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VANCOUVER, B.C.

1987 SUMMARY REPORT  
ON THE  
HEAD BAY PROJECT

FILMED

Located in the Tahsis area of Vancouver Island  
Alberni Mining Division  
NTS 92E/15E  
49° 48' <sup>00</sup>/<sub>00</sub>" North Latitude  
126° 31' <sup>12</sup>/<sub>00</sub>" West Longitude

-prepared for-  
Operator: GREAT KEPPEL RESOURCES LTD.  
Owner: David A. Coulfield  
-prepared by-  
Henry J. Awmack, P.Eng.

July, 1987

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,355

# 1987 SUMMARY REPORT ON THE HEAD BAY PROJECT

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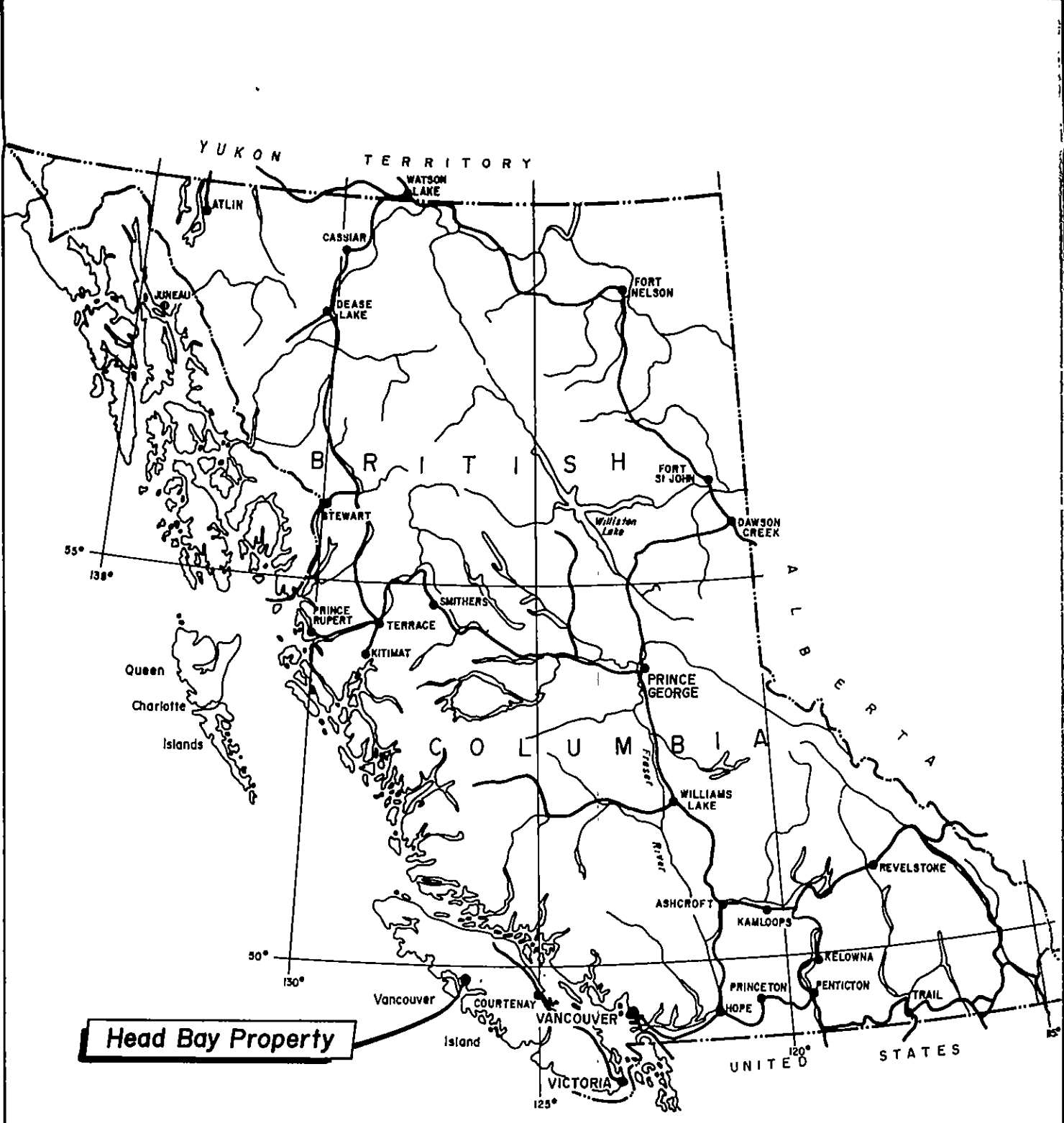
## 1.0 INTRODUCTION

The Head Bay property, comprising the VIG 3 and VIG 5 Mineral Claims, was staked in February and June of 1987 to cover a rich gold-bearing pyrite-quartz vein exposed in a logging road approximately sixteen kilometers south-east of Tahsis on the west coast of Vancouver Island (Figure 1). The Head Bay property partially covers the former TAH 22 claim, which was explored for gold by Aberford Resources Ltd. and Homestake Mineral Development Company in the early 1980's, and surrounds three Crown-granted mineral claims which host a magnetite skarn deposit.

An exploration program, consisting of geological mapping, prospecting, geochemistry, geophysics and hand-trenching was conducted over the Head Bay property in June 1987. Equity Engineering Ltd. carried out this program for Great Keppel Resources Ltd. and has been retained to report on the results of the field work. White Geophysical Inc. conducted the electromagnetic geophysical surveys and will report separately on them. Pamicon Developments was retained to provide an independent evaluation of the field data and set forth recommendations for future exploration.

## 2.0 LIST OF CLAIMS

Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the following claims, which comprise the Head Bay property (Figure 2) are owned by David A. Caulfield. Separate documents indicate that the claims are under option to Great Keppel Resources Ltd.



**Head Bay Property**



<b>GREAT KEPPEL RESOURCES LTD.</b>			
Head Bay Property			
<b>PROPERTY LOCATION MAP</b>			
ALBERNI MINING DIVISION N.T.S. 92E/15 E			
<b>EQUITY ENGINEERING LTD.</b>			
DRAWN J.J.E.	PROJECT GKR87-01	DATE July, 1987	FIG. 1

Claim Name	Record Number	No. of Units	Record Date	Expiry Date
VIG 3	3150	16	March 12, 1987	March 12, 1988
VIG 5	3255	<u>20</u>	June 11, 1987	June 11, 1988
		36		

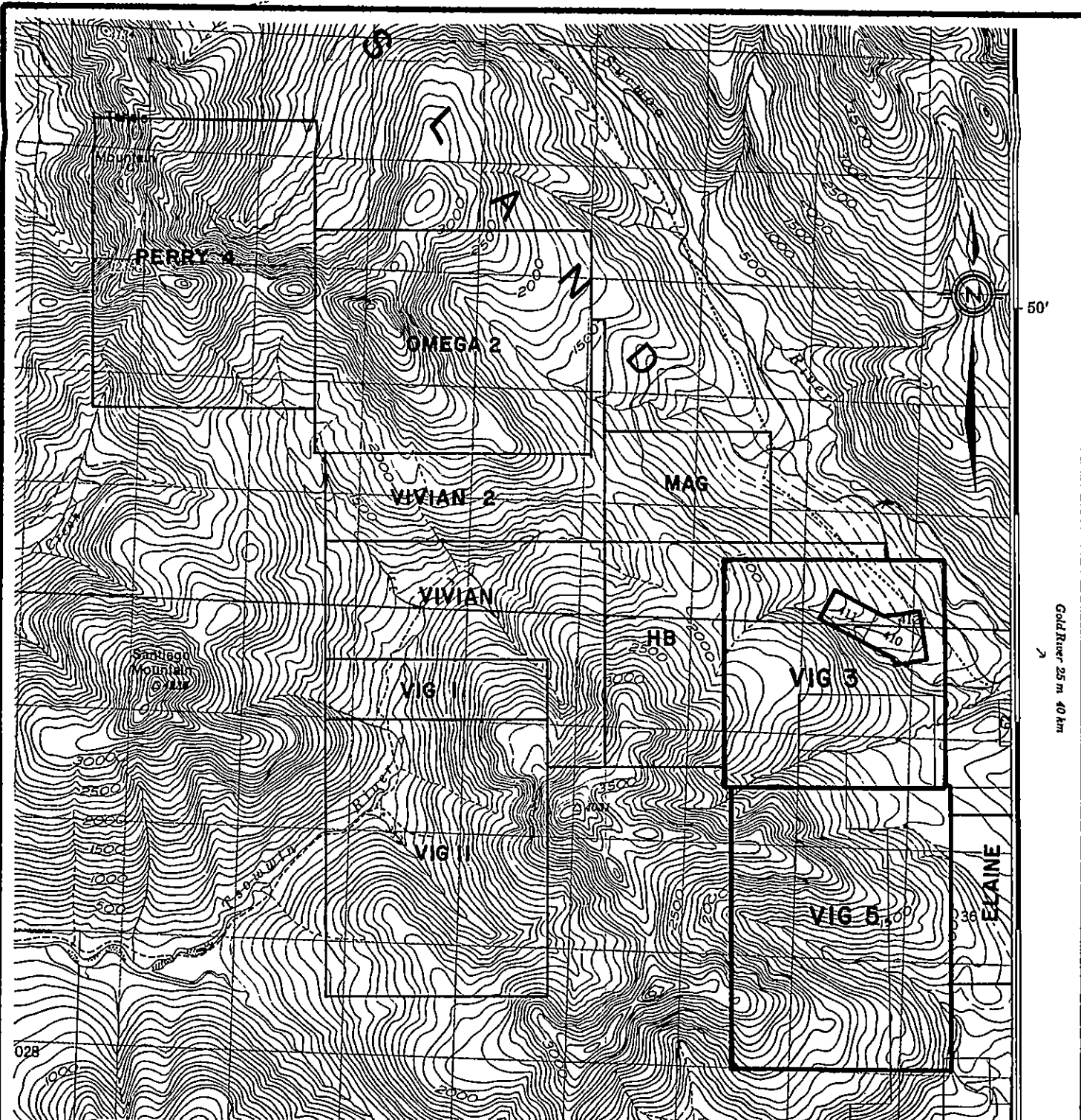
The location of both legal corner posts has been verified by the author.

### 3.0 LOCATION, ACCESS AND GEOGRAPHY

The Head Bay property is located one kilometer west of the Head Bay logging camp on Tlupana Inlet, approximately sixteen kilometers southeast of the village of Tahsis on the west coast of Vancouver Island (Figure 1). It lies within the Alberni Mining Division at 49 48' north latitude and 126 31' west longitude.

The Head Bay Forest Road, an improved gravel road which connects Tahsis to Gold River, passes by the northeastern corner of the VIG 3 claim. Branch roads from it and the Sucwoa Main Line extend throughout VIG 3 and provide access to the eastern and northern portions of VIG 5. Active logging by BCFP on the eastern part of the property will continue to improve access to VIG 5. A high-voltage power line crosses the northeastern part of VIG 3.

The Head Bay property covers the eastern flank of an unnamed mountain of the Vancouver Island Ranges. Topography is rugged, with deeply incised creeks and steep rock bluffs. Elevations range from 25 meters above sea level at the Sucwoa River to over 900 meters along the western boundary of the property. Outcrop exposure is excellent throughout.



Gold River 25 m 40 km

**GREAT KEPPEL RESOURCES LTD.**

Head Bay Property

**CLAIM MAP**

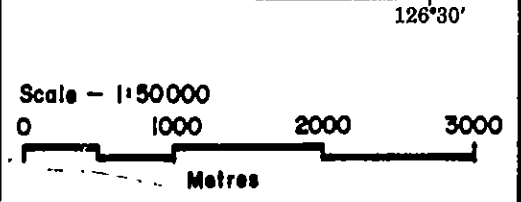
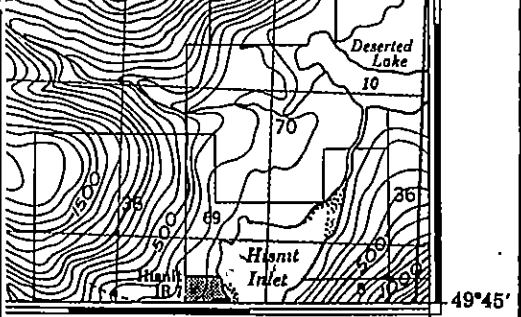
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ALBERNI MINING DISTRICT  
NTS 92E/15E

---

**EQUITY ENGINEERING LTD.**

DWN. BY <b>JJE.</b>	PROJECT <b>GKR87-01</b>	DATE <b>July, 1987</b>	<b>FIGURE 2</b>
------------------------	----------------------------	---------------------------	-----------------



Mature forest covers the southern part of the property with hemlock, red cedar, fir and a moderate undergrowth of salal, devil's club, huckleberry and salmonberry. Areas logged five to twenty years ago are choked with slash and shrubbery. A substantial area in the east-central part of the property is currently being logged, with falling, yarding and hauling in progress, causing the disruption of parts of the geochemical grid before the geophysical surveys could be undertaken.

The Tahsis area receives approximately 500 centimeters of precipitation annually in an otherwise moderate climate, with cool temperatures year-round. Heavy snowfalls can occur at higher elevations.

#### 4.0 PREVIOUS WORK

The rich, narrow, quartz-sulphide veins of the Zeballos camp, approximately 35 kilometers northwest of the Head Bay property, were discovered in the 1920's and 1930's upstream from coarse placer gold pockets in the Zeballos River. These veins produced a total of 8,930 kilograms (287,811 ounces) of gold and 3,880 kilograms (124,700 ounces) of silver until 1948. The Zeballos deposits are currently the subject of intensive exploration by New Privateer Mines Ltd. and McAdam Resources Ltd.

Development of the Zeballos gold camp resulted in increased exploration throughout the Tahsis area and led to the discovery in 1939 of the Mohawk and Vivian veins less than two kilometers west of the Head Bay property (Figure 3). Several adits were driven on these quartz-calcite-pyrite veins but were abandoned in 1940 as a result of the war.

The Glengarry-Stormont magnetite deposit, located on crown-granted mineral claims enclosed within the VIG 3 claim, was

discovered in 1902 but received little exploration until 1951. Surface exploration and diamond drilling in 1951 and 1952 indicated 330,000 tonnes of ore averaging 42.7% Fe (MMAR-1956, p. 133). Small-scale production in the early 1960's yielded 23,000 tonnes of magnetite concentrate from 60,000 tonnes of ore.

Aberford Resources Ltd. conducted an extensive reconnaissance exploration program for disseminated gold deposits throughout the Tahsis peninsula in 1979 and 1980 and staked several claims to cover anomalous drainages. In the course of follow-up work, they discovered several rich gold showings including a narrow pyrite-quartz vein traced by Aberford over 23 meters in a road cut on what is now the VIG 3 claim. Robinson (1983) reported that the 15 Aberford samples taken from this vein, which forms the hangingwall of the Road Zone as described in this report, averaged 54.76 grams gold per tonne (1.598 oz/ton) with the highest sample assaying 282.0 grams gold per tonne (8.828 oz/ton).

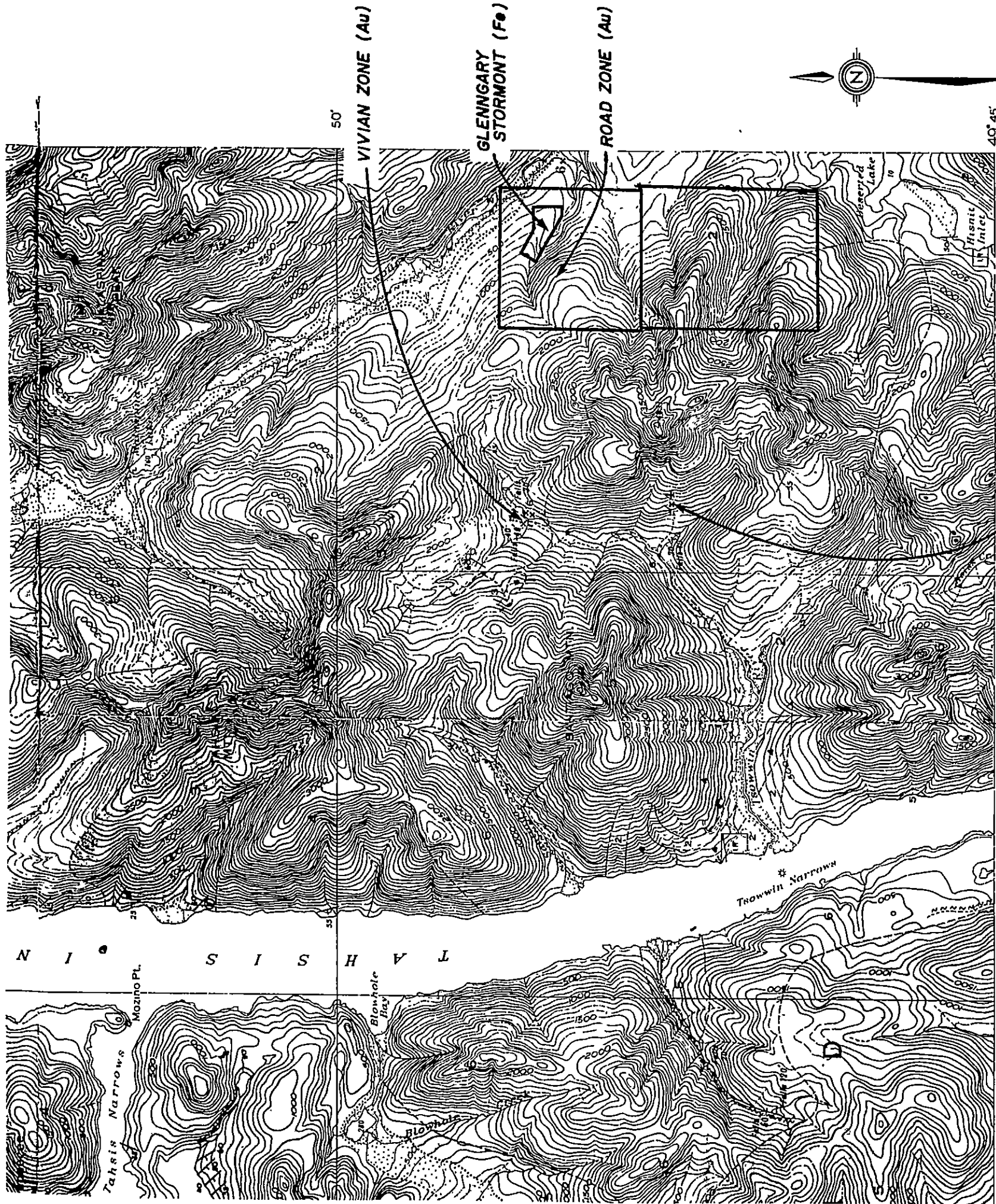
Homestake Mineral Development Company optioned the TAH 22 claim which contained the Road Zone, but dropped the option after limited property reconnaissance (Flanagan, 1984).

The TAH 22 claim was allowed to lapse in February 1987, and was immediately re-staked as the VIG 3 for subsequent option to Great Keppel Resources Ltd. VIG 5 was staked in June 1987 to cover favorable lithology and the regional trend of stratigraphy and mineralization.

## 5.0 REGIONAL GEOLOGY

The Tahsis area is underlain by thick northwesterly trending sequences of oceanic basalts and sediments of the Upper Triassic Vancouver Group and extrusive volcanics of the Lower Jurassic





Geology after Hoadley (1953)

Scale - 1:63360  
0 1000 5000  
Metres

**LEGEND**

**JURASSIC AND/OR CRETACEOUS UPPER JURASSIC AND/OR LOWER CRETACEOUS COAST INTRUSIONS**

**6**  
Granite, granodiorite, diorite, quartz diorite, minor syenite, apite, and micropegmatite

**TRIASSIC AND (?) JURASSIC UPPER TRIASSIC AND (?) LATER**

**4, 5**  
4. Andesitic lavas, agglomerates, tuffs and breccias, basaltic, trachytic, and dacitic lavas; minor, intercalated limestone  
5. Similar to 4, but may include some undifferentiated 3

**TRIASSIC UPPER TRIASSIC**

**3**  
Thin-bedded argillite, tuffaceous argillite, impure limestone, and tuffaceous limestone; agglomeratic andesitic lavas and associated pyroclastic rocks

**2**

**QUATSINO FORMATION: crystalline limestone, with minor volcanic rocks**

**UPPER TRIASSIC AND (?) EARLIER KARLUTSEN GROUP**

**1**  
Basaltic and andesitic lavas, agglomerates, breccias, and tuffs; minor intercalated limestone

- Heavily drift-covered area
- Bedding (horizontal inclined, vertical)
- Schistosity (inclined)
- Fault (arrow indicates direction of dip)
- Shear zone
- Glacial striae
- Fossil locality
- Mineral prospect
- Adit

BONANZA GROUP

MESOZOIC

<b>GREAT KEPPEL RESOURCES LTD.</b>		
Head Bay Property		
<b>REGIONAL GEOLOGY</b>		
ALBERNI MINING DISTRICT NTS 92E/15E		
DWN. BY <b>JJE.</b>	PROJECT GKR87-01	DATE July, 1987
EQUITY ENGINEERING LTD.		FIGURE 3

Bonanza Group. These have been intruded by Lower Jurassic batholithic Island Intrusions and by Eocene stocks of the Catface Intrusions, with attendant regional and contact metamorphism (Figure 3).

The Vancouver Group, as defined by Muller (1980), consists of up to 6,000 meters of Karmutsen Formation (Unit 1) basaltic pillow lavas, pillow breccias, lava flows and intervolcanic limestone, overlain by up to 750 meters of massive Quatsino Formation limestone (Unit 2). This grades upwards into thinly-bedded silty limestones, limey sandstones and reef limestones of the Parson Bay Formation (Unit 3).

The Bonanza Group (Units 4 and 5) comprises a complex sequence of maroon to green interbedded volcanic flows and pyroclastics ranging from basalt to rhyolite in composition. These formed in an island arc environment, and contain both marine and terrestrial facies. The volcanics are locally overlain by clastic sediments ranging from pebble conglomerate to shale, siltstone and coaly beds.

Lower Jurassic Island Intrusion batholiths (Unit 6) are mapped on the southern end of Tahsis Inlet and to the east of Tlupana Inlet. They are generally moderately-grained quartz diorites to leucogranites and may be cogenetic with the Bonanza volcanics (Muller, 1980).

Stocks of the Eocene Catface Intrusions (Unit 6) are mapped on the northeast shore of Hisnit Inlet and the northern slopes of Santiago and Tahsis Mountains (Muller, 1980). The unmapped stock which extends southeasterly from the Head Bay property may also belong to the Catface Intrusions. These intrusives are generally massive, light-colored fine- to medium-grained quartz diorites and granodiorites.

The Vancouver and Bonanza Group rocks form a southwest dipping monocline which is disrupted and offset by numerous northwesterly, northerly and easterly faults of unmeasured displacement. Amphibolite-grade regional metamorphism and migmatization are associated with the Island Intrusions. Contact metamorphism and skarn formation are common near Catface stocks. The Glengarry-Stormont magnetite deposit is hosted by a banded garnet-magnetite-epidote-diopside skarn in Quatsino limestone near its contact with the underlying Karmutsen volcanics close to the Head Bay stock.

The gold deposits of the Zeballos camp generally occur within steeply-dipping narrow quartz-sulphide veins hosted by a Catface quartz diorite stock near its intrusive contact with the limestone and volcanics of the Bonanza and Vancouver Groups. These banded veins are composed of quartz with twenty-five percent sulphides, principally pyrite, sphalerite, arsenopyrite and chalcopyrite. They exhibit good vertical and horizontal continuity, with an average grade of approximately 15.1 grams gold per tonne (0.44 oz/ton) of ore mined. This included a considerable amount of dilution by waste rock, since the veins rarely exceeded 35 centimeters in width (Stevenson, 1950).

The Mohawk and Vivian showings, approximately two kilometers west of the Head Bay property, are also associated with a Catface stock which intrudes Quatsino limestone and Bonanza volcanics (Figure 3). The Mohawk vein, which is 35 centimeters wide and strikes northeast, is a vertical quartz-filled fissure vein with fine pyrite. The Vivian vein is a five to ten centimeter wide, steeply-dipping quartz-calcite vein which strikes northwesterly (Hoadley, 1953). Sampling of the Vivian ore dump by Aberford in 1983 yielded two assays averaging 121.2 grams gold per tonne (3.537 oz/ton) and 361 grams silver per tonne (10.53 oz/ton) (Robinson, 1983).

## 6.0 PROPERTY GEOLOGY, GEOCHEMISTRY AND GEOPHYSICS

### 6.1 Geology

Two Karmutsen/Quatsino sequences on the Head Bay property (Figure 4) are separated by an inferred easterly fault. Subsequent northwesterly faulting has downdropped Bonanza volcanics to the west of the Karmutsen/Quatsino sequences. Intrusion of the multiphase Head Bay Stock along the easterly-trending fault produced skarn in favorable beds of the Quatsino limestone.

Dark green, generally fine-grained, massive, basaltic to andesitic flows of the Karmutsen Formation (Unit 1) are exposed on the northeastern and east-central parts of the Head Bay property. They are soft, pervasively chloritized and locally diopside- or epidote-altered. Fine-grained disseminated pyrite or magnetite is rare.

Massive grey limestone of the Quatsino Formation (Unit 2) overlies the Karmutsen volcanics throughout the northern part of VIG 3 and the southern part of VIG 5, dipping moderately to the west or southwest. Basaltic flows are intercalated with massive limestone near the bottom of the section and thinly-bedded limestone bands become more pronounced upwards. One outcrop of black limey argillite may represent the bottom of the overlying Parson Bay Formation (Unit 3).

The two Karmutsen/Quatsino sequences on the Head Bay property were probably displaced vertically by an easterly trending fault prior to intrusion of the Head Bay stock.

A later inferred northwesterly trending fault has downdropped Bonanza Group (Unit 5) felsic volcanoclastics and flows relative to the Karmutsen/Quatsino sequences in the western

part of the Head Bay property. Where exposed, the Bonanza Group consists mainly of tuffs, tuff breccias, agglomerates and feldspar porphyry flows with little lateral or vertical continuity. They are generally dacitic to rhyolitic in composition, green to purple in color and contain 1% finely disseminated pyrite.

All rock types have been intruded by the multiphase Head Bay stock (Unit 6) which is probably one of the Catface Intrusions. This stock extends easterly from the center of the property towards Head Bay along the inferred fault which separates the two Karmutsen/Quatsino sequences. In its central and southern outcrops, the stock is a medium-grained, equigranular diorite composed of 70% plagioclase, 20% hornblende, 5% biotite and 5% magnetite. Outcrops of a monzonitic phase, composed mainly of plagioclase and orthoclase with 5% biotite, occur sporadically along the southern contact of the Head Bay stock. In its northern and northeastern exposures, and elsewhere near its intrusive contacts, the stock is highly variable in composition and texture, ranging from diorite to coarse gabbro to anorthosite to pyroxenite. This mafic to ultramafic phase, which contains up to 25% magnetite, is related to the Glengarry/Stormont magnetite skarns and hosts the gold-bearing sulphide-quartz veins of the Road Zone.

Skarn (Unit 7) has formed wherever the gabbroic phase of the Head Bay stock has intruded Quatsino limestone, especially near the Quatsino/Karmutsen contact. It varies considerably in thickness from a few centimeters in road cuts west of the Road Zone to several meters in the Glengarry-Stormont magnetite deposit. Contact skarns generally consist of fine-grained diopside and epidote with variable amounts of quartz and calcite. Up to 5% pyrite, 20% magnetite and traces of chalcopyrite are present locally. The Glengarry-Stormont skarns, located on the Crown-granted mineral claims enclosed within VIG 3, are composed

of alternating bands of andradite, garnet and magnetite with lesser epidote, diopside, quartz and calcite. Beryl, pyrite, chalcopyrite and specularite are rare. These banded skarns are replacements of chemically favorable beds near the bottom of the Quatsino limestones. A similar skarn zone is exposed over 60 meters with a thickness of two to five meters on VIG 3 southwest of the Crown-granted mineral claims.

Small shear zones are common in all rock types on the property, generally trending northwesterly or easterly, following the trends of the major inferred faults on the Head Bay property.

## 6.2 Geochemistry

Six heavy sediment samples were taken from the major drainages on the Head Bay property (Figure 5). Stream sediments were screened in the field to -40 mesh, a heavy mineral separation was made and the fraction with specific gravity greater than 2.96 was analysed geochemically for Au, Pt, Pd and 32 element ICP (Appendices D and E). Only one sample, taken from the stream which drains the southern end of the soil geochemical grid, was mildly anomalous in gold with 832 ppb.

Stream sediment samples, screened in the field to minus 40 mesh, were taken from all accessible streams and analysed geochemically for Au, Ag, Cu, Pb, Zn and As. The most noteworthy sample, 87HA-39 (5690 ppb Au), drains the Karmutsen/Quatsino contact on the northern edge of VIG 3, in an area which received little prospecting. A sample containing 540 ppb Au is further downstream. By comparison, the stream which drains the Road Zone contained no detectable gold in its stream sediment sample.

Soil geochemical samples were taken on a grid 1300 meters square, with samples every 25 meters on lines spaced 50 meters

apart (Figures 6-11). In addition, a line of soil samples were taken at the 150 meter contour in the eastern part of the property. All soil samples were analyzed for Au, Ag, Cu, Pb, Zn and As. Statistical analysis (Appendix F) determined the anomalous thresholds. *The B horizon was sampled.*

Two soil samples (17+50N 25+25E with 3080 ppb Au and CL150-36 with 2845 ppb Au) are highly anomalous for gold. The sources for these and several strong multi-station gold soil anomalies within the Head Bay stock remain to be discovered (Figure 6). Of particular interest is the northwesterly-trending anomaly centered on 12+00N 23+25E, with adjacent values of 95, 155 and 300 ppb Au.

A moderate silver geochemical anomaly envelops and extends southward from the Road Zone (Figure 7), possibly indicating its continuation. Soil samples from near the Road Zone contain little gold, but show a strong Cu-Ag-As association. Soil sample 21+00N 21+50E, with 1282 ppm Cu, 5052 ppm Pb, 1992 ppm Zn, 2.1 ppm Ag and 91 ppm As deserves investigation on that basis.

The highly anomalous arsenic values obtained from lines 15+00N, 15+50N and 16+00N appear to be the result of analytical or data entry error (Figure 8).

### 6.3 Geophysics

*Instrument: Barringer G.M 122*

A proton magnetometer survey was conducted over parts of the soil geochemical grid in order to outline the geological units, extend the Road Zone and to discover other similar zones within the Head Bay stock (Figure 12). This survey defines the intrusive contact between the Head Bay stock and the Quatsino limestone quite well and shows the location of magnetite-bearing skarn bodies. Other contacts are not pronounced.

The Head Bay stock is highly variable in its magnetic response with variations of up to 5000 gammas over twenty-five meters. Many locations had magnetic gradients too high for accurate measurement with a proton magnetometer. The magnetic highs trend northerly to northwesterly, paralleling the predominant direction of fracturing. The Road Zone lies on the northeast flank of one magnetic high, but its extent is not clear from the ambiguous magnetic signature.

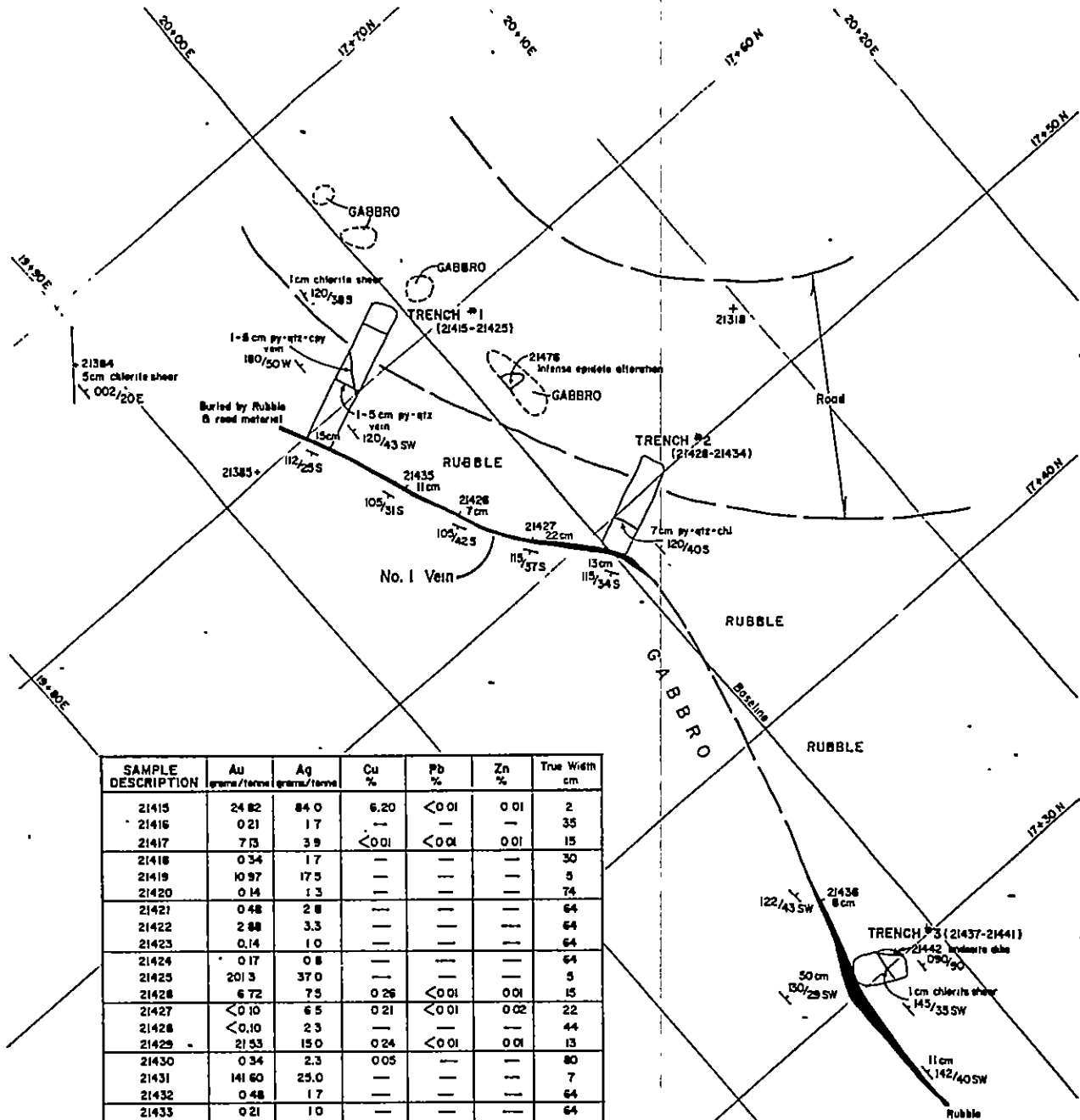
*Total field measurements were corrected for diurnal variations*

## 7.0 MINERALIZATION

The most significant gold mineralization found to date on the Head Bay property occurs in the Road Zone (Figure 13). This shallowly-dipping system of rich pyrite-quartz-chlorite-chalcopyrite lenses is hosted by weakly sheared, coarse magnetite-rich gabbro of the Head Bay stock. It strikes west-northwesterly along 38 meters of exposed strike-length. A persistent pyrite-quartz vein (the No. 1 Vein) forms the hangingwall of the Road Zone. Seven channel samples taken from it show an average width of 18 centimeters grading 9.16 grams gold per tonne. Parallel sulphide lenses have been exposed by trenching from 30 to 200 centimeters beneath the No. 1 Vein. These lenses are highly discontinuous both vertically and horizontally, but contain up to 201.3 grams gold per tonne over a few centimeters. The best values are found in heavy sulphide lenses with black chloritic ribbons and shears.

Three trenches cut the Road Zone. Trench #1 averaged 1.41 grams gold per tonne across a true width of 2.87 meters, including a hangingwall section grading 3.44 grams gold per tonne across 0.50 meters (Figure 14). Not included in these averages are two grab samples grading 201.3 and 24.82 grams gold per tonne from sulphide lenses which pinch out downwards in the trench





SAMPLE DESCRIPTION	Au grams/tonne	Ag grams/tonne	Cu %	Pb %	Zn %	True Width cm
21415	24.82	84.0	6.20	<0.01	0.01	2
21416	0.21	1.7	---	---	---	35
21417	7.13	3.9	<0.01	<0.01	0.01	15
21418	0.34	1.7	---	---	---	30
21419	10.97	17.5	---	---	---	5
21420	0.14	1.3	---	---	---	74
21421	0.48	2.8	---	---	---	64
21422	2.88	3.3	---	---	---	64
21423	0.14	1.0	---	---	---	64
21424	0.17	0.8	---	---	---	64
21425	201.3	37.0	---	---	---	5
21426	6.72	7.5	0.26	<0.01	0.01	15
21427	<0.10	6.5	0.21	<0.01	0.02	22
21428	<0.10	2.3	---	---	---	44
21429	21.53	15.0	0.24	<0.01	0.01	13
21430	0.34	2.3	0.05	---	---	80
21431	141.60	25.0	---	---	---	7
21432	0.48	1.7	---	---	---	64
21433	0.21	1.0	---	---	---	64
21434	<0.10	1.0	---	---	---	32
21435	2.40	2.8	0.05	<0.01	0.01	38
21436	43.26	18.8	0.33	<0.01	0.01	11
21437	0.55	1.9	---	---	---	73
21438	<0.10	1.9	---	---	---	25
21439	4.46	4.7	0.09	<0.01	0.01	50
21440	<0.10	1.3	---	---	---	44
21441	<0.10	1.3	---	---	---	48
21442	0.14	1.0	---	---	---	26
21318	3700 ppb	7.4 ppm	---	---	---	GRAB
21384	ND	2.0 ppb	183 ppm	26 ppm	260 ppm	GRAB
21385	1040 ppb	1.0 ppm	153 ppm	24 ppm	9 ppm	GRAB
21476	ND	0.1 ppb	16 ppm	16 ppm	59 ppm	GRAB

SCALE - 1:250



**GREAT KEPPEL RESOURCES LTD.**

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Head Bay Property

**GEOLOGY**  
Road Zone

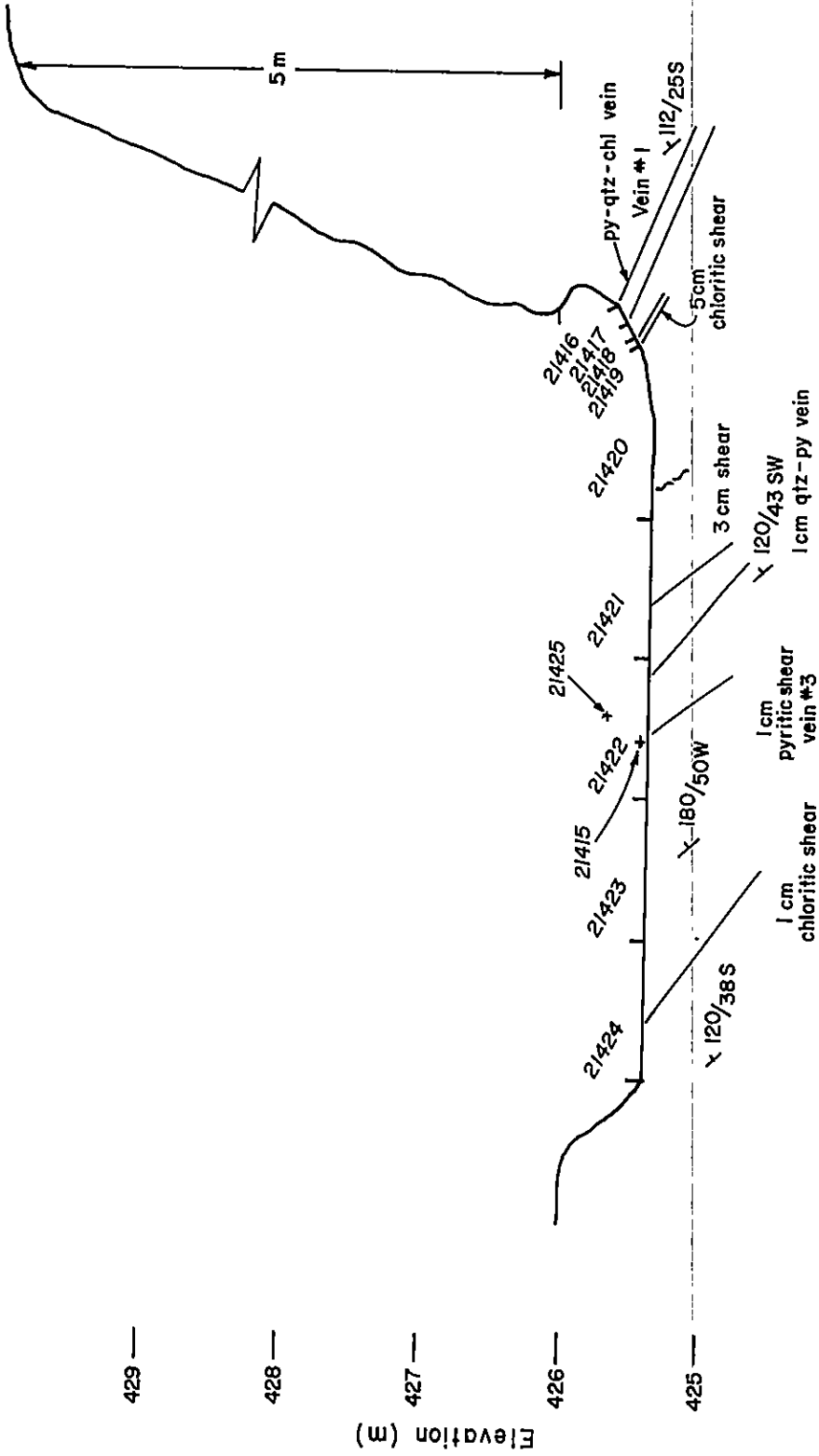
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ALBERNI MINING DISTRICT  
N.T.S. 92E/15E

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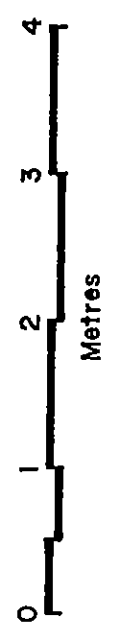
EQUITY ENGINEERING LTD.

OWN. BY <b>J.J.E.</b>	PROJECT <b>GKR87-01</b>	DATE July, 1987	FIGURE 13
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Elevation (m)  
 429 —  
 428 —  
 427 —  
 426 —  
 425 —

SCALE - 1:50



**GREAT KEPPEL RESOURCES LTD.**

Head Bay Property

**ROAD ZONE  
Trench I**

**Section Looking Towards 116°**

ALBERNI MINING DISTRICT  
 NTS 92E/15E

EQUITY ENGINEERING LTD.

DWN BY  
 J.J.E.

PROJECT  
 GKR87-01

DATE  
 July, 1987

FIGURE 14

walls. Trench #2 averaged 12.98 grams gold per tonne across 1.00 meters (Figure 15) and Trench #3 averaged 4.46 grams gold per tonne across 0.50 meters (Figure 16). Overall, this yields an average grade for the zone of 4.41 grams gold per tonne across 1.46 meters.

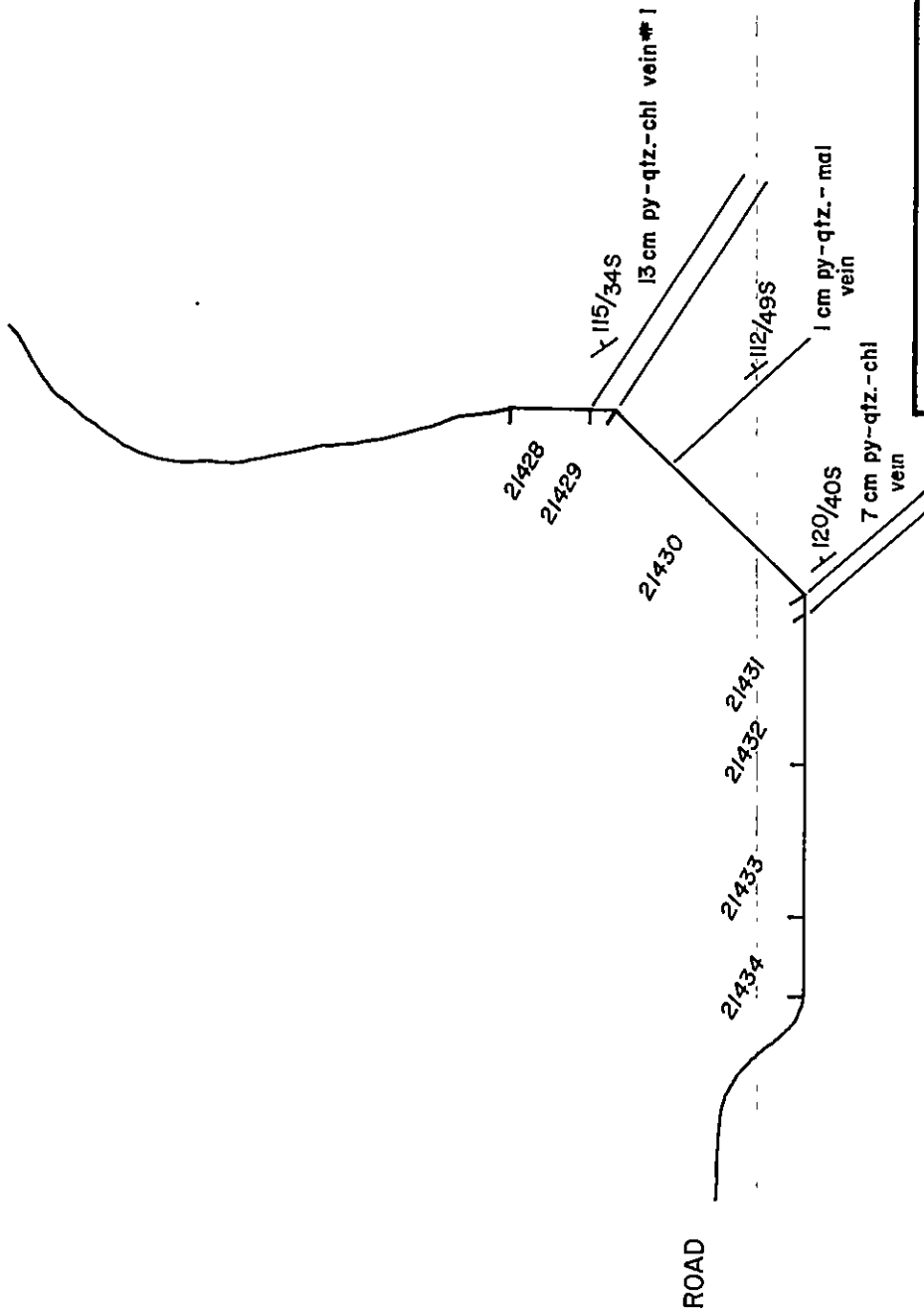
The gabbro between sulphide lenses is auriferous, with an arithmetic average of 0.20 grams gold per tonne for the trench samples. Trenching has not yet defined the footwall of the Road Zone, exposing sporadic sulphide lenses and weakly auriferous gabbro throughout their lengths. The No. 1 Vein and the sulphide lenses are recessive-weathering and the Road Zone as a whole is exposed on the south side of a recessive gut approximately sixteen meters wide and trending west-northwesterly, indicating that the zone may be considerably wider than presently recognized. Some evidence for this comes from sample 21318, with 3700 ppb Au, which was taken from semi-massive pyrite exposed in the road surface approximately ten meters north of the No. 1 Vein, but which may not be in place.

The gold mineralization of the Road Zone is accompanied by lesser quantities of silver, with values up to 84 grams silver per tonne. Copper assays range from nil to 6.2% Cu, but are economically insignificant. No lead, platinum or palladium was revealed by assaying, and zinc assays are extremely low.

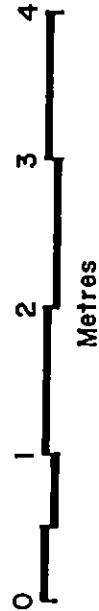
The magnetite skarns of the Glengarry-Stormont deposit and those extending onto VIG 3 contain only traces of precious metals. The best sample has only 40 ppb Au and 4.0 ppm Ag with 0.3% Cu. No effort was made to estimate their value as a source of iron ore.

428 —  
 427 —  
 426 —  
 425 — ROAD  
 424 —

Elevation (m)



SCALE - 1:50



**GREAT KEPPEL RESOURCES LTD.**

Head Bay Property

**ROAD ZONE  
 Trench 2**

**Section Looking Towards 114°**

ALBERNI MINING DISTRICT  
 NTS 92E/15E

EQUITY ENGINEERING LTD.

DWN BY  
 J.J.E.

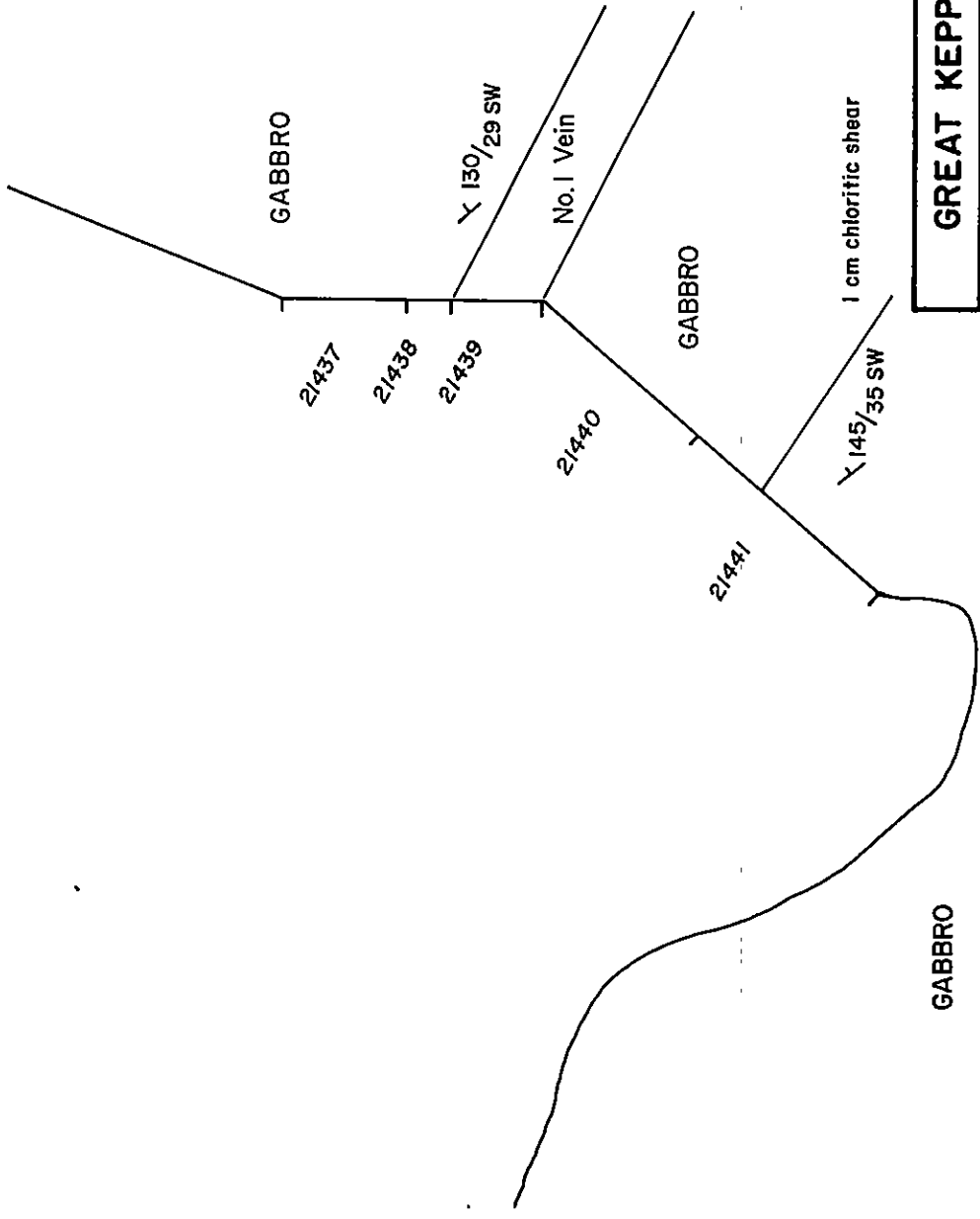
PROJECT  
 GKR87-01

DATE  
 July, 1987

FIGURE 15

425 —  
 424 —  
 423 —  
 422 —  
 421 —  
 420 —  
 419 —  
 418 —

Elevation (m)



**GREAT KEPPEL RESOURCES LTD.**

Head Bay Property

**ROAD ZONE  
 Trench 3**

**Section Looking Towards 160°**

ALBERNI MINING DISTRICT  
 NTS 92E/15E

EQUITY ENGINEERING LTD.

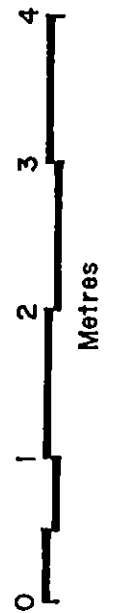
DWN BY  
 J.J.E.

PROJECT  
 GKR87-01

DATE  
 July, 1987

FIGURE 16

SCALE - 1:50



Metres

## 8.0 DISCUSSION AND CONCLUSIONS

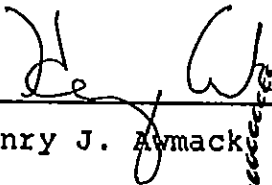
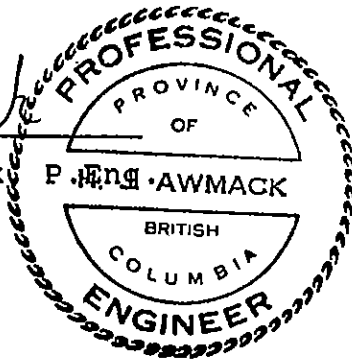
The Road Zone hosts significant gold mineralization, with very rich lenses and veins separated by weakly auriferous gabbro. Due to its recessive nature, the zone remains open along strike and in width. The recessive notch in which it is situated is sixteen meters wide and may be a topographic expression of the zone's extent. If so, potential exists for a true width of ten meters for the Road Zone.

Rock geochemical samples 21328 (640 ppb Au) and 21413 (995 ppb Au) were taken from chlorite-epidote-quartz altered diorite similar to some found near the Road Zone with elevated gold values (Sample 21385, with 1040 ppb Au, was taken four meters above the No. 1 Vein of the Road Zone). The anomalous gold values and alteration in each case may be indications of proximity to significant gold mineralization.

To date, no work has been directed towards following up on soil and stream sediment geochemical anomalies. The sources for each of the anomalies outlined in section 6.1 have not been located. Given the relatively subtle geochemical signature of the Road Zone, these deserve further investigation.

The geological setting of the Head Bay property is very similar to that of the Zeballos camp some thirty-five kilometers to the northwest from which 8.9 tonnes (288,000 oz) of gold were produced. Similar potential exists for narrow, rich, gold-bearing sulphide-quartz veins or for wider, leaner mineralized shear zones. The Road Zone presents an attractive target under either scenario, and strong geochemical anomalies indicate that other mineralized zones remain to be discovered.

Respectfully submitted,  
EQUITY ENGINEERING LTD.

  
Henry J. Awmack P. Eng. AWMACK  


Vancouver, British Columbia  
August 4, 1987

APPENDIX A

BIBLIOGRAPHY



## BIBLIOGRAPHY

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APPENDIX B

STATEMENT OF EXPENDITURES

**STATEMENT OF EXPENDITURES  
HEAD BAY PROPERTY  
JUNE 1 - 30, 1987**

**WAGES:**

HENRY J. AWMACK, P.Eng May 14 - August 4, 1987 35.25 days @ \$300/day	\$ 10,575.00	
NEIL DEBOCK, Prospector June 1 - 30, 1987 30.00 days @ \$200/day	6,000.00	
LAURA LOUIE, Sampler June 2 - 14, 1987 11.00 days @ \$175/day	1,925.00	
DONALD MCINNES, Sampler June 2 - July 1, 1987 29.50 days @ \$175/day	5,162.50	
BILL VANDERLAND, Sampler June 2 - 30, 1987 29.00 days @ \$175/day	<u>5,100.00</u>	\$ 28,762.50

**CHEMICAL ANALYSES:**

VANGEOCHEM LAB LTD.		
Soil samples:		
Au, Ag, Cu, Pb, Zn, As 800 @ \$ 17.35/sample	13,880.00	
Silt samples:		
Au, Ag, Cu, Pb, Zn, As 36 @ \$ 18.85/sample	678.60	
Rock geochemical samples		
Au, Ag, Cu, Pb, Zn, As 154 @ \$ 19.00/sample	2,926.00	
CHEMEX LABS LTD.		
Heavy sediment samples		
Au, Pt, Pd + 32-element ICP 6 @ \$ 33.75/sample	202.50	
Assays		
Au, Ag, Cu, Pb, Zn, Pt, Pd 28 @ \$32.79/assay	<u>918.25</u>	18,605.35

<u>STATISTICAL ANALYSIS OF GEOCHEMICAL RESULTS:</u>	250.00
<u>EQUIPMENT RENTAL:</u>	4,222.50
<u>MATERIALS AND SUPPLIES:</u>	2,756.75
<u>CAMP SUPPLIES:</u>	119.52
<u>MEALS:</u>	3,172.63
<u>ACCOMODATION:</u>	2,237.23
<u>TRAVEL:</u>	249.00
<u>AUTOMOTIVE EXPENSES:</u>	702.08
<u>TELEPHONE AND COMMUNICATIONS:</u>	133.11
<u>COURIER:</u>	8.55
<u>FREIGHT:</u>	82.76
<u>OFFICE SUPPLIES:</u>	154.65
<u>MAPS AND PUBLICATIONS:</u>	37.21
<u>DRAFTING:</u>	1,252.50
<u>PRINTING AND REPRODUCTIONS:</u>	<u>1,200.00</u>
	\$ 63,696.84

APPENDIX C

ROCK DESCRIPTIONS

Sampler Awmack  
 Date June 5/87

Project VIGS  
 Property East Creek

Location Ref \_\_\_\_\_  
 Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS	
					Rock Type	Alteration	Mineralization			
21251	New Road	Grab	5-10cm		Diorite	Shear	50% lim base rock	X 046/80 SE		
52	"	Grab	10cm		Diorite	Shear	70% lim 30% gtz	2 shears in 50cm chlo. altered diorite		V 170/Gow
53	East Creek	Grab	10cm		Andesite	Shear	Carb-gtz.	Chloite-epidote gouge X 347/70E		
54	East Creek	Grab	15-15cm		Andesite	Chloite-silic	-	X 340/80E - silicified		
55	Same	"	2cm	2cm	Qtz-dk			" with in shear		
56	South fork of creek	Flout			Diorite	Chlo-ep-silic	lim vuggy gtz-pyph	lim in brecciated altered diorite		
57	Creek 100m down	Grab		2cm			Red brown limonite	limonite nodules from fault		
58	Same	Chip		20cm	Andesite	fault gouge	<1% py	Blue grey rusty X 145/45 SW		
59	Same (down)	Chip		10	"	" + 2cm limonite		Exposed for 5meters in N creek bed		

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS		
					Rock Type	Alteration	Mineralization		Au	Ag	As
21260	40m downstream from jct.	Grab	7cm	7cm	Andesite	Carbonate-qtz-chlorite vein		X 045/135E			
21261	Same	Chip	25cm	25cm	"	" + weakly silicified	chloritic selvage.				
21262	20 meters downstream from junction	Grab	2-15cm	2-15cm	Andesite	Carbonate vein	Brown limonite	X 050/50 SE (Same vein as sample 21260).			
21263	Same	Grab	Irregular	Irregular	Felsic dikes			Lime-green. Fine-grained.			
21264	33 meters upstream from jct	Float	-	-	Andesite	Silicified Brecciated	2% py				
21265	Same	Chip	25cm	25cm	Fault gouge	Chloritic		X 110/35N. Up to 4m wide			
21266	110m up from jct.	Float			Andesite	Intense sericite-silicified	5% fq. py Goethitic	2% vuggy quartz veinlets.			
21267	180m up from jct	Grab	1.0m	1.0m	Andesite	Silicified	10% mag. minor py	At diorite/andesite contact.			
21268	40m up from jct	Grab	30cm to 100cm	30cm to 100cm	Andesite	Silicified	Minor py	Recessive, exposed for 20 meters.			
21269	On logging road	Grab	0-5cm	0-5cm	Andesite	Vuggy qtz vein	Limonite	2cm vuggy qtz vein X 085/15S			
21270	Same	Grab	>30m	>30m	Andesite	Brecciated silicified	1% fq. py	Irregular. Tr. malachite in float			
21271	40m above top of logging	Grab	15cm	15cm	Andesite	Calcite-qtz vein and silicification	1% py	X 082/60N. Fault wall of weak chloritic shear.			

Sampler AWMACK

Project GKR87-01

Location Ref \_\_\_\_\_

Date June 10, 1987

Property VIG 3

Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS	
					Rock Type	Alteration	Mineralization			
21272 21260	18+50N 20+05E	GRAB			Skarn in magnetite-diole		1% fg py	Qtz-chl-ep-mag-prone skarn near l.s. contact		
21273	18+60N 20+00E	GRAB	1.5m	1.5m	Diole side Skarn		20% limonite boxwork after pyrite	Exoskarn at diole/limestone contact		
21274	18+60N 19+99E	GRAB	2.0		Di-ep-mag skarn		20-60% boxwork after mag.	Pale green Magnetite in irregular 3 cm leached bands		
87HA-16	18+70N 19+90E	GRAB		>30cm	Skarn		Limonitic	Brown completely leached, fine-grained X 145°/58 NE		
21275	Same location	Chip		65cm	Di skarn cutting limestone	light-grey alteration retrograde seluages	10% vfg py 4% epy	Blue-black (fg sulphides?) away from retrograde seluages		X 065/75 SE
21351	18+75N 19+85E	Grab		5cm	Px-di-ep skarn		2% fg py tr. azurite	On limestone/skarn contact Irregular contact.		
21352	30 m above side road on creek	Grab		20-40cm	Andesite dile	Intense ep-ehl	Magnetite	Minor blue stain.		
21353	100 m further up creek	Grab		5 m	Dacite Andesite dile	~30% irregular quartz veining	5% disse PY	Grab of quartz. X 110/80S		
21354	Same	Grab		5 m	Dacite Andesite dile	Qtz-di-ehl	5% PY	Grab of dile		



NTS

Location Ref Roads on western  
Air Photo No Vig 5

Project GKR87-01  
Property Vig 5

Sampler AWMACIK  
Date JUNE 12, 1987

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS	
					Rock Type	Alteration	Mineralization			
21355		Grab	15cm		Karmutsen	Chloritic fault gouge		X070/70N		
21356		Grab	2-10cm		"	15m Shear zone (footwall)	Qtz-5% opy - Veinlets + horsetail stringers	X088/80N. Footwall		
21357		Grab	3-5cm		"	" (hangings wall)	50% vsgst + limonite	Vuggy drusy qtz - limonite veins		
21358	Adjoints 21357	Chip	110cm		"	Shear zone	10% Vuggy qtz - (sphale?)	Pale-green diopside-rich shear		
21359		Grab	5cm		"	Brown chloritic fault		X088/80N		
21360		Grab	60cm		Diorite	Shear zone	Rusty.	X120/70N. 40% unsharped diorite.		
21361		Chip	90cm		Diorite	Shear zone	<5% opy 1cm qtz veins	X156/85E. Near contact with Karmutsen.		
21362	Same	Grab				Chloritic		Grab of veins + gouge.		
21363		Grab	15cm		Diorite	Vuggy qtz vein	Mn stain + limonite	X130/60SW. Associated with 15cm diopside-altered dila		
21364		Chip	50cm		Diorite	Chloritic shear zone	Rare qtz stringers	X160/45E		
21365		Grab	2m		Diorite	Chloritic shear zone	Rusty	X160/45E. Grab of gouge + qtz		

NTS

Location Ref North-eastern corner  
Air Photo No of Vig 3

Project GKR87-01  
Property VIG 3

Sampler AWMACK  
Date JUNE 14, 1987

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS	
				Rock Type	Alteration	Mineralization			
21373	Creekbottom	Grab	5-60cm	Limestone	Antibiotite Shear zone		X 031/65E. Exposed for 600 meters in creek bottom.		
21374	"	"	1.8m	Felsic dike cutting limestone	Silicious	5% pyrite	X 080/63S		
21375	"	"	1cm	Contact: ls/ dike dila	Jasperoid	10% magnetite 5% pyrite	X 100/75S		
21376	Roadcut	"	1.5m	Di-ep skarn		Up to 5% py 5% magnetite (at contact)	X 130/25 SW		
21377	"	"	30cm	Ep-di-gar skarn	Silicious	5% py 2% mag 2% sphale(?) Tr. ep.	Near limestone contact of 1.5m (?) skarn.		
21378	"	"	30cm 20cm	Ep-di skarn		5% py 1% mag Minor ep	Near limestone contact of 2m		
21379	"	"	1.2m	Felsic dike	Silicious	5% py	X 085/72S. Cuts limestone.		
21380	"	"	3m	Felsic dike	Silicious	2% py	X 015/77N. Up to 10% py, 20% magnetite for 5m or contact with limestone.		
21381	"	"	40cm	?	Intense leaching (50% loss)	30% fg py	Toward of fresh course basalt dike.		



Sampler Awmack Project G16287-01  
Date JUNE 22, 1987 Property VIG 3/S

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS	
					Rock Type	Alteration	Mineralization			
21400	Cg. 410	Rubble Grab	/	?	Skeun		<1% Py + sp Mal/azurite	50% magnetite in ground-chalcite actinolite-guarite skeun.		
21401	Cg 410	Grab	/	15-15	Skeun		1% Py + sp Mal/azurite	70% magnetite in ground-chalcite chalcite skeun.		
21402	Day Cl.	Grab	/	15cm	Andesite dike	Epidoite	1cm very qtz vein	\ 145°/55 SW		
21403	Day Cl	Grab	/	5cm	Felsic dike/ lavastone	Skeun	10% magnetite 2% pyrite	\ 115/50 approx		
21404	Round S13A2	Grab	/	3cm	Andesite dike	Skeun Zone		Chloritic gouge + gypsum \ 130/60SW		
21405	Round S13A	Grab	/	1m ?	Kearnsite	(Chlorite zone)	2% Py + sp			
			/							
			/							
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			/							
			/							
			/							

NTS

Sampler Awmack  
Date June 24 1987

Project GKR87-01  
Property VIG 3/5

Location Ref Seiz G.R.D  
Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				True width	Rock Type	Alteration		Mineralization					
21406	19+50N 23+25E	Grab	> 1m	Ep. Qtz Skarn			Overlies diorite						
21407	19+50N 23+65E	Rubble	?	Skarn		5% py	Fine grained Qtz-chlorite skarn						
21408	19+40N 23+82E	Grab	2m	Skarn		20% magnetite	Coarse andradite-calcite-chlorite skarn X 140°/30SW						
21409	19+45N 24+25E	Grab	> 3m	Skarn		Vuggy Qtz-sphalerite veins	Garnet-magnetite-calcite skarn.						
21410	19+40N 24+35E	Grab	50cm	Skarn	Vuggy.		Qtz-chlorite-calcite - brown limonite skarn @ contact with underlying limestone						
21411	17+90N 23+10E	Grab	1.5m	Skarn		Tr. Pyrite	Banded garnet-magnetite-calcite-epidote skarn @ limestone/diorite contact Y090/90						
21412	18+50N 20+80E	Grab	> 1m	Skarn	Vuggy	Orange lim.	Epidote-diorite skarn.						

NTS  
Location Ref  
Air Photo No

Sampler AWMACK  
Date JUNE 25/87

Project GIC287-01  
Property VIG 3/5

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS		
					Rock Type	Alteration	Mineralization				
21413	~ 17km 15 to E	Grab	20m		Diorite	Chlorite Diopside	2% py	Qtz veins, X 105/60N			
21414	20 to N 16+80E	Grab	1m x 1m		Epitaxial calc skarn		Up to 5% in quartz				
21416	17.57N 20+01E	Grab	30cm x 50cm		Diorite	Intense ep-qtz		Irregular bbb - X 050°			

NTS

Sampler AurMAC Project GK227-01 Location Ref Road Vein  
 Date June 25/87 Property VIG 3 Air Photo No TRENCH I

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	Rock Type	DESCRIPTION		ADDITIONAL OBSERVATIONS	ASSAYS						
						Alteration	Mineralization		Ag	Cu	Pb	Zn	Pt		
	TRENCH I														
21415	3-3m	Grab	2cm	2cm	Quartz vein in Gabbro		5% spylite 40% pyrite 5% sphalerite	Vein #3 East wall at trench (2-3m)	24.62	84.0					
21416	6.5-6.9	Channel	10cm	35cm	Angite - hypersthene diab			High grade int sulphide vein #1	0.21	1.7					
21417	6.4-6.5	Channel	2.5	2.5	Vein #1		80% pyrite	N 112/25S 5% chloite	7.13	3.9					
21418	6.2-6.4	Channel	30cm	30cm	Gabbro		5% coarse pyrite	1-2% quartz. Locally shales Pyrite for 5cm on footwall at 21417 vein.	0.34	1.7					
21419	6.15-6.2	Channel	5cm	5cm	Gabbro			Chlorite. Mississippi long st. l.	10.97	17.5					
21420	5.0-6.15	Channel	1.15	74cm	Gabbro			Shear @ 5.25m	0.14	1.3					
21421	4.0-5.0	Channel	1.00	64cm	Gabbro			3cm shear @ 4.40m.	0.48	2.8					
21422	3.0-4.0	Channel	1.00	64cm	Gabbro		Vein #3	1cm pyritic shear @ 3.45 1.19m/sec	2.88	3.3					
21423	2.0-3.0	Channel	1.00	64cm	Gabbro		Vein #2	1cm quartz-py vein @ 3.70 1.120/435W	0.14	1.0					
21424	1.0-2.0 West wall 2.9m	Channel	1.00	64cm	Gabbro			1cm chlorite shear @ 1.45	0.17	0.8					
21425		Grab	5cm	5cm	Vein		Pyrite	Minor diopside chlorite. Vein #2	201.3	37.0					
Trench #1	runs @ 200'														
from 17+67N 2000'E															

Note: Zone dips -40° vertical

NTS

Sampler Awmack  
Date June 26/67

Project GK287-01  
Property VIG 3/5

Location Ref Road Vein  
Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS	
					Rock Type	Alteration	Mineralization			
21426	17+54N 19+96.5E	Channel	15cm		Vein + sheared diorite footwall		Py Cpy	"Hanging wall" (No.1) Vein 7cm sugary quartz-20% py 2% chalcopyrite vein. 8cm chloritic, sheared diorite with 5% pyrite. X105/425		
21427	17+51.3N 19+98.2E	Channel	22cm		Quartz- sulphide vein	Sheared black chlorite	30% pyrite Minor galena/sphal	"Hanging wall" (No.1) Vein X115/375		
21435	17+56N 19+95.5E	Channel	38cm		Vein + Diorite		5-10% py ~2% cpy	No.1 Vein X105/315 (ilcm) Includes footwall + qtz-py-cpy velets.		
21436	17+34N 19+97.4E	Channel	11cm		8cm Vein 3cm sheared gabbro		50% py	20% chloritic gouge.		



NTS TRENCH #2

Sampler Awmacik  
Date June 27, 1987

Project GK287-01  
Property Head Bay

Location Ref Zeev pt @ 17+49N 20E  
Air Photo No Brg 024' for 3.85 m

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS	
					Rock Type	Alteration	Mineralization			
21428	0-0 Vertical	Channel	58 cm		Dioit			15% magnetite		
21429	0-0 Vertical	"		13 cm	Vein			V 115°/345. 25% qtz, 25% chlorit		
21430	0-1.25 m	"	1.25		Dioit			1 cm qtz-py-mal vein @ 0.35 m		
21431	1.25-1.35 m	"		7 cm	Vein			V 112°/495		
21432	1.35-2.35	"	1.0		Dioit	Slightly stained		15% chloritic gouge V 120°/405		
21433	2.35-3.35	"	1.0		"	"				
21434	3.35-3.85	"	0.50		"	"				

NTS TRENCH #3

Sampler AWMACK  
Date JUNE 28, 1987

Project GR 87-01  
Property Head Bay

Location Ref Zero pt @ 17+30.5N  
Air Photo No Br. 070 19+964E

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS		
					Rock Type	Alteration	Mineralization				
21437	0-0 Vertical	Channel	84cm		Basalt			25% magnetite, coarse.			
21438	0-0 Vertical	"	29cm		Pyroxenite	Weakly sheared		Fracturing @ 130°/29 SW			
21439	0-0 Vertical	"	57cm	50cm	No. 1 Vein		Py	Banded pyritic and quartz-rich bands.			
21440	0-0.90	"	90cm		Gabbro	Local epidote					
21441	0.90-1.90	"	1.00		"			1 cm slickensite shear N145/35SW			
21442	@ 1.9m	Grab	26cm		Andesite	Weak chert-ep.		Fractured. X050°/90			

Sampler N. DeBock  
 Date June 6/87

Project Vig 3  
 Property Vig 3

Location Ref \_\_\_\_\_  
 Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization							
21276	H2-W	Grab + chip	10cm	Volc	not orange	Fe	end of spur at landing strike 135° T-20°E						
21277	H2-W	"	5cm	Volc	-	Fe	± 120° - 80° N						
21278	"	chip	50cm 50cm	"	very red	Fe	± 325° 90° E						
21279	"	chip	70cm 10cm	"	"	Fe	" " E						
21280	"	"	20cm	"	-	"	270° 75° S						
21281	" spur	"	20 cm	"	orange	"	-						
21282	" spur	"	25 cm	"	-	"	-						
21283	crack not possible H2	chip	20 cm	calc silica	orange	Fe + Sil (Hem)	325° 85° NE						
21284	"	"	10-20	"		"	345° 90°						
21285	"	"	20-30	"	"	-	225° 90°						
21286	"	"	10-20	"	"	-	330° 85° NE						
21287	"	"	5-20	"	"	-	145° 25° NNE						
<del>21288</del>	<del>spur</del>	<del>"</del>	<del>20 cm</del>	<del>"</del>	<del>orange</del>	<del>"</del>	<del>325° 85° NE</del>						

Sampler ADP Rock  
 Date June 13/87

Project Vig 3  
 Property 0"

NTS  
 Location Ref  
 Air Photo No

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION		ADDITIONAL OBSERVATIONS	ASSAYS	
					Rock Type	Alteration		Mineralization	
21301	S-46	silt							
21302		"							
21308	S-13	chip							
21309	S-13	r	20cm	20cm	calc. chlorite	red	Pyrite		
21310	"	"	2m	20cm	ironite	red	Fe magnetite	320°	40° 50m E of main 5 low
21311	"	"	1m?		skarn	green	Pyrites		
21312	"	"	1m	10cm	chlorite quartz	"	"		
21313	"	"	75cm	75cm	alter d	orange	"		
21314	"	"	1.5m		vale	"	MASSIVE PYRITES		
21315	"	"	25-30cm	5cm	diorite shear zone	white green shed	Pyrites		
21316	"	"	25cm	50m	"	"	"		
21317	"	"	30cm	1m	andesite dike	green + red	magnetite Pyrites copper		
21318	"	"	10-20m	"	diorite	red	"		
21319	"	"	20cm	"	quartz epidote	green	magnetite	195°	85° NW
21320	"	"	80cm	"	"	"	Pyrite	"	"
21321	"	"	35cm	"	"	"	-	320°	10° W
21322	H8	"	1m	10cm	sheared quartz	red	Pyrite	200°	30° E
21323	"	"	1.5m	10cm	"	"	"		
21324	"	"	30cm?		diorite quartz	red black	"		
21325	"	"	30cm	10cm	"	"	"	15°	85° E



APPENDIX D

CERTIFICATES OF ANALYSIS



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870541 GA

JOB NUMBER: 870541

EQUITY ENGINEERING LTD.

PAGE 1 OF 1

SAMPLE #	Cu	Pb	Zn	Ag	Au
	ppm	ppm	ppm	ppm	ppb
87 HA-01	107	22	106	.7	10
87 HA-02	74	22	126	.2	10
87 HA-03	60	23	130	nd	5
87 HA-04	23	21	102	.2	10
87 HA-05	20	18	110	nd	10
87 HA-06	26	21	120	nd	10
87 HA-07	9	16	66	.2	5
87 HA-08	22	20	130	.2	10
87 HA-09	25	21	117	nd	30
87 HA-10	42	26	130	.3	10
87 HA-11	82	23	141	nd	10

DETECTION LIMIT  
nd = none detected

1 2  
-- = not analysed

1 0.1 5  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
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BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5856

REPORT NUMBER: 870542 GA

JOB NUMBER: 870542

EQUITY ENGINEERING

PAGE 1 OF 1

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb
21251	25	16	46	nd	nd
21252	32	21	48	nd	10
21253	27	25	66	nd	20
21254	6	16	40	nd	20
21255	14	10	27	nd	15
21256	28	15	67	nd	10
21257	15	15	103	nd	40
21258	6	13	53	nd	40
21259	48	12	65	nd	20

DETECTION LIMIT  
nd = none detected

1 2  
-- = not analysed

1 0.1 5  
is = insufficient sample





# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 988-5211 TELEX: 04-352578

BRANCH OFFICE  
1830 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5858

REPORT NUMBER: 870563 GA

JOB NUMBER: 870563

EQUITY ENGINEERING

PAGE 1 OF 2

SAMPLE #	Ag ppm	As ppm	Au ppb	Cu ppm	Pb ppm	Zn ppm
21260	nd	2	nd	27	32	44
21261	.4	2	nd	17	25	96
21262	.3	nd	nd	12	27	40
21263	.2	6	nd	26	27	45
21264	.3	2	nd	22	10	15
21265	.3	6	nd	42	17	95
21266	.3	nd	10	11	6	16
21267	.2	2	5	118	16	66
21268	nd	2	100	49	6	17
21269	.5	8	10	445	11	22
21270	nd	nd	nd	170	4	40
21271	.2	2	nd	22	21	17
21272	nd	2	nd	35	30	75
21273	nd	40	nd	27	31	178
21274	nd	50	nd	48	85	168
21275	.4	50	nd	1070	360	1160
21276	.2	2	nd	40	40	156
21277	nd	2	nd	46	35	52
21278	nd	2	nd	51	37	149
21279	nd	6	10	142	57	182
21280	.4	6	15	315	55	147
21281	nd	2	35	15	10	15
21282	nd	8	nd	12	34	46
21283	nd	nd	nd	15	16	41
21284	.4	2	5	16	29	45
21285	nd	2	nd	10	21	70
21286	nd	2	40	26	27	65
21287	.2	2	60	6	25	75
21288	nd	nd	nd	5	21	36
21289	nd	nd	15	13	25	45
21290	nd	nd	5	6	26	41
21291	nd	nd	20	13	27	37
21292	nd	nd	15	10	35	40
21293	nd	4	nd	5	11	52
21294	nd	nd	nd	7	33	125
21295	nd	20	nd	37	23	260
21296	nd	30	25	11	30	52
21297	.4	70	40	810	42	215
21351	nd	60	5	16	57	242

DETECTION LIMIT  
nd = none detected

0.1 2  
-- = not analysed

5 1 2 1  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

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BRANCH OFFICE  
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(604) 251-5656

REPORT NUMBER: 870563 GA

JOB NUMBER: 870563

EQUITY ENGINEERING

PAGE 2 OF 2

SAMPLE #	Ag	As	Au	Cu	Pb	Zn
	ppm	ppm	ppb	ppm	ppm	ppm
21352	nd	6	nd	6	35	56
21353	nd	25	25	12	9	16
21354	nd	20	nd	8	13	30

DETECTION LIMIT            0.1       2       5       1       2       1  
nd = none detected       -- = not analysed       is = insufficient sample



# VANGEOCHEM LAB LIMITED

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BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V6L 1L6  
(604) 251-5656

REPORT NUMBER: 870580 GA

JOB NUMBER: 870580

EQUITY ENGINEERING LTD.

PAGE 1 OF 2

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
21298	--	--	--	.5	nd	15
21299	--	--	--	.9	nd	79
21300	--	--	--	.8	nd	11
21301	--	--	--	.8	nd	8
21302	--	--	--	.2	nd	12
21303	--	--	--	1.6	nd	47
21304	--	--	--	1.5	nd	25
21305	--	--	--	.1	80	16
21306	--	--	--	1.2	nd	53
21307	--	--	--	.3	nd	14
21308	--	--	--	.1	nd	nd
21309	--	--	--	.1	nd	nd
21310	--	--	--	2.7	nd	5
21311	--	--	--	.1	nd	195
21312	--	--	--	.1	nd	11
21313	--	--	--	.6	nd	13
21314	--	--	--	.1	nd	659
21315	--	--	--	.3	nd	46
21316	--	--	--	.3	nd	18
21318	--	--	--	7.4	3700	976
21355	--	--	--	.3	310	15
21356	21130	25	136	5.4	30	10
21357	1089	7	29	.5	nd	nd
21358	756	5	107	.4	nd	1
21359	--	--	--	.4	60	nd
21360	--	--	--	.6	nd	nd
21361	--	--	--	.3	nd	11
21362	--	--	--	.3	40	14
21363	--	--	--	.9	nd	5
21364	--	--	--	.2	80	54
21365	--	--	--	.6	nd	9
21366	--	--	--	.1	nd	17
21367	--	--	--	1.1	40	13
21368	--	--	--	.4	20	3
21369	--	--	--	1.4	35	4
21370	--	--	--	.9	nd	6
21371	--	--	--	.4	nd	1
21372	--	--	--	.4	nd	62
87HA-20	22	13	70	.9	nd	7

DETECTION LIMIT            1        2            1        0.1        5        2  
 nd = none detected        -- = not analysed        is = insufficient sample



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BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L8  
(604) 251-5656

REPORT NUMBER: 870580 GA

JOB NUMBER: 870580

EQUITY ENGINEERING LTD.

PAGE 2 OF 2

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
87HA-21	29	11	123	.1	nd	9
87HA-22	44	13	156	.5	nd	40
87HA-23	37	9	157	.4	20	13
87HA-24	31	9	119	.5	60	6
87HA-25	45	9	141	.1	nd	4
87HA-26	30	4	110	.1	nd	15
87ND-01	28	3	104	.1	30	6
87ND-02	41	nd	92	.5	nd	2

DETECTION LIMIT  
nd = none detected

1 2  
-- = not analysed

1 0.1 5 2  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
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BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V6L 1L6  
(604) 251-5658

REPORT NUMBER: 870585 GA

JOB NUMBER: 870585

EQUITY ENGINEERING LTD.

PAGE 1 OF 7

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
L10+00N 20+50E	14	17	45	nd	10	4
L10+00N 20+75E	13	14	71	nd	nd	6
L10+00N 21+00E	32	12	41	nd	15	5
L10+00N 21+25E	11	8	35	nd	nd	3
L10+00N 21+50E	10	6	39	nd	5	nd
L10+00N 22+00E	12	9	40	nd	nd	3
L10+00N 22+50E	40	11	65	nd	nd	nd
L10+50N 19+00E	8	5	33	nd	nd	nd
L10+50N 19+25E (A)	7	7	32	nd	nd	nd
L10+50N 19+25E (B)	3	4	30	nd	nd	nd
L10+50N 19+50E	18	17	66	nd	10	nd
L10+50N 19+75E	6	9	35	nd	nd	nd
L10+50N 20+00E	12	7	33	nd	nd	2
L10+50N 20+25E	13	8	39	1.0	nd	2
L10+50N 20+50E	32	11	72	nd	nd	nd
L10+50N 20+75E	20	15	48	2.0	nd	nd
L10+50N 21+00E	17	11	38	2.0	nd	5
L10+50N 21+25E	20	10	43	1.0	10	9
L10+50N 21+50E	19	14	49	1.0	nd	7
L10+50N 22+00E	14	7	33	1.0	nd	2
L10+50N 22+25E	9	10	36	nd	nd	nd
L10+50N 22+50E	22	12	53	nd	10	nd
L10+75N 20+00E	22	10	59	nd	10	nd
L12+50N 20+00E	19	17	66	nd	10	nd
L12+50N 21+50E	6	8	34	nd	nd	nd
L12+50N 21+75E	3	5	34	nd	nd	nd
L12+50N 22+00E	6	7	32	nd	nd	nd
L12+50N 22+25E	2	4	35	nd	nd	3
L12+50N 22+50E	10	7	50	nd	nd	nd
L12+50N 22+75E	2	5	32	nd	nd	nd
L12+50N 23+00E	2	7	31	nd	nd	2
L14+00N 20+25E	17	14	46	1.0	10	3
L14+00N 20+50E	15	15	44	1.0	10	5
L14+00N 20+75E	11	14	42	nd	10	2
L14+00N 21+00E	10	8	30	nd	nd	5
L14+00N 21+25E	3	10	29	nd	nd	nd
L14+00N 21+50E	3	9	29	nd	nd	nd
L14+00N 21+75E	nd	3	22	nd	nd	nd
L14+00N 22+00E	7	18	28	nd	nd	nd

DETECTION LIMIT

nd = none detected

1 2

-- = not analysed

1 0.1

is = insufficient sample

5

2



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
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(604) 988-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870585 GA

JOB NUMBER: 870585

EQUITY ENGINEERING LTD.

PAGE 2 OF 7

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L14+00N 22+25E	8	5	23	nd	nd	nd
L14+00N 22+50E	7	6	24	nd	nd	2
L14+00N 22+75E	7	5	20	nd	nd	nd
L15+50N 20+25E	15	5	24	nd	nd	nd
L15+50N 20+50E	10	6	23	nd	nd	nd
L15+50N 20+75E	16	6	27	nd	nd	nd
L15+50N 21+00E	13	6	26	nd	nd	nd
L15+50N 21+25E	26	16	41	1.0	20	3
L15+50N 21+50E	16	8	29	nd	nd	nd
L15+50N 21+75E	28	7	28	nd	nd	3
L15+50N 22+00E	21	11	45	1.0	nd	4
L16+00N 20+25E	12	4	36	nd	nd	nd
L16+00N 20+75E	15	9	26	1.0	nd	nd
L16+00N 21+00E	14	7	28	nd	nd	nd
L16+00N 21+25E	34	7	43	2.0	nd	8
L16+00N 21+50E	20	9	45	2.0	nd	nd
L16+00N 21+75E	8	4	27	nd	nd	nd
L16+00N 22+00E	31	6	28	nd	nd	3
L16+50N 20+25E	9	4	28	nd	nd	2
L16+50N 20+75E	16	11	33	1.0	nd	nd
L16+50N 21+00E	37	17	44	1.0	10	5
L16+50N 21+25E	28	19	40	2.0	10	nd
L16+50N 21+50E	10	7	25	nd	nd	nd
L16+50N 21+75E	10	7	25	nd	nd	nd
L16+50N 22+00E	23	9	22	nd	nd	nd
L17+00N 20+25E	24	3	48	2.0	10	nd
L17+00N 20+50E	17	7	41	2.0	10	nd
L17+00N 20+75E	38	6	34	1.0	nd	nd
L17+25N 19+00E	5	4	27	nd	10	nd
L17+25N 19+25E	17	8	26	nd	10	nd
L17+25N 19+50E	24	5	36	2.0	10	2
L17+25N 20+25E	11	6	35	1.0	nd	nd
L17+25N 20+50E	15	5	26	1.0	nd	nd
L17+25N 20+75E	14	6	30	1.0	nd	2
L17+50N 20+50E	6	6	23	nd	nd	4
L17+50N 21+25E	8	10	25	nd	nd	5
L17+50N 21+50E	23	17	32	2.0	nd	nd
L17+50N 21+75E	12	8	25	1.0	nd	2
L17+50N 22+25E	15	12	41	1.0	nd	6

DETECTION LIMIT

nd = none detected

1 2  
-- = not analysed

1 0.1 5 2  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

**MAIN OFFICE**  
 1521 PEMBERTON AVE.  
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**BRANCH OFFICE**  
 1630 PANDORA ST.  
 VANCOUVER, B.C. V5L 1L6  
 (604) 251-5656

REPORT NUMBER: 870585 GA

JOB NUMBER: 870585

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PAGE 3 OF 7

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
L17+50N 22+50E	11	10	40	nd	nd	4
L17+50N 22+75E	17	17	34	nd	10	5
L17+50N 23+25E	29	8	58	1.0	nd	5
L17+50N 23+50E	30	10	36	nd	10	3
L17+50N 23+75E	16	3	25	1.0	nd	11
L17+50N 24+00E	33	2	94	1.0	nd	13
L17+50N 24+50E	30	4	91	1.0	nd	51
L17+50N 24+75E	40	10	100	1.0	10	43
L17+75N 19+00E	14	14	22	1.0	nd	3
L17+75N 19+25E	9	12	20	nd	nd	2
L17+75N 19+50E	13	7	24	nd	5	2
L17+75N 19+75E	16	11	25	1.0	nd	nd
L17+75N 20+25E	70	10	37	1.0	30	7
L17+75N 20+50E	39	10	28	nd	nd	5
L17+75N 20+75E	6	7	22	nd	nd	3
L18+00N 20+75E	13	7	31	1.0	nd	5
L18+00N 21+00E	14	12	26	1.0	nd	4
L18+00N 21+25E	11	11	23	nd	nd	2
L18+00N 21+50E	13	10	23	nd	nd	4
L18+00N 21+75E	5	7	19	nd	nd	6
L18+00N 22+00E	24	12	115	1.0	15	44
L18+00N 22+25E	38	13	202	1.0	20	78
L18+00N 22+50E	18	17	158	1.0	20	41
L18+00N 22+75E	47	13	83	1.0	15	35
L18+00N 23+00E	24	11	89	nd	10	25
L18+00N 23+25E	35	12	91	1.0	nd	63
L18+00N 23+50E	56	19	370	nd	10	130
L18+00N 23+75E	50	10	242	nd	nd	48
L18+00N 24+00E	39	15	248	nd	nd	52
L18+50N 13+50E	17	5	90	nd	10	nd
L18+50N 14+00E	13	7	48	nd	nd	3
L18+50N 14+25E	31	1	102	nd	nd	6
L18+50N 14+50E	10	1	31	nd	nd	nd
L18+50N 14+75E	7	5	25	nd	nd	2
L18+50N 15+00E	92	nd	55	nd	nd	nd
L18+50N 15+25E	16	5	22	nd	10	3
L18+50N 16+00E	21	5	39	1.0	10	8
L18+50N 16+25E	3	6	24	nd	nd	5
L18+50N 16+50E	2	5	18	nd	nd	nd

DETECTION LIMIT            1        2            1        0.1        5        2  
 nd = none detected        -- = not analysed        is = insufficient sample



# VANGEOCHEM LAB LIMITED

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(604) 251-5656

REPORT NUMBER: 870585 GA

JOB NUMBER: 870585

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PAGE 4 OF 7

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
L18+50N 16+75E	13	5	22	nd	nd	nd
L18+50N 17+00E	18	9	28	nd	nd	nd
L18+50N 17+25E	19	8	38	nd	20	3
L18+50N 17+75E	34	14	76	3.0	10	40
L18+50N 18+00E	19	11	75	1.0	nd	19
L18+50N 18+25E	21	6	128	1.0	nd	64
L18+50N 18+50E	9	4	28	nd	nd	9
L18+50N 18+75E	28	49	295	1.0	nd	33
L18+50N 19+00E	18	9	68	2.0	nd	21
L18+50N 19+25E	9	3	30	nd	nd	5
L18+50N 19+50E	32	14	337	nd	20	64
L18+50N 19+75E	28	13	110	1.0	nd	36
L18+50N 20+75E	26	1	142	1.0	nd	12
L18+50N 21+00E	23	11	48	nd	nd	11
L18+50N 21+50E	19	6	149	nd	nd	6
L18+50N 21+75E	30	15	143	1.0	nd	24
L18+50N 22+00E	26	18	194	1.0	10	62
L18+50N 22+25E	42	28	162	nd	10	49
L18+50N 22+50E	23	7	88	1.0	10	26
L18+50N 22+75E	32	13	270	1.0	10	17
L19+00N 13+50E	13	8	29	nd	nd	nd
L19+00N 13+75E	22	9	29	nd	nd	nd
L19+00N 14+00E	20	11	32	nd	nd	nd
L19+00N 14+25E	12	4	22	nd	nd	nd
L19+00N 14+50E	28	6	66	nd	10	nd
L19+00N 14+75E	7	2	21	nd	nd	nd
L19+00N 15+00E	38	6	46	nd	nd	4
L19+00N 15+25E	21	2	27	nd	nd	nd
L19+00N 15+50E	12	8	30	nd	nd	4
L19+00N 15+75E	13	11	67	nd	10	13
L19+00N 16+00E	17	11	33	nd	nd	5
L19+00N 16+25E	11	9	17	1.0	nd	4
L19+00N 16+50E	8	14	19	nd	nd	nd
L19+00N 16+75E	12	15	25	1.0	nd	nd
L19+00N 17+00E	31	8	29	nd	nd	6
L19+00N 17+25E	15	11	28	1.0	nd	6
L19+00N 17+50E	26	68	343	nd	nd	445
L19+00N 18+00E	19	17	48	1.0	nd	23
L19+00N 18+25E	31	17	31	2.0	nd	10
DETECTION LIMIT	1	2	1	0.1	5	2
nd = none detected	--	= not analysed	is	= insufficient sample		





# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870585 GA

JOB NUMBER: 870585

EQUITY ENGINEERING LTD.

PAGE 5 OF 7

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
L19+00N 18+50E	47	31	220	nd	10	21
L19+00N 18+75E	55	17	177	nd	nd	16
L19+00N 19+00E	19	9	130	nd	10	nd
L19+00N 19+25E	19	18	48	1.0	10	4
L19+00N 19+50E	38	21	115	1.0	10	58
L19+00N 19+75E	14	10	31	nd	nd	9
L19+00N 20+25E	16	14	114	2.0	nd	45
L19+00N 20+50E	27	11	87	nd	10	48
L19+00N 20+75E	48	31	255	nd	10	85
L19+00N 21+00E	35	32	327	nd	nd	49
L19+00N 21+25E	21	27	272	nd	nd	18
L19+00N 21+50E	20	35	378	nd	nd	40
L19+00N 21+75E	21	45	7592	2.0	nd	23
L19+00N 22+00E	41	26	622	1.0	nd	9
L19+00N 22+25E	24	32	714	2.0	nd	15
L19+00N 22+50E	197	28	3616	2.0	nd	26
L19+00N 22+75E	27	124	595	nd	10	77
L19+00N 23+00E	18	51	453	nd	10	30
L19+00N 23+25E	32	32	226	1.0	nd	15
L19+00N 23+50E	18	23	107	1.0	10	10
L19+00N 23+75E	22	17	168	nd	nd	5
L19+00N 24+00E	19	67	498	nd	nd	24
L19+50N 13+50E	45	29	921	nd	nd	31
L19+50N 14+00E	7	7	88	nd	10	nd
L19+50N 14+25E	6	5	40	nd	nd	nd
L19+50N 14+50E	9	5	31	nd	10	nd
L19+50N 14+75E	3	1	17	nd	nd	nd
L19+50N 15+00E	1	nd	13	nd	nd	nd
L19+50N 15+25E	10	3	46	nd	nd	nd
L19+50N 15+50E	23	7	36	2.0	nd	4
L19+50N 15+75E	21	19	209	nd	nd	375
L19+50N 16+00E	20	42	279	1.0	nd	76
L19+50N 16+25E	31	11	63	1.0	nd	67
L19+50N 16+50E	23	127	247	1.0	nd	109
L19+50N 16+75E	7	19	98	nd	nd	28
L19+50N 17+00E	27	22	82	3.0	nd	30
L19+50N 17+25E	30	23	639	1.0	nd	60
L19+50N 17+50E	24	12	98	2.0	nd	17
L19+50N 17+75E	12	18	191	1.0	10	24

DETECTION LIMIT

nd = none detected

1

2

1

0.1

5

2

-- = not analysed

is = insufficient sample



# VANGEOCHEM LAB LIMITED

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(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1830 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870585 GA

JOB NUMBER: 870585

EQUITY ENGINEERING LTD.

PAGE 6 OF 7

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
L19+50N 18+00E	49	37	229	nd	20	21
L19+50N 18+25E	37	18	175	nd	nd	16
L19+50N 18+50E	16	13	133	nd	nd	nd
L19+50N 18+75E	18	22	50	1.0	20	nd
L19+50N 19+00E	33	23	99	1.0	nd	53
L19+50N 19+25E	11	7	27	nd	nd	6
L19+50N 19+50E	13	13	104	1.0	nd	41
L19+50N 19+75E	27	11	86	nd	nd	43
L19+50N 20+25E	21	27	235	nd	10	81
L19+50N 20+50E	32	26	306	nd	nd	37
L19+50N 20+75E	17	24	253	nd	nd	10
L19+50N 21+25E	18	34	361	nd	10	28
L19+50N 21+50E	19	41	6664	1.0	10	21
L19+50N 21+75E	38	25	541	nd	nd	6
L19+50N 22+00E	22	30	660	2.0	nd	7
L19+50N 22+25E	185	27	3465	1.0	nd	22
L19+50N 22+50E	26	104	578	nd	nd	59
L19+50N 22+75E	17	50	423	nd	nd	28
L19+50N 23+00E	42	30	220	nd	nd	12
L19+50N 23+25E	17	20	100	nd	nd	3
L19+50N 23+50E	20	14	150	nd	nd	3
L19+50N 23+75E	18	63	450	nd	nd	20
L19+50N 24+00E	31	29	864	nd	nd	24
L20+00N 13+50E	5	4	83	nd	nd	nd
L20+00N 13+75E	4	3	37	nd	nd	nd
L20+00N 14+00E	8	1	28	nd	nd	nd
L20+00N 14+25E	2	2	15	nd	nd	nd
L20+00N 14+50E	nd	nd	11	nd	nd	nd
L20+00N 14+75E	8	4	44	nd	10	nd
L20+00N 15+00E	21	6	32	1.0	nd	nd
L20+00N 15+25E	20	14	186	nd	nd	323
L20+00N 15+50E	18	35	258	nd	nd	56
L20+00N 15+75E	10	9	52	nd	nd	58
L20+00N 16+00E	22	124	235	nd	70	102
L20+00N 16+25E	10	9	79	nd	nd	11
L20+00N 16+50E	23	14	70	1.0	nd	14
L20+00N 16+75E	26	15	567	nd	nd	46
L20+00N 17+00E	21	10	83	1.0	nd	6
L20+00N 17+25E	10	20	169	nd	nd	19

DETECTION LIMIT

nd = none detected

1 2  
-- = not analysed

1 0.1 5 2  
is = insufficient sample



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NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1830 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870585 GA

JOB NUMBER: 870585

EQUITY ENGINEERING LTD.

PAGE 7 OF 7

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
L20+00N 17+50E	14	9	60	nd	nd	43
L20+00N 17+75E	26	8	682	nd	nd	57
L20+00N 18+00E	21	12	272	2.0	nd	69
L20+00N 18+25E	10	47	112	nd	nd	25
L20+00N 18+50E	19	12	40	1.0	nd	4
L20+00N 18+75E	13	43	252	nd	nd	33
L20+00N 19+00E	17	13	188	1.0	nd	21
L20+00N 19+25E	37	15	82	1.0	nd	6
L20+00N 19+50E	26	17	129	nd	nd	52
L20+00N 19+75E	12	26	140	nd	nd	30
L20+00N 20+25E	19	32	360	1.0	nd	23
L20+00N 20+50E	25	14	126	1.0	nd	3
L20+00N 20+75E	46	34	480	nd	nd	50
L20+00N 21+00E	14	19	146	nd	nd	15
L20+00N 21+25E	27	36	271	nd	nd	29
L20+00N 21+50E	27	20	463	nd	nd	26
L20+00N 22+00E	22	21	258	nd	nd	24
L20+00N 22+25E	32	38	605	1.0	nd	25
L20+00N 22+50E	11	29	214	nd	nd	16
L20+00N 23+00E	35	44	610	1.0	nd	24
L20+00N 23+25E	17	13	400	nd	nd	2
L20+00N 23+50E	35	19	565	1.0	nd	15
L20+00N 24+00E	25	22	241	2.0	nd	46
87-HA-27	28	5	105	nd	10	9
87-HA-28	34	6	84	nd	nd	23
87-HA-29	29	8	38	nd	nd	nd
87-HA-30	25	6	68	nd	nd	3
87-HA-31	13	6	72	nd	nd	nd
87-HA-32	28	6	78	nd	nd	nd
87-HA-33	45	15	109	nd	nd	45
87-HA-34	25	9	81	1.0	nd	7
87-HA-35	21	8	70	nd	nd	2
87-HA-36	48	14	260	nd	nd	18
87-HA-37	31	3	118	1.0	nd	18
87-HA-38	46	8	91	1.0	540	14
SAMPLE C	15	9	20	1.0	nd	nd
SAMPLE D	5	9	17	nd	nd	nd

DETECTION LIMIT                    1        2                    1        0.1        5                    2  
 nd = none detected            -- = not analysed            is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
 1521 PEMBERTON AVE.  
 NORTH VANCOUVER, B.C. V7P 2S3  
 (604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
 1630 PANDORA ST.  
 VANCOUVER, B.C. V5L 1L6  
 (604) 251-5656

REPORT NUMBER: 870595 GA

JOB NUMBER: 870595

EQUITY ENGINEERING LTD.

PAGE 1 OF 1

SAMPLE #	Ag ppm	As ppm	Cu ppm	Pb ppm	Zn ppm	Au ppb
21317	.5	82	800	nd	44	nd
21319	.7	5	55	nd	46	nd
21320	1.7	nd	66	nd	89	nd
21321	.7	8	77	20	115	nd
21322	.2	nd	46	1	78	nd
21323	.1	4	27	5	48	nd
21324	.2	nd	17	nd	89	nd
21325	.3	nd	36	2	111	nd
21326	.2	6	17	10	19	55
21327	.4	nd	72	nd	24	nd
21328	.2	1	41	2	70	640
21373	.1	8	11	nd	63	nd
21374	.1	11	11	2	22	nd
21375	.1	nd	20	nd	45	nd
21376	.8	2	49	33	720	nd
21377	.9	nd	16	nd	5952	nd
21378	3.1	27	874	17	2469	nd
21379	.1	9	34	2	131	nd
21380	.2	45	69	8	320	nd
21381	2.1	20	135	54	163	nd
21382	1.1	9	57	22	80	30
21383	.8	8	48	4	98	nd

DETECTION LIMIT  
 nd = none detected

0.1 2  
 -- = not analysed

1 2 1 5  
 is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 966-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870622 GA

JOB NUMBER: 870622

EQUITY ENGINEERING LTD.

PAGE 1 OF 1

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
21329	142	25	90	nd	nd	76
21330	273	14	102	nd	nd	197
21331	46	13	86	nd	nd	85
21332	106	20	1629	1.0	nd	26
21333	403	23	6971	2.0	nd	146
21334	43	4	467	3.0	nd	9
21384	183	26	260	2.0	nd	44
21385	153	24	91	1.0	1040	12
21386	235	13	72	nd	nd	12
21387	238	16	39	1.0	nd	7
21388	58	16	103	nd	nd	30
21389	53	20	382	nd	nd	26
21390	89	51	217	nd	nd	34
21391	45	17	117	nd	nd	82
21392	39	18	536	1.0	5	36
21393	86	18	146	nd	5	11
21395	13	14	39	nd	20	7
21396	14	10	156	1.0	15	18
21397	18	19	142	nd	nd	16
21398	66	14	130	nd	nd	12
21399	313	11	110	1.0	nd	57
21400	2801	1	86	3.0	15	13
21401	3356	11	50	4.0	40	83
21402	189	13	38	nd	nd	10
21403	105	11	41	nd	nd	17
21404	77	10	86	nd	5	16
21405	104	15	47	1.0	nd	18
87HA-39	228	21	96	2.0	5690	23

DETECTION LIMIT  
nd = none detected

1 2  
-- = not analysed

1 0.1 5 2  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352576

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L8  
(604) 251-5656

REPORT NUMBER: 870623 GA

JOB NUMBER: 870623

EQUITY ENGINEERING LTD.

PAGE 1 OF 5

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
18+00N 24+25E	57	18	277	.8	nd	12
18+00N 24+75E	24	35	66	1.7	nd	22
18+00N 25+00E	26	32	99	2.2	nd	41
18+00N 25+25E	31	30	197	1.6	10	30
18+00N 25+50E	29	9	125	1.7	nd	14
18+00N 25+75E	45	28	326	1.3	nd	11
18+00N 26+00E	18	22	212	2.3	nd	nd
19+00N 24+25E	25	16	98	2.6	nd	14
19+00N 24+50E	22	23	309	2.1	10	26
19+00N 24+75E	36	nd	137	.1	110	nd
19+00N 25+00E	19	12	80	.1	nd	nd
19+00N 25+25E	12	9	39	.1	nd	nd
19+00N 25+50E	29	8	243	.1	nd	nd
19+00N 25+75E	38	26	125	3.9	5	13
19+00N 26+00E	33	6	99	.1	nd	13
19+50N 24+25E	75	nd	498	.3	nd	nd
19+50N 24+50E	43	165	1526	3.2	10	nd
19+50N 24+75E	47	32	245	.6	5	10
19+50N 25+00E	14	nd	52	.5	5	nd
19+50N 25+25E	50	nd	296	.7	5	nd
19+50N 25+50E	37	nd	78	.7	nd	nd
19+50N 25+75E	31	nd	56	.4	nd	nd
19+50N 26+00E	61	nd	68	.1	nd	nd
20+25N 20+00E	51	48	194	.1	nd	nd
20+50N 20+00E	24	24	117	.1	nd	2
20+50N 20+25E	5	18	11	.1	nd	nd
20+50N 20+50E	22	24	302	.1	nd	nd
20+50N 20+75E	27	10	240	.6	nd	16
20+50N 21+00E	25	22	169	.1	nd	11
20+50N 21+25E	23	23	235	.3	nd	36
20+50N 21+50E	22	50	161	.1	nd	4
20+50N 21+75E	21	33	127	.1	nd	1
20+50N 22+00E	19	33	107	.1	nd	1
20+50N 22+25E	28	24	1148	4.2	nd	2
20+50N 22+50E	94	41	690	7.1	nd	nd
20+50N 22+75E	20	22	443	.4	nd	nd
20+50N 23+25E	24	26	55	.4	nd	5
20+50N 23+50E	22	3	4700	2.6	nd	nd
20+50N 23+75E	24	7	154	.4	nd	nd

DETECTION LIMIT

nd = none detected

1 2

-- = not analysed

1 0.1 5 2  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
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(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5658

REPORT NUMBER: 870623 GA

JOB NUMBER: 870623

EQUITY ENGINEERING LTD.

PAGE 2 OF 5

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
20+50N 24+00E	14	27	162	1.5	5	33
20+50N 24+25E	26	29	97	2.1	5	6
20+50N 24+50E	42	1	91	1.1	10	nd
20+50N 24+75E	34	11	65	.5	5	nd
20+50N 25+00E	85	13	371	1.2	nd	6
20+50N 25+25E	39	9	96	.8	nd	nd
20+50N 25+50E	28	30	201	.7	nd	9
20+50N 25+75E	30	6	55	.9	5	10
20+50N 26+00E	36	4	42	1.1	5	2
20+75N 20+00E	29	34	166	1.5	nd	9
21+00N 21+25E	25	12	189	.1	nd	nd
21+00N 21+50E	1282	5052	1992	2.1	nd	91
21+00N 21+75E	135	492	567	.7	nd	24
21+00N 22+00E	38	60	198	.5	nd	1
21+00N 22+25E	29	49	113	.7	nd	8
21+00N 22+50E	36	nd	75	.2	nd	nd
21+00N 22+75E	20	31	124	.1	nd	9
21+00N 23+00E	40	25	189	.3	nd	nd
21+00N 23+25E	49	8	185	.1	nd	nd
21+00N 23+50E	64	4	163	.5	5	nd
21+00N 23+75E	48	10	40	.5	nd	nd
21+00N 24+00E	48	18	122	.5	nd	nd
21+00N 24+25E	25	11	703	.8	5	nd
21+00N 24+50E	111	7	126	.8	nd	nd
21+00N 24+75E	45	17	180	1.3	nd	8
21+00N 25+00E	35	8	48	.3	5	nd
21+00N 25+25E	22	26	152	.7	60	15
21+00N 25+50E	17	37	111	.1	nd	2
21+00N 25+75E	14	25	31	.1	nd	8
21+25N 20+00E	28	47	175	.1	nd	10
21+50N 20+00E	16	23	13	.1	nd	3
21+50N 20+25E	15	17	29	.1	nd	4
21+50N 20+50E	46	67	515	.1	5	2
21+50N 20+75E	45	37	390	.1	5	12
21+50N 21+00E	25	28	61	1.2	nd	10
21+50N 21+25E	32	35	131	.1	nd	7
21+50N 21+50E	58	nd	115	.1	nd	nd
21+50N 21+75E	20	13	22	.1	nd	nd
21+50N 22+00E	37	22	155	.1	nd	nd

DETECTION LIMIT

nd = none detected

1 2  
-- = not analysed

1 0.1 5 2  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1830 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870623 GA

JOB NUMBER: 870623

EQUITY ENGINEERING LTD.

PAGE 3 OF 5

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
21+50N 22+25E	26	35	114	.1	nd	3
21+50N 22+50E	29	27	123	.1	nd	3
21+50N 22+75E	33	32	53	.8	nd	7
21+50N 23+00E	36	32	132	.2	nd	6
21+50N 23+25E	41	13	476	.2	5	nd
21+50N 23+50E	37	29	78	2.1	5	5
21+50N 23+75E	24	15	161	.6	10	nd
21+50N 24+00E	135	29	914	1.2	nd	nd
21+50N 24+25E	42	nd	125	.7	nd	nd
21+50N 24+50E	38	6	147	1.3	10	nd
21+50N 24+75E	58	nd	60	1.1	nd	nd
21+50N 25+00E	58	15	72	1.4	nd	15
21+50N 25+25E	17	28	210	.9	nd	10
21+50N 25+50E	26	30	268	3.1	nd	29
21+50N 26+00E	27	8	116	1.1	nd	nd
22+00N 20+25E	39	18	250	2.1	nd	7
22+00N 20+50E	19	54	188	.1	15	7
22+00N 20+75E	31	20	44	.1	5	nd
22+00N 21+00E	68	2	79	.5	5	nd
22+00N 21+25E	30	18	147	.4	5	nd
22+00N 21+50E	38	61	117	.8	15	7
22+00N 21+75E	32	7	67	.5	10	nd
22+00N 22+25E	19	15	91	.4	10	nd
22+00N 22+50E	56	26	209	2.6	5	10
22+00N 22+75E	19	32	94	.9	nd	6
22+00N 23+00E	28	9	183	.9	25	nd
22+00N 23+25E	42	7	48	.9	5	nd
22+00N 23+50E	23	26	73	.9	nd	nd
22+00N 23+75E	21	29	32	1.6	nd	8
22+00N 24+00E	28	18	280	1.6	5	nd
22+00N 24+25E	20	21	418	.1	5	nd
22+00N 24+50E	24	nd	79	.1	5	nd
22+00N 24+75E	20	17	87	.2	nd	nd
22+00N 25+00E	48	nd	85	.6	nd	nd
22+00N 25+25E	21	6	41	.2	nd	1
22+00N 25+50E	5	24	130	.1	nd	nd
22+00N 25+75E	26	24	27	1.6	nd	nd
22+25N 20+00E	41	38	405	.6	nd	3
22+50N 20+25E	39	62	366	.1	nd	9

DETECTION LIMIT

nd = none detected

1 2

-- = not analysed

1 0.1 5 2  
is = insufficient sample





# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352576

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V6L 1L6  
(604) 251-5658

REPORT NUMBER: 870623 GA

JOB NUMBER: 870623

EQUITY ENGINEERING LTD.

PAGE 4 OF 5

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
22+50N 20+50E	52	140	561	.9	nd	36
22+50N 20+75E	20	32	160	.1	nd	12
22+50N 21+00E	26	53	242	.1	10	17
22+50N 21+75E	18	20	121	.1	nd	4
22+50N 22+00E	28	73	274	.3	45	18
22+50N 22+25E	24	16	71	.1	nd	12
22+50N 22+50E	43	36	182	.3	nd	nd
22+50N 22+75E	30	10	79	.6	nd	4
22+50N 23+00E	32	17	65	.3	40	7
22+50N 23+25E	44	16	262	.3	5	6
22+50N 24+75E	7	6	26	.1	40	nd
22+50N 25+00E	38	nd	48	.2	nd	nd
22+50N 25+50E	28	8	48	.1	5	10
23+00N 20+50E	19	13	19	.1	nd	5
23+00N 20+75E	26	12	72	.1	10	20
23+00N 21+00E	16	9	377	1.2	10	1
23+00N 21+25E	35	8	82	.3	nd	16
23+00N 21+50E	17	12	116	.2	nd	8
23+00N 21+75E	26	4	35	.1	nd	nd
23+00N 22+00E	50	nd	141	.1	nd	nd
23+00N 22+25E	22	nd	100	.9	nd	nd
23+00N 22+50E	16	13	104	.4	nd	4
23+00N 22+75E	26	21	238	.9	nd	12
23+00N 23+00E	39	19	248	.5	nd	11
23+00N 23+25E	23	8	96	.1	nd	4
23+00N 23+50E	21	nd	136	.1	nd	nd
23+00N 23+75E	62	nd	84	.1	nd	nd
23+00N 24+00E	18	16	113	.1	nd	8
23+00N 24+25E	35	6	180	.9	nd	nd
23+00N 24+50E	25	10	44	1.1	nd	4
23+00N 24+75E	54	nd	116	.8	30	nd
23+00N 25+00E	9	12	44	.1	5	4
23+00N 25+25E	29	9	108	1.6	nd	10
23+00N 25+50E	25	4	54	.4	nd	8
23+00N 25+75E	31	nd	136	.1	nd	27
23+00N 26+00E	27	nd	70	.8	nd	nd
CL 150-001	61	12	103	.2	nd	11
CL 150-002	21	nd	33	.4	5	nd
CL 150-003	24	9	77	.3	nd	nd

DETECTION LIMIT            1        2            1        0.1        5        2  
 nd = none detected        -- = not analysed        is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
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NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870636 GA

JOB NUMBER: 870636

EQUITY ENGINEERING LTD.

PAGE 1 OF 1

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
87 HA-40	26	28	45	.1	10	nd
21406	12	17	149	.1	nd	nd
21407	68	12	56	.1	5	95
21408	49	10	134	.1	nd	nd
21409	6	13	47	.1	20	40
21410	341	7	726	.1	5	88
21411	31	9	68	.1	nd	86
21412	11	10	105	.1	10	nd
21413	1	19	204	.1	995	nd
21414	22	18	250	.1	nd	nd
21476	16	16	59	.1	nd	nd

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JUL 20 1987

DETECTION LIMIT  
nd = none detected

1 2  
-- = not analysed

1 0.1 5 2  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L8  
(604) 251-5656

REPORT NUMBER: 870567 GA

JOB NUMBER: 870567

EQUITY ENGINEERING LTD.

PAGE 1 OF 9

SAMPLE #	Cu	Pb	Zn	Ag	Au	As
	ppm	ppm	ppm	ppm	ppb	ppm
L11+00N 18+50E	24	22	149	.2	nd	7
L11+00N 18+75E	17	6	35	.4	nd	nd
L11+00N 19+00E	12	13	20	.1	nd	nd
L11+00N 19+50E	9	6	14	.3	nd	nd
L11+00N 20+00E	7	5	14	.2	10	nd
L11+00N 20+25E	14	8	24	.1	25	nd
L11+00N 20+50E	18	8	18	.4	15	nd
L11+00N 20+75E	10	7	21	.3	60	nd
L11+00N 21+00E	14	8	24	.1	nd	nd
L11+00N 21+25E	15	6	45	.3	nd	nd
L11+00N 21+50E	7	3	18	.1	nd	2
L11+00N 22+00E	24	18	48	.1	nd	10
L11+00N 22+25E	35	11	68	.2	nd	3
L11+50N 18+25E	11	5	17	.4	nd	nd
L11+50N 18+50E	20	8	32	.5	nd	4
L11+50N 18+75E	12	7	23	.5	nd	nd
L11+50N 19+00E	15	15	31	.5	nd	2
L11+50N 19+25E	17	11	32	.8	nd	nd
L11+50N 19+50E	11	11	32	.2	nd	nd
L11+50N 19+75E	15	7	23	.4	nd	nd
L11+50N 20+00E BL	16	10	29	.6	nd	nd
L11+50N 20+25E	16	9	31	.1	nd	nd
L11+50N 20+50E	22	11	44	.1	nd	nd
L11+50N 20+75E	23	16	35	.1	nd	nd
L11+50N 21+00E	26	13	55	.3	nd	6
L11+50N 21+25E	46	14	83	.1	nd	4
L11+50N 21+50E	63	8	103	.1	nd	16
L11+50N 21+75E	45	13	70	.2	nd	9
L11+50N 22+00E	22	8	35	.5	nd	nd
L11+50N 22+25E	81	6	94	.1	nd	6
L12+00N 17+50E	28	10	47	.1	nd	8
L12+00N 17+75E	38	9	80	.1	nd	8
L12+00N 18+00E	33	11	61	.1	nd	6
L12+00N 18+25E	135	14	107	.1	nd	14
L12+00N 18+50E	31	14	59	.1	5	nd
L12+00N 18+75E	64	10	72	.1	5	9
L12+00N 19+00E	15	5	23	.5	nd	nd
L12+00N 19+25E	5	4	11	.1	nd	nd
L12+00N 19+50E	2	2	16	.1	nd	7
DETECTION LIMIT	1	2	1	0.1	5	2
nd = none detected	--	= not analysed	is = insufficient sample			



# VANGEOCHEM LAB LIMITED

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(604) 251-5656

REPORT NUMBER: 870567 GA

JOB NUMBER: 870567

EQUITY ENGINEERING LTD.

PAGE 2 OF 9

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L12+00N 19+75E	19	14	23	.9	nd	nd
L12+00N 20+00E	32	15	41	.1	nd	4
L12+00N 20+25E	26	17	49	.5	nd	2
L12+00N 20+50E	18	9	22	1.2	nd	nd
L12+00N 20+75E	16	6	19	1.3	nd	nd
L12+00N 21+00E	14	5	110	.3	nd	2
L12+00N 21+25E	93	16	97	.5	5	12
L12+00N 21+50E	30	9	27	.5	10	nd
L12+00N 21+75E	9	6	17	.1	nd	2
L12+00N 22+00E	25	7	28	.8	nd	nd
L12+00N 22+25E	16	11	25	.3	nd	nd
L12+00N 22+50E	25	9	52	.5	95	nd
L12+00N 22+75E	11	7	12	.1	300	nd
L12+00N 23+00E	19	7	26	.8	nd	nd
L12+00N 23+25E	7	6	20	.1	nd	nd
L12+00N 23+50E	13	7	14	.3	nd	nd
L12+00N 23+75E	7	5	11	.1	nd	nd
L12+50N 17+00E	28	13	66	.1	nd	10
L12+50N 17+25E	28	nd	72	.1	nd	2
L12+50N 17+50E	26	9	38	.3	nd	2
L12+50N 17+75E	55	15	106	.1	95	19
L12+50N 18+00E	29	7	98	.1	nd	10
L12+50N 18+25E	29	13	33	.1	nd	20
L12+50N 18+50E	35	13	76	.1	nd	nd
L12+50N 18+75E	15	12	17	.1	nd	nd
L12+50N 19+00E	31	9	41	.1	60	nd
L12+50N 19+50E	45	17	86	.1	20	4
L12+50N 20+00E	11	16	12	.5	90	7
L12+50N 20+25E	24	15	31	.8	20	nd
L12+50N 20+50E	36	14	53	.9	80	nd
L12+50N 20+75E	13	6	20	.9	nd	nd
L12+50N 21+00E	23	13	25	1.6	nd	nd
L12+50N 21+25E	7	5	6	.1	nd	nd
L12+50N 21+50E	10	9	13	.1	nd	nd
L12+50N 21+75E	14	13	40	.1	nd	nd
L12+50N 22+25E	12	4	31	.3	155	nd
L12+50N 22+50E	10	8	14	.1	nd	nd
L12+75N 20+00E BL	22	13	27	.9	nd	nd
L13+00N 17+25E	31	10	60	.1	200	9

DETECTION LIMIT  
nd = none detected

1 2  
-- = not analysed

1 0.1 5 2  
is = insufficient sample



# VANGEOCHEM LAB LIMITED

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(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870567 GA

JOB NUMBER: 870567

EQUITY ENGINEERING LTD.

PAGE 3 OF 9

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L13+00N 17+50E	33	8	65	.2	nd	22
L13+00N 17+75E	26	8	34	.6	nd	11
L13+00N 18+00E	22	7	34	.4	nd	6
L13+00N 18+25E	18	8	23	.5	nd	8
L13+00N 18+50E	25	7	29	.5	nd	6
L13+00N 18+75E	23	9	25	.6	nd	nd
L13+00N 19+00E	34	13	46	.3	nd	13
L13+00N 19+25E	47	13	47	.1	nd	13
L13+00N 19+50E	27	16	44	.2	nd	6
L13+00N 19+75E	27	18	53	.1	nd	6
L13+00N 20+00E	22	9	44	.5	nd	7
L13+00N 20+00E BL	17	8	26	.4	80	nd
L13+00N 20+25E	16	10	39	.2	45	9
L13+00N 20+50E	12	2	16	.4	nd	nd
L13+00N 20+75E	22	12	32	.4	nd	2
L13+00N 21+00E	6	nd	15	.1	nd	nd
L13+00N 21+25E	9	4	14	.1	nd	nd
L13+00N 21+50E	9	13	19	.2	nd	9
L13+00N 21+75E	6	5	16	.1	nd	3
L13+00N 22+00E	4	7	15	.1	nd	29
L13+00N 22+25E	9	4	15	.1	nd	4
L13+00N 22+50E	9	9	13	.1	nd	2
L13+00N 22+75E	22	15	74	.1	15	8
L13+00N 23+00E	23	15	18	.1	nd	8
L13+00N 23+25E	10	59	16	.1	nd	nd
L13+00N 23+50E	4	10	14	.1	nd	6
L13+00N 23+75E	3	6	13	.1	nd	3
L13+25N 20+00E	16	7	22	.2	nd	3
L13+50N 17+50E	34	7	87	.1	nd	10
L13+50N 17+75E	20	8	54	.1	nd	13
L13+50N 18+00E	27	8	48	.5	nd	3
L13+50N 18+25E	35	19	56	.1	nd	12
L13+50N 18+50E	14	4	12	.1	nd	6
L13+50N 18+75E	8	2	19	.1	nd	nd
L13+50N 19+00E	29	5	26	1.3	nd	nd
L13+50N 19+25E	29	8	35	.9	nd	nd
L13+50N 19+50E	12	8	29	.2	nd	3
L13+50N 19+75E	13	11	25	.3	nd	4
L13+50N 20+00E	27	10	61	1.1	nd	3

DETECTION LIMIT

nd = none detected

1

2

1

0.1

5

2

-- = not analysed

is = insufficient sample



# VANGEOCHEM LAB LIMITED

**MAIN OFFICE**  
 1521 PEMBERTON AVE.  
 NORTH VANCOUVER, B.C. V7P 2S3  
 (604) 986-5211 TELEX: 04-352578

**BRANCH OFFICE**  
 1630 PANDORA ST.  
 VANCOUVER, B.C. V5L 1L6  
 (604) 251-5656

REPORT NUMBER: 870567 GA

JOB NUMBER: 870567

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PAGE 4 OF 9

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L13+50N 20+00E BL	46	14	44	.6	nd	2
L13+50N 20+25E	20	4	54	.2	60	nd
L13+50N 20+50E	31	9	55	.1	nd	4
L13+50N 20+75E	28	12	53	.4	nd	nd
L13+50N 21+00E	27	9	33	.2	nd	nd
L13+50N 21+25E	15	4	30	.8	nd	nd
L13+50N 21+50E	13	4	16	.2	15	nd
L13+50N 21+75E	7	2	11	.1	10	nd
L13+50N 22+25E	13	7	18	.8	nd	nd
L13+50N 22+50E	8	5	12	.3	20	nd
L13+50N 22+75E	10	8	17	.5	10	nd
L13+50N 23+00E	13	6	42	.1	nd	nd
L13+50N 23+25E	6	nd	7	.1	nd	nd
L13+50N 23+50E	9	5	11	.1	nd	nd
L13+75N 20+00E	23	10	48	.1	nd	5
L14+00N 15+75E	17	7	30	.2	nd	4
L14+00N 16+00E	16	5	28	.3	10	4
L14+00N 16+25E	20	8	48	.1	nd	9
L14+00N 17+00E	29	5	57	.1	nd	7
L14+00N 17+25E	7	5	14	.1	nd	nd
L14+00N 17+50E	32	10	31	1.1	nd	nd
L14+00N 17+75E	15	5	18	.1	30	4
L14+00N 18+00E	14	5	20	.1	nd	3
L14+00N 18+50E	16	7	19	.5	10	4
L14+00N 19+00E	40	5	72	.1	nd	8
L14+00N 19+50E	45	7	58	.1	nd	4
L14+00N 19+75E	18	11	30	.5	nd	2
L14+50N 16+00E	14	6	101	.1	nd	8
L14+50N 16+25E	15	5	18	.6	160	nd
L14+50N 16+50E	40	9	50	.1	5	8
L14+50N 16+75E	20	3	127	.1	nd	2
L14+50N 17+00E	29	10	81	.4	nd	7
L14+50N 17+25E	30	6	63	.6	nd	2
L14+50N 17+50E	21	3	44	.9	nd	3
L14+50N 17+75E	15	13	40	.1	nd	9
L14+50N 18+25E	17	5	52	.1	nd	9
L14+50N 18+75E	14	8	29	.6	nd	nd
L14+50N 19+00E	8	3	12	.1	nd	nd
L14+50N 19+25E	22	3	58	1.3	nd	nd

DETECTION LIMIT

nd = none detected

1

2

1

0.1

5

2

-- = not analysed

is = insufficient sample



# VANGEOCHEM LAB LIMITED

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1521 PEMBERTON AVE.  
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**BRANCH OFFICE**  
1630 PANDORA ST.  
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(604) 251-5658

REPORT NUMBER: 870567 GA

JOB NUMBER: 870567

EQUITY ENGINEERING LTD.

PAGE 5 OF 9

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L14+50N 19+50E	68	10	77	.1	nd	159
L14+50N 19+75E	15	6	25	.1	nd	22
L14+50N 20+25E	12	8	19	.2	nd	6
L14+50N 20+50E	24	9	55	.2	nd	nd
L14+50N 20+75E	14	nd	17	.2	nd	nd
L14+50N 21+00E	16	6	19	.6	nd	nd
L14+50N 21+25E	11	5	60	.1	nd	3
L14+50N 21+50E	25	16	44	.9	nd	nd
L14+50N 21+75E	19	18	71	.7	nd	nd
L14+50N 22+25E	8	8	13	.1	nd	3
L14+50N 22+50E	13	15	15	.1	nd	nd
L14+50N 22+75E	11	10	28	.4	nd	2
L14+50N 23+00E	5	3	12	.1	nd	nd
L14+50N 23+25E	20	2	20	.1	nd	nd
L14+50N 23+50E	18	4	39	.3	nd	2
L14+75N 20+00E	22	8	32	.3	nd	nd
L15+00N 16+25E	15	8	27	.2	nd	7
L15+00N 16+50E	30	5	73	.1	nd	9
L15+00N 16+75E	19	5	19	1.1	nd	nd
L15+00N 17+00E	48	13	111	.6	10	nd
L15+00N 17+25E	24	10	49	.8	nd	nd
L15+00N 17+50E	23	5	81	.7	nd	nd
L15+00N 17+75E	30	9	136	.1	20	nd
L15+00N 18+25E	20	11	27	1.2	nd	nd
L15+00N 18+50E	22	5	26	.4	nd	nd
L15+00N 19+25E	27	12	41	.1	nd	nd
L15+00N 19+50E	23	7	24	.1	10	nd
L15+00N 19+75E	10	9	23	.1	nd	6
L15+00N 20+00E	10	14	14	.7	nd	nd
L15+00N 20+25E	11	10	27	1.1	nd	nd
L15+00N 20+50E	6	6	7	.5	nd	2
L15+00N 20+75E	7	10	23	.1	5	8
L15+00N 21+25E	10	4	28	.3	5	nd
L15+00N 21+50E	9	5	17	.2	nd	2
L15+00N 21+75E	8	7	25	.1	30	3
L15+00N 22+00E	21	10	31	.7	10	nd
L15+00N 22+25E	29	8	33	.1	nd	68
L15+00N 22+50E	7	11	9	.2	nd	4
L15+00N 22+75E	13	4	23	.6	nd	nd

DETECTION LIMIT

nd = none detected

1

2

1

0.1

5

2

-- = not analysed

is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE

1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 988-5211 TELEX: 04-352578

BRANCH OFFICE

1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870567 GA

JOB NUMBER: 870567

EQUITY ENGINEERING LTD.

PAGE 6 OF 9

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L15+00N 23+00E	7	6	10	.1	nd	24
L15+00N 23+25E	26	7	78	.1	nd	94
L15+00N 23+50E	17	8	31	.2	nd	51
L15+00N 23+75E	12	7	18	.1	nd	32
L15+00N 24+00E	17	7	35	.2	nd	51
L15+50N 15+25E	24	10	64	.1	nd	70
L15+50N 15+50E	30	7	67	.1	10	69
L15+50N 15+75E	40	7	80	.1	nd	65
L15+50N 16+00E	16	6	24	.1	nd	54
L15+50N 16+50E	29	9	66	.1	nd	89
L15+50N 16+75E	23	8	78	.1	10	83
L15+50N 17+00E	19	7	31	.7	5	84
L15+50N 17+25E	38	12	46	.4	nd	136
L15+50N 17+50E	96	24	168	.4	nd	195
L15+50N 18+25E	36	8	47	.8	nd	63
L15+50N 18+50E	15	8	23	.1	nd	67
L15+50N 19+00E	14	12	8	.1	nd	51
L15+50N 19+25E	20	10	24	.1	nd	50
L15+50N 19+75E	28	5	23	.1	5	71
L15+75N 20+00E	13	4	12	.1	5	18
L15+75N 21+00E	18	9	23	.1	nd	46
L16+00N 13+50E	8	7	12	.1	nd	57
L16+00N 13+75E	14	10	28	.8	nd	54
L16+00N 14+00E	15	11	25	1.1	nd	56
L16+00N 14+25E	15	9	14	.8	15	46
L16+00N 14+50E	6	6	7	.1	nd	21
L16+00N 14+75E	20	9	25	.9	nd	49
L16+00N 15+00E	6	6	6	.1	60	17
L16+00N 15+25E	24	7	88	.1	10	98
L16+00N 15+50E	24	8	45	.1	10	101
L16+00N 15+75E	25	5	54	.1	40	105
L16+00N 16+00E	22	9	40	.4	10	130
L16+00N 16+25E	24	10	54	.8	nd	87
L16+00N 16+50E	18	10	23	1.1	nd	31
L16+00N 16+75E	27	15	55	1.1	10	173
L16+00N 17+00E	25	10	39	1.1	10	86
L16+00N 17+25E	34	7	44	1.4	nd	86
L16+00N 17+50E	31	21	63	.4	nd	200
L16+00N 17+75E	47	17	49	.7	nd	141

DETECTION LIMIT            1        2            1        0.1        5            2  
nd = none detected        -- = not analysed        is = insufficient sample





# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 870567 GA

JOB NUMBER: 870567

EQUITY ENGINEERING LTD.

PAGE 7 OF 9

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L16+00N 18+00E	23	7	27	1.8	nd	6
L16+00N 18+25E	88	nd	64	1.9	25	3
L16+00N 18+50E	31	nd	44	2.3	15	nd
L16+00N 19+00E	35	9	31	1.5	10	nd
L16+00N 19+25E	10	6	8	.4	nd	10
L16+00N 19+50E	24	6	34	1.6	nd	nd
L16+00N 19+75E	14	4	14	.1	nd	7
L16+00N 20+00E	9	4	12	.1	nd	5
L16+25N 20+00E	16	4	20	.1	nd	3
L16+50N 13+50E	15	5	50	.6	nd	nd
L16+50N 13+75E	25	10	49	.7	nd	nd
L16+50N 14+00E	5	4	4	.1	15	7
L16+50N 14+50E	8	6	21	.1	nd	12
L16+50N 14+75E	19	5	58	.1	nd	4
L16+50N 15+00E	16	nd	130	.1	nd	9
L16+50N 15+25E	49	3	79	.1	nd	8
L16+50N 15+50E	30	nd	80	1.1	nd	3
L16+50N 15+75E	24	7	43	1.1	nd	8
L16+50N 16+00E	40	4	70	.7	10	nd
L16+50N 16+25E	19	2	54	.1	nd	9
L16+50N 16+75E	33	12	48	1.2	15	5
L16+50N 17+25E	29	5	49	1.6	5	5
L16+50N 17+50E	17	8	29	1.2	420	6
L16+50N 18+25E	22	6	32	.7	nd	3
L16+50N 18+50E	11	5	12	.7	10	4
L16+50N 19+00E	17	nd	40	.8	nd	19
L16+50N 19+25E	9	nd	23	.6	50	4
L16+50N 19+50E	9	9	13	.7	nd	13
L16+50N 19+75E	15	2	32	1.1	nd	3
L16+50N 20+00E BL	15	4	19	1.2	nd	nd
L16+75N 20+00E SL	24	2	26	2.1	nd	nd
L17+00N 13+50E	5	6	5	.4	nd	8
L17+00N 13+75E	3	4	5	.2	nd	9
L17+00N 14+00E	19	8	42	.1	nd	6
L17+00N 14+25E	9	15	35	.1	nd	8
L17+00N 14+50E	8	7	20	.1	nd	10
L17+00N 15+00E	7	8	26	.1	5	7
L17+00N 15+25E	33	4	87	.1	5	7
L17+00N 15+50E	7	2	11	.4	nd	2

DETECTION LIMIT

nd = none detected

1

2

1

0.1

5

2

-- = not analysed

is = insufficient sample



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**BRANCH OFFICE**  
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 (604) 251-5656

REPORT NUMBER: 870567 GA

JOB NUMBER: 870567

EQUITY ENGINEERING LTD.

PAGE 8 OF 9

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L17+00N 15+75E	25	12	145	.1	nd	7
L17+00N 16+00E	22	6	25	1.1	nd	nd
L17+00N 16+25E	27	6	23	.2	20	nd
L17+00N 16+50E	13	4	14	.1	nd	nd
L17+00N 16+75E	32	10	28	2.1	nd	nd
L17+00N 17+00E	20	4	48	1.1	nd	nd
L17+00N 17+25E	25	7	38	.7	15	nd
L17+00N 17+50E	29	11	39	1.8	nd	nd
L17+00N 17+75E	12	5	21	.2	nd	3
L17+00N 18+00E	10	3	18	.1	nd	nd
L17+00N 18+25E	39	5	42	.5	25	3
L17+00N 18+50E	33	4	40	.5	nd	nd
L17+00N 18+75E	21	18	31	.5	nd	3
L17+00N 19+00E	10	11	9	.2	10	nd
L17+00N 19+25E	8	4	13	.1	20	2
L17+00N 19+50E	15	7	31	.4	nd	nd
L17+00N 19+75E	15	11	18	.9	nd	nd
L17+50N 13+50E	18	12	66	.6	nd	nd
L17+50N 13+75E	24	12	42	1.1	nd	3
L17+50N 14+00E	21	11	24	.3	nd	6
L17+50N 14+25E	9	10	21	1.2	nd	5
L17+50N 14+50E	29	8	74	.1	nd	9
L17+50N 14+75E	19	13	43	.1	nd	3
L17+50N 15+00E	19	2	68	.1	nd	nd
L17+50N 15+25E	24	6	69	.4	nd	3
L17+50N 15+50E	17	8	32	.9	nd	nd
L17+50N 15+75E	25	8	45	1.4	nd	nd
L17+50N 16+00E	11	2	15	.5	nd	nd
L17+50N 16+25E	17	5	26	.9	nd	nd
L17+50N 16+75E	37	5	53	1.4	nd	nd
L17+50N 17+00E	48	7	87	1.4	nd	2
L17+50N 17+25E	12	5	20	.5	10	nd
L17+50N 17+50E	11	4	13	.1	nd	4
L17+50N 17+75E	10	10	9	.3	nd	9
L17+50N 18+00E	8	4	10	.1	nd	7
L17+50N 18+25E	10	3	11	.1	nd	nd
L17+50N 18+50E	16	8	29	.6	nd	3
L17+50N 18+75E	8	9	12	.1	nd	3
L17+50N 19+00E	15	5	34	.6	nd	nd

DETECTION LIMIT

nd = none detected

1

2

1

0.1

5

2

-- = not analysed

is = insufficient sample



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(604) 251-5656

REPORT NUMBER: 870567 6A

JOB NUMBER: 870567

EQUITY ENGINEERING LTD.

PAGE 9 OF 9

SAMPLE #	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
L17+50N 19+25E	20	11	41	.9	15	nd
L17+50N 19+50E	7	7	12	.1	nd	4
L17+50N 20+00E	1299	3	105	4.6	nd	78
L17+50N 20+75E	61	10	75	.8	nd	47
L17+50N 25+00E	60	18	359	.6	nd	118
L17+50N 25+25E	29	3	194	.6	3080	75
L17+50N 25+50E	38	2	147	.1	nd	43
L17+50N 25+75E	31	10	121	.8	nd	16
L17+50N 26+25E	40	5	110	.4	nd	4
L17+50N 26+57E SILT	35	10	361	.1	nd	17
L18+00N 14+75E	7	8	15	.2	nd	nd
L18+00N 15+00E	27	9	28	.2	nd	nd
L18+00N 15+25E	45	20	146	.9	nd	9
L18+00N 15+50E	15	8	35	.7	nd	nd
L18+00N 15+75E	19	7	40	1.1	nd	nd
L18+00N 16+00E	27	12	54	.3	5	nd
L18+00N 17+25E	21	17	55	.9	nd	nd
L18+00N 17+50E	25	14	41	.4	nd	5
L18+00N 17+75E	8	6	16	.1	nd	4
L18+00N 18+00E	11	4	35	.1	nd	54
L18+00N 18+25E	23	13	31	1.1	nd	12
L18+00N 18+50E	28	4	69	3.7	nd	nd
L18+00N 18+75E	16	10	24	.8	nd	2
L18+00N 19+00E	21	7	35	1.1	nd	nd
L18+00N 19+25E	36	9	73	3.2	10	nd
L18+00N 19+50E	26	nd	52	2.8	nd	nd
L18+00N 19+75E	29	8	23	.5	nd	2
L18+75N 20+00E	8	2	48	.1	nd	13
L19+00N 20+00E	11	5	85	.1	nd	42
L19+50N 20+00E	13	14	75	.1	10	77
L20+00N 20+00E	22	24	96	.8	nd	38
87-HA 12 (-100 mesh)	45	5	120	.1	45	nd
87-HA 13 (-100 mesh)	38	17	125	.2	5	31
87-HA 14 (-100 mesh)	39	13	151	.2	5	7
87-HA 15	112	34	319	.1	nd	52
87-HA 16	111	46	1657	.1	nd	187
87-HA 17 (-100 mesh)	32	9	149	.1	nd	17
87-HA 18 (-100 mesh)	31	9	104	.1	nd	21
87-HA 19 (-100 mesh)	38	8	134	.1	300	26
DETECTION LIMIT	1	2	1	0.1	5	2
nd = none detected	--	= not analysed	is	= insufficient sample		



**Chemex Labs Ltd.**  
 Analytical Chemists • Geochemists • Registered Assayers  
 212 BROOKSBANK AVE., NORTH VANCOUVER,  
 BRITISH COLUMBIA, CANADA V7J-3C1  
 PHONE (604) 984-0221

To: EQUITY ENGINEERING LTD.  
 406 - 675 W. HASTINGS ST.  
 VANCOUVER, BC  
 V6B 1N2  
 Project: HEAD BAY  
 Comments:

\*Page No. : 1-A  
 Tot. Pages: 1  
 Date : 13-JUL-87  
 Invoice # : I-8717050  
 P.O. # : NONE

**CERTIFICATE OF ANALYSIS A8717050**

SAMPLE DESCRIPTION	PREP CODE	Au ppb AFS	Pd ppb AFS	Pt ppb AFS	Al %	As ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm
87 ES - 1	213 238	14	< 2	< 5	1.86	0.4	55	10	< 0.5	2	9.07	< 0.5	14	95	29	10.65	30	< 1	< 0.01	< 10
87 ES - 2	213 238	56	< 8	< 20	1.81	< 0.2	50	20	< 0.5	2	1.71	1.0	30	44	84	9.05	< 10	17	0.02	20
87 ES - 3	213 238	832	< 2	< 5	1.54	< 0.2	65	110	< 0.5	< 2	0.99	1.0	43	36	138	13.15	< 10	< 1	0.03	10
87 ES - 4	213 238	24	< 4	< 10	1.75	0.2	85	30	< 0.5	< 2	1.67	0.5	36	36	120	10.85	< 10	43	0.02	20
87 ES - 5	213 238	48	< 4	< 10	2.24	0.2	25	20	< 0.5	< 2	1.74	< 0.5	28	32	85	7.18	10	3	0.05	30
87 ES - 6	213 238	4	2	< 5	1.96	< 0.2	50	10	< 0.5	6	1.66	< 0.5	33	64	128	8.46	< 10	< 1	0.01	10

CERTIFICATION :



**Chemex Labs Ltd.**  
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 212 BROOKSBANK AVE • NORTH VANCOUVER,  
 BRITISH COLUMBIA, CANADA V7J-2C1  
 PHONE (604) 984-0221

To: EQUITY ENGINEERING LTD.

406 - 675 W. HASTINGS ST.  
 VANCOUVER, BC  
 V6B 1N2  
 Project: HEAD RAY

Comments:

\*Page No. : 1-B  
 Tot. Pages: 1  
 Date : 13-JUL-87  
 Invoice # : I-8717050  
 P.O. # : NONE

**CERTIFICATE OF ANALYSIS A8717050**

SAMPLE DESCRIPTION	PREP CODE	Mg %	Mn ppm	Mb ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
87 HS - 1	213 238	0.73	2880	< 1	0.01	11	340	36	15	10	201	0.20	< 10	< 10	87	10	77
87 HS - 2	213 238	1.03	707	< 1	0.01	18	750	14	10	10	148	0.41	< 10	< 10	150	< 5	107
87 HS - 3	213 238	0.94	713	< 1	0.01	8	810	42	< 5	10	116	0.29	< 10	< 10	177	< 5	112
87 HS - 4	213 238	1.07	724	1	0.01	21	840	32	5	< 10	135	0.35	< 10	< 10	134	< 5	94
87 HS - 5	213 238	0.90	837	< 1	0.01	6	610	28	10	10	358	0.38	< 10	< 10	148	< 5	74
87 HS - 6	213 238	1.18	695	< 1	0.05	30	890	40	10	20	124	0.36	< 10	< 10	171	< 5	73

CERTIFICATION : *BCG*



# Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers  
212 BROOKSBANK AVE., NORTH VANCOUVER,  
BRITISH COLUMBIA, CANADA V7J-3C1

PHONE (604) 984-0221

To: EQUITY ENGINEERING LTD.

406 - 675 W. HASTINGS ST.  
VANCOUVER, BC  
V6B 1N2

Project: GK87-01

Comments:

\*Page No. : 1  
Tot. Pages: 1  
Date : 1-JUL-87  
Invoice # : 1-8717051  
P.O. # : NONE

## CERTIFICATE OF ANALYSIS A8717051

SAMPLE DESCRIPTION	PREP CODE	Cu %	Pb %	Zn %	Pt ppb	Pd ppb	Ag g/t RUSH FA	Au g/t RUSH FA		
21415	236	6.20	< 0.01	0.01	< 50	< 10	84.0	24.82		
21416	231						1.7	0.21		
21417	236	< 0.01	< 0.01	0.01	< 50	< 10	3.9	7.13		
21418	236						1.7	0.34		
21419	236				< 50	< 10	17.5	10.97		
21420	236						1.3	0.14		
21421	236						2.8	0.48		
21422	236						3.3	2.88		
21423	236						1.0	0.14		
21424	236						0.8	0.17		
21425	236				< 50	< 10	37.0	201.3		
21426	231	0.26	< 0.01	0.01	< 50	< 10	7.5	6.72		
21427	236	0.21	< 0.01	0.02	< 50	< 10	6.5	< 0.10		
21428	236						2.3	< 0.10		
21429	236	0.24	< 0.01	0.01	< 50	< 10	15.0	21.53		
21430	236	0.05					2.3	0.34		
21431	236				< 50	< 10	25.0	141.60		
21432	236						1.7	0.48		
21433	236						1.0	0.21		
21434	236						1.0	< 0.10		
21435	236	0.05	< 0.01	0.01	< 50	< 10	2.8	2.40		
21436	236	0.33	< 0.01	0.01	< 50	< 10	18.8	45.26		
21437	236						1.9	0.55		
21438	236						1.9	< 0.10		
21439	236	0.09	< 0.01	0.01	< 50	< 10	4.7	4.46		
21440	236						1.3	< 0.10		
21441	236						1.3	0.10		
21442	236						1.0	0.14		

ALL ASSAY DETERMINATIONS ARE PERFORMED OR SUPERVISED BY B.C. CERTIFIED ASSAYERS

CERTIFICATION :

*W. Sen Amunini*

APPENDIX E

ANALYTICAL PROCEDURES



**Chemex Labs Ltd.**  
 Analytical Chemists • Geochemists • Registered Assayers  
 212 BROOKSBANK AVE. NORTH VANCOUVER,  
 BRITISH COLUMBIA, CANADA V7J-2C1  
 PHONE (604) 984-0221

To: EQUITY ENGINEERING LTD.  
 406 - 675 W. HASTINGS ST.  
 VANCOUVER, BC  
 V6B 1N2

A8717050

**CERTIFICATE A8717050**

EQUITY ENGINEERING LTD  
 PROJECT : HEAD BAY  
 P.O # : NONE

Samples submitted to our lab in Vancouver, BC.  
 This report was printed on 13-JUL-87.

**SAMPLE PREPARATION**

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
213	6	Heavy mineral separation SG 296
238	6	ICP: Aqua regia digestion

**ANALYTICAL PROCEDURES**

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
975	6	Au ppb: ICP-fluorescence package	FA-ICP-AFS	2	10000
977	6	Pd ppb: ICP-fluorescence package	FA-ICP-AFS	2	10000
976	6	Pt ppb: ICP-Fluorescence package	FA-ICP-AFS	5	10000
921	6	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
922	6	As ppm: 32 element, soil & rock	ICP-AES	0.2	200
923	6	As ppm: 32 element, soil & rock	ICP-AES	5	10000
924	6	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
925	6	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
926	6	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
927	6	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
928	6	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
929	6	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
930	6	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
931	6	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
932	6	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
933	6	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
951	6	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
934	6	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
935	6	La ppm: 32 element, soil & rock	ICP-AES	10	10000
936	6	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
937	6	Mn ppm: 32 element, soil & rock	ICP-AES	1	10000
938	6	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
939	6	Na %: 32 element, soil & rock	ICP-AES	0.01	5.00
940	6	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
941	6	P ppm: 32 element, soil & rock	ICP-AES	10	10000
942	6	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
943	6	Sb ppm: 32 element, soil & rock	ICP-AES	5	10000
952	6	Se ppm: 32 element, soil & rock	ICP-AES	10	10000
944	6	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
945	6	Ti %: 32 element, soil & rock	ICP-AES	0.01	5.00
946	6	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
947	6	U ppm: 32 element, soil & rock	ICP-AES	10	10000
948	6	V ppm: 32 element, soil & rock	ICP-AES	1	10000
949	6	W ppm: 32 element, soil & rock	ICP-AES	5	10000
950	6	Zn ppm: 32 element, soil & rock	ICP-AES	1	10000

Comments:





# VANGEOCHEM LAB LIMITED

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(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

August 04, 1987

TO: Henry Awmack  
EQUITY ENGINEERING  
406 - 675 Hastings Street  
Vancouver, British Columbia V6B 1N2

FROM: Vangeochem Lab Limited  
1521 Pemberton Avenue  
North Vancouver, British Columbia  
V7P 2S3

SUBJECT: Analytical procedure used to determine hot acid soluble  
for Cu, Pb, Zn and Ag in geochemical silt and soil  
samples.

## 1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" x 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

## 2. Method of Digestion

- (a) 0.50 gram portions of the minus 80-mesh samples were used. Samples were weighed out using an electronic balance.
- (b) Samples were heated in test tubes, on a sand bath in a Nitric and Perchloric concentrated acid solution (15% and 85% by volume respectively).
- (c) A minimum of 5000 ppm solution of  $Al_2O_3$  was added to each sample when Mo analyses were required. Digested samples were diluted with demineralized water to a



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fixed volume. The samples were agitated to obtain a homogeneous solution.

### 3. Method of Analyses

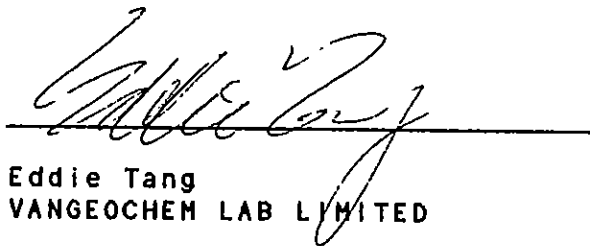
Cu, Pb, Zn, and Ag concentrations were determined using a Techtron Atomic Absorption Spectrophotometer Model AA5 with their respective hollow cathode lamps. The digested samples were directly aspirated into an air and acetylene mixture flame. The results, in parts per million, were calculated by comparing them to a set of standards used to calibrate the atomic absorption units.

### 4. Background Correction

A hydrogen continuum lamp was used to correct the Ag background interferences.

### 5. Analysts

The analyses were supervised or determined by either Mr. Conway Chun or Mr. Eddie Tang, and, the laboratory staff.



Eddie Tang  
VANGEOCHEM LAB LIMITED

APPENDIX F

STATISTICAL ANALYSIS OF GEOCHEMICAL RESULTS



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870915 SA

EQUITY ENGINEERING

87/08/04

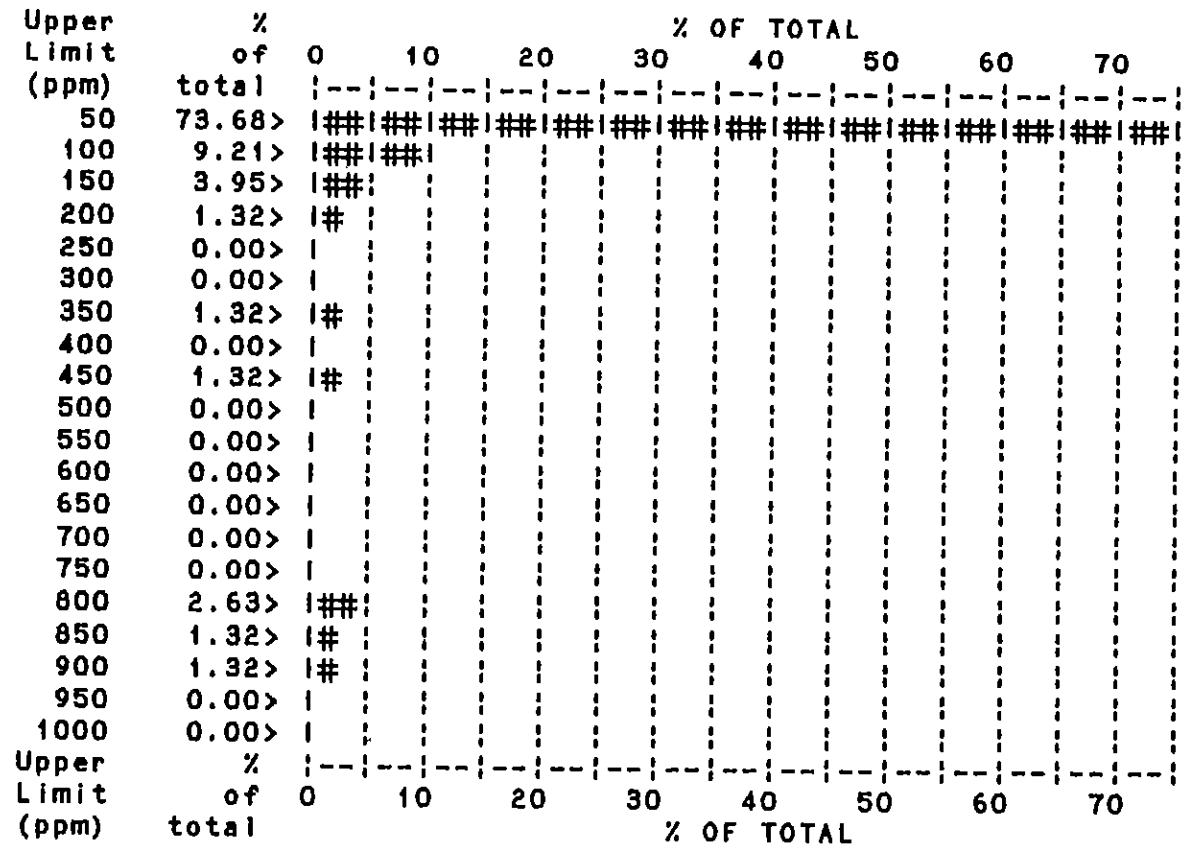
Statistical Analysis for Copper (rock) Project: GKR 87-01

Number of samples in analyses: 76

Mean value: 388.789 ppm

variance: 5794701.000 ppm<sup>2</sup>

Samples below range: 0



Samples above range: 3

Samples with the highest and lowest concentrations of Copper

Rank	Maximum Cu ppm	Sample	Minimum Cu ppm	Sample
1:	21130	21356	5	21293
2:	1089	21357	5	21288
3:	1070	21275	6	21352
4:	874	21378	6	21290
5:	810	21297	6	21287
6:	800	21317	6	21258
7:	756	21358	6	21254
8:	445	21269	7	21294
9:	315	21280	8	21354
10:	170	21270	10	21292



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EQUITY ENGINEERING

87/08/04

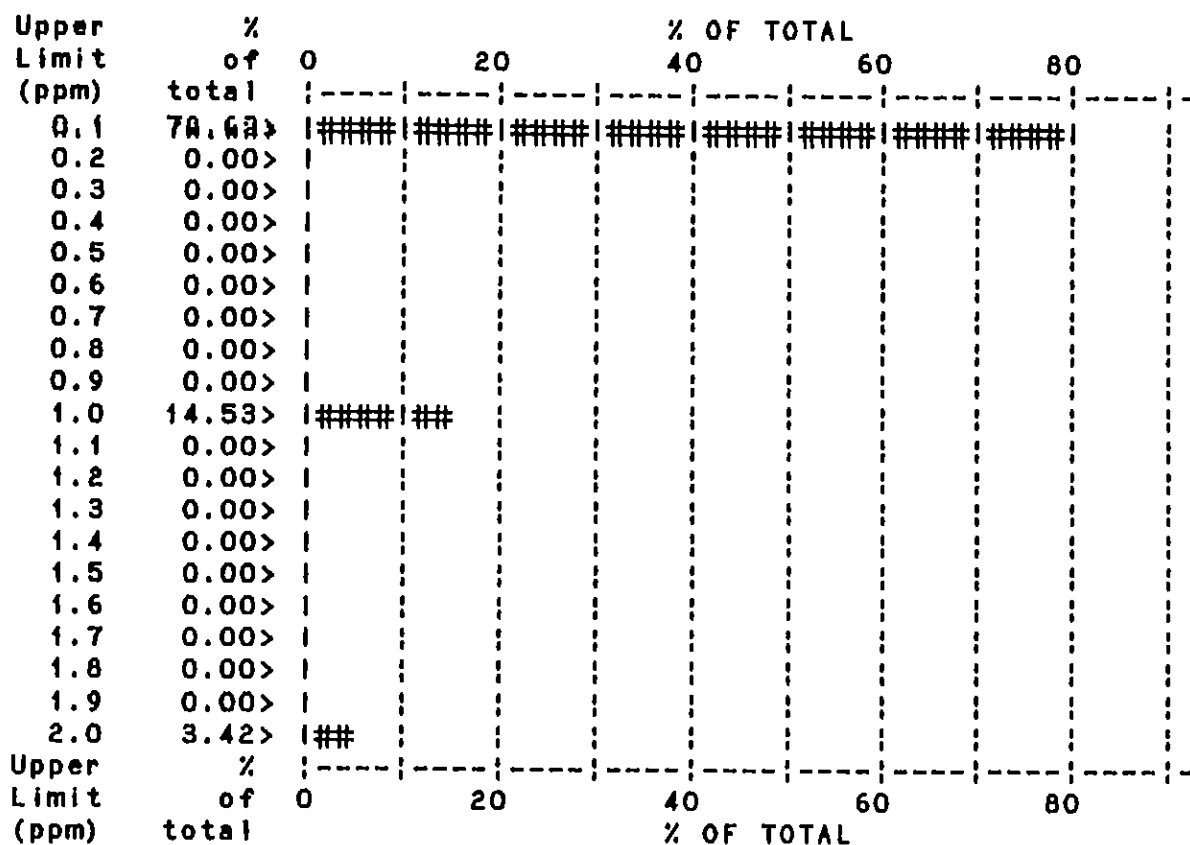
Statistical Analysis for Silver (rock) Project: GKR 87-01

Number of samples in analyses: 117

Mean value: 0.368 ppm

variance: 0.933 ppm<sup>2</sup>

Samples below range: 0



Samples above range: 4

Samples with the highest and lowest concentrations of Silver

Rank	Maximum Ag ppm	Sample	Minimum Ag ppm	Sample
1:	7.0	21318	0.0	5737
2:	5.0	21356	0.0	5736
3:	3.0	21378	0.0	5735
4:	3.0	21310	0.0	5734
5:	2.0	21381	0.0	5733
6:	2.0	21320	0.0	5732
7:	2.0	21304	0.0	21380
8:	2.0	21303	0.0	21379
9:	1.0	21383	0.0	21375
10:	1.0	21382	0.0	21374



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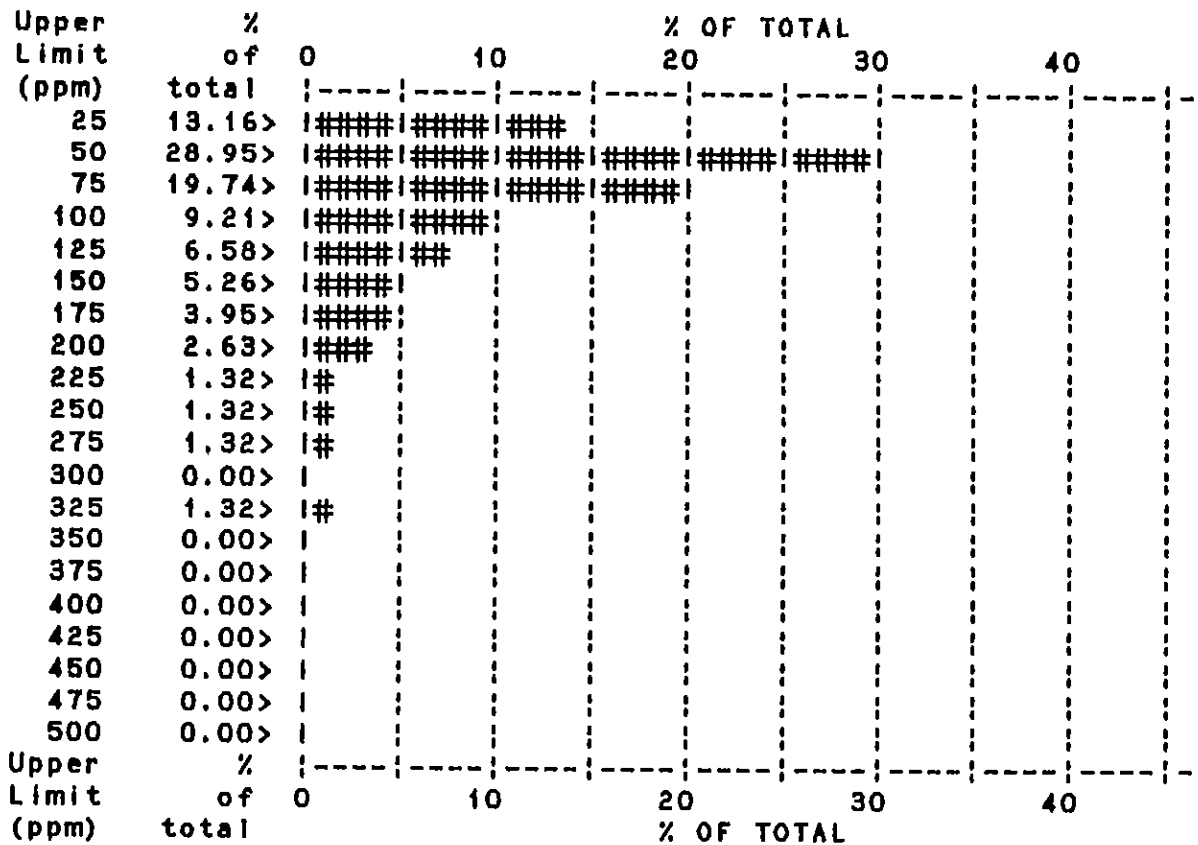
EQUITY ENGINEERING

87/08/04

Statistical Analysis for Zinc (rock) Project: GKR 87-01

Number of samples in analyses: 76  
 Mean value: 210.092 ppm  
 variance: 536201.500 ppm<sup>2</sup>

Samples below range: 0



Samples above range: 4

Samples with the highest and lowest concentrations of Zinc

Rank	Maximum Zn ppm	Sample	Minimum Zn ppm	Sample
1:	5952	21377	15	21281
2:	2469	21378	15	21264
3:	1160	21275	16	21353
4:	720	21376	16	21266
5:	320	21380	17	21271
6:	260	21295	17	21268
7:	242	21351	19	21326
8:	215	21297	22	21374
9:	182	21279	22	21269
10:	178	21273	24	21327



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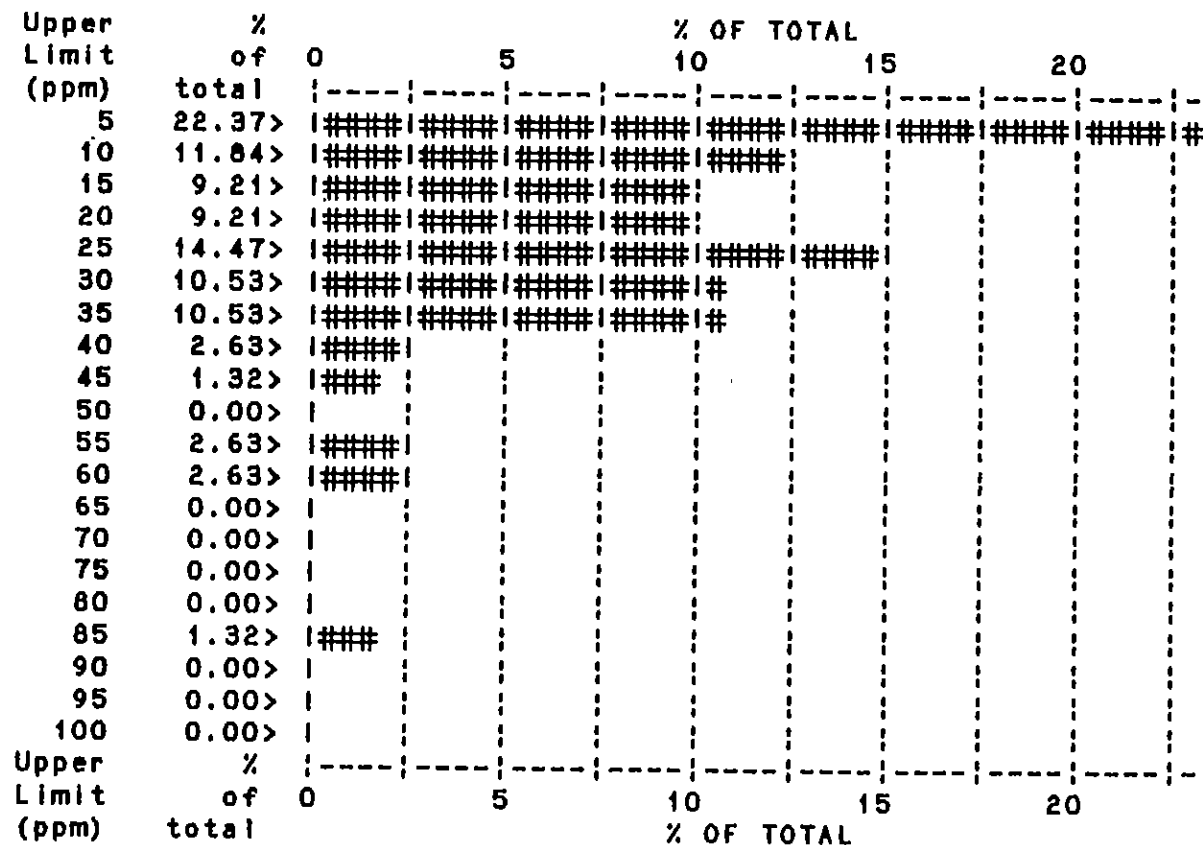
EQUITY ENGINEERING

87/08/04

Statistical Analysis for Lead (rock) Project: GKR 87-01

Number of samples in analyses: 76  
 Mean value: 24.250 ppm  
 variance: 1768.082 ppm<sup>2</sup>

Samples below range: 0



Samples above range: 1

Samples with the highest and lowest concentrations of Lead

Rank	Maximum Pb ppm	Sample	Minimum Pb ppm	Sample
1:	360	21275	0	21377
2:	85	21274	0	21375
3:	57	21351	0	21373
4:	57	21279	0	21327
5:	55	21280	0	21324
6:	54	21381	0	21320
7:	42	21297	0	21319
8:	40	21276	0	21317
9:	37	21278	1	21322
10:	35	21352	2	21379



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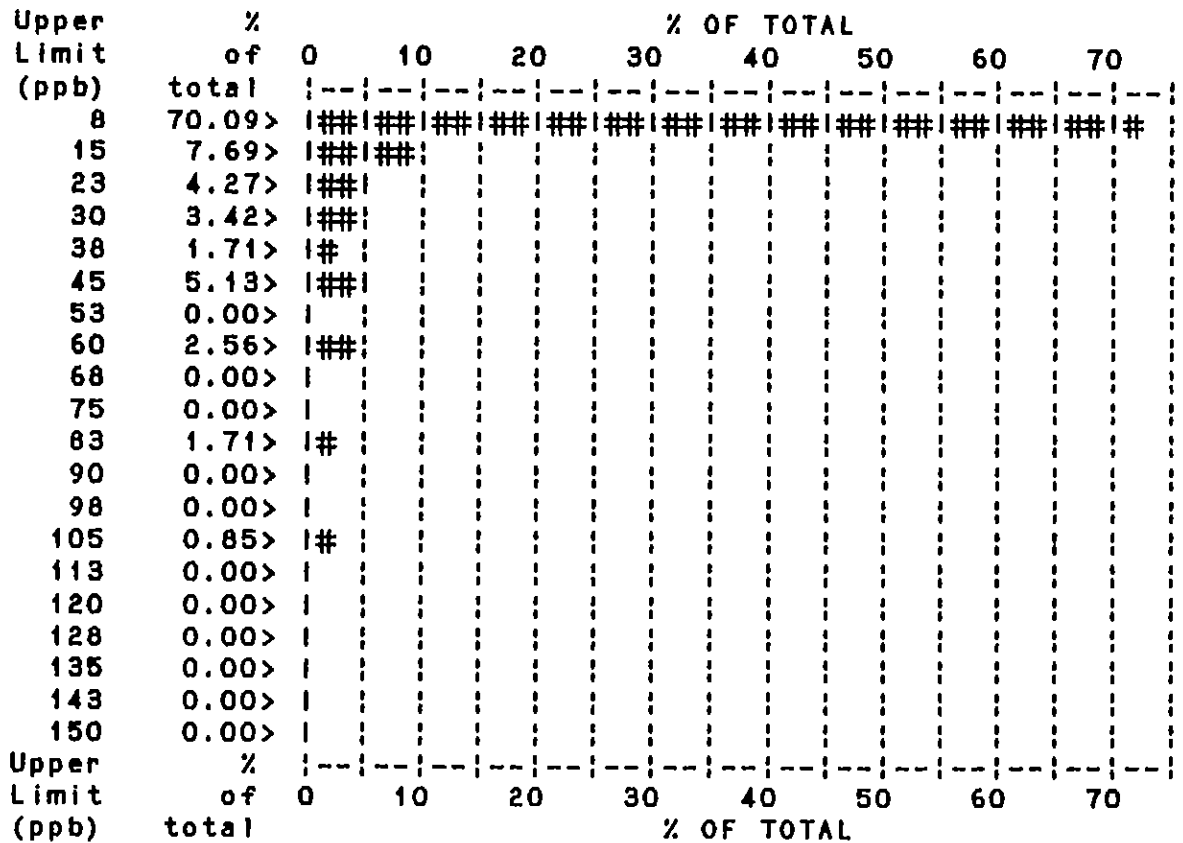
EQUITY ENGINEERING

87/08/04

Statistical Analysis for Gold (rock) Project: GKR 87-01

Number of samples in analyses: 117  
 Mean value: 49.068 ppb  
 Variance: 119364.600 ppb<sup>2</sup>

Samples below range: 0



Samples above range: 3

Samples with the highest and lowest concentrations of Gold

Rank	Maximum Au ppb	Sample	Minimum Au ppb	Sample
1:	3700	21318	0	5737
2:	640	21328	0	5735
3:	310	21355	0	5734
4:	100	21268	0	21383
5:	80	21364	0	21381
6:	80	21305	0	21380
7:	60	21359	0	21379
8:	60	21287	0	21378
9:	55	21326	0	21377
10:	40	21367	0	21376





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EQUITY ENGINEERING

87/08/04

Statistical Analysis for Lead (soil) Project: GKR 87-01

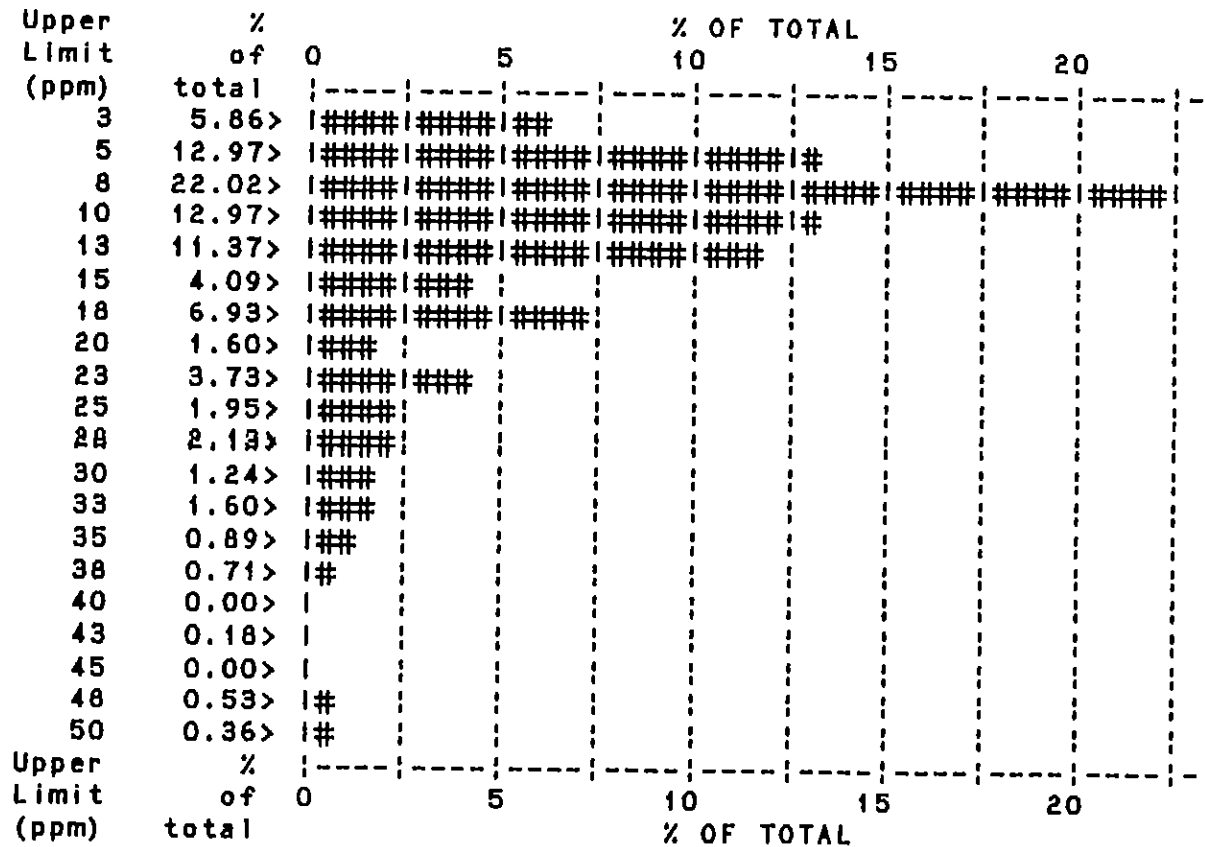
Number of samples in analyses: 563

Mean value: 22.052 ppm

variance: 45607.390 ppm<sup>2</sup>

90<sup>th</sup> percentile = 27 ppm

Samples below range: 38



Samples above range: 12

Samples with the highest and lowest concentrations of Lead

Rank	Maximum Pb ppm	Sample	Minimum Pb ppm	Sample
1:	5052	21+00N 21+50E	0	CL 150-041
2:	492	21+00N 21+75E	0	CL 150-019
3:	165	19+50N 24+50E	0	CL 150-015
4:	140	22+50N 20+50E	0	CL 150-005
5:	73	22+50N 22+00E	0	CL 150-002
6:	67	21+50N 20+50E	0	23+00N 26+00E
7:	62	22+50N 20+25E	0	23+00N 25+75E
8:	61	22+00N 21+50E	0	23+00N 24+75E
9:	60	21+00N 22+00E	0	23+00N 23+75E
10:	59	L13+00N 23+25E	0	23+00N 23+50E



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EQUITY ENGINEERING

87/08/04

Statistical Analysis for Copper (soil) Project: GKR 87-01

Number of samples in analyses: 565

Mean value: 31.138 ppm

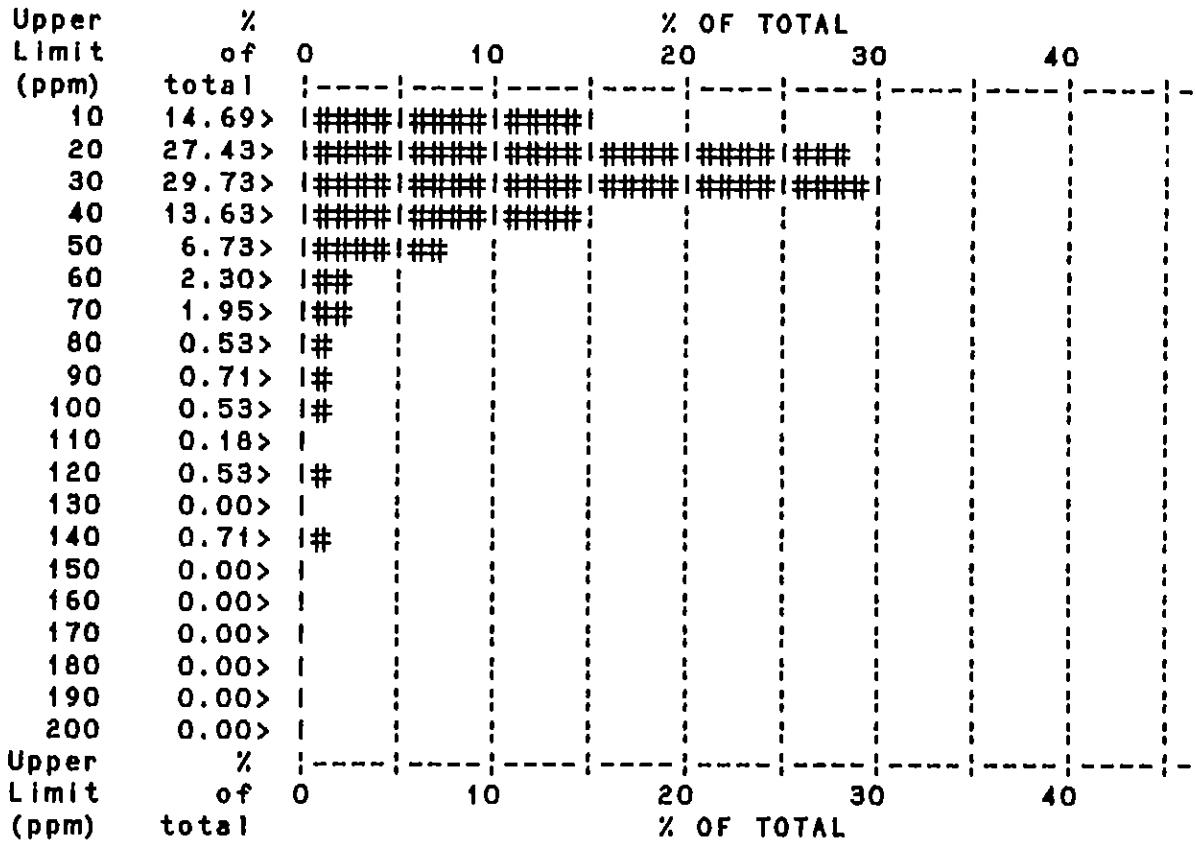
variance: 6000.387 ppm<sup>2</sup>

99<sup>th</sup> percentile = 135 ppm

95<sup>th</sup> percentile = 70 ppm

90<sup>th</sup> percentile = 50 ppm

Samples below range: 0



Samples above range: 2

Samples with the highest and lowest concentrations of Copper

Rank	Maximum Cu ppm	Sample	Minimum Cu ppm	Sample
1:	1299	L17+50N 20+00E	2	L12+00N 19+50E
2:	1282	21+00N 21+50E	3	L17+00N 13+75E
3:	138	CL 150-041	3	L13+00N 23+75E
4:	135	21+50N 24+00E	4	CL 150-011
5:	135	21+00N 21+75E	4	CL 150-008
6:	135	L12+00N 18+25E	4	CL 150-007
7:	112	87-HA 15	4	L13+00N 23+50E
8:	111	21+00N 24+50E	4	L13+00N 22+00E
9:	111	87-HA 16	5	CL 150-010
10:	107	87-HA 04	5	22+00N 25+50E



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EQUITY ENGINEERING

87/08/04

Statistical Analysis for Silver (soil) Project: GKR 87-01

Number of samples in analyses: 563

Mean value:

0.545 ppm

variance:

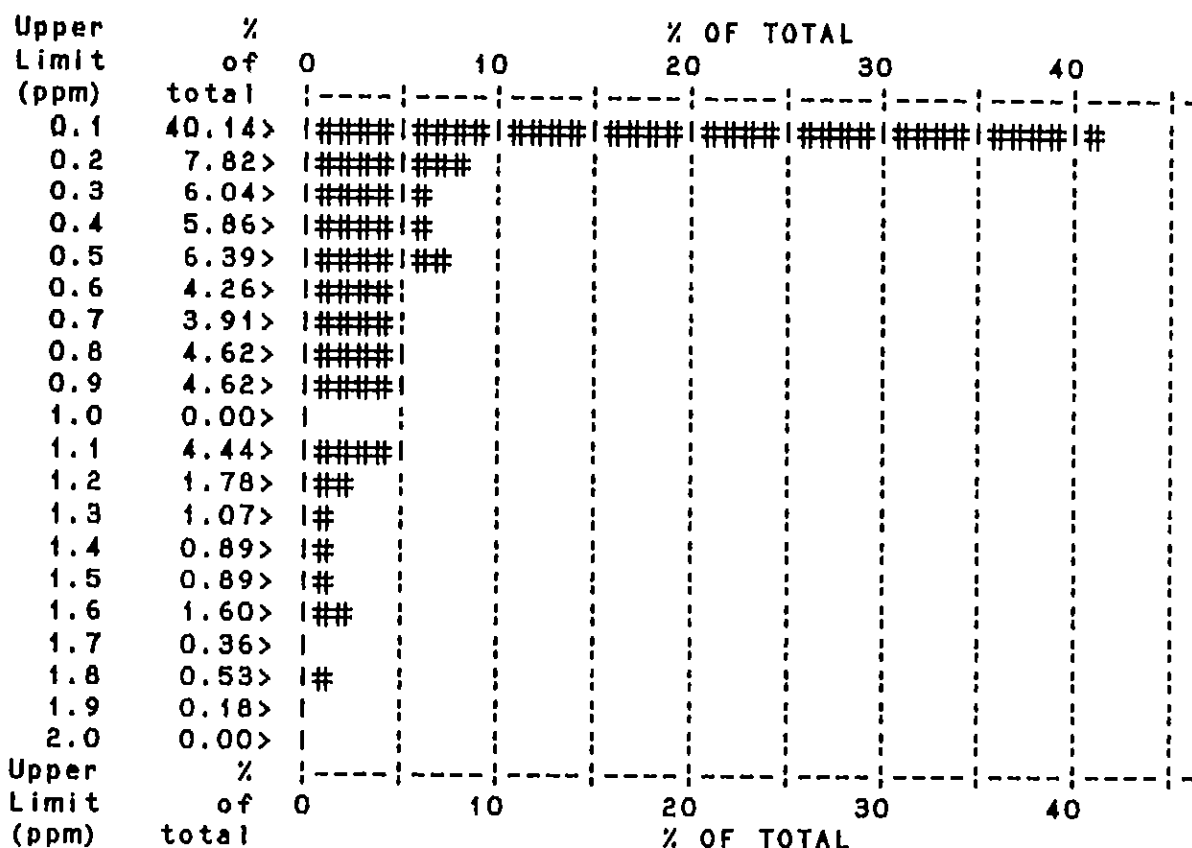
0.479 ppm<sup>2</sup>

99<sup>th</sup> percentile = 3.5 ppm

95<sup>th</sup> percentile = 2.3 ppm

90<sup>th</sup> percentile = 1.9 ppm

Samples below range: 0



Samples above range: 26

Samples with the highest and lowest concentrations of Silver

Rank	Maximum		Minimum	
	Ag ppm	Sample	Ag ppm	Sample
1:	7.1	20+50N 22+50E	0.0	87 HA-11
2:	4.6	L17+50N 20+00E	0.0	87 HA-09
3:	4.2	20+50N 22+25E	0.0	87 HA-06
4:	3.9	19+00N 25+75E	0.0	87 HA-05
5:	3.7	L18+00N 18+50E	0.0	87 HA-03
6:	3.2	19+50N 24+50E	0.1	CL 150-043
7:	3.2	L18+00N 19+25E	0.1	CL 150-042
8:	3.1	21+50N 25+50E	0.1	CL 150-020
9:	2.8	L18+00N 19+50E	0.1	CL 150-018
10:	2.6	22+00N 22+50E	0.1	CL 150-017



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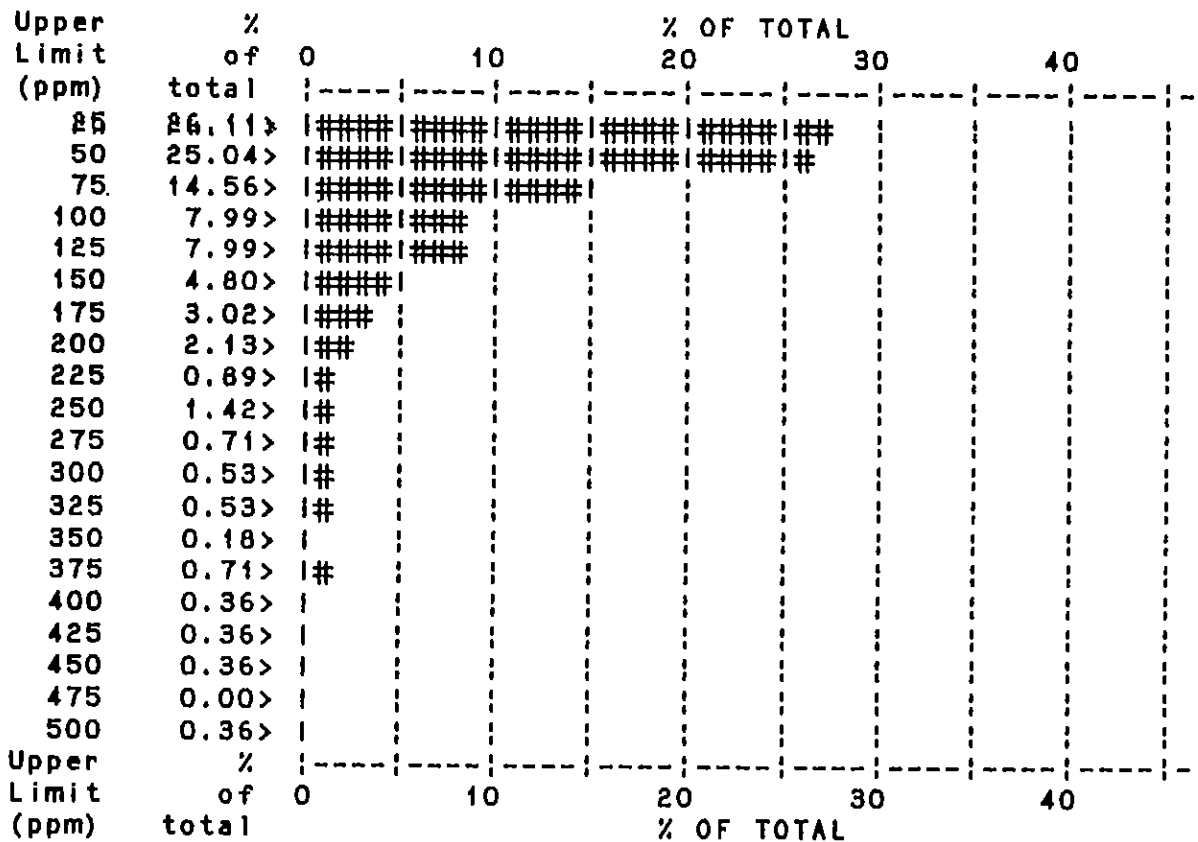
87/08/04

Statistical Analysis for Zinc (soil) Project: GKR 87-01

Number of samples in analyses: 563  
 Mean value: 100.291 ppm  
 variance: 63921.380 ppm<sup>2</sup>

99<sup>th</sup> percentile = 1000 ppm  
 95<sup>th</sup> percentile = 320 ppm  
 90<sup>th</sup> percentile = 210 ppm

Samples below range: 0



Samples above range: 11

Samples with the highest and lowest concentrations of Zinc

Rank	Maximum Zn ppm	Sample	Minimum Zn ppm	Sample
1:	4700	20+50N 23+50E	4	L16+50N 14+00E
2:	1992	21+00N 21+50E	5	L17+00N 13+75E
3:	1657	87-HA 16	5	L17+00N 13+50E
4:	1526	19+80N 24+50E	6	L16+00N 15+00E
5:	1148	20+50N 22+25E	6	L12+50N 21+25E
6:	914	21+50N 24+00E	7	L16+00N 14+50E
7:	703	21+00N 24+25E	7	L15+00N 20+50E
8:	690	20+50N 22+50E	7	L13+50N 23+25E
9:	567	21+00N 21+75E	8	CL 150-010
10:	561	22+50N 20+50E	8	L16+00N 19+25E



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EQUITY ENGINEERING

87/08/04

Statistical Analysis for Gold (soil) Project: GKR 87-01

Number of samples in analyses: 563

Mean value: 17.718 ppb

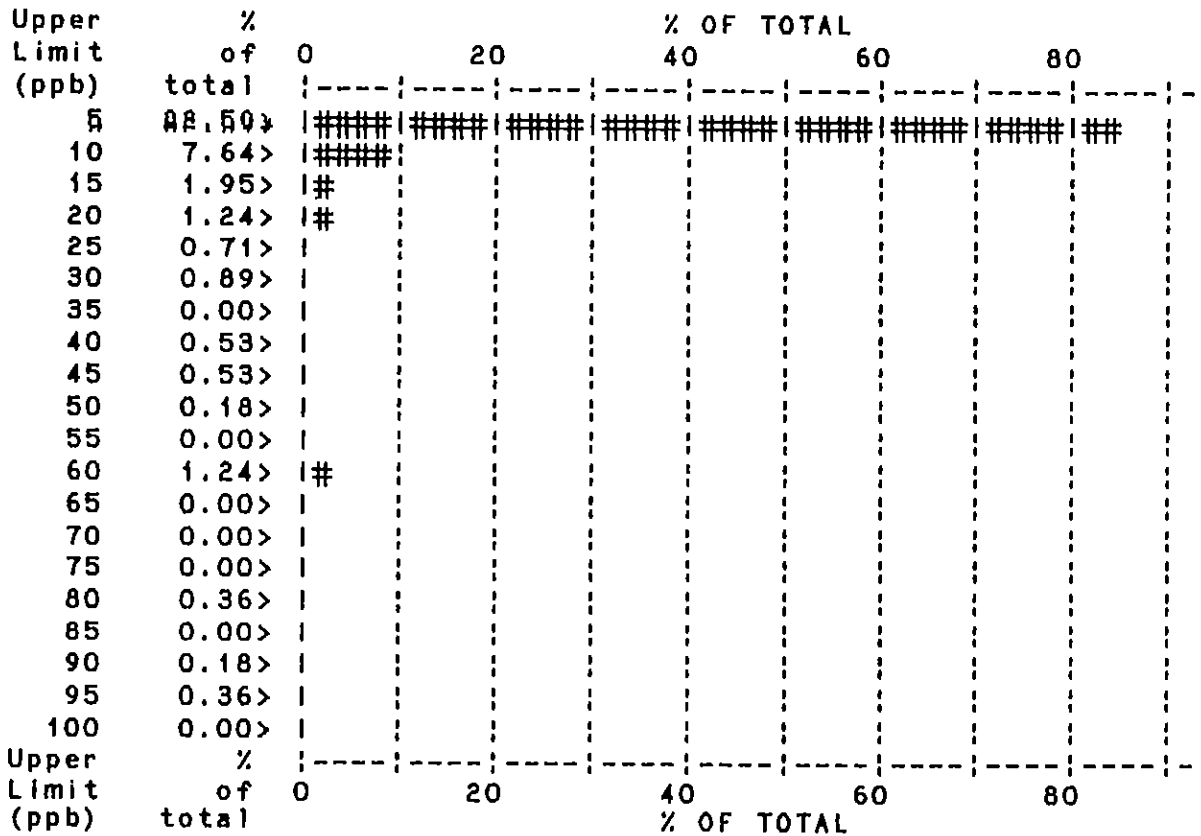
variance: 31895.600 ppb<sup>2</sup>

99<sup>th</sup> percentile = 200 ppb

95<sup>th</sup> percentile = 90 ppb

90<sup>th</sup> percentile = 60 ppb

Samples below range: 0



Samples above range: 9

Samples with the highest and lowest concentrations of Gold

Rank	Maximum Au ppb	Sample	Minimum Au ppb	Sample
1:	3080	L17+50N 25+25E	0	CL 150-043
2:	2845	CL 150-036	0	CL 150-042
3:	420	L16+50N 17+50E	0	CL 150-040
4:	300	87-HA 19 (-100 mesh)	0	CL 150-039
5:	300	L12+00N 22+75E	0	CL 150-038
6:	200	L13+00N 17+25E	0	CL 150-037
7:	160	L14+50N 16+25E	0	CL 150-032
8:	155	L12+50N 22+25E	0	CL 150-030
9:	110	19+00N 24+75E	0	CL 150-029
10:	95	L12+50N 17+75E	0	CL 150-026

APPENDIX G

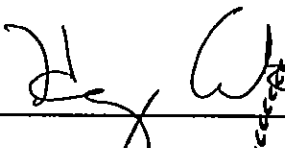
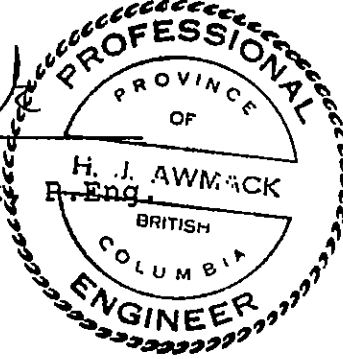
ENGINEER'S CERTIFICATE

ENGINEER'S CERTIFICATE

I, HENRY J. AWMACK, of 708-1265 Burnaby Street, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Consulting Geological Engineer with offices at Suite 406, 675 West Hastings Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of British Columbia with an honors degree in Geological Engineering.
3. THAT I am a member in good standing of the Association of Professional Engineers of British Columbia.
4. THAT this report is based on work carried out under my supervision, government publications and on reports filed with the Province of British Columbia.

DATED at Vancouver, British Columbia, this 5<sup>th</sup> day of August, 1987.

  
Henry J. Awmack, P. Eng.  


GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,355

Scale - 1:2000  
0 100 200 300  
METRES

GREAT KEPPEL RESOURCES LTD.

Head Bay Property

MAGNETOMETER SURVEY

ALBERNI MINING DISTRICT  
NTS 92E/15E

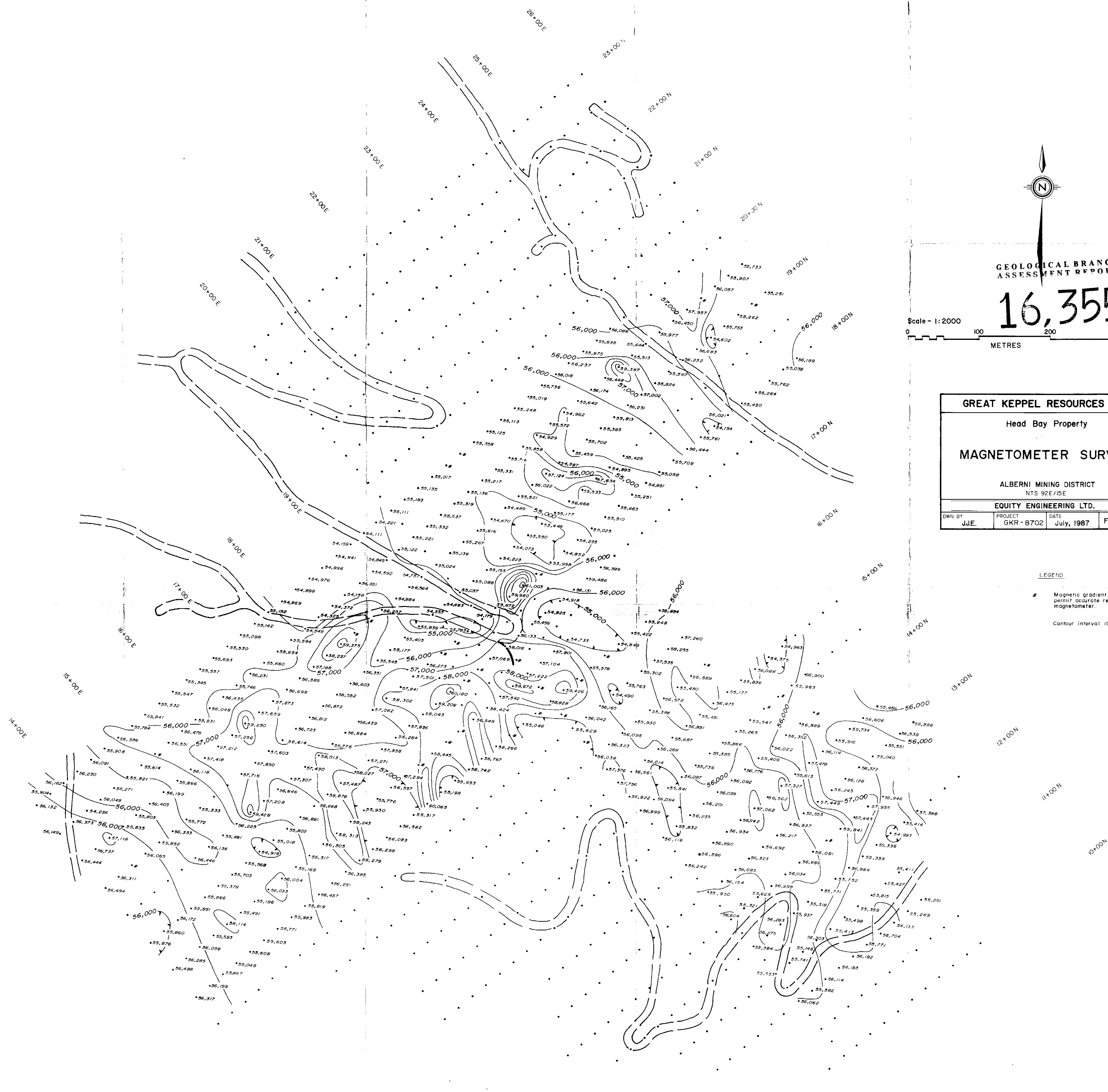
EQUITY ENGINEERING LTD.

DWN BY	PROJECT	DATE	FIGURE
J.J.E.	GKR-8702	July, 1987	12

LEGEND

\* Magnetic gradient too high to permit accurate reading with proton magnetometer.

Contour interval 1000 gammas









GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,355

Scale - 1:2000



GREAT KEPPEL RESOURCES LTD.

Head Bay Property

SOIL GEOCHEMISTRY

Zn in ppm

ALBERNI MINING DISTRICT  
NTS 92E/15E

EQUITY ENGINEERING LTD.

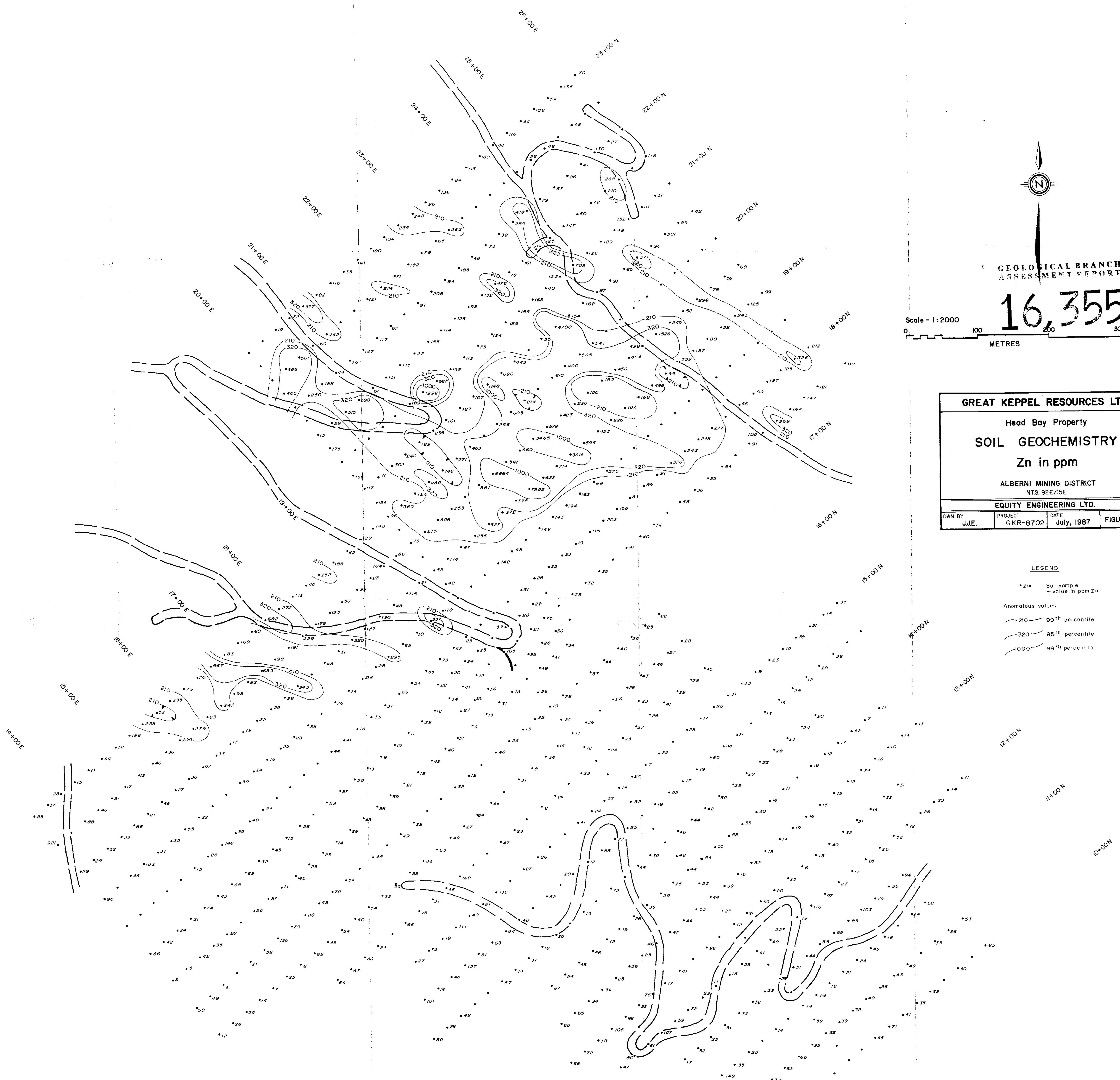
OWN BY	PROJECT	DATE	FIGURE
J.J.E.	GKR-8702	July, 1987	11

LEGEND

\*214 Soil sample  
- value in ppm Zn

Anomalous values

- 210 - 90th percentile
- 320 - 95th percentile
- 1000 - 99th percentile



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,355



GREAT KEPPEL RESOURCES LTD.

Head Bay Property  
SOIL GEOCHEMISTRY  
Pb in ppm

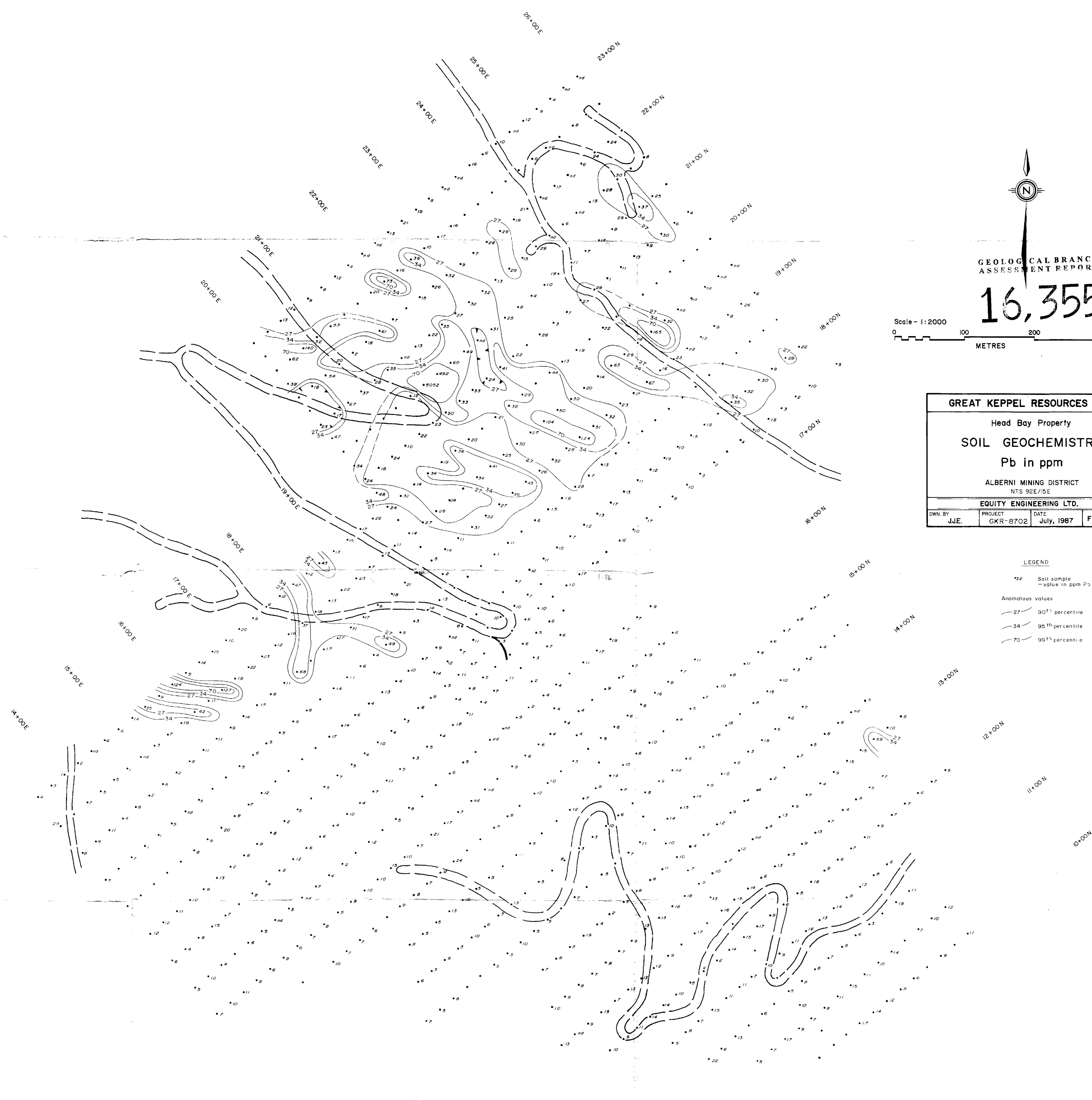
ALBERNI MINING DISTRICT  
NTS 92E/5E

EQUITY ENGINEERING LTD.

OWN BY	PROJECT	DATE	FIGURE
J.J.E.	GKR-8702	July, 1987	10

LEGEND

- \*32 Soil sample value in ppm Pb
- Anomalous values
  - 27 90<sup>th</sup> percentile
  - 34 95<sup>th</sup> percentile
  - 70 99<sup>th</sup> percentile





GEOLOGICAL BRANCH  
MINISTRY OF ENERGY

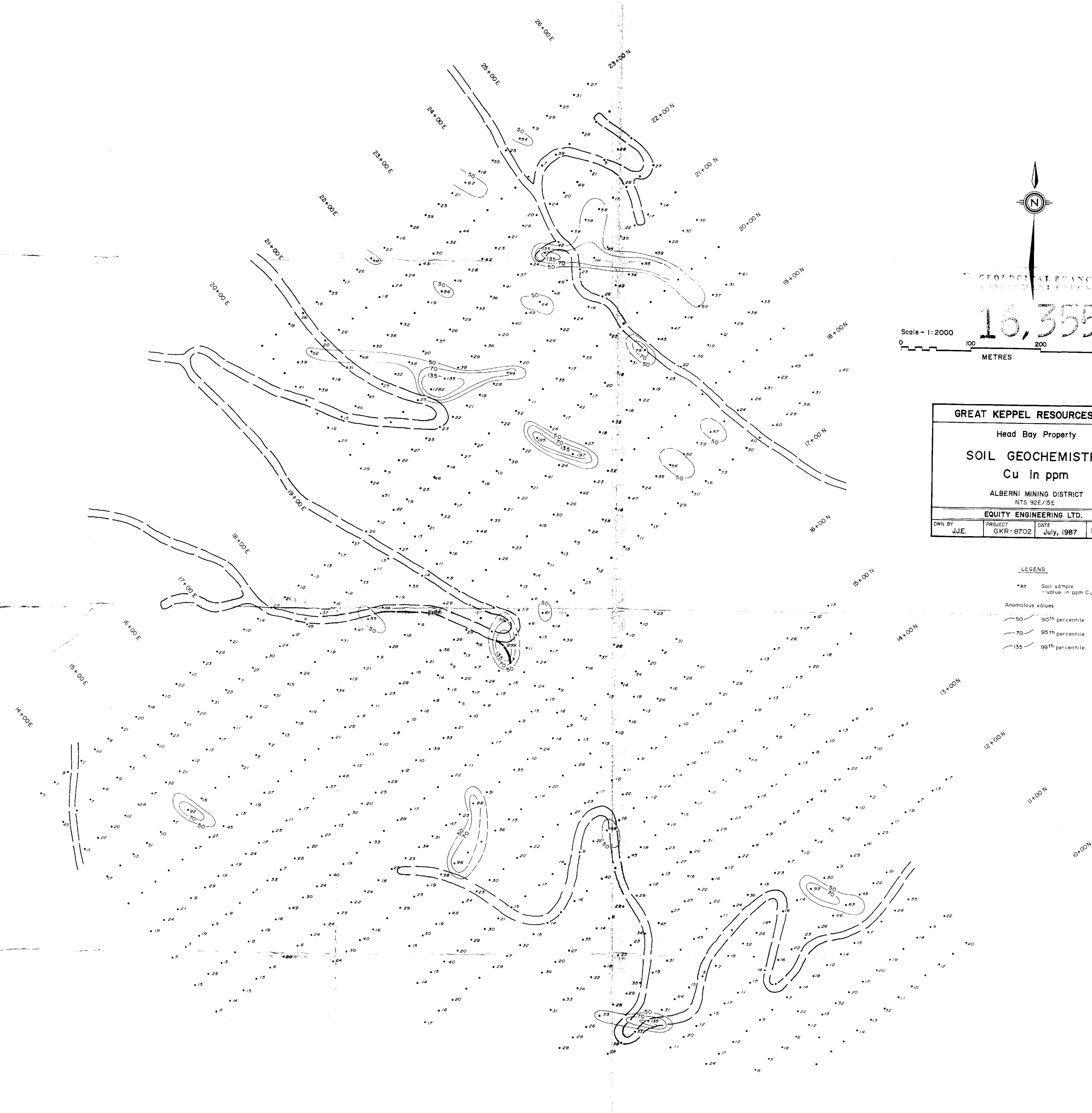
16,355



GREAT KEPPEL RESOURCES LTD.			
Head Bay Property			
SOIL GEOCHEMISTRY			
Cu in ppm			
ALBERNI MINING DISTRICT			
NTS 92E/15E			
EQUITY ENGINEERING LTD.			
DWN. BY	PROJECT	DATE	FIGURE
J.J.E.	GKR-8702	July, 1987	9

LEGEND

- \*93 Soil sample value in ppm Cu
- Anomalous values
  - 50 90th percentile
  - 70 95th percentile
  - 135 99th percentile

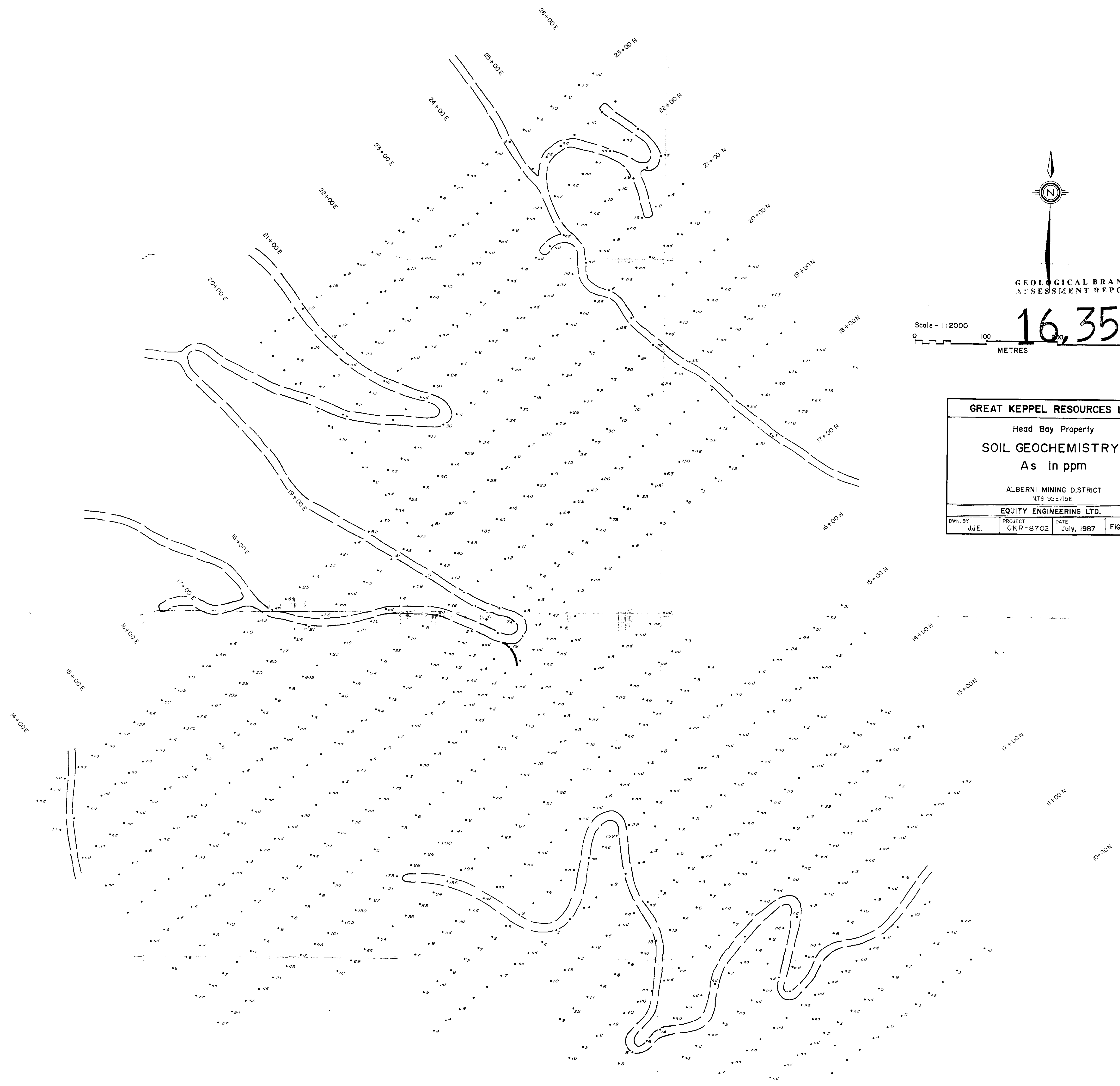




GEOLOGICAL BRANCH  
ASSESSMENT REPORT

Scale - 1:2000  
0 100 200  
METRES  
**16,355**

GREAT KEPPEL RESOURCES LTD.			
Head Bay Property			
SOIL GEOCHEMISTRY			
As in ppm			
ALBERNI MINING DISTRICT			
NTS 92E/15E			
EQUITY ENGINEERING LTD.			
DWN BY	PROJECT	DATE	FIGURE
JJE.	GKR-8702	July, 1987	8





GEOLOGICAL BRANCH  
ALBERTA GOVERNMENT REPORT

16,355

Scale - 1:2000  
0 100 200 300  
METRES

GREAT KEPPEL RESOURCES LTD.

Head Bay Property  
SOIL GEOCHEMISTRY  
Ag in ppm

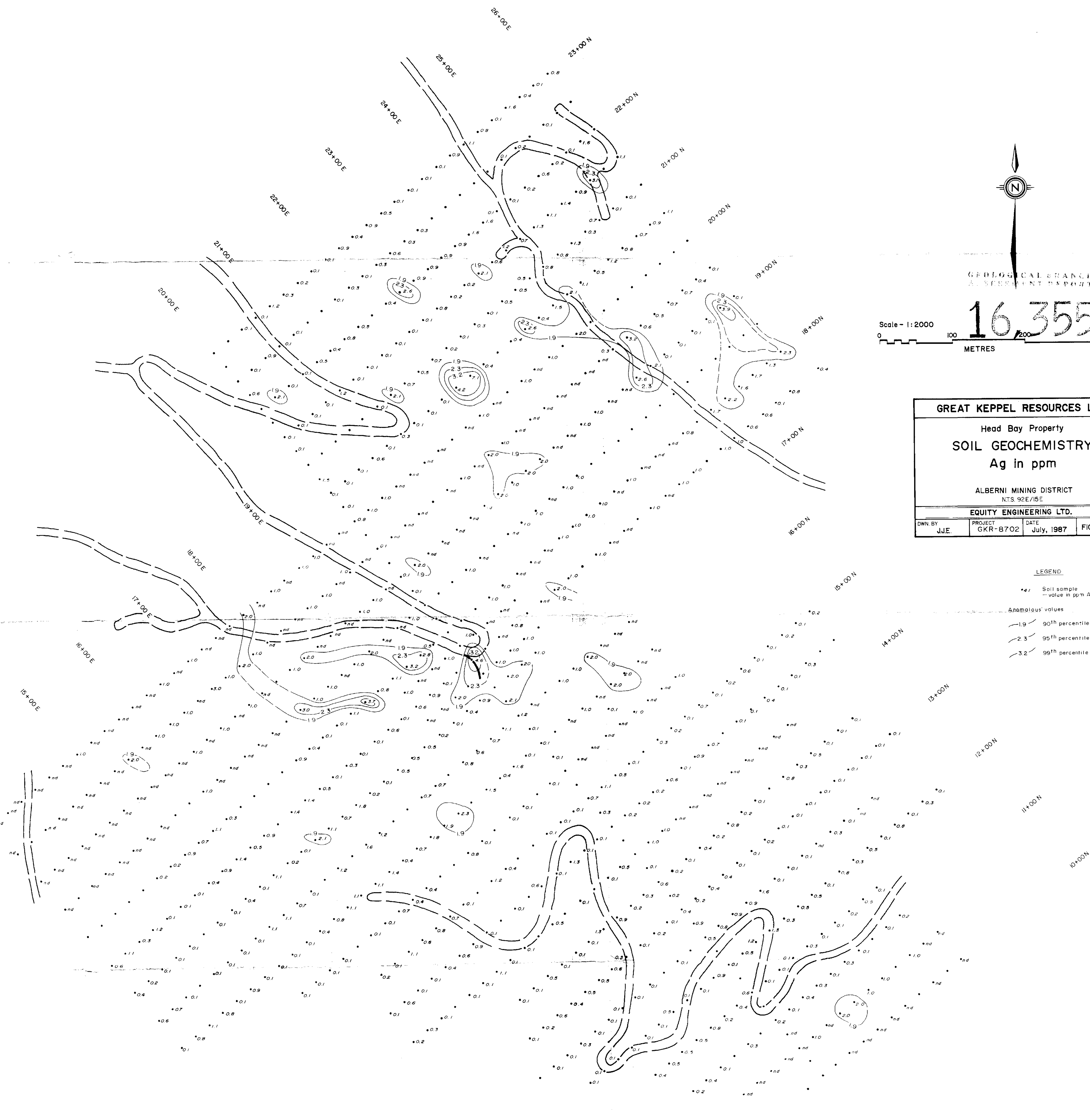
ALBERNI MINING DISTRICT  
NTS. 92E/15E

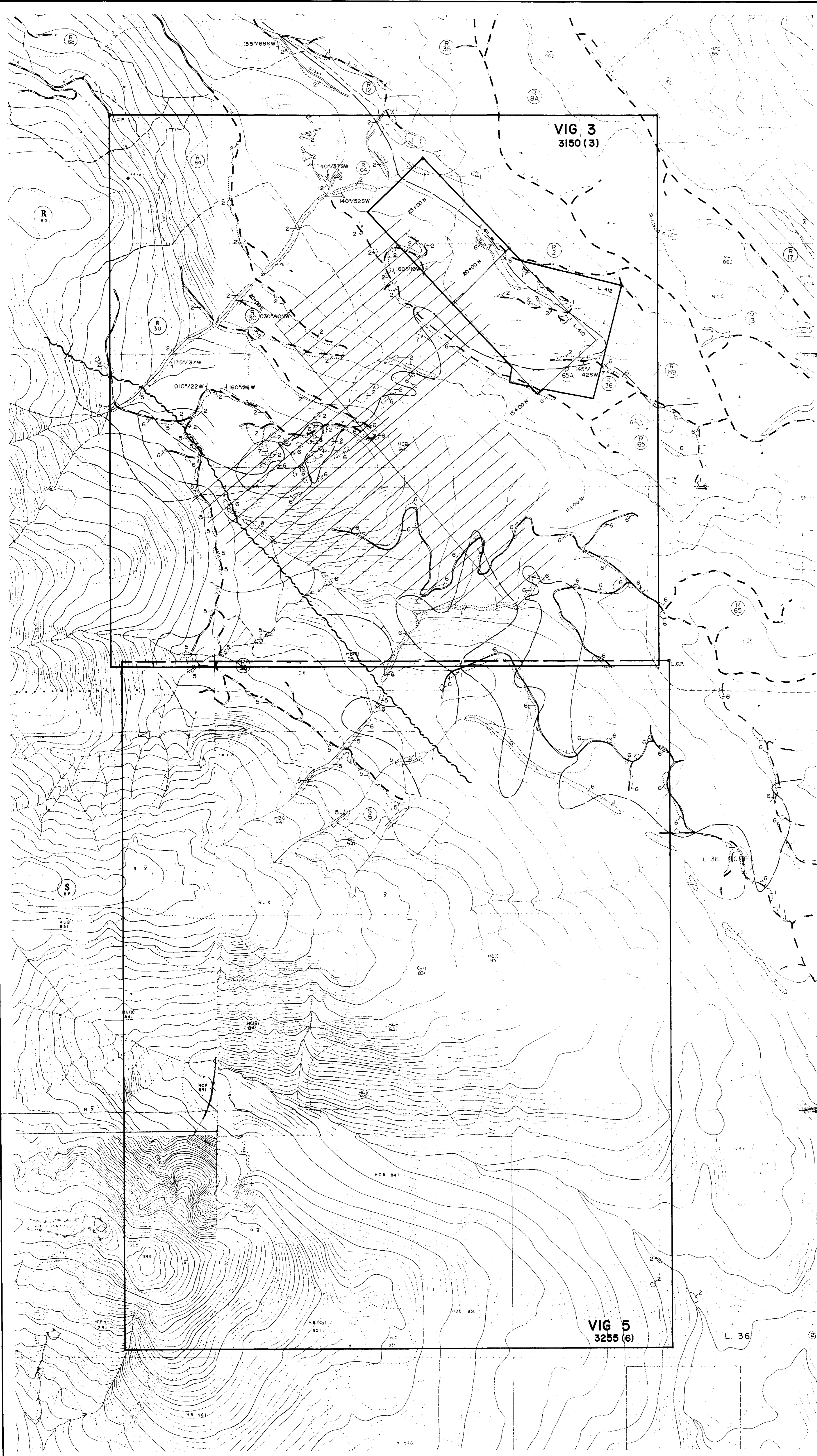
EQUITY ENGINEERING LTD.

DWN BY JJE	PROJECT GKR-8702	DATE July, 1987	FIGURE 7
---------------	---------------------	--------------------	-------------

LEGEND

- \*41 Soil sample  
- value in ppm Ag
- Amomalous values
- 19 90th percentile
- 23 95th percentile
- 32 99th percentile





VIG 3  
3150 (3)

VIG 5  
3255 (6)

**LEGEND**

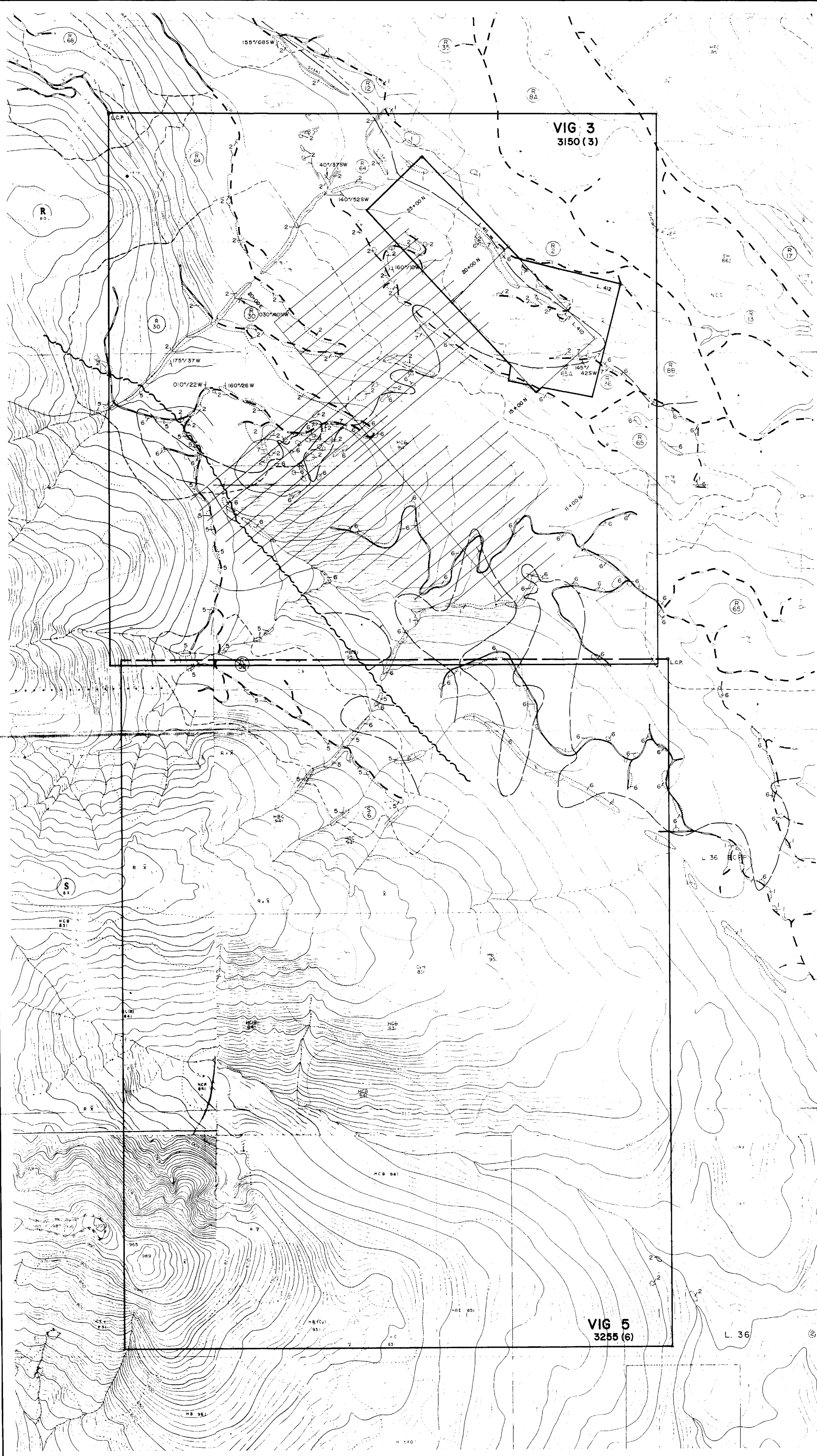
- TERTIARY**
- Eocene
- 7 SKARN : Garnet - magnetite - epidote - diopside
  - 6 HEAD BAY STOCK: diorite, gabbro, monzonite
- JURASSIC**
- Lower Jurassic
- 5 BONANZA GROUP: felsic pyroclastics, flows and sills
- TRIASSIC**
- VANCOUVER GROUP
- 3 Parsons Bay Formation: limy argillite
  - 2 Quatsino Formation: limestone
  - 1 Karmutsen Formation: Basalt flows
- Outcrop
  - Geological contact
  - Fault (inferred)
  - 160' open Breking strike/dip

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**16,355**

Scale - 1:5000  
0 100 200 300 400 500  
Metres

GREAT KEPPEL RESOURCES LTD.			
Head Bay Property			
<b>PROPERTY GEOLOGY</b>			
ALBERNI MINING DISTRICT NTS 92E/15E			
EQUITY ENGINEERING LTD.			
DWN. BY JJE.	PROJECT GKR-8702	DATE July, 1987	FIGURE 4

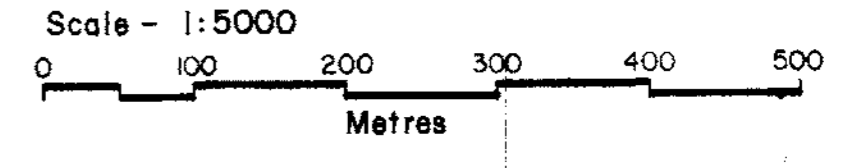


**LEGEND**

- TERTIARY**
- Eocene**
- 7 SKARN: Garnet-magnetite-epidote-diopside
  - 6 HEAD BAY STOCK: diorite, gabbro, monzonite
- JURASSIC**
- Lower Jurassic**
- 5 BONANZA GROUP: Felsic pyroclastics, flows and sills
- TRIASSIC**
- VANCOUVER GROUP**
- 3 Parsons Bay Formation: limey argillite
  - 2 Quatsino Formation: limestone
  - 1 Karmutsen Formation: Basalt flows
- Outcrop
- Geological contact
- ~ Fault (inferred)
- 160°/26W Bedding strike/dip

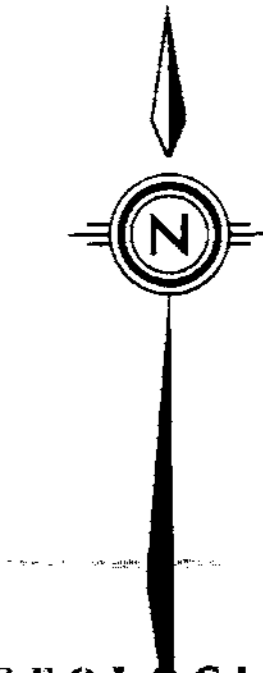
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**16,355**



<b>GREAT KEPPEL RESOURCES LTD.</b>			
Head Bay Property			
<b>PROPERTY GEOLOGY</b>			
ALBERNI MINING DISTRICT N.T.S. 92E/15E			
EQUITY ENGINEERING LTD.			
DWN BY J.J.E.	PROJECT GKR-8702	DATE July, 1987	FIGURE 4





GEOLOGICAL BRANCH  
ASSESSMENT REPORT

16,355

Scale - 1:2000



GREAT KEPPEL RESOURCES LTD.			
Head Bay Property			
SOIL GEOCHEMISTRY			
Au in ppb			
ALBERNI MINING DISTRICT NTS. 92E/15E			
EQUITY ENGINEERING LTD.			
DWN BY JJE.	PROJECT GKR-8702	DATE July, 1987	FIGURE 6

LEGEND

- \* 75 Soil sample value in ppb Au
- Anomalous values:
  - 60 90th percentile
  - 90 95th percentile
  - 200 99th percentile

