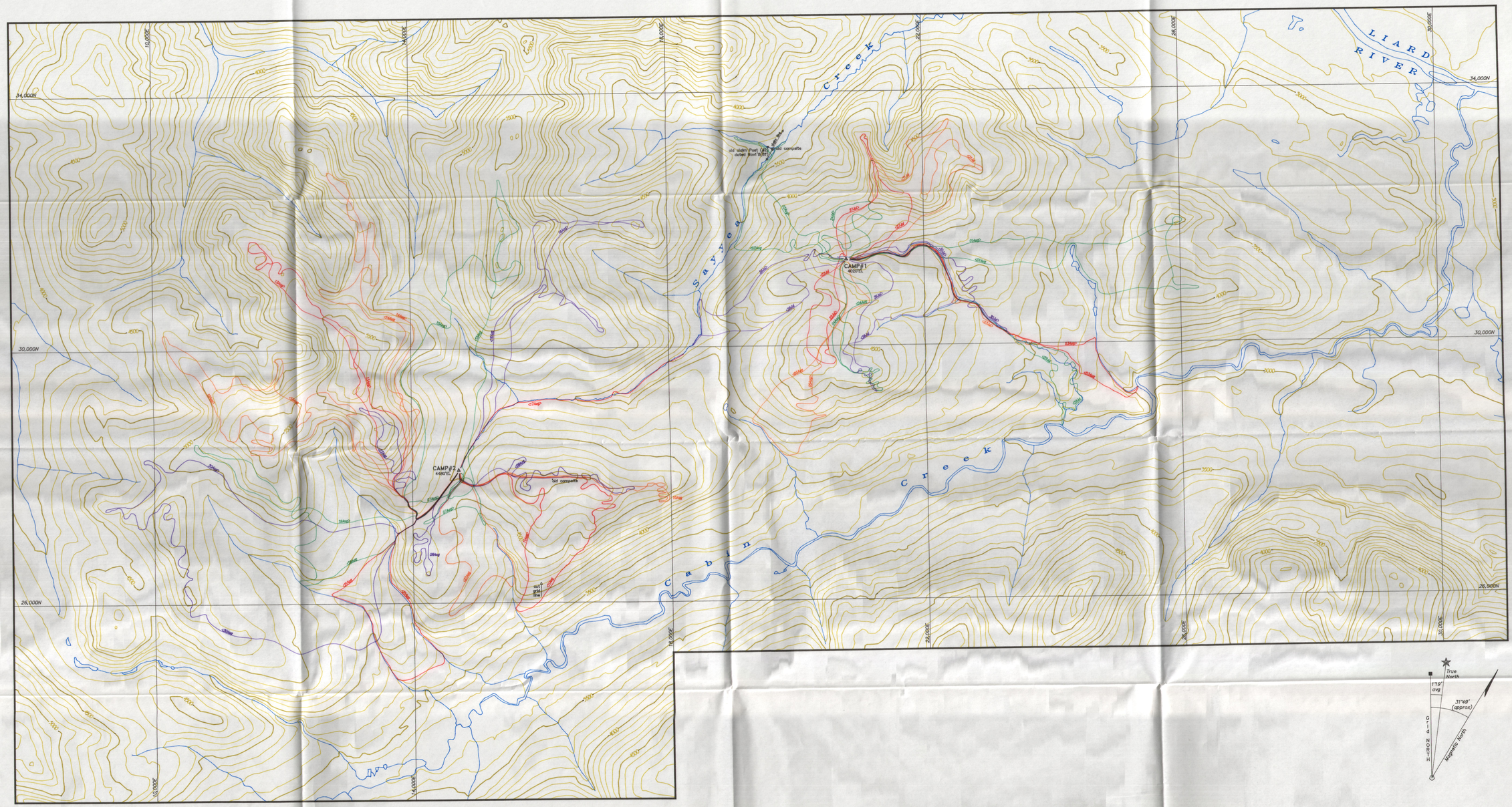
ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: P1 ROCK P2 STREAM SED. AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.
Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 8 1992 **DATE REPORT MAILED:** Sept 15/92 **SIGNED BY** ..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
SS01	1	18	16	102	.1	65	17	590	4.40	9	5	ND	4	49	.2	2	2	8	.49	.029	45	32	1.08	13	.01	4	1.41	.01	.02	1	1
SS02	1	18	22	109	.1	40	20	1370	4.89	11	5	ND	5	37	.2	2	2	8	.32	.030	44	20	.88	28	.01	2	1.54	.01	.03	1	1
SS03	1	22	13	95	.2	37	17	917	4.56	5	5	ND	6	96	.2	2	2	8	1.09	.025	37	19	.97	20	.01	5	1.62	.01	.03	1	1
SS04	1	18	14	90	.1	32	15	370	3.49	4	5	ND	7	36	.2	2	2	9	.45	.053	52	20	.79	22	.01	2	1.55	.01	.03	1	1
SS05	1	23	16	103	.3	34	15	468	3.56	7	5	ND	7	80	.2	2	2	8	1.31	.043	50	17	.72	18	.01	3	1.34	.01	.03	1	1
SS06	1	22	21	128	.1	35	16	662	3.58	9	5	ND	6	39	.3	2	2	8	.49	.049	52	17	.66	24	.01	2	1.43	.01	.02	1	1
SS07	1	50	141	272	.7	70	27	1991	6.30	103	5	ND	10	49	.5	2	2	8	.46	.041	68	18	.68	30	.01	6	1.38	.01	.02	1	240
SS08	1	19	23	102	.1	34	16	566	3.53	13	5	ND	7	63	.2	2	2	8	.85	.046	48	15	.63	22	.01	2	1.22	.01	.03	2	3
SS09	1	25	18	138	.2	37	17	574	3.91	13	5	ND	6	90	.2	2	2	14	1.12	.053	39	26	.87	36	.02	3	1.82	.01	.09	1	2
SS10	1	18	9	91	.1	32	15	643	4.05	5	5	ND	6	74	.2	2	2	9	1.13	.029	33	20	1.01	18	.01	2	1.68	.01	.04	1	2
RE SS15	1	15	9	61	.2	25	11	990	2.72	14	5	ND	4	290	.2	2	2	6	10.14	.028	21	11	.60	28	.01	3	1.07	.01	.04	1	1
SS11	1	27	16	123	.2	38	17	974	3.95	10	5	ND	8	99	.2	2	2	11	1.60	.044	50	21	.82	36	.02	2	1.57	.01	.07	1	7
SS12	1	17	13	112	.2	36	15	1939	3.58	13	5	ND	7	44	.2	2	2	16	.54	.043	31	22	.74	73	.05	4	1.56	.01	.16	1	1
SS13	1	17	19	96	.1	29	13	432	3.08	13	5	ND	6	56	.2	2	2	11	.68	.058	37	19	.68	26	.02	2	1.37	.01	.04	1	1
SS14	1	12	10	71	.1	25	12	577	2.78	10	5	ND	6	98	.2	2	2	9	1.03	.062	31	16	.78	24	.01	3	1.31	.01	.03	1	1
SS15	1	16	11	59	.1	24	11	978	2.73	12	5	ND	5	292	.2	2	2	6	9.89	.029	21	12	.61	26	.01	2	1.10	.01	.04	1	1
SS16	1	14	22	145	.3	18	10	1647	2.43	17	5	ND	5	84	.3	2	2	12	1.84	.046	25	14	.41	55	.03	4	1.18	.01	.13	6	2
SS17	1	35	8	416	.1	30	13	461	3.32	5	5	ND	7	136	.6	2	3	24	1.44	.055	31	30	.69	61	.07	2	2.26	.06	.31	19	1
SS18	1	29	16	294	.4	32	13	566	3.40	5	5	ND	6	100	.5	2	2	21	1.06	.051	31	29	.75	68	.05	6	2.04	.03	.18	1	8
SS19	1	20	17	135	.2	28	11	363	3.23	12	5	ND	6	77	.2	2	2	11	.82	.067	35	17	.63	27	.01	4	1.35	.01	.03	1	1
SS20	1	14	14	105	.1	26	13	558	3.09	18	5	ND	5	42	.2	2	2	10	.95	.083	33	18	.69	25	.01	2	1.34	.01	.03	1	1
SS21	1	22	18	96	.2	36	15	368	3.18	22	5	ND	6	34	.5	2	2	12	1.41	.087	35	18	.65	26	.01	4	1.29	.01	.04	1	350
SS22	1	18	19	127	.4	31	16	812	3.26	17	5	ND	7	75	.2	2	2	11	1.52	.074	31	16	.67	23	.01	9	1.26	.01	.03	1	5
SS23	1	22	17	137	.1	37	17	583	3.87	12	5	ND	8	94	.2	2	2	14	1.36	.057	35	24	.88	33	.02	2	1.83	.02	.07	1	1
SS24	1	17	24	185	.3	29	14	1976	3.06	25	5	ND	4	55	.8	2	2	11	1.89	.076	30	15	.52	55	.01	4	1.09	.01	.03	1	16
SS25	1	12	48	381	3.6	25	14	937	2.46	22	5	ND	3	38	1.8	2	2	12	1.39	.119	33	20	.37	54	.02	5	1.37	.01	.07	1	2
SS26	1	11	15	126	.4	20	10	718	2.20	11	5	ND	5	37	.2	2	2	11	.77	.088	27	16	.42	48	.03	2	1.09	.01	.09	1	1
SS27	1	14	20	177	.4	21	11	913	2.36	15	5	ND	6	46	.7	2	2	11	.95	.075	27	14	.43	37	.02	6	.98	.01	.05	1	1
STANDARD C/AU-S	18	59	37	130	7.3	71	31	1057	3.96	41	21	8	40	52	18.5	14	19	57	.51	.086	39	61	.91	183	.08	35	1.94	.06	.14	10	48

Sample type: STREAM SED.. Samples beginning 'RE' are duplicate samples.

03-TRVRS



DATE	REVISION	INITIAL
25SEP92	New Drawing	JDW

INTERGREX ENGINEERING

NOTES:

Base Map from Surveys and Mapping Branch, Dept. of Energy, Mines and Resources 105B/9 "ALLAN CREEK" Edition 1 & 105B/10 "GRAVEL CREEK" Edition 1

Coordinate Grid UTM Zone9

Contour interval 100 FEET

COMPOSITION	5		10	
1	BORDER/TITLE	6		11
2	ELEVN Contours	7		12
3	DRAINAGE	8		13
4	Misc Features	9		14

250 METRES 0 250 500 750 1000

Scale 1:25,000

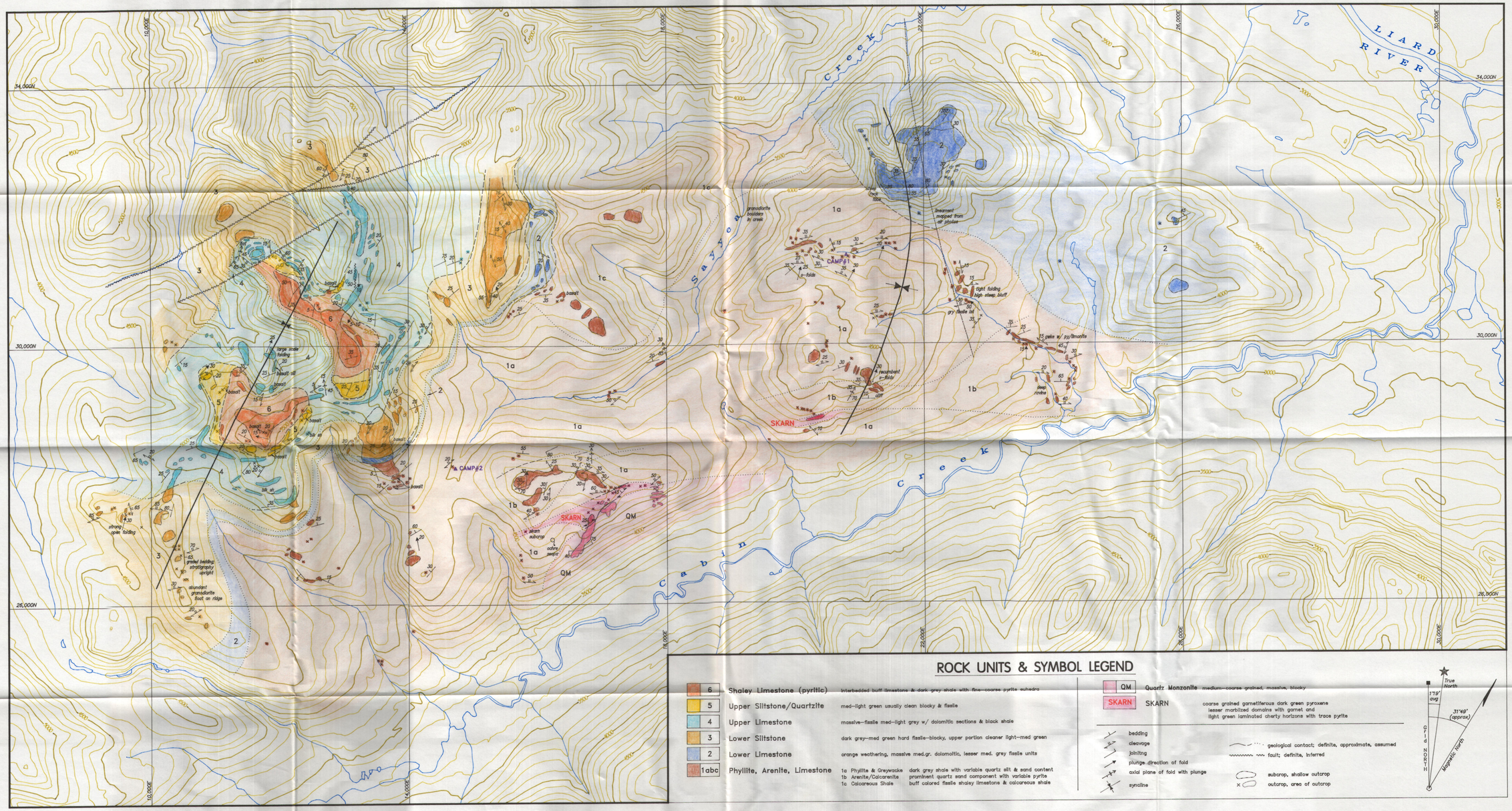
YMIP 1992 PROGRAM

PROJECT AREA
Traverse Routes

DATE DRAWN:	SEPTEMBER, 1992	SCALE:	1 : 25,000
DRAWN By:	J.D.WILLIAMS, P.Eng.	DWG No.:	03-TRVRS
JOB No.:	YMIP-92101	N.T.S:	105B/09,10

Figure No.: 03

04-GEOL



ROCK UNITS & SYMBOL LEGEND

6	Shaley Limestone (pyritic)	interbedded buff limestone & dark grey shale with fine-coarse pyrite euhedra
5	Upper Siltstone/Quartzite	med-light green usually clean blocky & fissile
4	Upper Limestone	massive-fissile med-light grey w/ dolomitic sections & black shale
3	Lower Siltstone	dark grey-med green hard fissile-blocky, upper portion cleaner light-med green
2	Lower Limestone	orange weathering, massive med.gr. dolomitic, lesser med. grey fissile units
1abc	Phyllite, Arenite, Limestone	1a Phyllite & Greywacke: dark grey shale with variable quartz silt & sand content 1b Arenite/Calcarenite: prominent quartz sand component with variable pyrite 1c Calcareous Shale: buff colored fissile shaley limestone & calcareous shale
QM	Quartz Monzonite	medium-coarse grained, massive, blocky
SKARN	SKARN	coarse grained garnetiferous dark green pyroxene lesser marbilized domains with garnet and light green laminated cherty horizons with trace pyrite

bedding; cleavage; jointing; plunge direction of fold; axial plane of fold with plunge; syncline

geological contact; definite, approximate, assumed

fault; definite, inferred

subcrop, shallow outcrop

outcrop, area of outcrop

True North; 179° avg; 31°49' (approx); Grid North; Magnetic North

DATE	REVISION	INITIAL
30SEP92	New Drawing	JDW
30SEP92	minor changes; figure4 changed to 04	JDW
010CT92	name of rock unit6 changed from Calc.Shale	JDW

INTEGREX ENGINEERING

NOTES:
Base Map from Surveys and Mapping Branch, Dept. of Energy, Mines and Resources 105B/9 "ALLAN CREEK" Edition 1 & 105B/10 "GRAVEL CREEK" Edition 1
Coordinate Grid UTM Zone9
Contour interval 100 FEET

COMPOSITION	5		10	OUTCROP
1 BORDER/TITLE	6	Geol Annotation	11	SUBCROP
2 ELEVN Contours	7	Geol Contacts	12	
3 DRAINAGE	8	FOLDING	13	
4 CampSites	9	FAULTING	14	

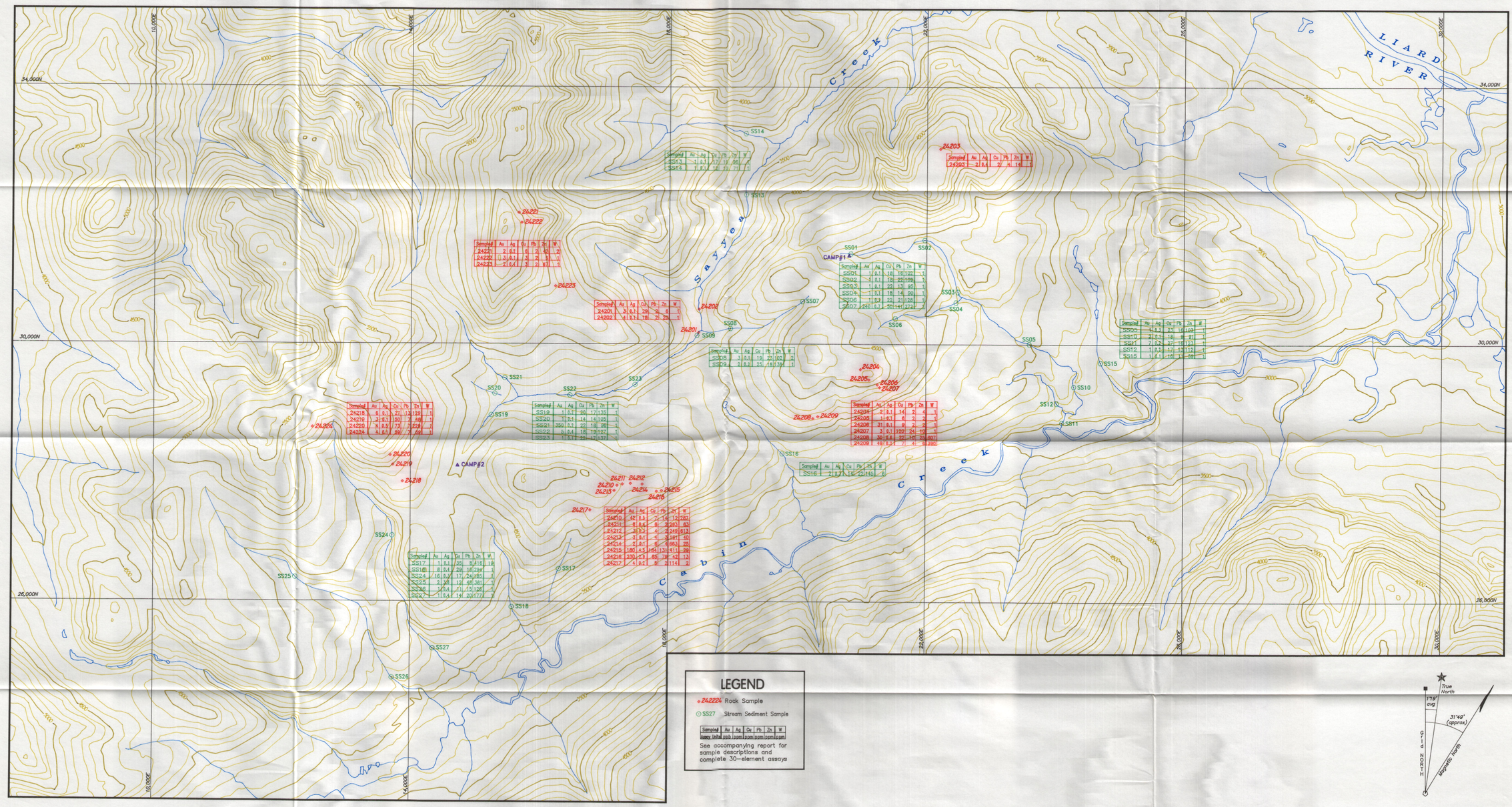
250 METRES 0 250 500 750 1000
Scale 1:25,000

YMIP 1992 PROGRAM

PROJECT AREA BEDROCK GEOLOGY

DATE DRAWN:	SEPTEMBER, 1992	SCALE: 1 : 25,000	Figure No.: 04
DRAWN By:	J.D.WILLIAMS, P.Eng.	DWG No.: 04-GEOL	
JOB No.:	YMIP-92101	N.T.S: 105B/09,10	

05-SAMPL



Sample#	Au	Ag	Cu	Pb	Zn	W
24218	6	0.1	27	13	139	1
24219	3	0.1	50	3	68	1
24220	1	0.5	73	7	259	2
24224	1	0.1	39	7	61	1

Sample#	Au	Ag	Cu	Pb	Zn	W
SS19	1	0.1	20	17	135	1
SS20	1	0.1	14	14	105	1
SS21	350	0.1	22	18	95	1
SS22	5	0.4	18	19	127	1
SS23	1	0.1	22	17	137	1

Sample#	Au	Ag	Cu	Pb	Zn	W
SS17	1	0.1	35	8	416	19
SS18	8	0.4	29	16	294	1
SS24	10	0.9	17	24	195	1
SS25	2	0.1	12	45	381	1
SS26	1	0.4	11	15	126	1
SS27	1	0.4	19	20	177	1

Sample#	Au	Ag	Cu	Pb	Zn	W
SS13	1	0.1	17	19	68	1
SS14	1	0.1	18	19	71	1

Sample#	Au	Ag	Cu	Pb	Zn	W
24221	2	0.1	6	2	62	2
24222	1	0.1	3	2	51	1
24223	2	0.1	3	2	97	1

Sample#	Au	Ag	Cu	Pb	Zn	W
24201	3	0.1	29	3	6	1
24202	4	0.1	18	2	28	1

Sample#	Au	Ag	Cu	Pb	Zn	W
SS08	3	0.1	19	20	102	2
SS09	2	0.2	25	18	139	1

Sample#	Au	Ag	Cu	Pb	Zn	W
SS01	1	0.1	18	18	102	1
SS02	1	0.1	18	22	109	1
SS03	1	0.1	22	13	80	1
SS04	1	0.1	18	14	90	1
SS06	1	0.2	22	21	128	1
SS07	240	0.1	50	14	1224	1

Sample#	Au	Ag	Cu	Pb	Zn	W
SS05	1	0.1	23	16	103	1
SS10	2	0.1	18	9	87	1
SS11	2	0.2	27	18	153	1
SS12	1	0.1	17	15	112	1
SS15	1	0.1	18	11	99	1

Sample#	Au	Ag	Cu	Pb	Zn	W
SS16	2	0.1	14	22	116	6

Sample#	Au	Ag	Cu	Pb	Zn	W
24203	2	0.1	2	4	14	1

Sample#	Au	Ag	Cu	Pb	Zn	W
24204	2	0.1	14	2	4	1
24205	1	0.1	6	2	2	1
24206	31	0.1	9	2	2	1
24207	3	0.1	120	24	10	1
24208	30	0.4	22	16	34	607
24209	46	0.5	7	41	58	302

Sample#	Au	Ag	Cu	Pb	Zn	W
24210	42	0.1	7	16	12	287
24211	8	0.4	8	2	93	83
24212	3	0.3	4	2	49	613
24213	3	0.1	5	2	61	50
24214	2	0.1	9	4	63	25
24215	180	4.5	164	13	411	38
24216	330	4.3	85	29	42	13
24217	4	0.1	8	2	114	2

LEGEND

- 24222A Rock Sample
- SS27 Stream Sediment Sample

Sample#	Au	Ag	Cu	Pb	Zn	W
Assay Units	ppb	ppm	ppm	ppm	ppm	ppm

See accompanying report for sample descriptions and complete 30-element assays

DATE	REVISION	INITIAL
26SEP92	New Drawing	JDW
28Sep92	Figure# changed to 05	JDW

INTERGREX ENGINEERING

NOTES:

Base Map from Surveys and Mapping Branch, Dept. of Energy, Mines and Resources 105B/9 "ALLAN CREEK" Edition 1 & 105B/10 "GRAVEL CREEK" Edition 1

Coordinate Grid UTM Zone9

Contour interval 100 FEET

COMPOSITION	5		10	
1 BORDER/TITLE	6	ROCK Samples	11	
2 ELEVN Contours	7		12	
3 DRAINAGE	8	Stream Sediments	13	
4 CampSites	9		14	

250 METRES 0 250 500 750 1000

Scale 1:25,000

YMIP 1992 PROGRAM

PROJECT AREA
Sample Locations & Assays

DATE DRAWN:	SEPTEMBER, 1992	SCALE: 1 : 25,000	Figure No.: 05
DRAWN By:	J.D.WILLIAMS, P.Eng.	DWG No.: 05-SAMPL	
JOB No.:	YMIP-92101	N.T.S: 105B/09,10	