

MAP NO.: ASSESSMENT REPORT X

DOCUMENT NO: 092994

116 B /03

PROSPECTUS
CONFIDENTIAL X
OPEN FILE

MINING DISTRICT: Dawson
TYPE OF WORK: Initial Evaluation Survey

REPORT FILED UNDER: Merced Industries Inc.

DATE PERFORMED: July 16, 1990
August 16 - 20 1990

DATE FILED: Nov 6, 1991

LOCATION: LAT.: 64°02'N
LONG.: 139°07'W

AREA: Australia Hill Area
VALUE \$: 4,450.00

CLAIM NAME & NO.: Jap 1 - 11, YB30377 - YB30387, Jay 1 - 2, YB30408 - YB30412 - YB30413,
Omega 1 - 4, YB30408 - YB30411.

WORK DONE BY: David A. Downing, P.Eng and others.

WORK DONE FOR: Mr. Jack Thompson

DATE TO GOOD STANDING:

REMARKS: # 116 B

An initial evaluation survey was prepared for the owner to gather together the results of various evaluation surveys. The property has the potential of hosting a epithermal gold deposit. All results are preliminary.

*Needs
Geoscan
M.A.L.*

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AUSTRALIA HILL
Initial Evaluation Survey
for
Mr. Jack Thompson
on the
JAP 1-11, OMEGA 1-4 & JAY 1-2
NTS 116B03
Long. 139° 07' W, Lat. 64° 02' N
Dawson Mining District, Yukon
15 October 1991

David A. Downing, P. Eng.

092994

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 4,450⁰⁰.

for. *Robert Debluck*
Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

SUMMARY

Australia Hill, in the Dawson Mining District Yukon, has all the earmarks of a large bulk tonnage epithermal gold deposit. A massive kaolinitic alteration zone in the bedrock and overlying gravels contains topaz, fluorite, tourmaline and gold. It is situated over major northwest trending fault structures that parallel the Klondike valley, the Tintina Trench and are found at the base of the prolific White Channel Gravel placer deposits. There has been no previous evaluation of Australia Hill as an epithermal gold deposit.

A geologic model for Australia Hill is the Grew Creek deposit 380 km to the southwest. It also is located immediately southwest of the Tintina Trench along northwest trending faults with an extensive alteration zone. Past exploration in the Dawson area for another Grew Creek focused on Tertiary rhyolites as the host for this type of deposit. Australia Hill is adjacent to one of these rhyolite intrusions and one that is known to be mineralized. Lack of bedrock exposure precluded exploration to the northwest of this rhyolite intrusion towards Australia Hill. Australia Hill was not recognized as a White Channel placer deposit at that time.

Development of an effective low-cost exploration technique for the evaluation of epithermal gold deposits has only been achieved within the last two years. Application of shallow seismic or radar techniques for delineating clay alteration zones has yet to be applied in the Klondike. Frozen ground may limit the usefulness of seismic but similar radar surveys have been successful at Australia and Wounded Moose Creeks in the Klondike for profiling gravel stratigraphy and bedrock.

Preliminary test work conducted during the summer of 1990 provides some guidance for future exploration. Sample collection, processing and assaying techniques are critical. Visible *colours* from panning were not reflected in results from the assay laboratory. VLF-EM surveying appears to map graphitic fault zones that may also be geologic contacts. The present 1:50,000 scale geologic mapping could be improved upon at a scale of 1:10,000. Magnetometer surveying should record any ultramafic rocks from tectonic melange zones, if they exist on the property.

It is recommended that an initial property evaluation be conducted at Australia Hill. The evaluation requires acquisition and compilation of basic topographic, geophysical, geochemical and geologic data. Compiled data may then be used to sell, option or raise funds for further stages of exploration. The cost of a preliminary exploration program is estimated at \$5,000. Subsequent exploration would employ shallow geophysical techniques and require a budget of \$22,000. Exploration on this property will become increasingly easier as the placer operations expose more bedrock. It is essential that bedrock be examined and sampled as it is exposed by the placer operations as it will subsequently be covered again.

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INTRODUCTION

Throughout western North America, large tonnage, low grade gold deposits have revolutionized the gold mining industry over the last ten years. Formed from hot spring activity at the surface they are characterized by extensive alteration zones of clay minerals, specific trace element and mineral suites and an age of less than 120 million years. Typically they are genetically related to volatile rich intrusions of rhyolitic composition emplaced along major fault structures. Australia Hill has the earmarks of such a deposit.

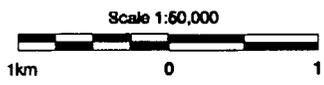
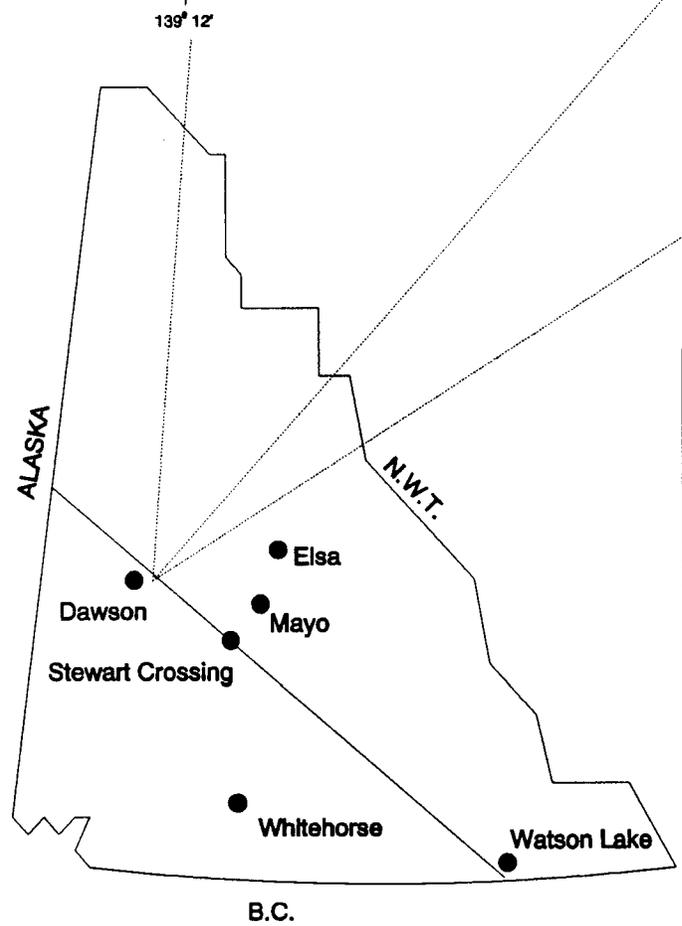
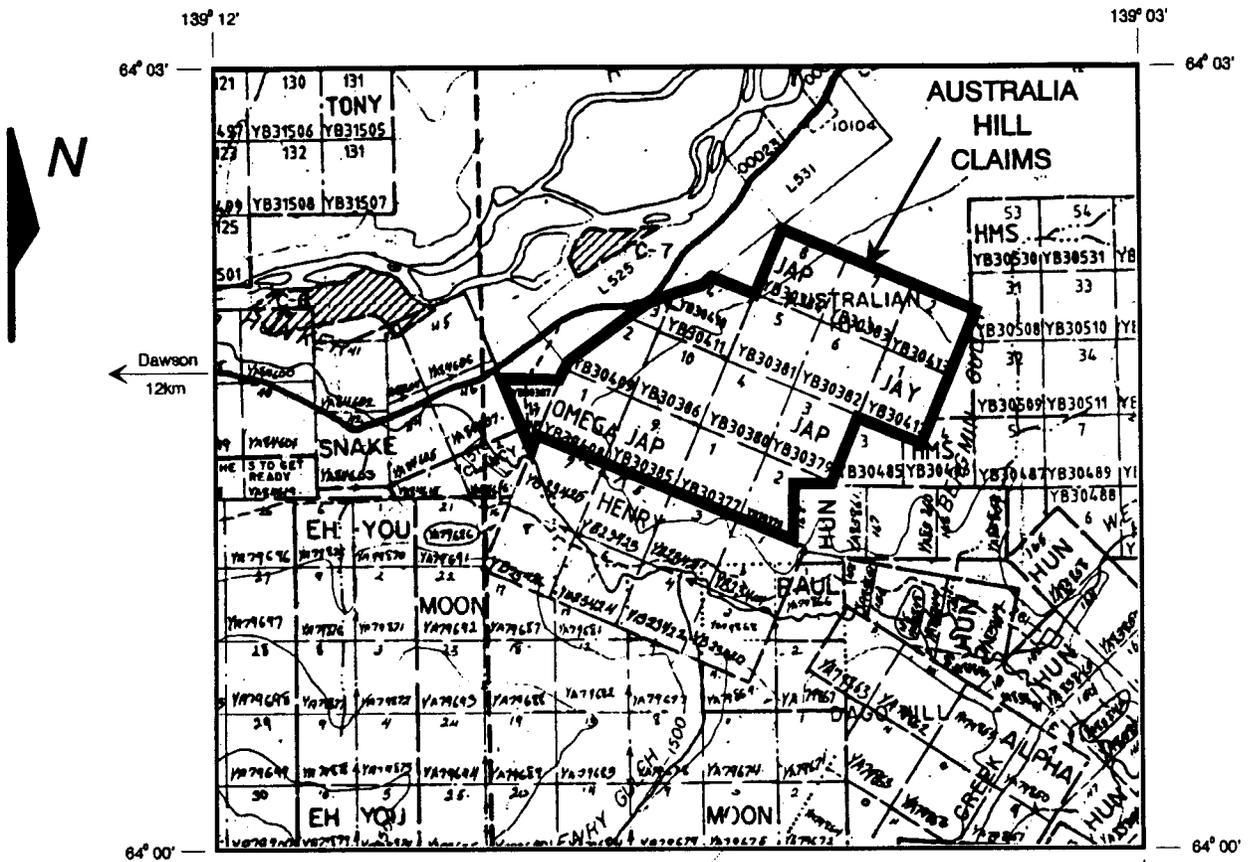
The Dawson area is famous for the goldrush of 1898. In excess of 200 million kilograms of gold have been produced from Klondike placer deposits since that time. The most productive dredging ground in Yukon was on Hunker Creek from the foot of Australia Hill downstream to the Klondike River.

During the field season of 1990 a preliminary evaluation of the Australia Hill claims was undertaken. The purpose of the evaluation was threefold. Firstly to confirm the presence of gold and indicator elements; secondly to examine the potential extent of the target zone(s); thirdly, to test geochemical and geophysical responses. The results of this initial investigation have been used as the basis for the recommended exploration program described at the conclusion of this report.

The work occurred in two phases. J. Duke of Noranda Exploration Company Limited and an assistant examined the claims and collected samples for description and assay on 16 July 1990. From 16 - 20 August 1990, D. Bret collected and processed further samples. Two lines were run to test magnetic and electromagnetic response across the claims at the same time.

LOCATION AND ACCESS

Australia Hill is located 12 km east of Dawson City, Yukon in the Dawson Mining District. The claims are bordered by the Klondike highway on the north and the Hunker road on the west. Several four wheel drive trails provide access to the bulk of the property. The Dawson airport is 2 km to the east along the Klondike highway. Figure 1 indicates the location of Australia Hill.



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**AUSTRALIA HILL
LOCATION & CLAIM MAP**
Figure 1

PROPERTY STATUS

A 16 claim block was staked by Mr. Roger Lavoie of Dawson City, on 12 May 1990 covering Australia Hill from the Klondike highway and Hunker road east to Bergmin Gulch. The claims were subsequently transferred to Mr. Jack Thompson of Abbotsford, B.C. The claims, staked under the Yukon Quartz Mining Act, cover ground already held under the Yukon Placer Mining Act. The placer claims entered production during 1991. The quartz claims are the JAP 1-11, OMEGA 1-4 and JAY 1-2 with grant numbers YB 30377-387, YB 30408-411 and YB 30412-413 respectively. The expiry date for the claims will advance to 12 May 1993 should this report be accepted for assessment purposes. Further exploration work on the claims to the value of \$100/claim may be filed to extend the date of expiry provided the work is completed prior to the date of expiry. Cash may be paid in lieu of the work.

HISTORY

The area of Hunker Creek from the foot of Australia Hill downstream along the Klondike River was known as the Golden Mile. The richest area of the Klondike it was included the famous Anderson and Boyle concessions.

The hardrock history pertinent to Australia Hill is recent even though it lies within the Klondike gold fields. From the gold rush until 1980 prospectors focused their prospecting on quartz veins containing gold. It wasn't until 1982 that a paper was published by Dirk Templeman-Kluit describing the clay alteration at the base of the White Channel gravels as being epithermal in origin. No comprehensive exploration for such a target was initiated until 1985 following a remapping of the Klondike by Ruth Debicki.

REGIONAL GEOLOGY

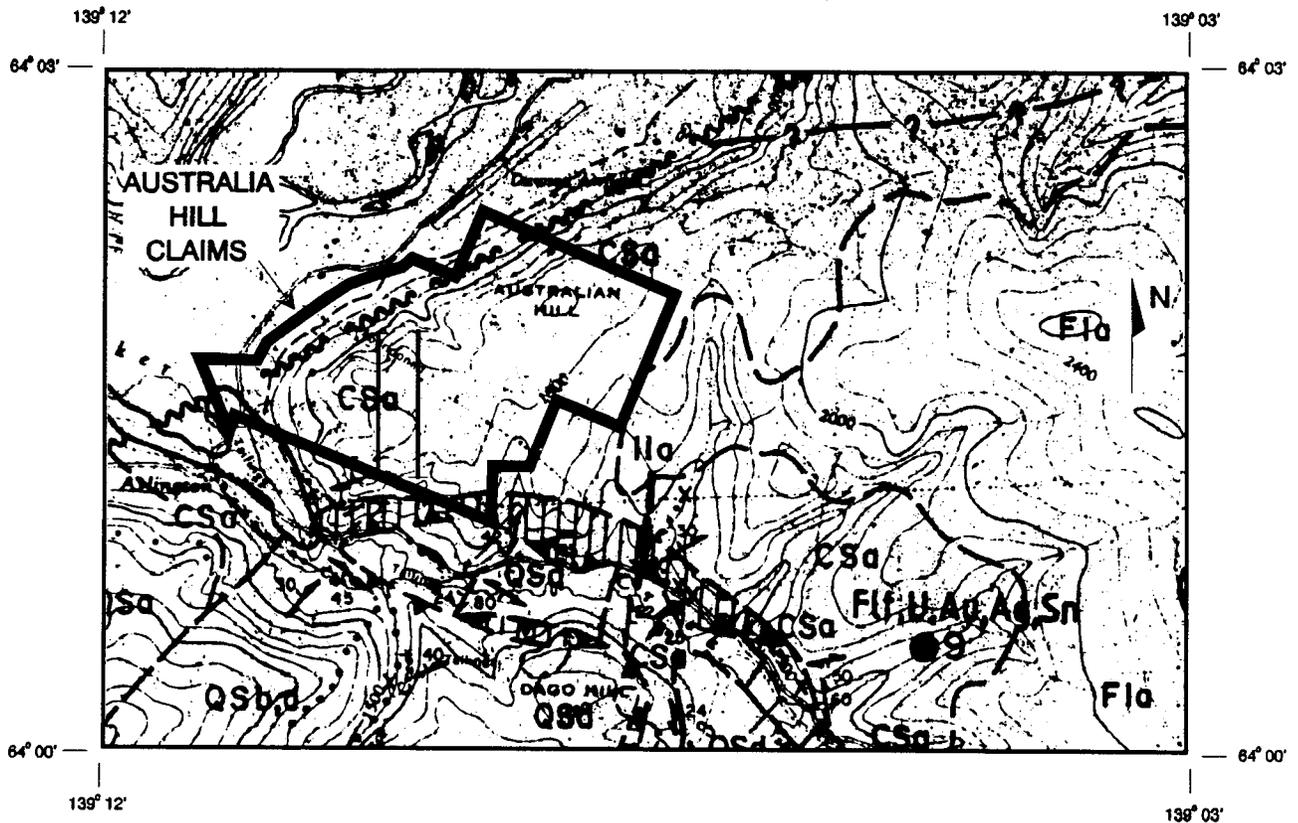
The basic geology of the Dawson area includes rocks of three categories. Triassic and older rocks make up the majority of the bedrock. They were originally sedimentary, volcanic and intrusive rocks but have been strongly metamorphosed to the schists so prevalent today. Diabase dikes of early Cretaceous age and/or older intrude the older metamorphic rocks. Late Cretaceous to Early Tertiary felsic and intermediate volcanics, intrusives and associated sedimentary rocks are the youngest rocks in the area. They are correlative with the rocks of the Mount Nansen - Carmacks Group and the Nisling Range Alaskites. Figure 2 records the 1:50,000 scale geology of the property and environs as mapped by Ruth Debicki.

A period of compressional tectonism followed by subsequent extension resulted in the many gold bearing quartz veins discovered by the early prospectors. These mesothermal veins are genetically related to the thrust faults that developed in reaction to the stress and to the ultramafic rocks located on the soles of the faults.

ECONOMIC GEOLOGY

Epithermal mineralization is recognized in the Late Cretaceous to Early Tertiary volcanic rocks. Tertiary miarolitic quartz-feldspar rhyolite porphyry is a known source of uranium, gold, silver and base metals. These intrusions appear to have a spatial relationship to the contemporaneous northwest - southeast strike slip faulting that resulted in the development of the Tintina Trench and Klondike River valley. Similarly, the intense hydrothermal alteration found in the lower sections of the White Channel gravel and underlying bedrock, where it has been mined for gold, would also appear to be spatially related to the northwest - southeast trending fault zones.

Topaz is recovered by placer mining operations in the lower Hunker Creek area including Australia and Dago Hills. In the southwestern U.S. topaz is employed as an indicator in epithermal gold exploration programs. Two other indicator minerals commonly used are tourmaline and fluorite, both of which are reported on Australia Hill.

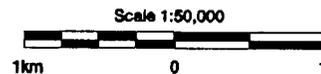


LEGEND

- LATE CRETACEOUS TO EARLY TERTIARY**
- INTERMEDIATE INTRUSIVE AND VOLCANIC ROCKS, AND ASSOCIATED SEDIMENTARY ROCKS**
- I** Ila massive dark grey weathering intrusive andesite
- FELSIC INTRUSIVE AND VOLCANIC ROCKS**
- FI** FIa light-coloured quartz feldspar rhyolite porphyry
- TRIASSIC OR OLDER**
- ROCKS OF VARYING GRADE AND DEGREE OF DEFORMATION**
- QUARTZOFELDSPATHIC SCHISTOSE ROCKS**
- QS** QSa blocky weathering light grey to pinkish grey feldspar quartz schist
 Qsb buff to pale green weathering well foliated muscovite-feldspar-quartz schist with quartz and feldspar porphyroclasts, and lithic fragments
 Qsd buff weathering well foliated muscovite-feldspar-quartz schist
- CARBONACEOUS ROCKS**
- CS** CSa massive to foliated dark grey to black carbonaceous quartzite and muscovite-quartz schist

SYMBOLS

- Fault or lineament, location known, approximate and estimated
- Thrust fault, known and approximate
- Geological boundary, location known and approximate
- Tectonic melange
- Schistosity and gneissosity; (horizontal, inclined, and vertical)
- Small outcrops; area of outcrop
- Mineral occurrence with commodity indicated



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**AUSTRALIA HILL
GEOLOGY MAP**

Figure 2

**PROPERTY
GEOLOGY**

The property as examined to date has little naturally outcropping bedrock. Stripping, trenching, road building and mining by the placer miners has exposed some sections of the overlying gravel down to bedrock.

The top of the hill is a relatively flat plateau incised by small gulches. It is an old valley floor uplifted 90 - 100 metres above the present valley bottom. Bedrock is covered with approximately 80 metres of fluvial gravels and a thin vegetative mat.

The uppermost gravel is the coarse brown Klondike glacial-fluvial outwash gravel containing moderately well sorted, well rounded sand to cobble sized material. The clasts are of quartz, carbonaceous shale, chert and schist. There are ice wedges up to 10 metres long in the gravel. The lithology is mostly of local derivation with minor exotic clasts such as the chert coming from the Selwyn Basin in the eastern Yukon. This unit shows a multitude of high energy fluvial depositional features including gross graded bedding. The unit is 45 - 50 metres thick.

Under the Klondike gravel, the White Channel gravel is 30 - 35 metres thick. It is a clast supported gravel with a sericitic matrix. The lithology includes quartz, sericitic schist, and occasionally granodiorite. The schist and granodiorite clasts are badly decomposed.

The bedrock, where exposed, is quartz-sericite schist with minor quartz veins and lenses. It has been undergone strong hydrothermal alteration resulting in a high clay content for at least a depth of 1.5 metres as has the overlying white channel gravel through the lower 3.5 metres. This bedrock is different from that recorded on the 1:50,000 scale geology map (Figure 2). To the north of the tectonic melange unit is quartz sericite schist. At some unexposed point to the north it is assumed that there is a geologic contact with the black carbonaceous unit recorded on the geology map. The contact is question may be a fault contact as it is to the west around Jackson and Lovett hills. This contact, assuming it is a fault contact, is undoubtedly recorded as the VLF-EM geophysical anomaly.

Poorly exposed fault zones filled with black graphitic gouge cut the bedrock along an east-west trend. The surface expression of these zones is a distinct change in the surface of the drill roads from schist gravel to black clay.

SAMPLING RESULTS

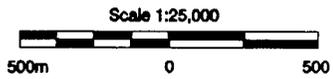
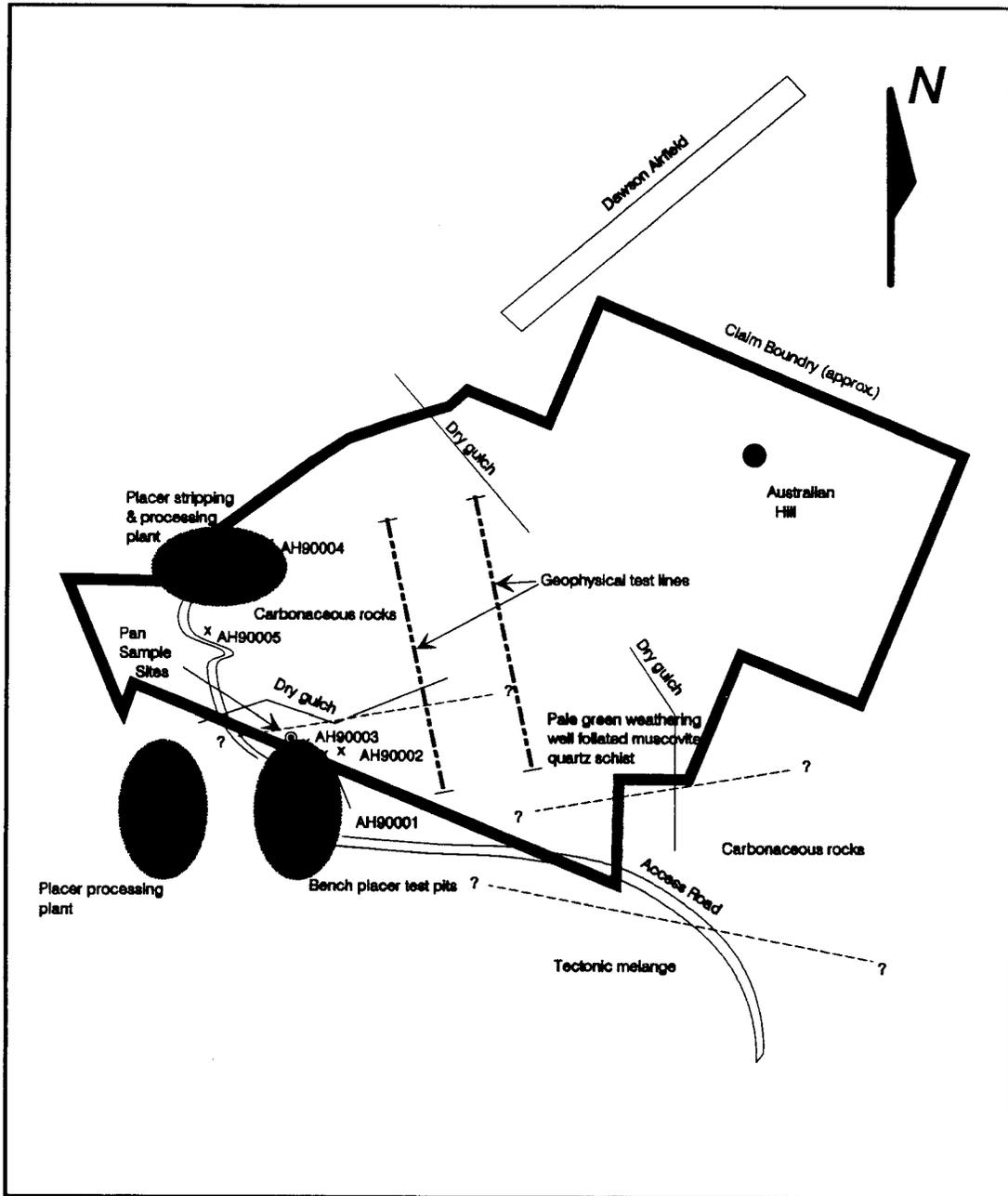
Initial sampling results are inconclusive and only serve to indicate the need for extreme caution in sampling and assaying technique. Samples that are carefully panned contain fine visible gold (colours), and yet gold has failed to be recorded using standard assay techniques.

Notwithstanding, the sampling and assaying problems for gold, the few samples collected and assayed show two distinct mercury geochemical signatures. The *white channel* gravels display only background levels of mercury at less than 40ppm and typically 5 - 10 ppm. The black graphitic material runs at greater than 50 ppm mercury and is typically 150 - 200 ppm mercury. This conclusion is, of course, preliminary as it is based upon so few samples.

Panned samples contained 20 - 180 colours per pan and averaged 40 colours. Several 1mm - 2mm sized topaz's were recovered. Eldorado Mining's placer operation on the south side of the hill gold recoveries had 20% -10 mesh +30 mesh, 60% -30 mesh +60 mesh and 20% -60 mesh, (Placer Mining Section 1991, p.74). Recoveries of -60 mesh gold were felt to be poor. The other two placer operations on the hill have also had fine gold recovery problems.

Comparison of the placer gold distribution and the discrepancy between hardrock panning results and assays, suggests that a large portion of the gold may be in the -60 mesh fraction, but is not in the micron size range. The acid leach used in the atomic absorption spectroscopy method would have efficiently extracted any micron sized gold. Panning of bedrock samples, however, indicates several milligrams visible gold per 1000 cubic centimeter.

In future all samples should be of a constant and recorded volume. They should be wet screened for size classification and the individual fractions should have the heavy minerals separated using a gravity technique. The heavy mineral fraction should be visually examined for an estimate of the visible gold. The whole of each individual fractions should be assayed using an appropriate fire assay technique. The the size distribution of gold particles is a critical for design of recovery systems and will influence the economics of any potential orebody.



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**AUSTRALIA HILL
SAMPLE LOCATIONS**

Figure 2a

AUSTRALIA HILL SAMPLING RESULTS											
Sample No.	Type	Material	Au ppb	Ag ppm	As ppm	Cu ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Hg ppb
138274	Grab	Rock	1	0.1	2	8	2	23	2	28	5
138275	Grab	Rock	4	0.5	5	3	3	25	2	1	5
138283	Grab	Rock	2	0.2	26	16	2	4	2	207	10
138284	Grab	Rock	3	0.4	50	8	3	40	2	52	5
138285	Grab	Rock	7	0.1	18	23	1	5	2	156	30
138286	Grab	Rock	3	0.3	34	133	4	12	2	263	40
90001	Grab	Rock	12	<0.5	<5	68	5	11	<5	244	180
90002	Grab	Rock	9	<0.5	7	36	2	14	<5	90	60
90003	Grab	Rock	8	0.7	<5	52	6	15	<5	205	150
90004	Grab	Rock	10	0.5	<5	90	11	23	<5	135	360
90005	Grab	Rock	7	<0.5	53	83	<1	<5	<5	481	50
			Au(colors)								
1	10 litre	Gravel	2								
2	10 litre	Gravel	0								
3	10 litre	Gravel	0								
4	10 litre	Gravel	0								
5	10 litre	Gravel	8								
6	10 litre	Gravel	16								
7	10 litre	Rock	>80								
8	10 litre	Rock	>60								
9	10 litre	Rock	23								
10	10 litre	Rock	38								
11	10 litre	Rock	32								
12	10 litre	Rock	0								
13	10 litre	Rock	64								
14	10 litre	Rock	48								
15	10 litre	Rock	0								
16	10 litre	Rock	0								

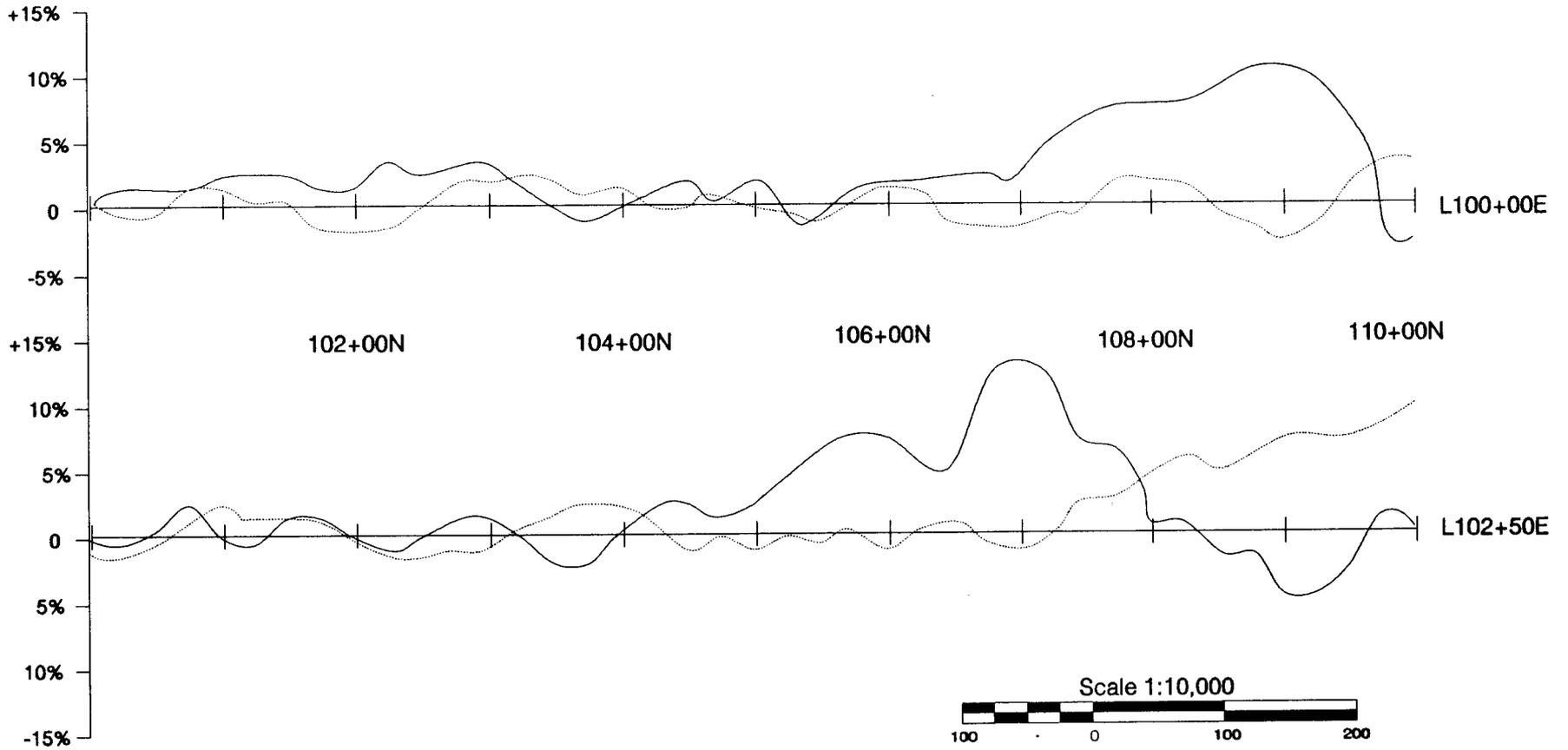
* see appendices for complete descriptions and results for additional elements

GEOPHYSICS

A test grid was established on the claims for the purpose of checking magnetic and electromagnetic response. Two lines of 1000 metres with 25 meter stations were run 250 meters apart (See Figure 2).

The magnetic survey was inconclusive and recorded only typical topography of the klondike schist. A magnetometer survey should differentiate between the tectonic melange unit and the schist. A more extensive survey should be conducted to detect and map any ultramafics as occur on the south edge of the property. The survey was conducted during a period of moderate magnetic noise. Should a survey be run during a quieter magnetic period, it may be used to map subtle differences between the klondike schist and carbonaceous rocks.

The Very Low Frequency - Electromagnetic (VLF-EM) survey was more successful in revealing subsurface details. Both lines recorded anomalous cross-overs at the northern extent of the survey. The cross-overs are interpreted as reflecting a graphitic fault zone that may also represent the geologic contact between klondike schist and carbonaceous rocks. The trend of the anomaly is basically coincident with an area of black clay exposed by placer access trails to the west crossing the face of the hill just above the bedrock rim. The results of the test lines are plotted on Figure 3. The plotted results have been Frazer filtered and thus the highest positive values represent the most conductive zones.

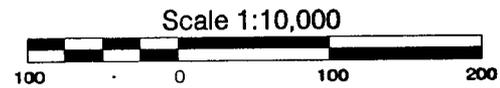


Instrument - Geonics EM-16

Station - Seattle, Washington

—— Frazer filtered in-phase component

..... Filtered out-of-phase component (quadrature)



MERCED INC.
AUSTRALIA HILL VLF-EM TEST MAP
Figure 3

CONCLUSIONS

All the key components of an epithermal gold deposit exist at Australia Hill. Tertiary topaz bearing rhyolite is located on a regional strike slip structure with a large clay alteration zone bearing topaz, tourmaline, flourite and gold.

This type of deposit has only been recognized in the area for less than ten years and Australia Hill has never been evaluated as such.

A new geophysical exploration method (radar), capable of delineating the clay alteration zones associated with epithermal deposits has been perfected recently.

Visually identified gold from panned samples does not correlate with the geochemical results of acid leach atomic absorption for gold.

Test geophysics indicate that a VLF-EM survey may be useful in delineating graphitic shear zones. A magnetometer survey could be used to map ultramafic rocks in tectonic melange zones although the test lines did not locate any.

RECOMMENDATION

Baseline data is required to effectively evaluate the property on a preliminary basis. A compilation and summary of the presently available information should be assembled. It should include a literature search for both historical and recent data pertinent to the project. Air photographs and a satellite image should be acquired and examined for structural features. A preliminary base map should be prepared showing topography, claim locations, current workings and roads, drainage and any obvious geology. If possible, exposed altered bedrock should be screened to appropriate size fractions and examined for visible gold, topaz, flourite and tourmaline. Rejects from the screening should be assayed for gold and mercury. This initial phase is estimated to cost \$5,000.

A second phase of exploration would employ geophysical methods to delineate the extent of the alteration halo and define the locations of the northwest - southeast trending fault structures. Station to station radar is the suggested method of mapping the alteration and a VLF-EM survey should be effective in tracing the faults. Both methods require the establishment of a picketed grid. The estimated cost is \$22,000.

PROPOSED COSTS

Literature search and basic research 2 days @ \$400/day - geologist	\$ 800
Air photographs and satellite image	500
20 Gold & Mercury Trace Element Determinations @ \$20.00	400
Groundwork for base-map 3 days @ \$400/day - geologist 3 days @ \$200/day - prospector	1,600
Report writing and drafting 3 days @ \$400/day - geologist	1,200
Food, transport & accommodation	500

	Total Phase I

	\$ 5,000

10km Radar @ \$1,500/km	\$ 15,000
10km VLF-EM @ \$200/km	2,000
10km Line cutting @ \$150/km	1,500
Report writing and drafting 5 days @ \$400/day - geologist	2,000
Contingency	1,500

	Total Phase II

	\$ 22,000

	TOTAL PROJECT COST

	\$ 27,000

SELECTIVE BIBLIOGRAPHY

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Burt, D.M., Sheridan, M.F., Bikun, J.V., Christiansen, E.H., 1982. Topaz rhyolites - distribution, origin, and significance for exploration; in *Economic Geology*, Vol. 77, p.1818-1836.

Debicki, R.L. 1985. Bedrock geology and mineralization of the Klondike area (east), 115O/9,10,11,14,15,16 and 116B02; Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada. Open File, 1:50,000 scale map with marginal notes.

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Cooksley, J.W., 1990. Use of seismic geophysics in the detection of epithermal precious metal deposits in the western U.S.; in *Explore*, The Association of Exploration Geochemists Newsletter, January 1990, p.1,3,4.

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Placer Mining Section 1991. Yukon Placer Industry 1989 to 1990; Mineral Resources Directorate, Yukon, Indian and Northern Affairs Canada.

STATEMENT OF COSTS

Summary

Research, project supervision, report writing and drafting	\$ 2,245
Sample collection, panning and assaying	1,405
Test geophysics, magnetometer and VLF-EM	800
<hr/>	
Total	\$ 4,450

Costs by Item

Description	Item	Quantity	Rate	Amount	Subtotal
Noranda	J. Duke *	1 day	\$300	\$300	
	Assistant *	1 day	\$200	\$200	
	Assays *	6	\$33	\$198	\$698
Field Prep.	D. Bret	1 day	\$340	\$340	\$340
Dawson - Field Work/ Processing	D. Bret	5 days	\$340	\$1700	
	R. Beaumont	5 days	\$250	\$1250	\$2950
Expenses	Assays	1	\$24	\$24	
		4	\$18.50	\$74	
	Mag. Rental	1 week	\$210	\$210	
	EM-16	1 week	\$170	\$170	\$478
	Rental				
TOTAL					\$4466

* paid by Noranda (all other costs billed by Geotek)



STATEMENT OF QUALIFICATIONS

I, David A. Downing, of 14 Buttercup Place, in the City of Whitehorse, Yukon, Canada, do hereby certify:

1. That I am a consulting geological engineer, with an office located at #3 - 1114 First Avenue, in the City of Whitehorse, Yukon.
2. That I am a graduate of Queen's University, Kingston, in Kingston, Ontario, Canada, where I obtained a Bachelor of Science Degree in Geological Engineering (Mineral Exploration and Resource Evaluation Option) in 1978.
3. That I am a registered Professional Engineer (Geological); in the Association of Professional Engineers of the Yukon Territory - #0832.
4. That I have practised my profession as an engineer and geologist for the past fourteen years.
5. That I have examined the Australia Hill property as defined by the quartz claims listed in this report.
6. That I have personally prepared this report from information documented by Noranda Exploration Co. Ltd. and Merced Inc.. That I did not supervise the work described herein.

Dated this 15th day of October, 1991, at the City of Whitehorse, Yukon Canada.

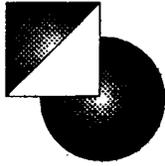


David A. Downing, P. Eng.

WORK CREW

Supervising Geologist - Diana Bret (see next page)
Field Hand - Ralph Beaumont
Geotek Resource Management Ltd.
808 S.W. 15th Avenue,
Portland, OR. 97205

Property Inspection by:
Geologist - Jessie Duke
Noranda Exploration Ltd.
#201 - 107 Main Street
Whitehorse, Yukon



GeoTek Resource Management Ltd.

808 S.W. 15th, Portland Oregon 97205 (503)228-2600

STATEMENT OF QUALIFICATION - MS. DIANA BRET

Graduate of University Arizona(Phoenix) B.Sc.(Geology) 1983

Geophysical Technician with Earth Probe Research &
Consulting, Sparks, Nevada (1983 - 1988)

Consulting Geologist to BRGM a.b.m., Santiago, Chile(1988-)

Member of the Association for Women Geoscientists.

Member of The Geological Society of America

Member of the Society of Exploration Geophysicists

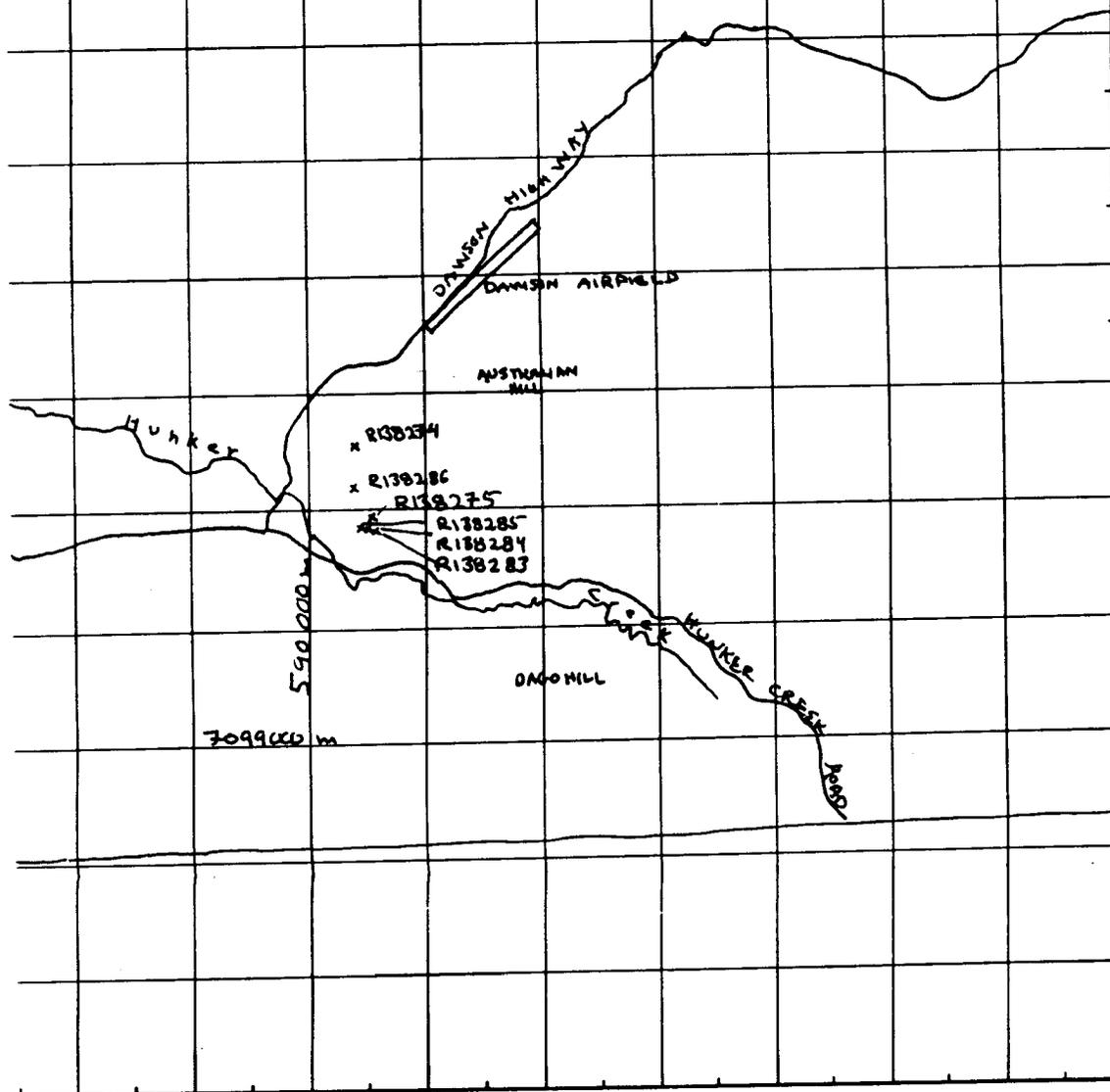
Member Association Geological - Chile

APPENDIX A

Noranda Exploration Sample Map, Results and Descriptions

AUSTRALIAN HILL PROPERTY EXAM

Sample against INTENSE
ALTERATION IN SCHISTS OF
THE "YUNGGI GROUP" and
ASSOCIATED QUARTZ VEINING



No. of SAMPLES 6 SAMPLE No's. R138274, R138275, R138283 to
R138286 inclusive
 PROJECT 312 A/4 DATES SAMPLED 16, 7, 1960 COLLECTORS J. DUKE
 REMARKS AUSTRALIA HILL PROPERTY EXAM
 SCALE 1:50,000 N.T.S. No. 116 B/3

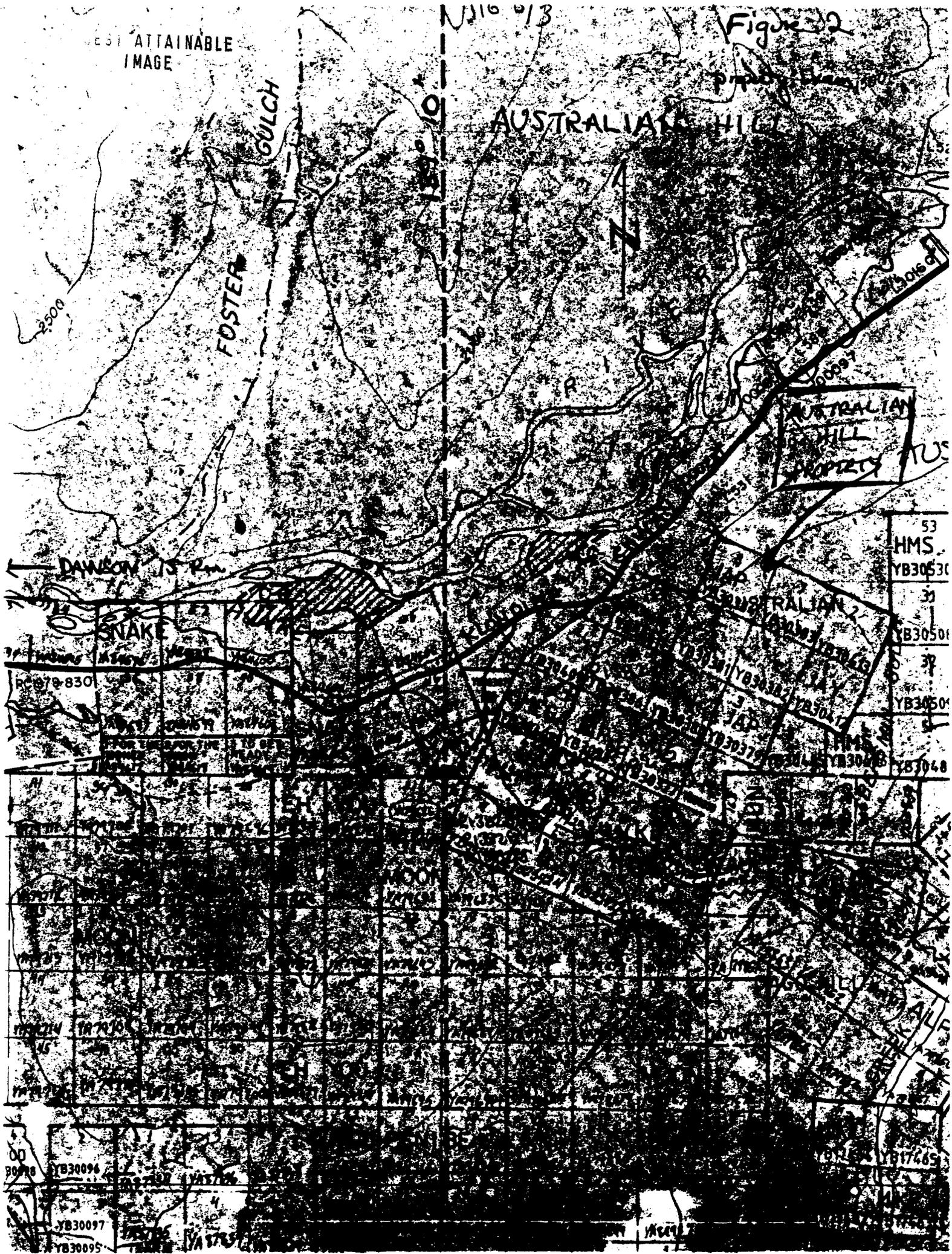
G.C.I. No. 52222

Fig.

BEST ATTAINABLE
IMAGE

116 9/3

Figure 2



N.T.S. 116 B/3

DATE July 16, 1990

PROJECT 312 A/4

PROPERTY AUSTRALIA HILL EXAM

ROCK SAMPLE REPORT

MPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G	A	G	A	G	A	G	A	G	A	SAMPLED BY
					<input type="checkbox"/>										
	SEE G.C. I 52222 for Locations				Au	PPB									
18274	Taken behind DAN JOHNSONS SLICE BOXES IN WEATHERED YUKON GROUP METAMORPHICS. These are overlain by white-channel bench deposits which are being mined - unofficially at \$35.00/Yd (e\$550.00 Au?) - Rocks are altered carbonaceous schists with frequent quartz veins - SAMPLED: one cross-cutting quartz vein bearing a few blebs of pyrite - 5-10cm wide - There are several of these veins.	Tr.	GRA3	5-10 cm											JHD ↓
															ALL RESULTS LOW.
2138275	From Paul Bawinsky's (spelling?) placer operation on the west side of the property - Taken From Bedrock in the bed of a placer cut of altered white channel gold-bearing gravels. Bedrock is intensely altered Yukon Group metamorphics.		GRA3												

N.T.S. _____

PROPERTY AUSTRALIA HILL

DATE _____

ROCK SAMPLE REPORT

PROJECT _____

SAMPLE NO.	LOCATION & DESCRIPTION	% SULPHIDES	TYPE	WIDTH	G	A	G	A	G	A	G	A	G	A	G	A	SAMPLED BY
					<input type="checkbox"/>												
	See G.C.I. 52222 for Locations																
138284	Same location as R138283 - QUARTZ VEIN - 5-10 cm wide VERTICAL, STRIKING NORTH. CONTAINS BANDS OF LIMONITE GIVING VEIN A ROUGH Banded appearance.		QUARTZ	5-10 cm													JLD ↓
138285	10m E of R138284 - a hard schist. Prominent limonite on foliation planes - locally cross cut with limonite veinlets - giving the appearance of a stock work. CONTAINS DISSEMINATIONS AND BLENDS OF A SOFT GREY SULPHIDE. QUARTZ SWEATS AND MN-STAINING (dendrites) common. A few strongly limonitic cross-cutting quartz veinlets. Extensive pods of sericite and clay.	2-4	GPAB														

GEOCHEMICAL ANALYSIS CERTIFICATE

Yukon Gen. (JD)

Noranda Exploration Co. Ltd. PROJECT 9008-033 312

File # 90-3335

P.O. Box 2380, 1050 Davie, Vancouver BC V6B 3T5

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	Hg ppb
R 138262	27	29	2	21	.5	17	1	11	.43	15	5	ND	1	76	.2	9	2	256	.03	.396	2	46	.01	550	.01	9	.57	.01	.06	1	5	1500
R 138274	2	8	23	28	.1	15	5	1368	2.39	2	5	ND	1	65	1.1	2	2	4	4.25	.019	6	11	1.96	31	.01	4	.14	.01	.05	1	1	5
R 138275	3	3	25	1	.5	11	1	20	.39	5	5	ND	1	5	.2	2	2	4	.04	.006	4	9	.02	169	.01	3	.13	.02	.07	1	4	5
R 138283	2	16	4	207	.2	81	26	286	5.89	26	8	ND	1	14	.2	2	3	22	.05	.006	5	109	.06	325	.01	4	.41	.01	.09	1	2	10
R 138284	3	8	40	52	.4	12	2	313	2.01	50	5	ND	5	150	.2	2	2	3	3.01	.004	8	24	1.07	88	.01	2	.13	.02	.05	1	3	5
R 138285	1	23	5	156	.1	40	20	186	6.01	18	5	ND	1	24	.2	2	2	23	.53	.002	3	121	.24	112	.01	2	.37	.01	.07	1	7	30
R 138286	4	133	12	263	.3	156	34	282	6.67	34	10	ND	1	42	.6	2	2	47	.16	.093	6	41	1.05	177	.01	3	1.59	.02	.04	1	3	40
R 138294	3	41	61	131	1.4	25	5	159	2.32	101	5	ND	3	12	1.1	7	2	19	.02	.020	12	16	.33	353	.01	9	.69	.01	.13	1	4	10
R 138295	2	42	6722	236	41.0	11	2	110	3.59	175	9	ND	12	3	1.0	42	9	25	.01	.039	19	18	.37	325	.01	11	.98	.01	.33	1	9	230
R 138296	3	190	20	552	2.6	24	7	362	2.28	36	5	ND	1	171	3.6	3	2	16	.07	.019	2	20	.47	179	.01	7	1.11	.01	.05	1	2	10
R 138297	24	22	58	7	.5	3	1	208	1.52	5	6	ND	7	55	.3	2	2	46	.05	.021	10	27	.64	413	.10	6	.95	.03	.31	1	7	20
R 138298	2	49	10084	380	59.6	8	1	176	4.18	306	8	ND	11	4	.8	50	4	25	.01	.037	17	17	.43	265	.01	9	1.00	.01	.26	1	4	520
STANDARD C	19	63	39	131	7.4	72	32	1053	3.97	38	17	8	39	52	18.4	15	21	58	.51	.093	40	61	.90	183	.08	38	1.92	.07	.13	13	-	1300

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. - SAMPLE TYPE: Rock AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

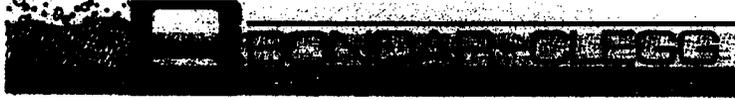
DATE RECEIVED: AUG 8 1990 DATE REPORT MAILED: *Aug 16/90* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

AUSTRALIA HILL ASSAY RECOMMENDED EXAM

APPENDIX B

Assay Certificates

Bondar-Ligg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2R5
phone: (604) 985-0881
fax: 04-372667



Geochemical
Lab Report

REPORT: V90-06821.0

PROJECT: AUST. HILL PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au 30g PPB	Ag PPM	As PPM	Cu PPM	Mo PPM	Pb PPM	Sb PPM	Zn PPM	Hg PPM
AH90001		12	<0.5	<5	68	5	11	<5	244	180
AH90002		9	<0.5	7	36	2	14	<5	90	60
AH90003		8	0.7	<5	52	6	15	<5	205	150
AH90004		10	0.5	<5	90	11	23	<5	135	360

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2B5
phone: (604) 985-0681
telex: 04-352667



**Geochemical
Lab Report**

REPORT: V90-06821.1

PROJECT: AUST. HILL PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au 30g PPB	Ag PPM	As PPM	Bi PPM	Co PPM	Cr PPM	Cu PPM	Mn PPM	Mo PPM	Ni PPM	Pb PPM
AH90005		7	<0.5	53	<2	43	171	83	1373	<1	93	<5

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2B5
phone: (604) 985-0681
telex: 04-352667



**Geochemical
Lab Report**

REPORT: V90-06821.1

PROJECT: AUST. HILL PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Sb PPM	Se PPM	Te PPM	W PPM	Zn PPM	Hg PPM	Ba PPM
AH90005		<5	<5	24	<10	481	50	2600

APPENDIX C

Magnetometer Survey Notes

Missoula, Montana, Aug. 16-90

Prosser City, Yukon Territory, Canada

EDA-MF100 Probe Perseus Magnetometer

(1) Base station Celestia base. (100100E, 100100N)

Time Reading ← Dry to about 2000 readings sure

6:30 5888 jumping 300-400 gammas.

6:31 5945

6:32 5940

6:33 5995

6:34 5945

6:35 5887

6:36 5849

6:41 5902

6:42 5940

6:44 5891

6:45 5945

6:46 5944

6:47 5936

6:50 5932

7:02 5931

7:03 5919

7:04 5916

7:05 5924

* Not good! It must be done today - it's supposed to be worse for the next week!!

Line 100100E

STATION	TIME	Reading	STATION	TIME	Reading
100100	7:08	5945	106100	8:07	5955
25	7:10	5947	25	8:09	5957
50	7:11	5988	50	8:10	5958
75	7:13	5943	75	8:11	5964
101100	7:16	5941	107100	8:13	5961
25	7:18	5920	25	8:14	5967
50	7:21	5921	50	8:15	5949
75	7:23	5928	75	8:17	5961
102100	7:27	5912	108100	8:18	5943
25	7:29	5901	25	8:21	5942
50	7:31	5938	50	8:23	5949
75	7:34	5955	75	8:25	5931
103100	7:36	5948	109100	8:26	5938
25	7:39	5941	25	8:28	5947
50	7:41	5950	50	8:29	5928
75	7:45	5950	75	8:30	5947
104100	7:47	5951	110100	8:32	5953
25	7:50	5968			
50	7:52	5943			
75	7:54	5944			
105100	7:56	5938			
25	7:59	5908			
50	8:02	5927			
75	8:05	5927			

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APPENDIX D

Electromagnetic Survey Notes

Australization Project Aug 10-90

Dawson City, Yukon Territory, Canada

Chances - V. 10.11.16

Station: S. 100' (Chronic very faint - in signal
to be used from here)

NIKE 248 - direction Az. 148°

* 100' dip is in the direction of the
crease in this case - the other side is
open for 500' as shown on the map.

- direction of flow lines is as shown on the map.

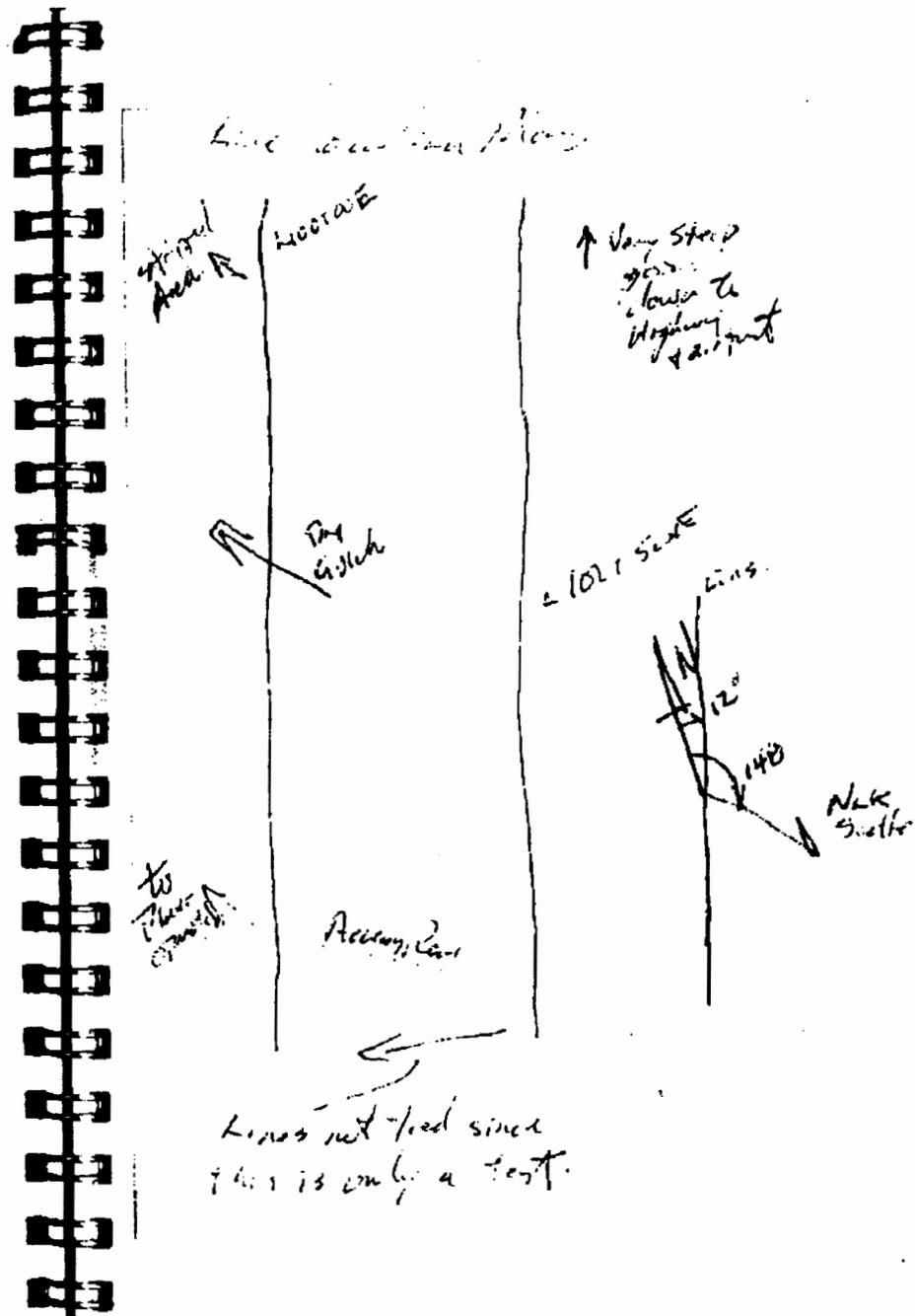
- lines not kept apart at some time

Line Station Dip (in) Dip (out) to (in)

Line	Station	Dip (in)	Dip (out)	to (in)
100700E	100700N	0	0	
	25	-1	-1	
	50	-1	-1	
	75	-2	+1	
101700N	+3		+2	
	25	-1	+1	
	50	0	0	
	75	-1	0	
102700N	+3		-2	
	25	+4	-2	
	50	+1	0	
	75	+3	+1	

Lines down on P. 10
105 by dip as big heavy to
get for 100' + Embolometry

Unit.



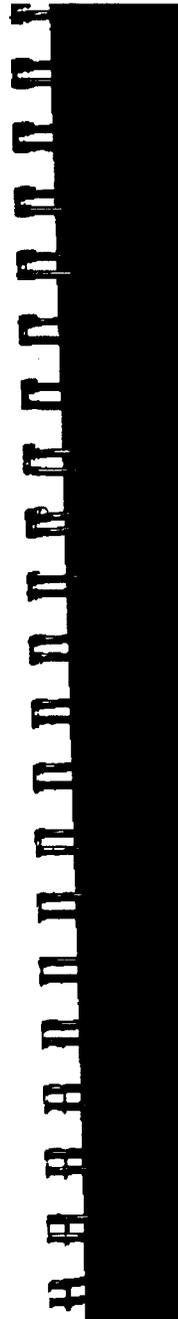
Line	Station	Dip (N)	Dip (S)	Remarks
100100E	103100W	-2	+2	
	25	+1	+2	(Cover)
	750	-2	+3	
	775	-1	+1	
107100W		+2	+1	
	25	+1	0	
	50	-2	+1	
	75	0	0	
103100		+4	-1	(Cover)
	25	-1	+2	
	50	-3	-2	
	75	+1	+1	
106100		+2	+1	
	25	+2	+1	
	50	+3	-2	
	75	+3	-1	
107100		+1	-1	
	25	+5	-2	
	50	+8	+2	
	75	+7	+1	
108100W		+8	+1	
	25	+11	-1	
	50	+14	-2	
	75	+13	-3	

Line	Station	Dip (N)	Dip (S)	Remarks
100100E	109100W	+9	-3	
	25	+5	-1	(Cover)
	50	0	+1	
	75	-4	+2	
110100W		-2	+1	
(x-1)+25		-1	-1	
*Fairly North & Juba conditions as on				
102100E	110100W	0	+9	
	109175	+1	+9	
	150	-3	+10	
	165	-6	+9	
107100W		-2	+9	
	175	-2	+8	
	150	0	+7	(Cover)
	125	+1	+7	
108100		+1	+6	
	75	+2	+3	
	50	+4	+5	
	25	+6	+4	
107100		+7	+6	
	75	+12	+5	
	50	+14	+4	
	25	+11	+2	
			11	
				↓ out

Line Station (D, T, U) 95' (V, W, X) 100' (Y, Z)

0075DE	100400N	+4	-1
	105+75N	0	+2
	750	+7	+1
	725	+7	-2
	100700N	+5	0
	100+75N	+2	-2
	750	+3	-1
	725	+2	0
	100710N	+1	+2
	775	-1	+3
	750	-2	+2
	725	-2	+1
	105700	0	+1
	775	+1	0
	50	+1	-2
	25	-2	-1
	102100	-1	-1
	775	+2	+1
	750	0	+2
	725	-1	+1
	101100	-2	+2
	775	+3	0
	750	0	-1
	725	-1	-1
	100400N	0	-1
	725	-1	-2

2000
177



APPENDIX E

Rock and Gravel Sampling Notes and Results

AUSTRALIAN HILL SAMPLE PROCESSING
(10 h samples - hand-picked) 18 Aug.

SAMPLE	Description	Age
AHP 1	Brown weathering unconsolidated 2nd Black Chert, Quartz Aggregate, Quartzite, & S&R Rhyolite, metagreywacke or meta- volcaniclastic. All rocks are iron stained.	2 color.

There are ~~two~~ sand seams
with cross bedding and
drape structures in this
brown gravel.

AHP 2	Brown gravel (as above)	φ
AHP 3	" " "	φ
AHP 4	" " " but a very coarse fraction	φ
AHP 5	White quartz gravel with small amount of clay near top of section.	8 colors
AHP 6	White quartz gravel (fine sum)	16 colors but very irregular

Two lithologies are immediately
obvious wherever enough gravel is
exposed. A brown & tan gravel lies
(unconformably?) on top of the white
channel gravel. Both units exhibit
cross bedding, graded bedding, channel
scouring and other high energy stream
bed characteristics.

The Brown Gravel (Tertiary) lithology is
2nd Black Chert - Subangular clasts typically
1-2 cm, buoy

Quartz Aggregate
Quartzite (Very well rounded massive
white quartz typically with
one axis longer than the
others) - Contains traces
of mica, feldspar & white clay
< S&R Rhyolite - Distinct subangular clasts
of light green siliceous
rhyolite

Metagreywacke - Well rounded clasts in
+/- Metavolcaniclastic a wide range of sizes
from sand to + 20 cm.
cut →

(Col. v.)
 Sample Description Au
 AHP7 white channel gravel from bedrock +80
 intrinsic clasts are completely
 rotted with argillic alteration
 mats of clay washes. From the
 sample a field is all very fine
 No "prayers" makes a sound when
 dropped into the pan.
 Panning is slow because ^{size} gold
 flake when it breaks the
 surface. (Lupine? scabiosa)

AHP8 white channel gravel from bedrock +60
 as above but contains small
 fragments of tape - clear
 glass like fragments well
 rounded on original surface
 + very angular on broken
 surface. They have been
 in AHP7 (above) + not
 recognized.

Note: Both samples were examined for
 Fluorite, tourmaline + monazite. None
 definitely identified although some tourmaline
 may have been present - Oring 1921 handbook

Metagranulite
 (1 cm²)

A wide range of clasts are
 poorly sorted on a finer
 gray to green matrix.
 Clasts may be extended
 in one direction + a
 weak foliation has
 developed

white channel gravel

10% Quartz Chlorite Schist light green angular
 shaly in part pieces from
 21 cm - + some hydro-
 thermal alteration is
 complete - rock only
 stays together
 because it contained
 quartz. Multiple
 foliations + impossible
 to tell original rock
 type. This is the
 rock type that makes
 up the bedrock in the
 Johnson operation

-7 cm²

SAMPLE	DESCRIPTION	AN COLOR
AHP 9	Qtz chl schist trace pulled apart with rock hammer	23
AHP 10	Qtz chl schist subunit (columns)	38
AHP 11	" (traps)	32
AHP 12	"	0
AHP 13	" + white channel sand from interface	07

* Gold is consistently very fine. It is not flattened at all but is typically shorter along one axis (when big enough to see) giving it a slightly flattened appearance. The gold is very lustrous & a light color but red, brown, yellow or bronze colored at all.

AHP 14 Qtz chl schist (one "pinger") 48

* Estimate - $\rightarrow 40000$ ^{columns} ~~to~~ 1 ~~off~~

AHP 14 Graphitic Schist From NE side of road near gulch (subcrop) 0

AHP 15 Mychite From Littleton near Hunter Road 0

White Channel lithology (cont)

25% Graphitic Schist Black (brown-submetallic) very well cleaved grayish schist. Angular shales. Undoubtedly source of black "gumbo" along the road.

65% Massive Quartzite Quartz sand gravel & cobbles as described in the brown gravel above & seen in the bedrock exposures as qtz lenses and veins.

5% Almand quartz
Mudstone & breccia

Fine grained mudstone with large percentage of quartz & other resistant clasts of different types. Other than quartz the original types are
cut

For Assay

Sample Descriptions

AH9001 Qtz. chlorite schist bedrock }
- strongly altered. } clark.
AH9002 " " }
AH9003 " " }
AH9004 Black graphitic schist (Spot)
AH9005 " "

* Samples 1-3 Substrate where
gold was panned out
* { + use to relate approx # of colors
to the ounce of gold.

Reference Samples

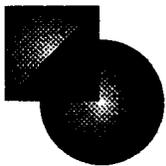
AHR1-AHR7 - Bedrock + White channel
gravel from area that
panning produced results

White Channel Lithology (cont)

Shalestone (cont) not obvious due to the
hydrothermal alteration
that is pervasive
throughout the
lower sections of
the gravel section.

APPENDIX F

GeoTek Resource Management Invoice #YT29015C



GeoTek Resource Management Ltd.

808 S.W. 15th, Portland Oregon 97205 (503)228-2600

Mr. J. Thompson c/o Geokon Resources Box 5026 Whitehorse, Yukon Y1A 4N8	PROJECT Australia Hill
INVOICE No. YT29015C	DATE Sept. 10, 1990
To examine Australia Hill mining claims, Dawson Mining District, Yukon Territory, Canada. Preliminary test sampling for panning and geochemical trace element detection. Orientation surveys for magnetic and electro - magnetic response.	
D. Bret - 6 days @ \$340/day	2,040
R. Beaumont - 5 days @ \$250/day	1,250
4 - 9 element detections	74
1 - 18 element detection	24
Proton precision magnetometer rental	210
VLF-EM16 rental	170
* Billed in Canadian funds as requested.	
* Daily rates are all inclusive as requested.	
TOTAL \$3,768 (CDN)	

P. Hillier
M. Marshall
15/9/90

This is a professional service. Accounts are due when rendered.