

ARIS SUMMARY SHEET

District Geologist, Nelson

Off Confidential: 89.06.23

ASSESSMENT REPORT 17527

MINING DIVISION: Nelson

PROPERTY: Totem Gold
LOCATION: LAT 49 24 34 LONG 116 40 58
UTM 11 5472802 523012
NTS 082F07E

CLAIM(S): German Basin, Totem Gold, Gold Dust
OPERATOR(S): Dobrana Res.
AUTHOR(S): Borovic, I.
REPORT YEAR: 1988, 70 Pages

COMMODITIES
SEARCHED FOR: Lead, Zinc, Silver, Gold

GEOLOGICAL
SUMMARY: Proterozoic sediments of Purcell and Windermere Supergroups are intruded by Cretaceous granitic rocks of the Bayonne Batholith. Vein and skarn type mineralization occurs within contact metamorphic rocks. Strong northerly striking shears appear to control mineralization.

WORK
DONE: Geological, Geophysical, Geochemical
EMGR 28.5 km; VLF
Map(s) - 2; Scale(s) - 1:5000
LINE 28.5 km
MAGG 28.5 km
Map(s) - 1; Scale(s) - 1:5000
SOIL 480 sample(s); AU, AG, CU, PB, ZN
Map(s) - 6; Scale(s) - 1:5000
MINFILE: 082FSE039

REPORT ON THE MINERAL

EXPLORATION

OF

FILMED

THE TOTEM GOLD PROPERTY

Lat. 49 25'N; Long. 116 43'W

N.T.S. 82 F/7E

NELSON M. D.

British Columbia

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ACTION:	
FILE NO:	

1987

SUMMARY AND EVALUATION

GEOLOGICAL BRANCH
ASSESSMENT REPORT

DOBRANA RESOURCES Ltd

by 17,527

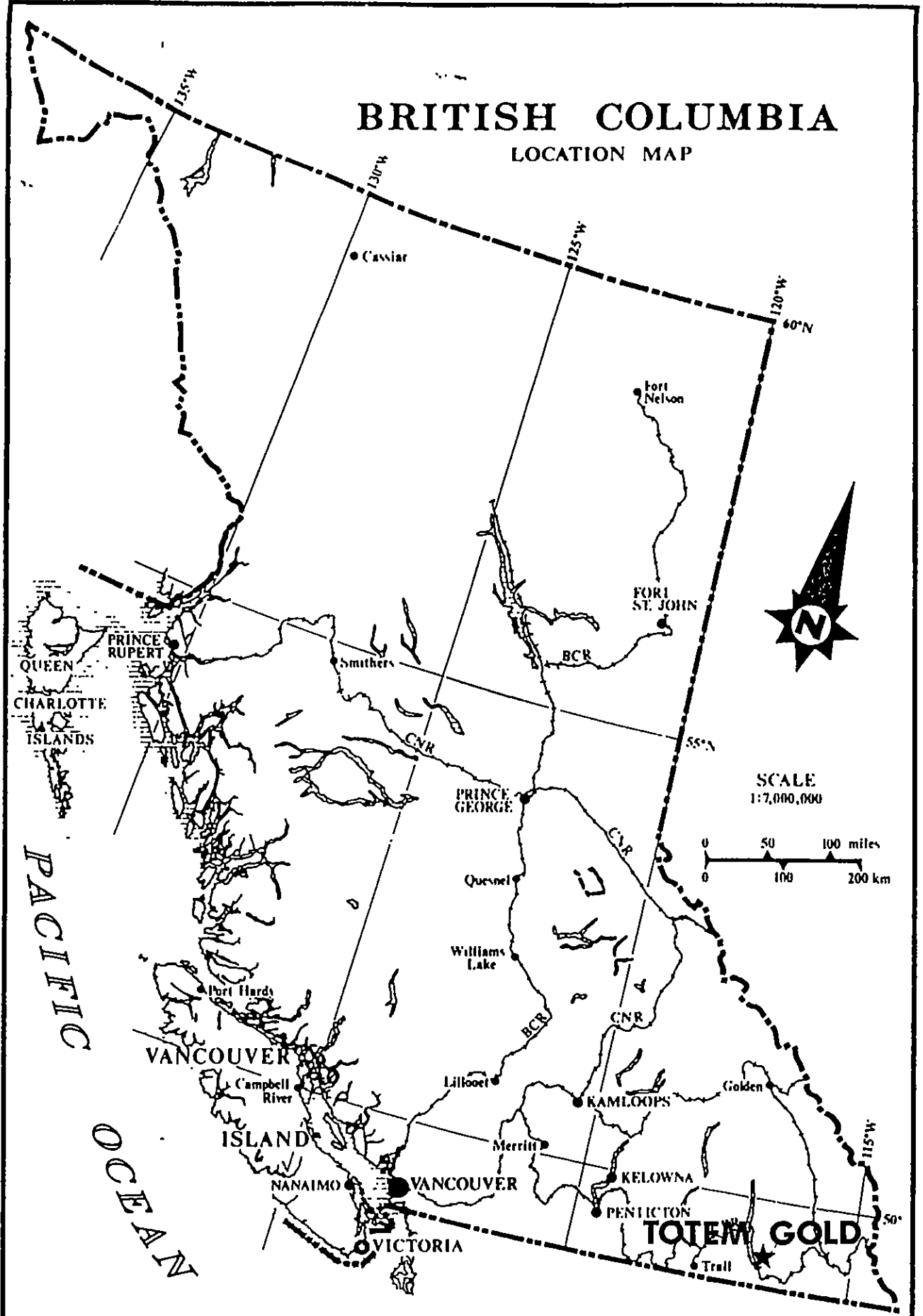
I. BOROVIC, P. Eng.
geologist

VANCOUVER, B. C.
March 18, 1988.

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BRITISH COLUMBIA

LOCATION MAP



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DATE FEB. 1988

FIG. No. 1

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SUMMARY

A combined geological, geophysical and geochemical exploration work of the TOTEM GOLD property held by DOBRANA RESOURCES Ltd. was conducted by Igna Engineering and Consulting Ltd. from November throughout December 1987. The claims are situated in the Nelson Mining Division, in the southern Kootenay Lake area, 40 km north of Creston, B. C.

The geology of the property area is characterized by Proterozoic sediments of Purcell and Windermere Supergroups intruded by Cretaceous granitic rocks of the Bayonne Batholith. In many areas limestones and other sediments have undergone contact metamorphism and metasomatism resulting from the granitic intrusion.

Vein and skarn type mineralizations occur in the area.

Numerous old workings such as German (Gold) Basin, Hope of Discovery, Copper Canyon, Imperial and Valporaiso/Government, date back to the turn of the century.

The area has been explored for high grade silver, lead, zinc, gold, tungsten and copper. The old records show shipments of ore from Imperial and Valporaiso/Government mines containing 3.45 oz/t silver and 0.356 oz/t gold (O'Grady, 1933).

Geophysical studies have revealed the presence of northerly trending electromagnetic conductors attributable to silver, lead, zinc, gold and copper mineralization. Magnetic survey suggests areas of alteration and possible presence of anomalous concentrations of minerals within shear zones parallel and coincidental with the German Basin contact and the shear zone.

Soil geochemistry results show an area anomalous in silver, lead, zinc, copper and gold in the vicinity of the north trending magnetic anomaly and electromagnetic conductor in the area of the TOTEM GOLD workings.

It is recommended that a next phase of exploration be undertaken to assess the following:

Phase 1/88

- lateral (north-south) extent and grade characteristics of two target areas.

Phase 2/88

- to test for the down dip extension of mineralization with diamond drilling.

INTRODUCTION

DOBRANA RESOURCES LTD., a Vancouver, B.C. based mineral exploration company, intends to continue the exploration of the silver, lead, zinc, gold and copper bearing mineral property known in the past as GERMAN (GOLD) BASIN, located on the southwest slopes of Mount Sherman, north of Sanca Creek about 4 km east of Sanca on Kootenay Lake.

The following report is a summary of information obtained from the various published and private reports, which are listed in the Bibliography on page 17; from the writer's personal knowledge and experience gained through research and exploration work in the Kootenay Lake area in the past; and from the results of the 1987 geological, geophysical and geochemical survey. The writer visited and examined the TOTEM GOLD property at the beginning of November, 1987.

Following the writer's recommendations basic exploration work, comprised of geological mapping, geochemical soil surveying, geophysical, VLF, and ground magnetic surveying, was done during November and December of 1987.

Heavy snowfall at this time of the year made the already treacherous ground even more treacherous hampering better progress in our exploration efforts. Important workings in the German (Gold) Basin were under a heavy snow cover.

The conclusions expressed in this report are based upon the results of the geological, geochemical and geophysical work done on and around the Totem Gold property in 1987 and in the past.

PROPERTY

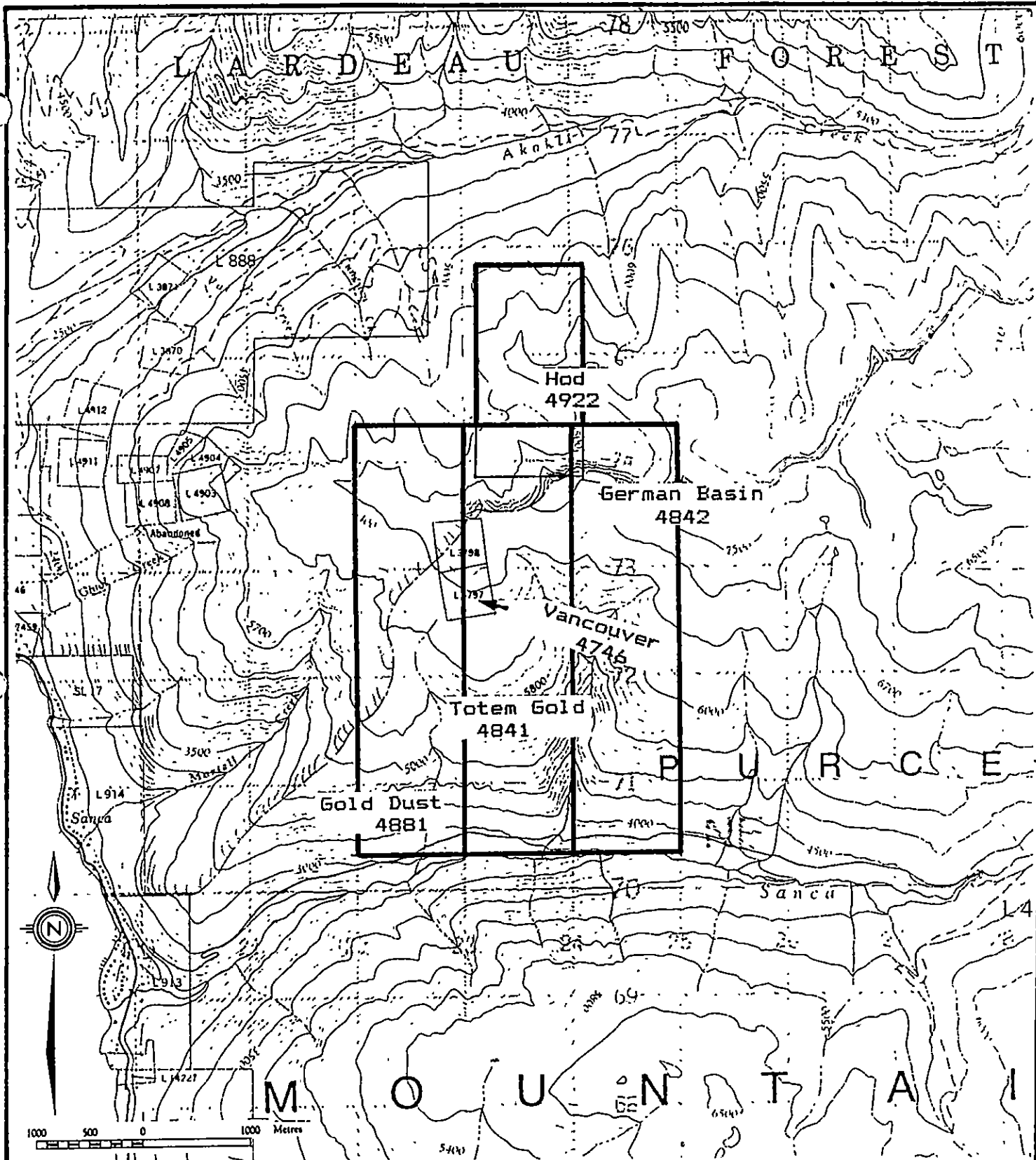
Claims:
(Fig. 2)

The property is composed of four located mineral claims with a total of ~~62~~ units and one reverted Crown Granted claim as follows: ⁵⁷

Claim (# of units)	Lot. No.	Rec. No.	Rec. Date
Totem Gold (16)		4841	Sept. 18, 1987.
German Basin (16)		4842	Sept. 18, 1987.
Gold Dust (16)		4881	Oct. 21, 1987.
Hod (8)		4922	Dec. 29, 1987.
Vancouver (RCG)	3797	4746	June. 29, 1987.

Owner: DOBRANA RESOURCES LTD.
1407-750 W., Pender St.
Vancouver, B. C. V6C 2T7

Location:
(Fig. 1, 2)
(Lat. 49 25'N; Long. 116 43'W); NTS 82 F/7E; Nelson, M.D. B.C.



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TOTEM GOLD
Claim Map

NTS 82F/7 E

DATE
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FIG. 2

The property is approximately 40 km north-northwest of Creston, B.C., about 4.5 km east of Sanca on Kootenay Lake and north of Sanca Creek.

Access:

A forestry access road leaving highway 3A at Sanca rises to approximately 1200 m elevation in the easterly direction. It follows Sanca Creek for 6.5 km where it joins an old mine and series of new logging roads leading northerly into the property. The nearest rail point is at Sirdar, 36 km distance south of the old mine site. The smelter at Trail is approximately 150 km distance by road.

Climate

In the property area, climate is temperate. Summers are moderately dry and warm. Snowfall accumulation varies widely from winter to winter but is rarely greater than one meter. Annual precipitation is light to moderate.

Physiography

THE TOTEM GOLD PROPERTY is located on the western flanks of the Purcell Mountains. The Purcell Mountains lie east of the Selkirk Mountains and are separated from them by the long through valley occupied by Beaver River, Duncan River, Duncan Lake, and Kootenay Lake.

Along the east side of Kootenay Lake the tributary creeks, flowing in narrow deep valleys, have carved out a series of narrow ridges running east and west, ranging in elevation from 7,000 feet on the ends overlooking the lake to 8,000 feet and higher on the eastern ends.

The Purcell Mountains are underlain by sedimentary and metamorphic rocks, largely of Proterozoic age but extending upward into the Lower Palaeozoic, which are intruded by batholiths of granitic rocks. The sedimentary and metamorphic rocks comprise thick quartzite, argillaceous quartzite, argillite, and limestone members.

The rocks are involved in overturned and frequently complex folds about axes which regionally have an accurate plan, being northeasterly in the south, northerly in the central ranges, and northwesterly in the north. The trends of individual ranges are controlled by this fundamental bedrock structure.

In the southern Purcell Mountains south of Mount Findlay and Skookumchuck Creek "the mountains up to 7,000 feet are rounded and well wooded to the summit, higher ones are commonly extremely rugged, and those carved out of granite or massive quartzites are climbed only with extreme difficulty."

Water

Intermittent streams from which quantities of water can be obtained for exploration drilling occur in the vicinity of the property.

Power

A power line (rated 2200 volts) extends from the transmission line on Highway 3A to the old mine site at Valporaiso-Government workings (about 3.5 km from the Hope of Discovery property) and appears to be in good condition. To become operational, the terminus needs only to be refitted with transformers and the power line right-of-way re-slashed. The power line is owned and maintained by West Kootenay Power Ltd. from whom power can be contracted.

Crew accommodation

During the summer months room and board for the exploration crew is found in the motel at the Destiny Bay on Kootenay Lake only 13 km from the property.

In late fall and winter months the nearest room and board facilities are located in the town of Creston some 40 km to the south of the property.

G E O L O G Y

REGIONAL GEOLOGY

(Fig. 3)

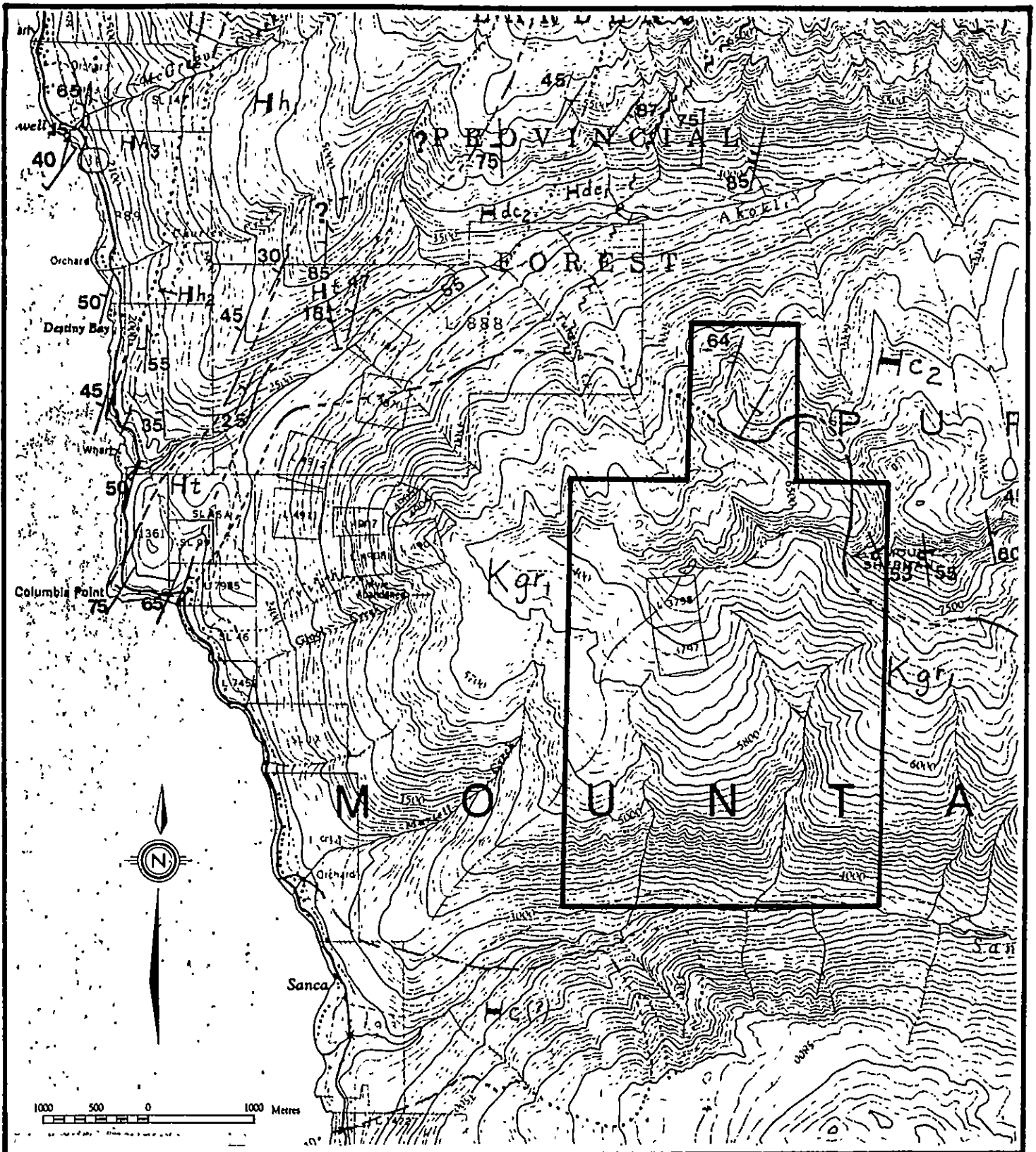
(Rice 1938, 1941; Green 1981; Reesor 1983)

The northeastern area of the Property is underlain by late Precambrian (Proterozoic) sediments of Hadrynian and Helikian age. Sediments have been divided into two systems or supergroups: the Purcell and the Windermere (Rice 1938, 1941). Proterozoic sediments have been intruded by Cretaceous granitic rocks of the Bayonne Batholith which occupy the rest of the property.

The Purcell Supergroup

The Purcell Supergroup consists of a conformable succession of formations which in the area of interest is represented by Creston (Hc) and the Dutch Creek Formations (Hdc).

The Creston Formation (Hc) is composed of varicolored argillaceous quartzite, laminated argillite, bands of chlorite schist. Narrow beds and lenses of calcareous rocks occur in the upper part of the formation, and are transitional to the Kitchener-Siyeh Formation (Rice 1941). The Kitchener-Siyeh consists mainly of impure dolomitic limestone, argillite and calcareous quartzite. Limestone and calcareous rocks compose the bulk of the formation. The Kitchener Formation is not subdivided on map Fig 4 & 5. The Dutch Creek Formation (Hdc) overlies the Kitchener and is represented by slaty argillite with fine, regular lamination. Some of the argillite is calcareous, grading to impure, dolomitic limestone or sandy, grading to argillaceous quartzite.



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TOTEM GOLD
Geology

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FIG. 3

LEGEND

M E S O Z O I C

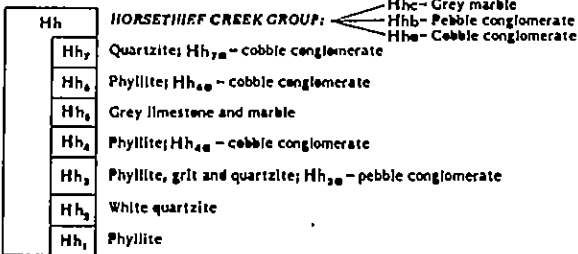
CRETACEOUS



Biotite granite with megacrysts of Potash Feldspar

HADRYNIAN

WINDERMERE SUPERGROUP (Hh, Ht)



Ht **TOBY FORMATION:** polymict conglomerate, conglomeratic dolomite, conglomeratic pelite

Hdc **DUTCH CREEK FORMATION:** undivided

Hdc2 **UPPER:** siltstone, argillite, quartzite
2a-carbonate bearing beds and dolomite

Hdc1 **LOWER:** black argillite and argillaceous grey siltstone, thinly interbedded; 1a-thin successions of dolomite and/or white quartzite

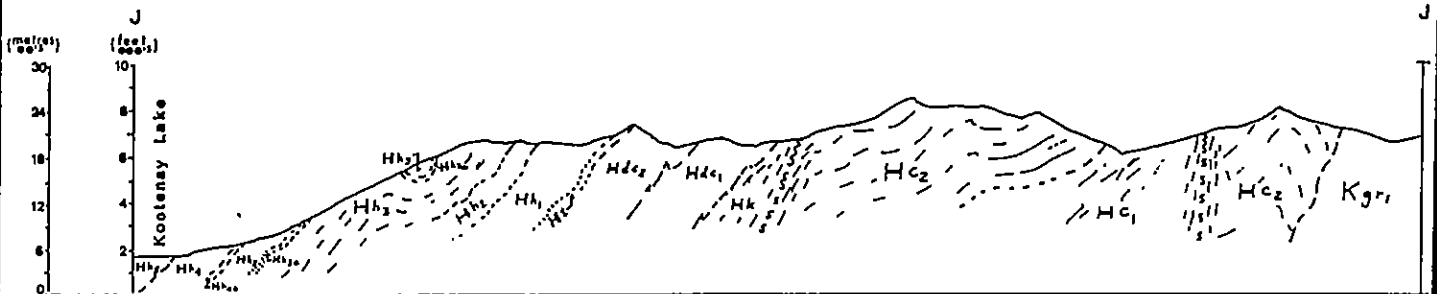
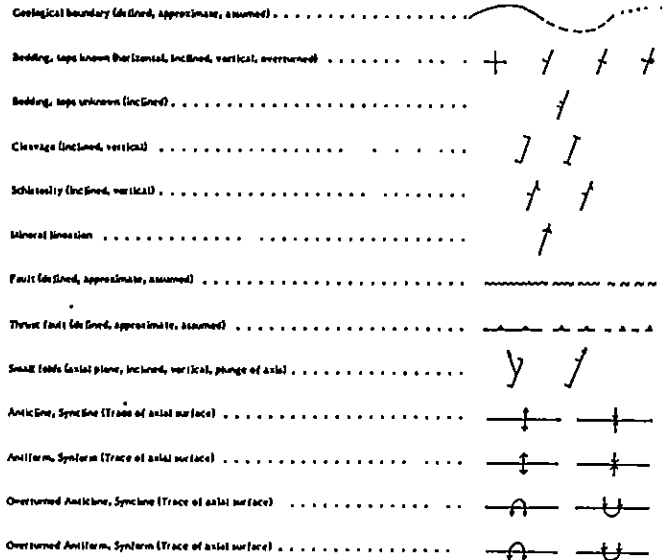
Hc **CRESTON FORMATION:** undivided

Hc2 **UPPER CRESTON:** deep green siltstone, light and dark, thinly laminated argillite and siltstone; purple argillite.

Hc3 **MIDDLE CRESTON:** grey, blocky siltstone and very fine quartzite in beds to 30 cm or more, commonly ripple marked, and commonly purple lined or mottled; black to deep purple argillite and thin-bedded siltstone; white, medium-grained quartzite commonly associated with purple mud-chip breccias.

Hc1 **LOWER CRESTON:** thin-bedded dark argillite and grey siltstone characterized by irregular pinching and swelling beds, ripple cross-lamination, mud-cracks, minor cut and fill features; green siltstone with thin interbeds of argillite.

P R O T E R O Z O I C



J. E. REESOR JAN. 1983

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FIG. 3A

The Windermere Supergroup

The Toby Formation (Ht) is the basal member of the Windermere series (Rice, 1941) and mainly consists of a greenish grey conglomerate. The clasts are mostly quartz set in a siliceous cement. Conglomerate is interbedded with greenish foliated argillite.

The Horsethief Creek Group (Hh) overlies the Toby Formation and is represented in large part by slaty argillite, laminated, finely-grained or sandy with beds and lenses of crystalline limestone, arkose and pebble conglomerate.

Granitic Intrusives:

Bayonne Batholith (Kgr)

The major part of the Totem Gold property area is underlain by the granitic intrusive rocks of the Bayonne Batholith. The intrusive is typically white to light grey, medium to coarse grained biotite granite.

It is composed of approximately equal amounts of quartz, potash feldspar and plagioclase. Megacrysts of potash feldspar from 2 to 3 cm long occur in the rock. Locally the intrusive rock may be weathered and friable with feldspar altered to kaolin. Fine grained pink to grey aplite dykes transect the granitic rock frequently.

The contact to the metasediments (northern part of the property) is irregular, with numerous apophysis and relicts of country rock. The metasediments observed near the contacts have been silicified and bleached in narrow aureoles.

STRUCTURE:

Foliation measurements north and west of the intrusive rocks showed steep eastward dips on planes striking 10 - 200 NE (Green, 1981). This suggests an eastward dipping fold axial plane consistent with other areas adjoining the Kootenay Arc the major structure of the region.

A major fault structure or sheeted zone, conforming closely to the fabric of the schistose metasediments in the Akokli Creek Valley, traces southward into the intrusive rocks without apparent attenuation or refraction. This north-south trending shear zone, subparallel to the major structure of the area, the Val Fault (Green op. cit.), is the locus for mineralization in the Totem Gold and German (Gold) Basin area.

MINERALIZATION

The results of a study of geology and related mineralizing events at the Valporaiso/Government workings and results of our investigations on the Totem Gold show remarkable structural and mineralogical similarities in the two properties. The reason for this is location of mineralization in the shear zone within the intrusive, along the numerous shear zones.

Description of Workings

(Fig. 4)

Valporaiso/Government workings

(Fig. 4)

At the Valporaiso/Government Workings mineral and quartz vein deposition is controlled by parallel fractures within a major sheared zone striking northward and dipping 35- 50 to the east, and a minor zone of parallel fractures striking northeastward and dipping 50 to 80 to the east. The major fracture zone (the Val Fault) persists along the strike to the northern margin of the intrusive and extends into the metasediments. The host rock is a biotite granodiorite - chloritic and sericitic within and in the vicinity of mineralization, adjacent to quartz veins and locally adjacent to some concordant fractures. The mineral assemblages indicate both low to moderate and high temperature hydrothermal activity. Alteration of feldspar to muscovite (greisenization) occurs over narrow widths in the host rock near quartz veins in some localities. In general, alteration in the host rock near quartz veins or shears is chloritic, sericitic and kaolinitic, gradually decreasing outward, away from the shear.

Vein quartz, pyrite, arsenopyrite, wolframite, galena, sphalerite, chalcopyrite, silver and gold are the primary vein materials in order of abundance.

Pyrite, arsenopyrite and wolframite occur together and probably were precipitated in close synchronicity. Although wolframite with arsenopyrite occurs in sheared and altered wall rock, often in ribbon structures, it was also observed with pyrite along fracture shears in quartz veins. Small amounts of chalcopyrite with pyrite and galena occur in vein quartz, but generally these minerals are scarce. Gold values fluctuate in direct proportion to silver values and were likely deposited in the same stages.

Hope of Discovery Workings

(Fig. 4)

The main occurrence consists of a galena-bearing quartz vein within thinly folded, bedded, white limestone of the Dutch Creek Formation. The vein strikes N 12 W and dips 77 E. Galena occurs in bands and pockets within the quartz and in minor concentrations along the bedding planes of the foot wall and hanging wall limestones. The vein varies from 2.5 to 70 cm in width and has been exposed over a strike distance of 60 m. An open cut and a 25 m long adit have been driven along the vein.

Three samples taken from the open cut averaged: Silver 7.7 oz/t; Lead 13.4%; Zinc 14.6% over 0.5 m width over a strike distance of 20 m.

Copper Canyon Workings

Located on the west facing slope of Mr. Davie between McGregor and Charles Creeks.

A quartz vein 0.7 to 1.2 m in width containing disseminations and stripes of pyrite, chalcopyrite, and secondary copper carbonates occurs within quartzites and quartzose schists. Two tunnels, separated by 12 to 15 m vertically, have been driven along the vein. The lower tunnel is 43 m long and the upper tunnel is 11 m long. Grab samples from the stockpile of the mouth of each tunnel assayed: Gold tr to 0.02 oz/t; Silver 0.6 to 1.0 oz/t; Copper 0.91 to 4.21%.

TOTEM GOLD PROPERTY

Gold (German) Basin Group

(Fig. 4)

This is an old property restaked in 1906 by J. W. Mulholland of Sanca Creek, B. C.

It lies in German Basin on the south side of Akokli Creek at an elevation of 7,000 feet. A trail about 5 miles long connects it with the main highway up the east side of Kootenay Lake at Columbia Point.

The deposit is a quartz vein in the same granitic body as the Valporaiso, and the vein outcrops along its east wall not far below the crest of the ridge. It strikes roughly north and, near the surface, dips about 30 degrees west. The workings consist of a long adit driven from a point just above the floor of the basin, and a shorter adit higher up the vein. Several raises have been driven from these adits through to the surface. In addition to the underground workings, a line of open-cuts expose the vein on the surface for about 300 feet. All the underground workings were in poor condition at the time of the writer's visit and the examination was largely confined to the surface. The vein in the open-cuts occupies a strong fracture in the granite and is from 3 to 8 feet wide. It apparently dies out where the fracture passes from the granite to the sediments. The quartz is milky white and contains scattered galena, pyrite, and chalcopyrite. Some orange-yellow scheelite (calcium tungstate) was seen. Gold is reported associated with the sulphides.

On the ridge above the workings several open-cuts have been excavated, in most of which large quartz veins are exposed. The relation between these and the main vein is not known.

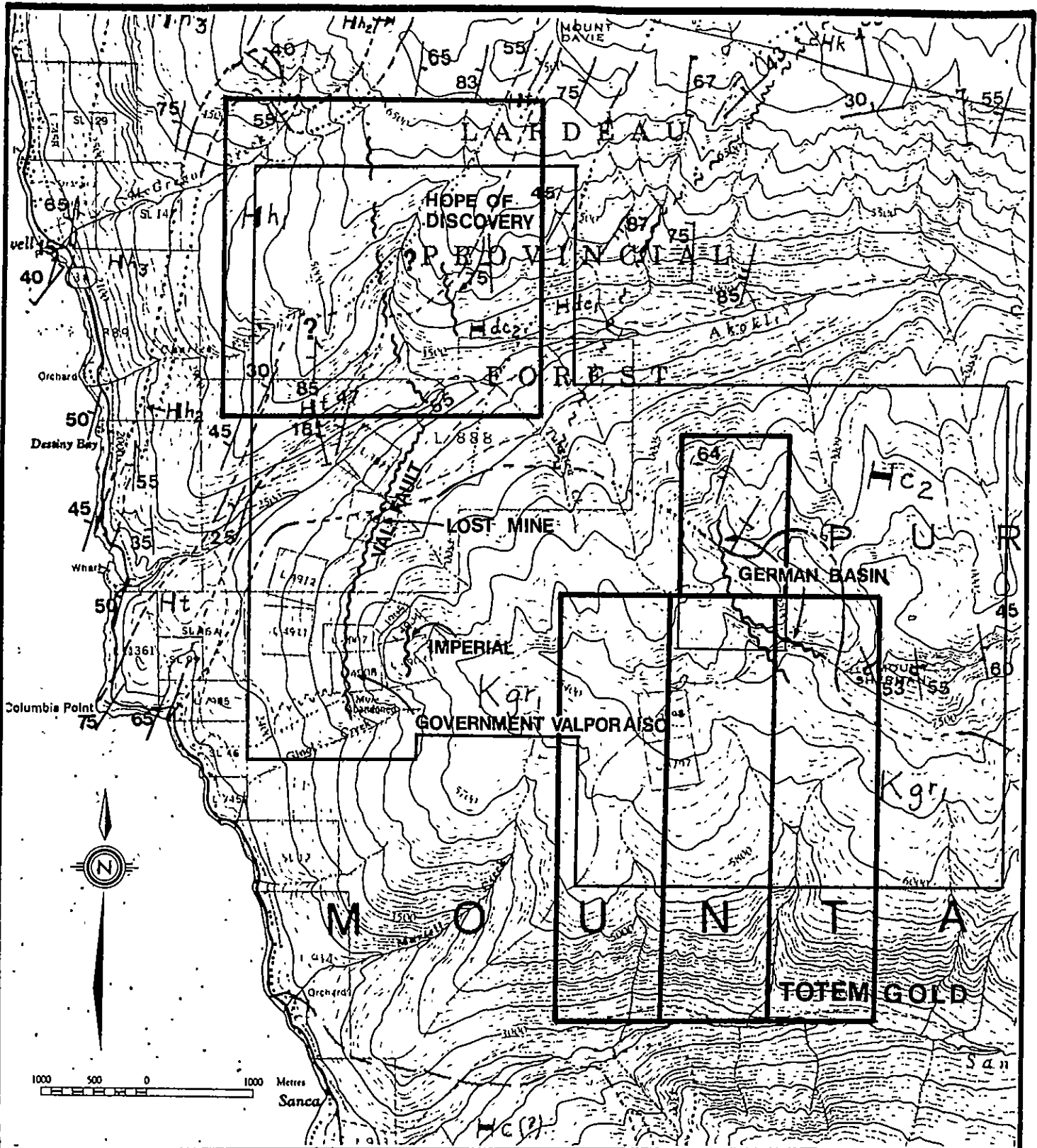
HISTORY OF EXPLORATION AND MINING

(Fig. 4)

Exploration history of the Totem Gold property is related to the exploration history of the numerous properties in the area such as Government-Valporaiso, Imperial, Lost Mine, German (Gold) Basin and Hope of Discovery.

The above properties are located within similar geological structures and appear to have similar mineral paragenesis.

- 1898 - A claim was staked on the Imperial Vein.
- 1900 - The Valporaiso Gold Mining Company acquired 7 claims in the vicinity of the present workings and drove the Valporaiso crosscut adit 60 m east of the vein.
- 1901 - The Imperial and Valporaiso were closed.
- 1919 - Imperial Mines Ltd. drove a 39 m crosscut to the Imperial vein.
- 1926 - Associated Mining and Milling Co. Ltd. acquired the claims of the Valporaiso Gold Mining Co. and Imperial Mines Ltd. and staked 20 additional claims.
- 1927 - The holdings of Associated Mining and Milling Co. Ltd. were increased to 60 claims.
- 1928 - Sanca Mines Ltd. acquired the property of Associated Mining and Milling Co. Ltd. Some assessment work was done.
- 1930 - Sanca Mines Ltd. performed assessment work.
- 1932 - Canada Smelters Ltd., an associate of Sanca Mines Ltd., built a pole track tramway from the Valporaiso portal to a storage bin 900 m downslope.
- 1933 - Canada Smelters Ltd. shipped 324 tons of gold-silver ore to the Trail smelter. "Unsorted mine run ore" assayed 0.356 oz/t gold and 3.455 oz/t silver. The Government shaft was sunk to a depth of 82.5 m and about 190 m of lateral work was done in the Government/Valporaiso workings.
- 1953 - Mr. Wilson of Boswell leased the Valporaiso and Government claims and staked 15 more for the purpose of investigating the area for tungsten occurrences.



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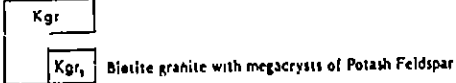
DOBRANA RESOURCES ltd
TOTEM GOLD
Location of Workings

NTS 82F/7E
DATE FEB.88
FIG. 4

LEGEND

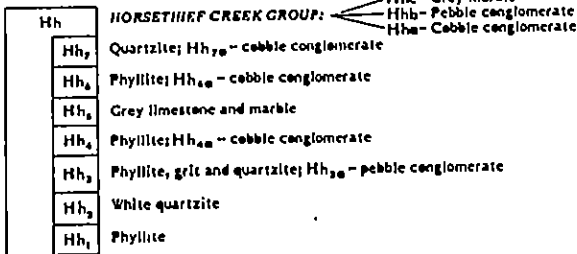
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CRETACEOUS

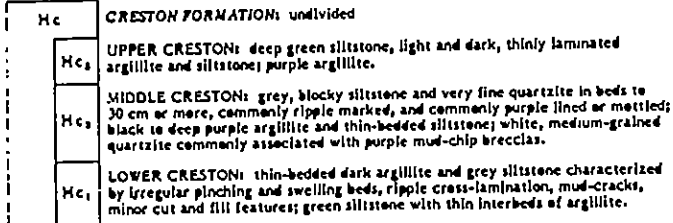
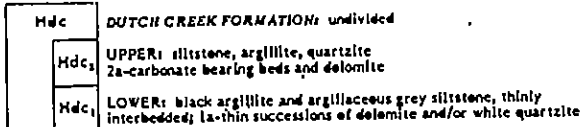


TRIADRYNIAN

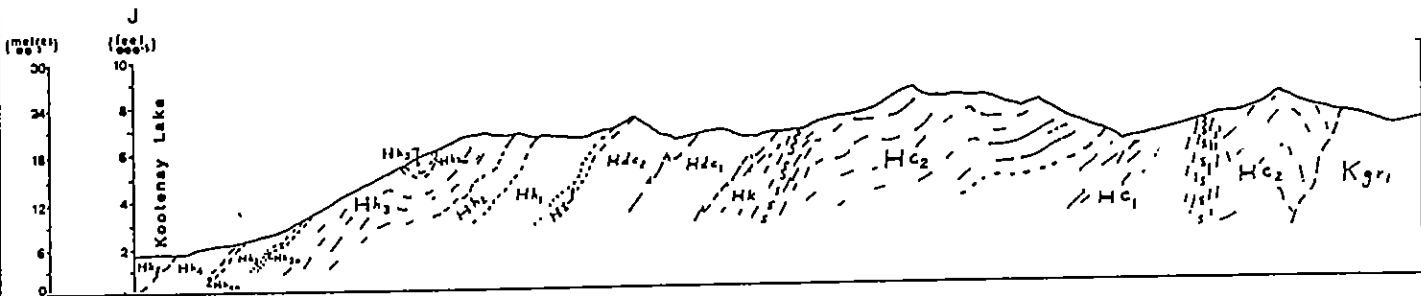
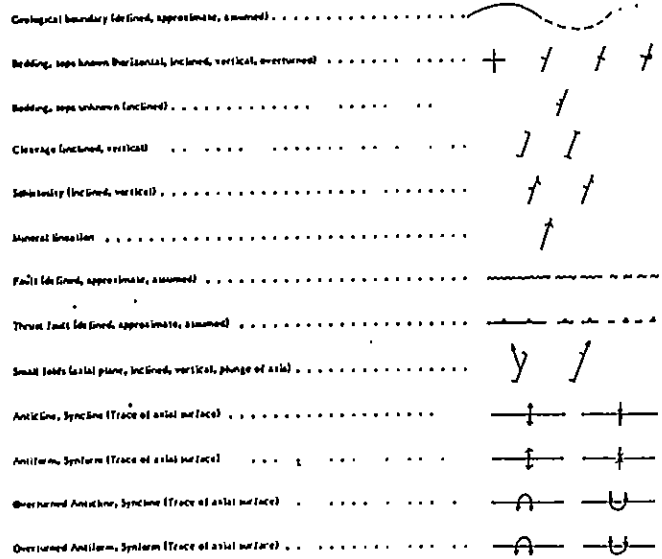
WINDERMERE SUPERGROUP (Hh, H1)



PURCELL SUPERGROUP (Hm to Hc)



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FIG. 4A

- 1954 - Akokli Tungsten Mines Ltd., associated with Palouse Co. Ltd. of Moscow, Idaho, performed underground lateral development, 450 m of long hole percussion drilling and some surface trenching on the Valporaiso/Government zone.
- 1955 - Akokli Tungsten Mines Ltd. improved the Government shaft, did some drifting and drove a raise to the surface. The pilot mill was completed. The mill treated 533 tons of tungsten material, and produced 11,200 lbs of tungsten-pyrite concentrate.
- 1956 - E. Houghland did sampling and geological work on behalf of Palouse Co. Ltd.
- 1964 - Present holdings were acquired by M. J. Pritchard on behalf of Northern Pacific Mines Ltd.
- 1981 - A. S. Greene examined the Valporaiso/Government Workings (August - October) at the request of J. D. Mawhinney of Custom Mining Inc. He did geological evaluation and examination of the property and located drill sites.

Hope of Discovery Workings

A very good but overgrown road leads 3.5 km from a forestry access road on the north side of Akokli Creek, approximately 2 km east of Highway 3A to the workings site at the 5500 foot elevation. The workings, approximately on strike and 4 km north of the Valporaiso/Government Workings, consist of a 24 m adit with a 3 m raise to surface, following a quartz lead and 30 m of surface trenching above the adit. Construction includes two ore bins and a waste chute in fair condition (approximately 4 tons of mineralized rock remain in the bins).

WORK DONE 1987 (Fig. 5)

Geological, geophysical and geochemical surveys were done on the part of the Totem Gold property during November and throughout December of 1987.

GEOLOGICAL MAPPING AND PROSPECTING

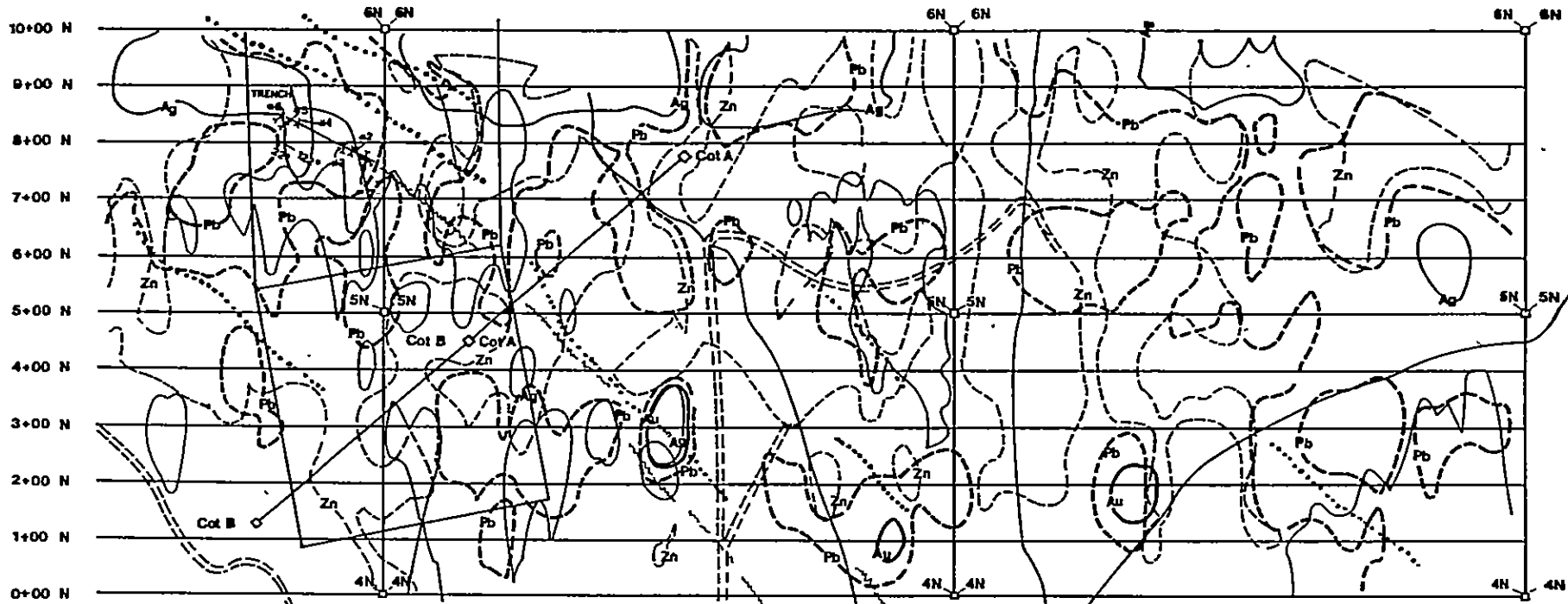
German (Gold) Basin

(Fig. 4, 5) (after, Green, A. S. 1981. and expl. 1987)
The German Basin Workings, originally developed in the later 1800's, lie on the south side of Akokli Creek, 3.6 km east of the Valparaiso/Government Workings at an elevation of about 7000 feet. The underground workings consist of a long adit (portal caved), a 35 m adit driven in on a quartz vein 20 m higher, and a water filled shaft (depth unknown) 65 m southwest of the lower adit. The higher adit and the shaft were examined and sampled. Several raises to surface and stopes have been driven from the adits. The raises however, are also caved. A series of open cuts, following the same quartz vein and fault structure for about 100 m on a north ridge of the basin, were also sampled and examined.

5 m inside the portal of the upper adit, 100m southeast of the lower adit, a 2 m thick milky quartz vein oriented N 5 W35/ W was stoped updip for about 4 m. A major fault structure, N 45 W/90, intersects the controlling shear at this location. The vein consists of coarsely crystalline, vuggy quartz mineralized with galena and pyrite in irregular bands, patches, and clustered in vuggy quartz. Thin, dark to rusty, weathered sulphide bands were observed underground along the margins of the quartz vein footwall. There is slight chloritization, sericitization and pyritization of the granodiorite host rock on the footwall. Examination of the vein underground shows the vein pinching and swelling at intervals over the 35 m exposed distance, varying in thickness from a maximum of 2m at the portal, to a minimum of 0.15 m, 15m, and 35m, south of the portal. The vein ranges in orientation from N 5 W/35 W to N 10 W/45 W. The vein has obviously intruded a pre-existing shear zone of closely spaced fractures, axis evident in some places by the occurrence of parallel wallrock remnants within the quartz vein. Fractures within the quartz parallel the shear and were probably developed after cooling.

A quartz vein is exposed in a downdip shaft 65 m southwest of the lower adit and approximately 5 m below. The narrow 0.1 m vein occupies a shear oriented W/65 S and shows visible spotty galena mineralization.

15+00 14+00 W 13+00 W 12+00 W 11+00 W 10+00 W 9+00 W 8+00 W 7+00 W 6+00 W 5+00 W 4+00 W 3+00 2+00 W 1+00 W 0+00 W E 1+00 E 2+00 E 3+00 E 4+00 E 5+00 E 6+00 E 7+00 E 8+00 E 9+00 E 10+00



Gold Dust Claim

Totem Gold Claim

German Basin Claim

To Highway

	Au	Ag	Pb	Zn
	ppm	ppm	ppm	ppm
2701 TRENCH 1	0.004	0.52	0.58	0.27
2702 -	0.008	0.26	0.88	0.84
2703 -	0.012	0.44	0.06	0.03
2704 TRENCH 2	0.004	0.30	0.07	0.03
2705 -	0.008	0.26	0.04	0.02
2706 TRENCH 4	0.002	0.35	0.19	0.10
2707 -	0.002	0.05	0.08	0.01
2708 TRENCH 5	0.018	2.57	0.33	0.02
2709 -	0.002	4.86	0.84	0.81

LEGEND

- VLF conductor (Seattle)
- VLF conductor (Annapolis)
- Magnetic anomaly

- Soil anomalies
- Au
 - Ag
 - Pb
 - Zn

100 50 0 100 200m

IGNA
engineering &
consulting ltd

DOBRANA RESOURCES ltd

TOTEM GOLD
COMPILATION MAP
Location of workings

NTS B2F7 E

DATE
FEB. 88

FIG 5

The open cuts on the north ridge, 500 to 600 m north of the underground workings, expose an irregular quartz vein up to 1 m thick. The northernmost trench exposes a 0.6 m galena mineralized quartz vein N 40 W/55 W, truncated or faulted off by an N 10 E/40 E oriented fault. Approximately 70 m south of this exposure is a 1 m thick, unmineralized, vuggy quartz vein oriented W/35 S.

SAMPLING BY GREEN 1981.:

Assay Reference No.	Field Reference No.	Elements Tested	Location; Width or Interval; Remarks
5566	GR 10-21-1	Ag, Au, Pb	German Basin, open cut on north ridge; quartz with galena.
5567	CH 10-21-1	Au, Ag, Pb	German Basin, upper adit, adjacent to portal; 0-2.0 m quartz vein, vuggy N5 W/35 W.
5568	CH 10-21-2	Au, Ag, Pb	as above, 35 m south of porta; 0-0.3 m; rusty sheared quartz, galena, N40 W/40 W.
5569	CH 10-21-3	Au, Ag, Pb	as above, 25 m south of portal; 0-6 m (top down); quartz in hanging wall, dark oxides N5 W/35 W.
5570	CH 10-21-4	Au, Ag, Pb	as above; 0.6 - 1 m; black oxide over rusty sheared quartz (0.15m) altered grandiorite (0.25 m).
5571	CH 10-21-5	Au, Ag, Pb	as above; 20 m south of portal; 1 - 0.2 m; quartz vein.
5572	CH 10-21-6	Au, Ag, Pb	as above; 15 m south of portal; 0 - 0.5 m; quartz vein.
5573	CH 10-21-7	Au, Ag, Pb	as above; 8 m south of portal on north wall of raise; 0 - 1.2 m; quartz vein, galena, wallrock clasts.
5574	CH 10-21-8	Au, Ag, Pb	German Basin, shaft 65 m southwest of lower adit; 0 - 1 m; quartz vein near top of shaft N90 W/65 S.

5575	CH 10-21-9	Au, Ag, Pb	German Basin, northern open cut on north ridge; 0-0.6 m quartz vein with galena N40 W/55 W.
5576	CH 10-21-10	Au, Ag, Pb	as above; southern open cut on north ridge; 0-1 m; quartz vein, vuggy N90 W/35 S
5577	CH 10-22-1	Au, Ag, Pb	North Akokli workings 2.5 km north of Valporaiso workings, adit, 10 m north of portal on face; 0-0.5 m; shear and quartz vein N15 W/80 E.

Description	oz/t Au	oz/t Ag	% Pb
5566	0.052	10.68	39.7
5568	0.012	0.62	0.3
5569	0.002	0.10	0.1
5570	0.008	0.29	0.3
5571	0.004	0.26	0.2
5572	0.004	0.23	0.3
5573	0.098	8.22	1.8
5574	0.006	0.37	0.4
5575	0.001	0.04	0.1
5576	0.001	0.04	< 0.1

Samples are taken from German (Gold) Basin workings. Exact location is not available.

Northern Crown Grant and Vancouver Crown Grant (1987 exploration)

Geological investigations were centered around the Northern Crown Grant area. The snow conditions were better and outcrops easier to locate.

On the Northern Crown Grant a series of trenches were located and sampled. These trenches, after some excavations, were found to contain massive--Vuggy + or - Fe Quartz veins and Fe--Granite with tree quartz stringers. In trench #5 (see map, Fig. 5) one sample contains a 1.0-1.5 cm band of brecciated vein with pyrite. The vein trends 122° and dips 22 south.

There seems to be an extensive 'shear zone' on the Southern Crown Grant located approximately 75-150 m east of the 115 + 00W tie line from Lines 2+50 - 4+50 North.

The entire area covered by the two Crown Grants seems to be completely underlain by granodiorite-granite. A noticeable amount of aplitic float is located around L 2 + 00N 115 + 00W and on the Southern Crown Grant.

Samples taken from the trenches were assayed and results are shown on Fig. 5.

GEOPHYSICAL SURVEY 1987

Ground Magnetic Survey (Total Field)

(Fig. 6)

Field Method and Instrumentation

The ground magnetic survey on the Totem Gold property was performed simultaneously with the VLF survey. The Scintrex IGS unit with magnetometer and VLF was used for both surveys. The grid used is described in the GROUND VLF SURVEY. Magnetic readings were taken in conjunction with the VLF readings.

For the survey a portable unit and a base station, fitted with similar proton precision sensors, were used. The base station was programmed to sample the magnetic field every two seconds. The portable unit records the magnetic data, time and station coordinates; corrections are made automatically at the end of the days survey by connecting the portable and base stations to each other.

Data Presentation

(Fig. 6)

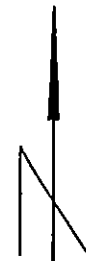
Corrected values were plotted on 1:5000 scale plan and contoured. Contour intervals are 100 and 500 gammas.

Discussion of Results

(Fig. 6)

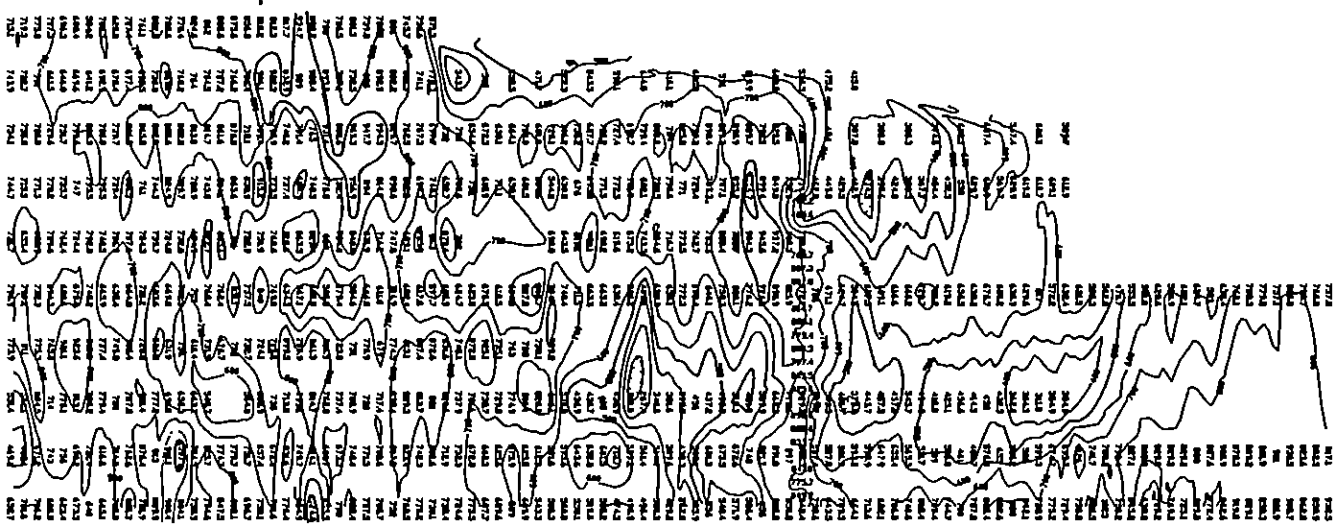
Magnetic anomalies within surveyed part of the property show northerly trend with relief of about 800 to 1000 gammas. This kind of magnetic relief is characteristic for the terraine underlain by granitic intrusive rocks and trend shows possible development of fractures, faults and related shear zones. Gold and silver bearing granitic rocks of the Idaho Batholith give very similar magnetic susceptibility response even over the wide silicified shears with considerable gold, silver and sulfide mineralization. One of the best examples are gold and silver mines located on the large mineralized shear zones near Atlanta in south central Idaho.

In the north western part of the grid the magnetic high is mapped in an area with significant silver lead and zinc anomalies. (see Compilation Map Fig. 5) In the general area two VLF conductors were mapped striking northwest-southeast.



Station 1800E ---
Station 900E ---
Station 900C ---
Station 850E ---
Station 800E ---
Station 750E ---
Station 700E ---
Station 650E ---
Station 600E ---
Station 550E ---
Station 500E ---
Station 450E ---
Station 400E ---
Station 350E ---
Station 300E ---
Station 250E ---
Station 200E ---
Station 150E ---
Station 100E ---
Station 50E ---
BASELINE ---
Station 50V ---
Station 100V ---
Station 150V ---
Station 200V ---
Station 250V ---
Station 300V ---
Station 350V ---
Station 400V ---
Station 450V ---
Station 500V ---
Station 550V ---
Station 600V ---
Station 650V ---
Station 700V ---
Station 750V ---
Station 800V ---
Station 850V ---
Station 900V ---
Station 950V ---
Station 1000V ---
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Station 1100V ---
Station 1150V ---
Station 1200V ---
Station 1250V ---
Station 1300V ---
Station 1350V ---
Station 1400V ---
Station 1450V ---
Station 1500V ---

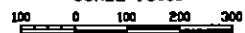
--- Line 900
--- Line 800
--- Line 700
--- Line 600
--- Line 500
--- Line 400
--- Line 300
--- Line 200
--- Line 100
--- Line 0N



BASE MAG VALUE: 57,000 GAMMAS

CONTOUR INTERVAL: 100 GAMMAS

SCALE 1:5000



METERS

TO ACCOMPANY REPORT BY: T. BORDVIC, P. ENG.	
TOTEM GOLD PROJECT	
FOR: DOBRAMA RESOURCES LTD.	
BY: IGMA ENGINEERING AND CONSULTING LTD. PLOTTED BY: RPH HAPPING AND COMPUTER SERVICES LTD.	
TOTAL MAGNETIC FIELD STRENGTH	
NELSON N.D., B.C.	
NTS: 807 - 7E	DATE: FEBRUARY 1990
PLOTTED BY: RPH	FIGURE NO. 6

Ground VLF-EM Survey

Field Method and Instrumentation

A Scintrex IGS VLF-magnetometer instrument was utilized.

A flagged grid, 28.5 km lines in total, was used for the survey, the lines being spaced at 50 and 100 meter intervals and the stations every 50 meters. Readings were taken at 25 meter intervals.

The Scintrex IGS-2 unit was set up to receive two stations, NKL Seattle, Washington, 24.8 kHz and NSS Annapolis, Maryland 21.4 kHz, measuring the horizontal field strength and the in-phase and out-of phase or quadrature components of the vertical field. The instrument was a three coil system, one horizontal coil and two vertical coils all at 90 angles to each other. The horizontal coil is used to scale the in-phase and quadrature readings, to correct for changes in the strength of the VLF signal at different points on the property. The frequency reference needed to obtain quadrature readings is accomplished by using the magnetic field's frequency.

Data Presentation

The in phase and quadrature components of the electromagnetic field are shown as total field values in profiles superimposed on 1:5000 scale maps, one for Seattle and one for Annapolis.

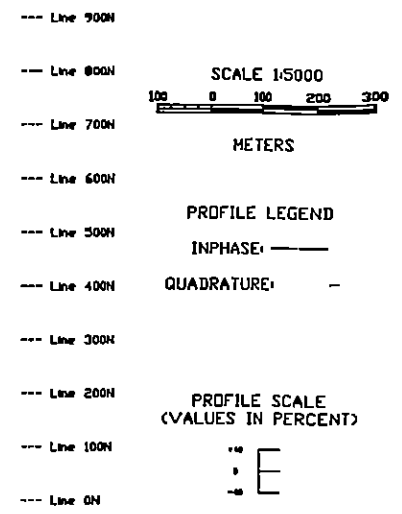
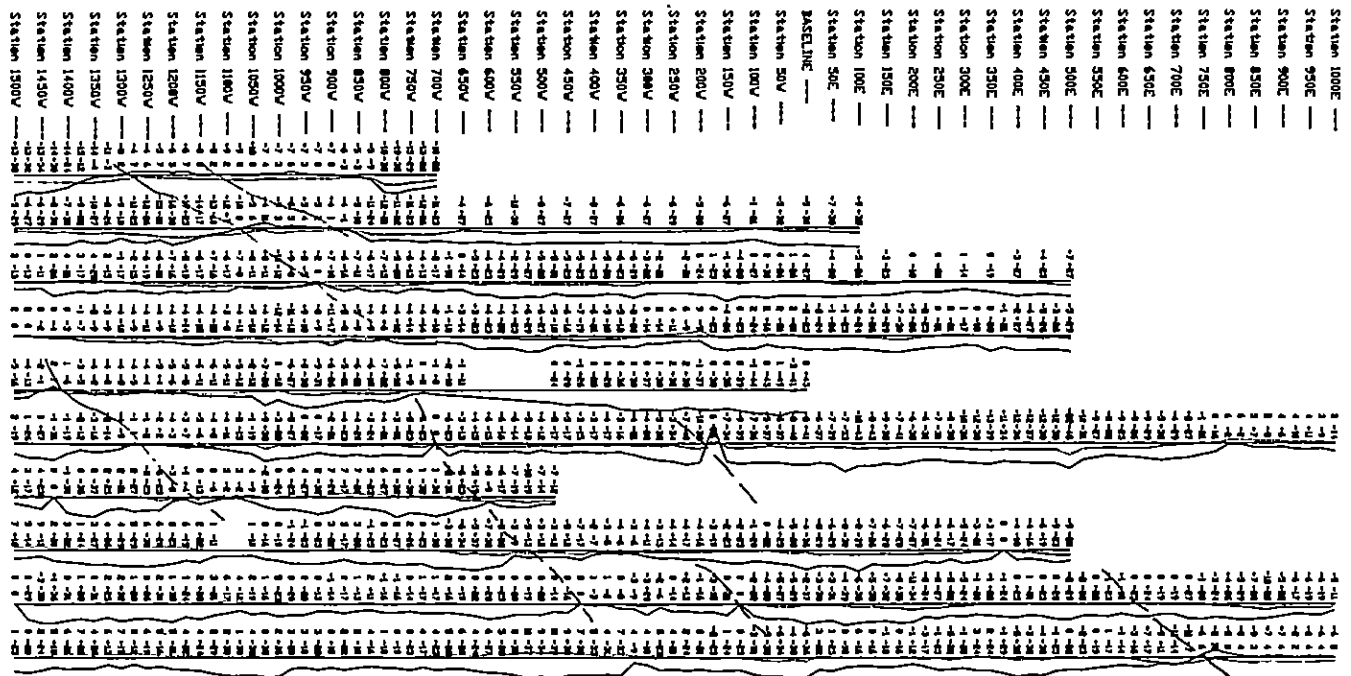
Discussion of Results

(Seattle and Annapolis stations)
(Fig. 7, 8)

Two moderate strength conductors were mapped in the western part of the surveyed area and both correspond to the magnetic high and mineralized structures. The conductors strike southeast and may indicate mineralization localized within shears similar to mineralization occurring on the Valporaiso/Government property.

The conductors extend from Lines 9+00 N and 10+00 N, Station 12+00 W, to about Line 0+00 N, Station 4+00 W.

This conductors may indicate a mineralized zone. It coincides with a trenched shear near the northwest end and also with moderately significant silver, lead and zinc anomalies in the soils.



FOR EACH POSITION
 LOWER NUMBER ON PAGE IS INPHASE
 UPPER NUMBER ON PAGE IS QUADRATURE

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TOTEM GOLD PROJECT	
FOR: DOBRANA RESOURCES LTD.	
BY: IGRA ENGINEERING AND CONSULTING LTD. PLOTTED BY: RPH HAPPING AND COMPUTER SERVICES LTD.	
VLF - EM (SEATTLE) PROFILES OF VERTICAL INPHASE AND QUADRATURE NELSON M.D., B.C.	
MTS: 88 - 7C	DATE: FEBRUARY 1988
PLOTTED BY: RPH	FRAME NO. 7



PROFILE LEGEND

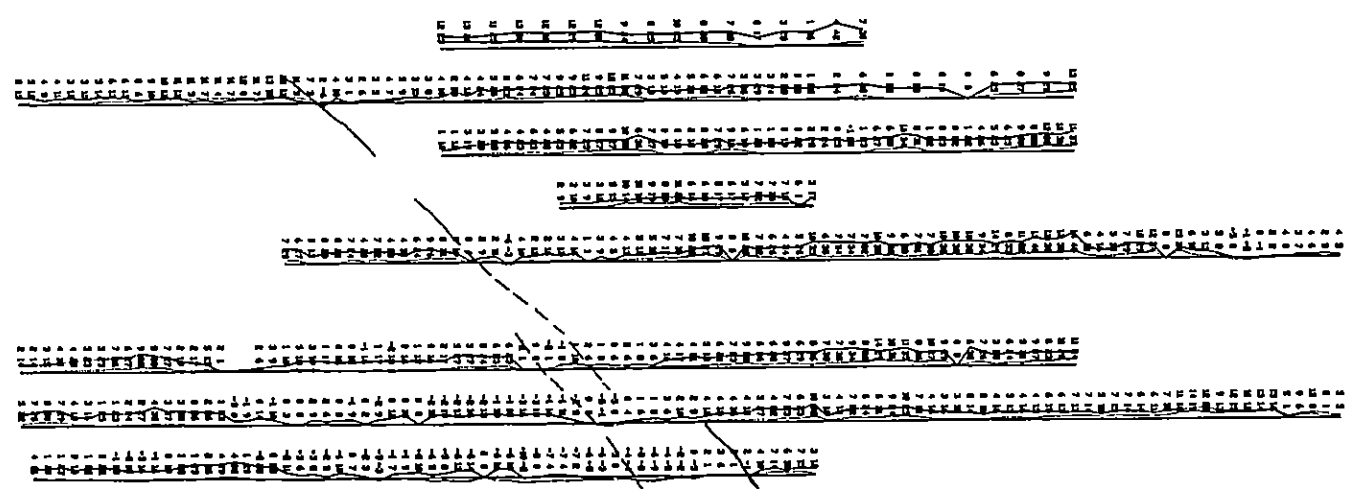
INPHASE: ———
 QUADRATURE: - - -

PROFILE SCALE
 (VALUES IN PERCENT)

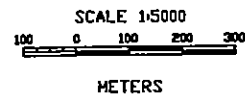


- Line 800V
- Line 700V
- Line 600V
- Line 500V
- Line 400V
- Line 300V
- Line 200V
- Line 100V
- Line 0V

- Station 1000V ---
- Station 950V ---
- Station 900V ---
- Station 850V ---
- Station 800V ---
- Station 750V ---
- Station 700V ---
- Station 650V ---
- Station 600V ---
- Station 550V ---
- Station 500V ---
- Station 450V ---
- Station 400V ---
- Station 350V ---
- Station 300V ---
- Station 250V ---
- Station 200V ---
- Station 150V ---
- Station 100V ---
- Station 50V ---
- BASELINE ---
- Station 50V ---
- Station 100V ---
- Station 150V ---
- Station 200V ---
- Station 250V ---
- Station 300V ---
- Station 350V ---
- Station 400V ---
- Station 450V ---
- Station 500V ---
- Station 550V ---
- Station 600V ---
- Station 650V ---
- Station 700V ---
- Station 750V ---
- Station 800V ---
- Station 850V ---
- Station 900V ---
- Station 950V ---
- Station 1000V ---
- Station 1050V ---
- Station 1100V ---
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- Station 1400V ---
- Station 1450V ---
- Station 1500V ---



FOR EACH POSITION
 LOWER NUMBER ON PAGE IS INPHASE
 UPPER NUMBER ON PAGE IS QUADRATURE



TO ACCOMPANY REPORT BY:
 I. BROVIC, P. ENG.

TOTEM GOLD PROJECT

FOR: DOBRAVA RESOURCES LTD.

BY: IGNA ENGINEERING AND CONSULTING LTD.

PLOTTED BY: RPM MAPPING
 AND COMPUTER SERVICES LTD.

**VLF - EM (ANNAPOLIS)
 PROFILES OF VERTICAL
 INPHASE AND QUADRATURE**
 NELSON, M.D., B.C.

WED. 07F - 74 DATE: FEBRUARY 1990
 PLOTTED BY: RPM FILE NO. 8

GEOCHEMICAL SURVEY 1987

Summary of Results and Correlation with Geophysical, Magnetometer and VLF Surveys.

A geochemical soil survey was done over the central part of the property on a 28.5 km/line grid covering three mineral claims: the German Basin, Totem Gold, Gold Dust claims and also the Vancouver Reverted Crown Granted claim.

Sampling method:

Samples were taken from the poorly developed reddish brown "B" horizon which is about 15 cm below the surface. In most cases a layer of humus is only 2 to 4 cm thick and an underlying leached layer ("A") is from 4 to 10 cm thick. The soil material was collected with a spoon; cleaned of larger size particles and put in the standard soil sample envelope which was marked with a coordinate location. Samples were collected at regular 50 m intervals along the lines on snow covered ground.

Analytical methods:

Soil samples were dried, pulverized, screened to -80 mesh, and the subsequent AA analyses were done by General Testing Laboratories of Vancouver, B.C. Samples were assayed for silver, lead, zinc, gold and copper.

Summary of Results

Silver (Fig. 9)

Anomalous values begin at 0.04 ppm to 0.08 ppm. Values above 1.0 ppm are significantly anomalous.

Lead (Fig. 10):

Lead being a less mobile element than zinc shows anomalies beginning at 40 ppm and significant anomalous values beginning at 100 ppm.

Zinc (Fig. 11):

Dispersion of zinc throughout the soils shows that zinc occurs in the same area with lead and silver.

Anomalous values begin at 100 ppm and highly anomalous values are 200 ppm and higher.

Gold (Fig. 12)

Gold dispersion is fairly uniform except for a few anomalous peaks. Background values of 0.02 ppm (20 ppb) gold is high for the area. Anomalous values start at 0.025 ppm (25 ppb) and significant anomalies begin at 0.035 ppm (35 ppb).

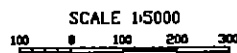


Station 1000C ---
 Station 950C ---
 Station 900C ---
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 Station 800C ---
 Station 750C ---
 Station 700C ---
 Station 650C ---
 Station 600C ---
 Station 550C ---
 Station 500C ---
 Station 450C ---
 Station 400C ---
 Station 350C ---
 Station 300C ---
 Station 250C ---
 Station 200C ---
 Station 150C ---
 Station 100C ---
 Station 50C ---
 Barometer ---
 Station 50V ---
 Station 100V ---
 Station 150V ---
 Station 200V ---
 Station 250V ---
 Station 300V ---
 Station 350V ---
 Station 400V ---
 Station 450V ---
 Station 500V ---
 Station 550V ---
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 Station 800V ---
 Station 850V ---
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 Station 950V ---
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 Station 1450V ---
 Station 1500V ---



--- Line 1000H
 --- Line 900H
 --- Line 800H
 --- Line 700H
 --- Line 600H
 --- Line 500H
 --- Line 400H
 --- Line 300H
 --- Line 200H
 --- Line 100H
 --- Line 0H

CONTOUR INTERVAL
 0.2 PPM AG
 (TICKS SIGNIFY AREAS BELOW 0.2 PPM)

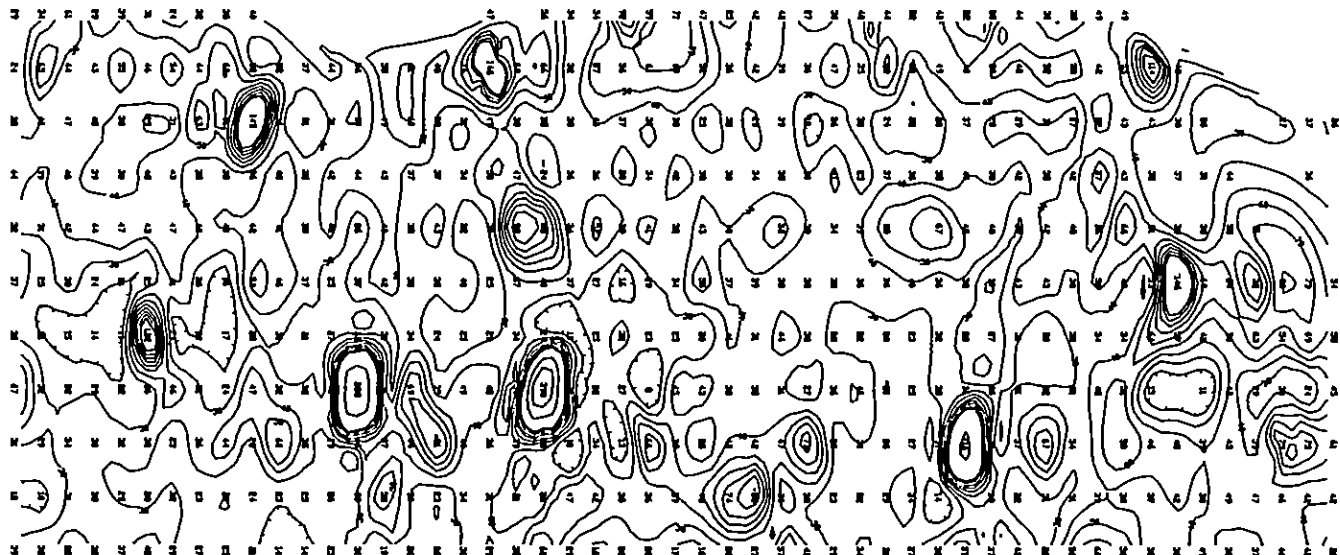


METERS

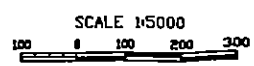
TO ACCOMPANY REPORT BY: I. BIRKOVIC, P. ENG.	
TOTEM GOLD PROJECT	
FOR: DOBRANA RESOURCES LTD	
BY: IGHA ENGINEERING AND CONSULTING LTD PLOTTED BY: RPH MAPPING AND COMPUTER SERVICES LTD.	
SOIL GEOCHEMISTRY SILVER	
NELSON M.D. B.C.	
N.T.S. 637 - 7C	DATE: FEBRUARY 1988
PLOTTED BY: R.P.H.	FIGURE NO. 1



Station 100E ---
Station 950E ---
Station 900E ---
Station 850E ---
Station 800E ---
Station 750E ---
Station 700E ---
Station 650E ---
Station 600E ---
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Station 500E ---
Station 450E ---
Station 400E ---
Station 350E ---
Station 300E ---
Station 250E ---
Station 200E ---
Station 150E ---
Station 100E ---
Station 50E ---
Baseline ---
Station 50V ---
Station 100V ---
Station 150V ---
Station 200V ---
Station 250V ---
Station 300V ---
Station 350V ---
Station 400V ---
Station 450V ---
Station 500V ---
Station 550V ---
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Station 1000V ---
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Station 1200V ---
Station 1250V ---
Station 1300V ---
Station 1350V ---
Station 1400V ---
Station 1450V ---
Station 1500V ---



--- Line 1000N
--- Line 900N
--- Line 800N
--- Line 700N
--- Line 600N
--- Line 500N
--- Line 400N
--- Line 300N
--- Line 200N
--- Line 100N
--- Line 0N

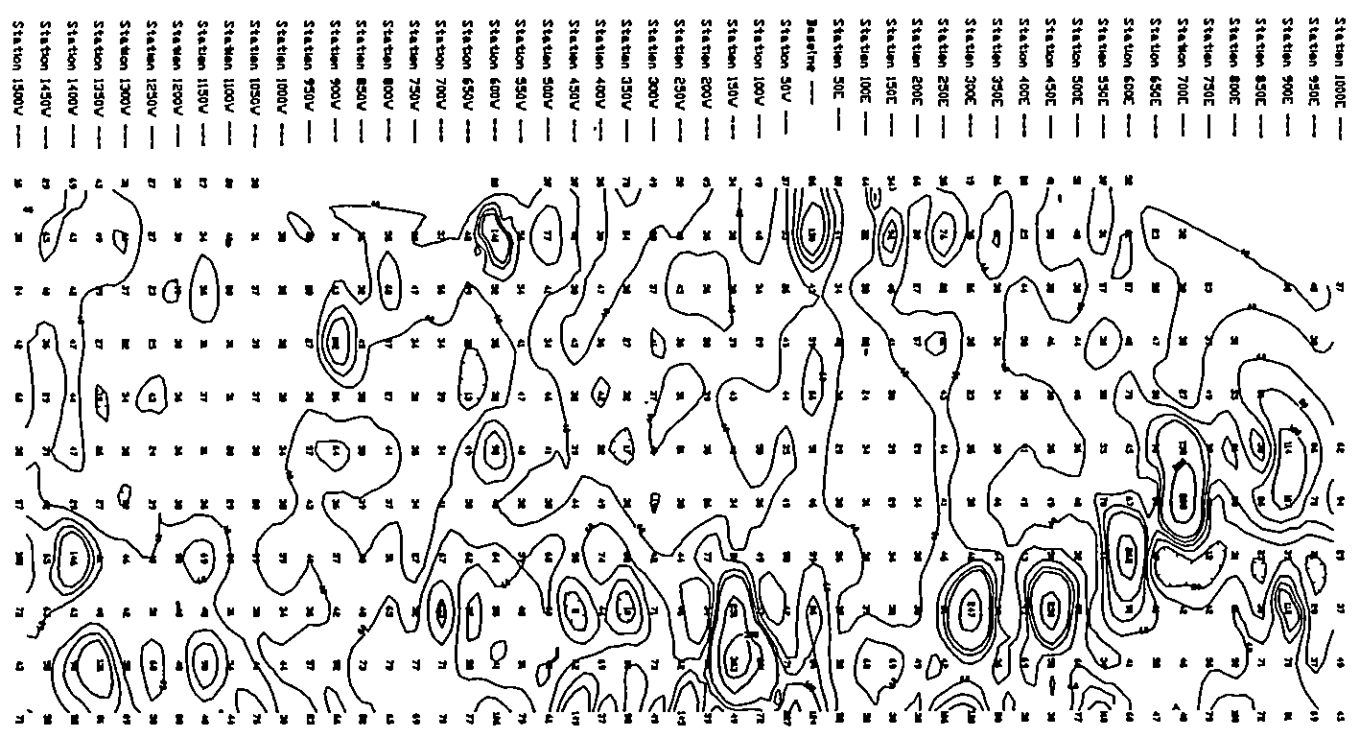


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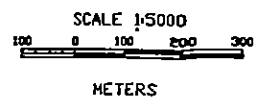
CONTOUR INTERVAL
BELOW 100 PPM: 10 PPM PB
ABOVE 100 PPM: 100 PPM PB

(TICKS SIGNIFY AREAS BELOW 20 PPM)
(LOWEST CONTOUR SHOWN: 20 PPM)

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TOTEM GOLD PROJECT	
FOR: DOBRANA RESOURCES LTD	
BY: IGMA ENGINEERING AND CONSULTING LTD.	
PLOTTED BY: RPH MAPPING AND SURVEY SERVICES LTD.	
SOIL GEOCHEMISTRY LEAD	
NELSON M.D., B.C.	
M.T.S. 82P - 3C	DATE: FEBRUARY 1998
PLOTTED BY RPH	FORMING NO. 10



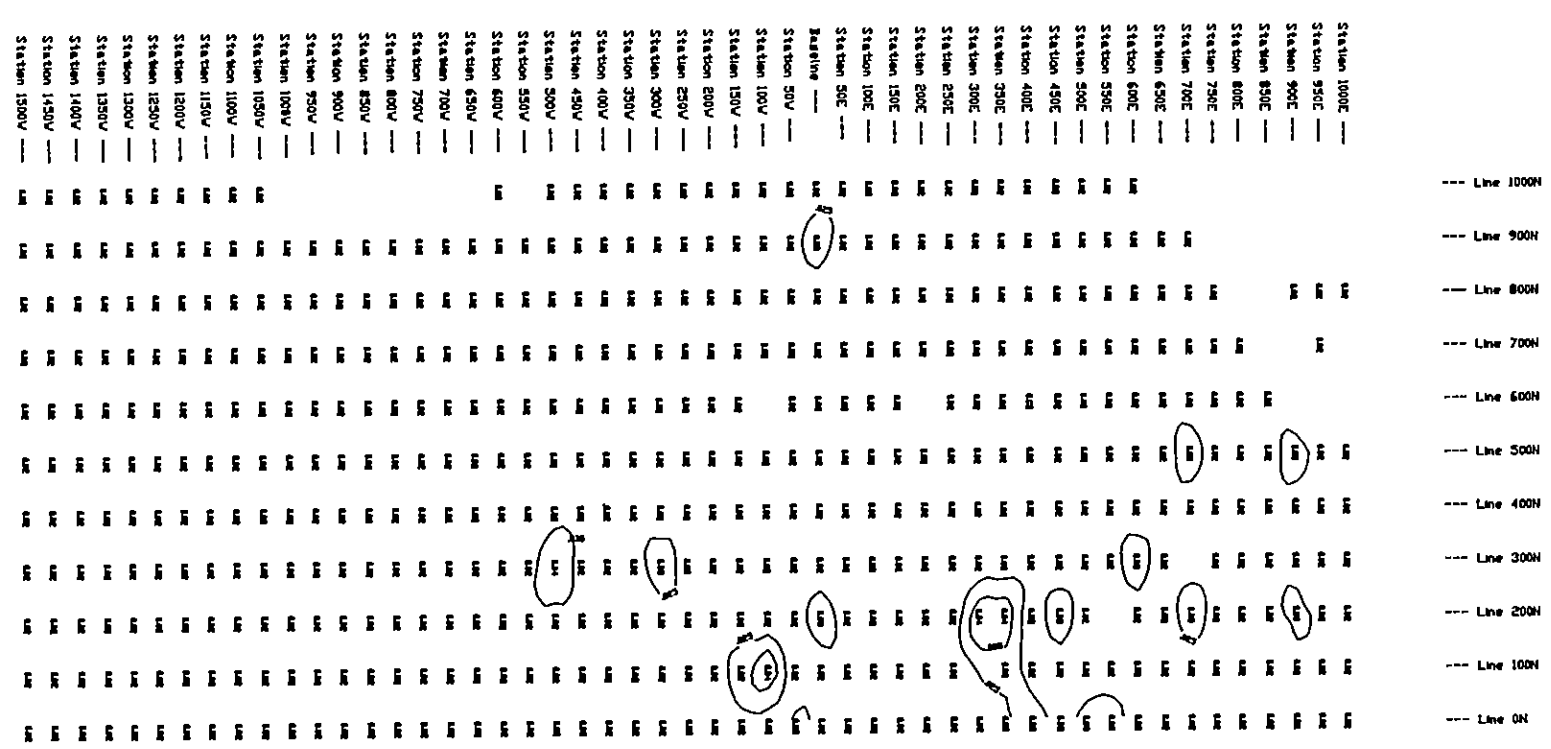
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- Line 900N
- Line 800N
- Line 700N
- Line 600N
- Line 500N
- Line 400N
- Line 300N
- Line 200N
- Line 100N
- Line 0N



CONTOUR INTERVAL
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ABOVE 100 PPM: 100 PPM
<TICKS SIGNIFY AREAS BELOW 20 PPM>

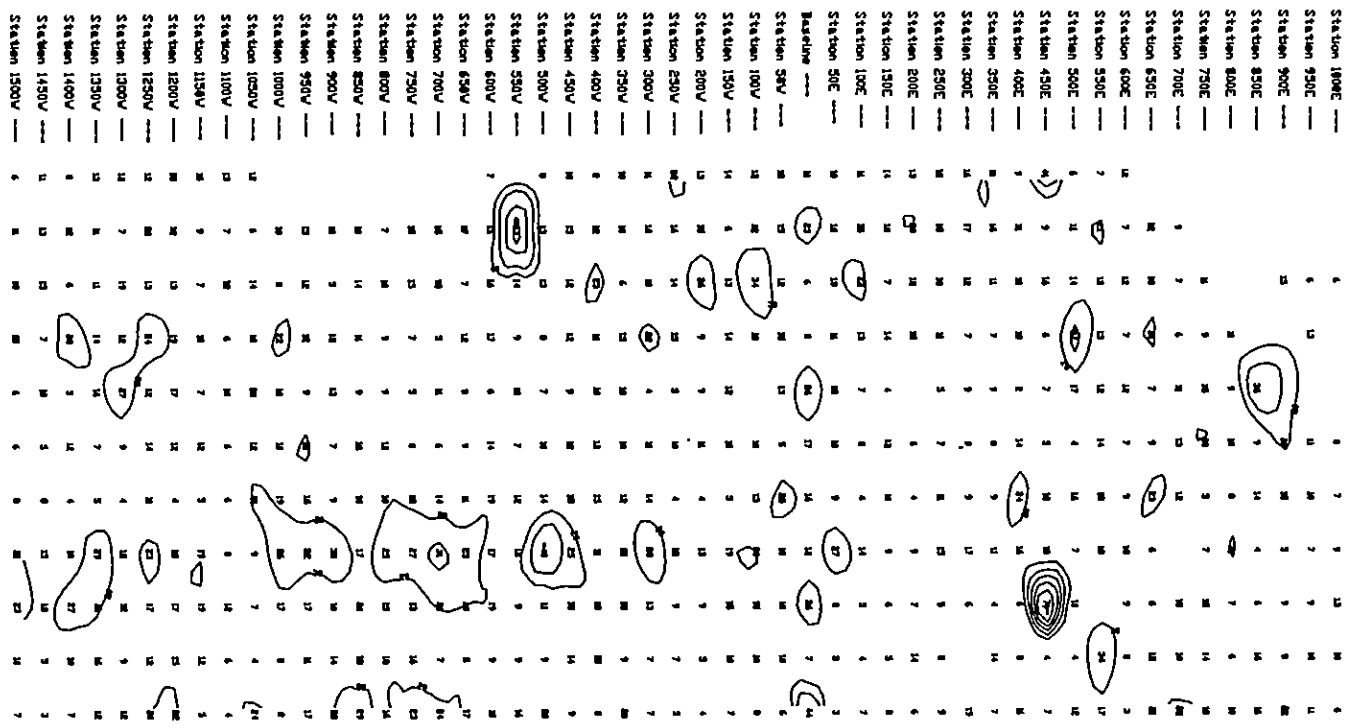
TO ACCOMPANY REPORT BY: J. BOROVIĆ, P. ENG.	
TOTEM GOLD PROJECT	
FOR: DOBRANA RESOURCES LTD	
BY: IGNA ENGINEERING AND CONSULTING LTD	
PLOTTED BY: RPA MAPPING AND SERVICE PRODUCTS LTD.	
SOIL GEOCHEMISTRY ZINC	
NELSON M.D., B.C.	
MIS: 877 - 7C	DATE: FEBRUARY 1988
PLOTTED BY: RPA	FILING NO. 11

- Station 1000E ---
- Station 950E ---
- Station 900E ---
- Station 850E ---
- Station 800E ---
- Station 750E ---
- Station 700E ---
- Station 650E ---
- Station 600E ---
- Station 550E ---
- Station 500E ---
- Station 450E ---
- Station 400E ---
- Station 350E ---
- Station 300E ---
- Station 250E ---
- Station 200E ---
- Station 150E ---
- Station 100E ---
- Station 50E ---
- Baseline ---
- Station 50V ---
- Station 100V ---
- Station 150V ---
- Station 200V ---
- Station 250V ---
- Station 300V ---
- Station 350V ---
- Station 400V ---
- Station 450V ---
- Station 500V ---
- Station 550V ---
- Station 600V ---
- Station 650V ---
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- Station 750V ---
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- Station 850V ---
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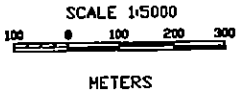
SCALE 1:5000
 100 0 100 200 300
 METERS
 CONTOUR INTERVAL
 0.01 PPM AU
 (FROM A BASE OF 0.005 PPM)

TO ACCOMPANY REPORT BY: I. BOROVIC, P. ENG.	
TOTEM GOLD PROJECT	
FOR: DOBRAHA RESOURCES LTD	
BY: IGHA ENGINEERING AND CONSULTING LTD	
PLOTTED BY: RPH MAPPING AND COMPUTER SERVICES LTD	
SOIL GEOCHEMISTRY GOLD	
NELSON H.D., B.C.	
DATE: MAY - 88	DRAWN: FEBRUARY 1989
PLOTTED BY: RPH	FIGURE NO. 12



--- Line 1000N
--- Line 900N
--- Line 800N
--- Line 700N
--- Line 600N
--- Line 500N
--- Line 400N
--- Line 300N
--- Line 200N
--- Line 100N
--- Line 0N

CONTOUR INTERVAL
10 PPM CU
(LOWEST CONTOUR INTERVAL SHOWN: 20 PPM)



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TOTEM GOLD PROJECT	
FOR: DOBRANA RESOURCES LTD.	
BY: IGMA ENGINEERING AND CONSULTING LTD. AND COMPUTER SERVICES LTD.	
SOIL GEOCHEMISTRY COPPER	
NELSON M.D., B.C.	
W.S. 827 - 70	DATED FEBRUARY 1988
PLOTTED BY RPA	FIGURE NO. 13

Copper (Fig 13):

Copper dispersion shows a background of 20 ppm and significant anomalies of up to 213 ppm.

Discussion of Results

Soil geochemistry has outlined several anomalous zones on the property. Coincidental silver, lead and silver, lead, and zinc anomalies occur in the north, northwestern and south central parts of the surveyed area.

CONCLUSIONS AND RECOMMENDATIONS (Fig. 5)

Coincidental soil, VLF and magnetic total field anomalies in the northwest and south central part of the surveyed area are probably caused by underlying mineralized structures. These areas should be further explored using excavating methods and later drilled in order to examine the horizontal and vertical extent of the silver, lead, zinc and gold mineralization.

In addition to a follow up physical work, basic exploration work should be extended to the other parts of the Totem Gold Property, particularly in the area of the German (Gold) Basin old workings.

The Phase 1/87 of exploration on the Totem Gold project has indicated one large target worth investigating.

1. -area beginning at the northwestern end of the property where northwest-southeast trending moderately strong VLF anomaly is located. The anomalies are about 1000 m long.

Featuring:

- presence of strong silicification, brecciation, in the shear.
- sulfide mineralization associated with the shear zone.

Second possibility worth investigating is located in and around German (Gold) Basin area in the northern part of the Totem Gold Project.

EXPLORATION PLAN AND ESTIMATED BUDGET 1988.

Exploration work should start by opening and enlarging the surface exposures coincidental with the VLF, soil and magnetic anomalies and also by opening, examining and sampling the old workings. Geological detail mapping and sampling of the trenches, and geological structural studies should continue.

In order to test extension of mineralized structures, trenching of significant anomalies which are showing the greatest mineral potential should be done.

To test the extent of the mineralization at depth a diamond drilling should follow in Phase 2.

The cost of the proposed exploration program is estimated at \$112,000.00. Additional work (Phase 2) would be dependent on favorable results of Phase 1.

PHASE 1

Geological - structural - mineral studies.....	\$	12 000.00
Engineering, supervision, evaluation.....	\$	14 000.00
Room & Board.....	\$	4 000.00
Trenching.....	\$	25 000.00
Assaying.....	\$	7 000.00
Transportation.....	\$	4 000.00
Underground cleaning, sampling.....	\$	35 000.00

Total	\$	101 000.00
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Contingencies (10% of total).....	\$	11 000.00
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Total Phase 1.....	\$	112 000.00
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PHASE 2

Geology, engineering, supervision.....	\$	28 000.00
Room and board.....	\$	8 000.00
Diamond drilling (5000 ft. @ \$ 80.00/foot)....	\$	400 000.00
Assaying.....	\$	12 000.00
Transportation.....	\$	5 000.00

Total	\$	453 000.00
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Contingencies (10% of total).....	\$	45 300.00
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Total Phase 2.....	\$	498 300.00
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BIBLIOGRAPHY

- Green, A. S. (1981): Property Evaluation Report, Destiny Bay Properties, Valporaiso/Government Workings, Hot Group of Claims. Prepared for Custom Mining Inc. Kamloops, B. C.
- Hoy, Trygve (1980): Geology of the Riondel Area, Central Kootenay Arc, Southeastern B. C.; B. C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 73.
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- Rice, H. M. A. (1938): East Half Nelson Map-Area British Columbia, Preliminary Report, Canada Department of Mines and Resources, Geological Survey, Ottawa 1938.
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COST BREAKDOWN OF PHASE 1 PROGRAM

RE: Totem Gold Project

Establishing exploration grid		
Six men crew 75 man/days @ \$250.00/man/day	\$	18 750.00
Materials	\$	1 121.19
GEOLOGICAL MAPPING AND SAMPLING:		
Geologist:		
22 days @ \$400.00	\$	8 800.00
Assistant:		
12 days @ \$250.00	\$	3 000.00
GEOPHYSICAL SURVEY:		
Equipment rental	\$	3 739.90
Geophysicist:		
10 days @ 400.00	\$	4 000.00
GEOCHEMICAL SURVEY:		
480 samples @ 17.00/sample	\$	8 160.00
Assays	\$	5 250.00
SUPERVISION:		
2 days @ \$500.00	\$	1 000.00
Camp cost		
Room and board	\$	3 272.71
Transportation		
Truck rentals plus gas	\$	2 429.21
Air fares	\$	344.00
Computer plotting, stats.	\$	1 116.25
Draughting	\$	1 150.00
REPORT AND OFFICE COSTS:		
Project Management:		
10 days @ \$500.00	\$	5 000.00
Geological interpretation, report		
23.2 man days @ \$ 400.00 man/day	\$	9 250.00
Word processing 20 hours @ 30.00	\$	600.00
Blackline printing	\$	380.00
Photocopying, binding	\$	390.00

TOTAL FOR PHASE I	\$	77 203.26

C E R T I F I C A T E

I, I. Borovic, of the city of Vancouver, B. C., do hereby certify that:

1. I have personally supervised the exploration program carried out in the area of the TOTEM GOLD property of DOBRANA RESOURCES Ltd. located 40 km north of Creston, B.C.
2. The expenditures claimed for the performance of the work are correct.

Respectfully submitted



I. Borovic, P.Eng.

Vancouver, March 18, 1988.

APPENDIX # 1
VLF Theory

Appendix #1: VLF Theory

The signal transmitted by the VLF station is recorded by the vertical coils as: $H_p = A \sin \omega t$; $H_s = B \cos (\omega t - \phi)$ (1.0)

where H_p = primary signal

H_s = secondary (phase lag) signal

ω = frequency

t = time

ϕ = phase lag

A = amplitude of primary signal

B = amplitude of secondary signal

These two received signals combine giving an ellipse, which has two axis corresponding to the maximum length and minimum width of the ellipse.

$$\text{ie: } \frac{H_p^2}{A^2} + \frac{H_s^2}{B^2} - \frac{2 H_p H_s \sin \phi}{AB} = \cos^2 \phi \quad (2.0)$$

By measuring the angle from horizontal of the long axis of the ellipse, a conductor is located when this tilt angle is zero.

The Scintrex IGS VLF measures the primary vertical (in phase) H_p and the secondary (quadrature) H_s to obtain a conductor's location (from H_p) and the conductor's quality using both H_p and H_s . ie

$$\theta = \frac{1}{2} \tan^{-1} (2 H_p / 100 (1 - e^2))$$

where θ = tilt angle (degrees)

H_p = vertical in phase, expressed as a %

$$\phi = \tan^{-1} (H_p / H_s)$$

where ϕ = phase lag (degrees)

H_p = vertical in phase (any units)

H_s = vertical quadrature (same units as H_p)

Since the quadrature readings require a magnetic field phase reference, using unpublished means, the phase lag value is untested and should be considered qualitative only, but is likely reasonably precise (the readings are repeatable), but may or may not be accurate (the correct value).

APPENDIX # 2
magnetic data and geochem assays

CERTIFICATE OF ASSAY

Date: January 27, 1988

File: 8712-1152



SGS SUPERVISION SERVICES INC.
General Testing Laboratories Division

1001 East Pender Street,
Vancouver, B.C., Canada. V6A 1W2
Telephone: (604) 254-1647
Telex: 04-507514

TO: IGNA ENGINEERING & CONSULTING
LTD.
4258 West 10th Avenue
Vancouver, B.C.
V6R 2H4

We hereby certify that the following are the results of assays on: soil samples

GERMAN BASIN

MARKED	GOLD		SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxxx	xxxxxx
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
BL 0+00	L0+00	0.02	0.2	44	41	124			
	L1+00 N	0.02	0.2	7	33	84			
	L2+00	0.03	0.2	26	73	86			
	L3+00	0.02	0.2	12	27	59			
	L4+00	0.02	0.5	16	38	46			
	L5+00	0.02	0.3	17	33	51			
	L6+00	0.02	0.4	26	39	66			
	L7+00	0.02	0.2	8	30	59			
	L8+00	0.02	0.2	6	18	43			
	L9+00	0.03	0.5	23	36	130			
L10+00 N	0.02	0.2	11	27	86				
LO+00N	0+50 E	0.02	0.2	3	29	52			
	1+00	0.02	0.2	7	34	50			
	1+50	0.02	0.2	8	21	38			
	2+00	0.02	0.2	6	27	38			
	2+50	0.02	0.4	9	38	106			
	3+00	0.02	0.4	19	59	120			
	3+50	0.02	0.2	7	37	58			
	4+00	0.03	0.2	11	42	50			
	4+50	0.02	0.2	7	28	38			
	5+00	0.03	0.2	12	56	77			
	5+50	0.03	0.2	17	66	118			
	6+00	0.02	0.2	3	56	60			
	6+50	0.02	0.2	21	35	47			
	7+00	0.02	0.2	22	32	40			
	7+50	0.02	0.2	18	49	79			
	8+00	0.02	0.2	10	33	100			
	8+50	0.02	0.2	10	37	72			
	9+00	0.02	0.4	22	46	81			
	9+50	0.02	0.2	11	42	69			
	10+00 E	0.02	0.2	6	21	45			
LO+00	0+50 W	0.03	0.2	6	57	227			
	1+00	0.02	0.2	8	27	72			
	1+50	0.02	0.2	7	28	49			
	2+00	0.02	0.2	4	16	59			
	2+50 W	0.02	0.2	5	17	145			

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NOTE REJECTS RETAINED ONE MONTH PULPS RETAINED THREE MONTHS ON REQUEST PULPS AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR

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L. Wong

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MARKED		GOLD	SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxx	xxxxxxxxxxxxx
		Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
LO+00	3+00 W	0.02	0.2	7	28	49			
	3+50	0.02	0.2	20	26	93			
	4+00	0.02	0.2	8	16	37			
	4+50	0.02	0.2	9	29	149			
	5+00	0.02	0.2	20	60	61			
	5+50	0.02	0.2	16	35	79			
	6+00	0.02	0.2	10	29	106			
	6+50	0.02	0.2	17	31	77			
	7+00	0.02	0.2	24	26	70			
	7+50	0.02	0.2	23	26	69			
	8+00	0.02	0.2	16	19	65			
	8+50	0.02	0.5	29	31	52			
	9+00	0.02	0.2	20	25	66			
	9+50	0.02	0.2	17	14	23			
10+00 W	0.02	0.2	8	14	30				
LON	10+50W	0.02	0.2	24	21	76			
	11+00	0.02	0.2	4	25	44			
	11+50	0.02	0.2	5	27	48			
	12+00	0.02	0.3	22	29	58			
	12+50	0.02	0.8	20	45	58			
	13+00	0.02	0.2	12	37	69			
	13+50	0.02	0.2	12	32	81			
	14+00	0.02	0.2	7	22	55			
	14+50	0.02	0.2	3	38	53			
	15+00 W	0.02	0.2	7	39	71			
	LIN	0+50 W	0.02	0.2	10	30	71		
1+00		0.04	0.5	10	86	201			
1+50		0.03	0.4	10	74	363			
2+00		0.02	0.3	5	48	83			
2+50		0.02	0.6	7	39	62			
3+00		0.02	0.3	7	36	73			
3+50		0.02	0.2	9	33	80			
4+00		0.02	0.6	15	42	69			
4+50		0.02	0.4	14	47	62			
5+00		0.02	0.2	9	26	40			
5+50 W		0.02	0.2	9	21	51			

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MARKED		GOLD	SILVER	Copper	Lead	Zinc	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx
		Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L1N	6+00 W	0.02	0.2	9	31	41			
	6+50	0.02	0.2	5	34	53			
	7+00	0.02	0.4	7	23	71			
	7+50	0.02	0.3	16	30	77			
	8+00	0.02	0.7	18	55	79			
	8+50	0.02	0.3	13	30	73			
	9+00	0.02	0.2	14	26	52			
	9+50	0.02	0.2	11	25	57			
	10+00	0.02	0.2	8	23	44			
	10+50	0.02	0.2	4	24	40			
	11+00	0.02	0.2	6	20	54			
	11+50	0.02	0.2	12	23	98			
	12+00	0.02	0.7	15	32	48			
	12=50	0.02	0.2	12	28	68			
	13+00	0.02	0.2	9	29	53			
	13+50	0.02	0.2	16	33	131			
	14+00	0.02	0.2	10	31	98			
	14+50	0.02	0.2	5	18	55			
	15+00 W	0.02	0.2	10	18	43			
L1N	0+50 E	0.02	0.2	8	23	50			
	1+00	0.02	0.2	4	22	68			
	1+50	0.02	0.2	5	29	69			
	2+00	0.02	0.2	14	34	49			
	2+50	0.02	0.2	8	14	42			
	3+50	0.03	0.2	14	38	36			
	4+00	0.02	0.2	8	22	69			
	4+50	0.02	0.2	4	31	52			
	5+00	0.02	0.2	4	31	60			
	5+50	0.02	0.2	34	39	36			
	6+00	0.02	0.2	8	38	41			
	6+50	0.02	0.2	12	37	53			
	7+00	0.02	0.2	10	42	46			
	7+50	0.02	0.2	14	38	56			
	8+00	0.02	0.3	6	49	50			
	8+50	0.02	0.2	16	47	71			
	9+00 E	0.02	0.2	8	46	70			

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MARKED	GOLD		SILVER	Copper	Lead	Zinc	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L1N 9+50 E	0.02	0.2		10	42	37			
10+00 E	0.02	0.6		10	42	49			
L2N 0+50 E	0.02	0.2		8	28	37			
1+00	0.02	0.2		5	30	39			
1+50	0.02	0.8		6	26	32			
2+00	0.02	0.2		7	27	38			
2+50	0.02	0.3		5	31	81			
3+00	0.04	0.3		6	216	247			
3+50	0.04	0.5		4	33	39			
4+00	0.02	0.4		6	37	45			
4+50	0.03	0.3		71	67	250			
5+00	0.02	0.3		10	34	55			
6+00	0.02	0.5		9	58	91			
6+50	0.02	0.2		6	46	61			
7+00	0.03	0.2		15	45	42			
7+50	0.02	0.2		15	39	42			
8+00	0.02	0.5		7	45	61			
8+50	0.02	0.4		6	39	36			
9+00	0.03	0.8		9	75	118			
9+50	0.02	0.2		9	75	28			
10+00 E	0.02	0.7		13	61	37			
L2N 0+50 W	0.02	0.6		10	47	42			
1+00	0.02	0.4		15	42	57			
1+50	0.02	0.7		15	42	251			
2+00	0.02	0.3		9	23	34			
2+50	0.02	0.3		9	39	46			
3+00	0.02	0.5		13	66	71			
3+50	0.02	0.3		15	13	10			
4+00	0.02	0.4		18	34	44			
4+50	0.02	0.3		15	10	8			
5+00	0.02	0.5		11	35	60			
5+50	0.02	0.4		9	39	48			
6+00	0.02	0.3		19	36	55			
6+50	0.02	0.3		20	40	37			
7+00 W	0.02	0.7		21	81	105			

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		Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L2N	7+50 W	0.02	0.1	13	44	52			
	8+00	0.02	0.3	15	37	65			
	8+50	0.02	0.3	20	46	48			
	9+00	0.02	0.2	10	29	42			
	9+50	0.02	0.8	17	35	36			
	10+00	0.02	0.2	17	60	34			
	10+50	0.02	0.2	7	28	38			
	11+00	0.02	0.4	12	44	31			
	11+50	0.02	0.5	19	36	45			
	12+00	0.02	0.7	17	23	40			
	12+50	0.02	0.6	17	32	51			
	13+00	0.02	0.6	12	32	42			
	13+50	0.02	0.6	21	30	48			
	14+00	0.02	0.7	27	34	43			
	14+50	0.02	0.3	18	29	63			
	15+00 W	0.02	0.3	23	31	72			
L3N	0+50 W	0.02	0.2	10	31	53			
	1+00	0.02	0.6	20	35	49			
	1+50	0.02	0.3	19	33	51			
	2+00	0.02	0.6	13	43	77			
	2+50	0.02	0.6	13	45	44			
	3+00	0.03	0.4	28	8	42			
	3+50	0.02	0.5	13	27	62			
	4+00	0.02	0.6	11	22	74			
	4+50	0.02	0.4	25	40	55			
	5+00	0.04	2.2	40	390	68			
	5+50	0.02	0.3	18	36	59			
	6+00	0.02	0.4	17	45	64			
	6+50	0.02	0.6	25	49	62			
	7+00	0.02	0.2	31	35	67			
	7+50	0.02	0.5	27	69	27			
	8+00	0.02	0.5	25	36	51			
	8+50	0.02	1.3	17	288	40			
	9+00	0.02	0.4	33	42	57			
	9+50	0.02	0.9	22	32	40			
	10+00	0.02	0.4	26	32	59			
	10+50 W	0.02	0.4	9	47	39			

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MEMBER American Society For Testing Materials • The American Oil Chemists Society • Canadian Testing Association
REFEREE AND OR OFFICIAL CHEMISTS FOR National Institute of Oilseed Products • The American Oil Chemists' Society
OFFICIAL WEIGHMASTERS FOR Vancouver Board Of Trade

CERTIFICATE OF ASSAY

Date: Jan. 27, 1988



SGS SUPERVISION SERVICES INC.
General Testing Laboratories Division

File: 8712-1152

1001 East Pender Street,
 Vancouver, B.C., Canada. V6A 1W2
 Telephone: (604) 254-1647
 Telex: 04-507514

TO: IGNA ENGINEERING & CONSULTING
 LTD.

(page 6)

We hereby certify that the following are the results of assays on: soil samples

MARKED	GOLD		SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxx	xxxxxxxxxxx
	Au(ppm)	Ag(ppm)		Cu (ppm)	Pb (ppm)	Zn (ppm)			
L3N	11+00 W	0.02	0.2	8	24	39			
	11+50	0.02	0.2	19	31	69			
	12+00	0.02	0.2	13	46	58			
	12+50	0.02	0.6	23	26	40			
	13+00	0.02	0.2	12	22	46			
	13+50	0.02	0.5	29	29	61			
	14+00	0.02	0.2	10	28	146			
	14+50	0.02	0.6	15	32	65			
	15+00 W	0.02	0.4	21	67	103			
	0+50 E	0.02	0.4	27	36	56			
	1+00	0.02	0.2	14	40	38			
	1+50	0.02	0.2	9	20	34			
	2+00	0.02	0.2	9	25	35			
	2+50	0.02	0.4	15	33	46			
	3+00	0.02	0.4	17	36	48			
	3+50	0.02	0.1	11	35	44			
	4+00	0.02	0.3	16	31	43			
	4+50	0.02	0.1	10	32	50			
	5+00	0.02	0.1	7	31	32			
	5+50	0.02	0.2	18	45	61			
	6+00	0.03	0.9	18	52	262			
	6+50	0.02	0.2	6	15	18			
	7+50	0.02	0.3	7	11	12			
	8+00	0.02	0.3	21	42	31			
	8+50	0.02	0.1	4	29	23			
	9+00	0.02	0.3	5	30	39			
	9+50	0.02	0.6	7	24	21			
	10+00 E	0.02	0.7	9	45	29			
L4N	0+50 W	0.02	0.9	23	44	49			
	1+00	0.02	0.3	13	31	36			
	1+50	0.02	0.2	5	41	34			
	2+00	0.02	0.4	4	20	26			
	2+50	0.02	0.2	4	25	33			
	3+00	0.02	0.6	14	23	19			
	3+50 W	0.02	0.4	12	32	36			

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NOTE REJECTS RETAINED ONE MONTH PULPS RETAINED THREE MONTHS ON REQUEST PULPS AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR

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(page 7)

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MARKED	GOLD		SILVER		Copper	Lead	Zinc	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
	Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)					
L4N 4+00 W	0.02	0.4	15	25	49					
4+50	0.02	0.4	13	19	44					
5+00	0.02	0.5	14	24	35					
5+50	0.02	0.5	12	34	32					
6+00	0.02	0.6	19	29	40					
6+50	0.02	0.4	11	25	50					
7+00	0.02	0.2	14	24	41					
7+50	0.02	1.3	18	34	34					
8+00	0.02	0.4	19	30	37					
8+50	0.02	0.5	10	32	39					
9+00	0.02	0.9	9	27	36					
9+50	0.02	0.4	16	21	43					
10+00	0.02	0.7	19	31	35					
10+50	0.02	0.2	21	28	28					
11+00	0.02	0.6	6	17	29					
11+50	0.02	0.2	5	20	36					
12+00	0.02	0.5	4	25	33					
12+50	0.02	0.8	11	122	39					
13+00	0.02	0.2	4	19	20					
13+50	0.02	0.1	5	14	27					
14+00	0.02	0.2	4	15	29					
14+50	0.02	0.5	8	21	42					
15+00 W	0.02	0.2	8	30	57					
L4N 0+50 E	0.02	0.2	9	28	33					
1+00	0.02	0.2	4	22	31					
1+50	0.02	0.3	11	28	29					
2+00	0.02	0.2	4	23	34					
2+50	0.02	0.2	11	32	41					
3+00	0.02	0.5	9	28	30					
3+50	0.02	0.2	9	27	46					
4+00	0.02	0.5	24	31	49					
4+50	0.02	0.2	10	20	49					
5+00	0.02	0.3	16	33	48					
5+50	0.02	0.2	13	34	70					
6+00	0.02	0.6	9	34	67					
6+50	0.02	0.2	23	64	60					
7+00 E	0.02	0.2	12	57	283					

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(page 8)

We hereby certify that the following are the results of assays on: soil samples

MARKED	GOLD		SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxx	xxxxxxxxxxx
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L4N 7+50 E	0.02	0.2		5	42	49			
8+00	0.02	0.2		8	50	58			
8+50	0.02	0.2		14	63	86			
9+00	0.02	0.5		15	54	107			
9+50	0.02	0.2		10	69	70			
10+00 E	0.02	0.2		7	55	94			
L5N 0+50 W	0.02	0.2		5	33	35			
1+00	0.02	0.2		10	39	53			
1+50	0.02	0.2		10	37	40			
2+00	0.02	0.2		11	53	35			
2+50	0.02	0.2		10	34	21			
3+00	0.02	0.2		11	29	41			
3+50	0.02	0.2		10	16	17			
4+00	0.02	0.2		12	27	22			
4+50	0.02	0.2		12	37	39			
5+00	0.02	0.2		10	40	41			
5+50	0.02	0.2		7	37	48			
6+00	0.02	0.2		14	25	92			
6+50	0.02	0.2		9	40	49			
7+00	0.02	0.2		6	32	34			
7+50	0.02	0.2		8	38	35			
8+00	0.02	0.2		12	42	44			
8+50	0.02	0.2		13	37	53			
9+00	0.02	0.2		7	25	64			
9+50	0.02	0.2		21	37	57			
10+00	0.02	0.3		10	46	34			
10+50	0.02	0.3		12	52	38			
11+00	0.02	0.5		6	16	28			
11+50	0.02	0.2		12	26	21			
12+00	0.02	0.2		12	41	36			
12+50	0.02	0.2		14	25	24			
13+00	0.02	0.2		9	21	33			
13+50	0.02	0.2		7	24	26			
14+00	0.02	0.2		12	33	47			
14+50	0.02	0.2		5	25	39			
15+00 W	0.02	0.3		6	37	35			

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We hereby certify that the following are the results of assays on: soil samples

MARKED	GOLD		SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxx	xxxxxxxxxxxxx
	Au(ppm)	Ag(ppm)		Cu (ppm)	Pb (ppm)	Zn (ppm)			
L5N 0+50 E	0.02	0.2		10	33	29			
1+00	0.02	0.2		8	36	34			
1+50	0.02	0.2		12	36	39			
2+00	0.02	0.2		6	40	29			
2+50	0.02	0.2		7	36	44			
3+00	0.02	0.2		9	38	35			
3+50	0.02	0.2		8	19	33			
4+00	0.02	0.2		14	43	41			
4+50	0.02	0.2		5	43	35			
5+00	0.02	0.2		4	38	36			
5+50	0.02	0.6		14	52	55			
6+00	0.02	0.2		7	40	45			
6+50	0.02	0.7		9	33	96			
7+00	0.03	0.2		13	146	158			
7+50	0.02	0.2		20	69	77			
8+00	0.02	0.2		10	64	81			
8+50	0.02	0.2		9	32	33			
9+00	0.03	0.8		21	80	114			
9+50	0.02	0.2		11	73	86			
10+00 E	0.02	0.2		8	54	62			
L6N 0+50 E	0.02	0.2		13	34	38			
1+00	0.02	0.5		7	39	24			
1+50	0.02	0.2		4	53	28			
2+50	0.02	0.2		5	67	43			
3+00	0.02	0.4		9	48	23			
3+50	0.02	0.2		9	48	34			
4+00	0.02	0.2		2	29	33			
4+50	0.02	0.2		7	42	38			
5+00	0.02	0.2		17	48	48			
5+50	0.02	0.2		12	36	50			
6+00	0.02	0.2		12	66	70			
6+50	0.02	0.5		7	51	50			
7+00	0.02	0.2		11	38	27			
7+50	0.02	0.2		15	35	49			
8+00	0.02	0.2		9	53	55			
8+50 E	0.02	1.7		36	71	81			

/ continued on page 10

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We hereby certify that the following are the results of assays on: soil samples

MARKED	GOLD	SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxx	xxxxxxxxxxxxx
	Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L6N 0+50 W	0.02	0.3	13	52	44			
1+50	0.02	0.2	12	40	43			
2+00	0.02	0.2	9	43	39			
2+50	0.02	0.2	5	32	51			
3+00	0.02	0.2	4	41	37			
3+50	0.02	0.2	10	39	32			
4+00	0.02	0.2	10	52	42			
4+50	0.02	0.2	9	34	32			
5+00	0.02	0.2	7	85	46			
5+50	0.02	0.2	10	98	47			
6+00	0.02	0.2	6	34	32			
6+50	0.02	0.2	8	22	13			
7+00	0.02	0.4	11	43	39			
7+50	0.02	0.3	5	38	30			
8+00	0.02	0.2	9	40	27			
8+50	0.02	0.2	9	26	35			
9+00	0.02	0.2	13	42	26			
9+50	0.02	0.4	9	33	35			
10+00	0.02	0.5	10	41	30			
10+50	0.02	0.2	20	42	37			
11+00	0.02	0.2	10	40	31			
11+50	0.02	0.2	7	40	37			
12+00	0.02	0.2	17	47	36			
12+50	0.02	0.2	12	43	43			
13+00	0.02	0.5	27	47	34			
13+50	0.02	0.8	16	44	18			
14+00	0.02	0.2	5	42	44			
14+50	0.02	0.2	10	31	29			
15+00 W	0.02	0.2	6	32	60			
L7N 0+50 E	0.02	0.2	11	41	42			
1+00	0.02	0.2	13	25	22			
1+50	0.02	0.2	14	37	41			
2+00	0.02	0.2	12	36	57			
2+50	0.02	0.6	11	35	61			
3+00	0.02	0.2	7	40	33			
3+50 E	0.02	0.2	7	38	36			

/ continued on page 11.....

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We hereby certify that the following are the results of assays on: soil samples

MARKED	GOLD		SILVER	Copper	Lead	Zinc	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L7N 4+00 E	0.02	0.2	0.2	10	42	58			
4+50	0.02	0.2	0.2	6	35	46			
5+00	0.02	0.2	0.2	32	42	44			
5+50	0.02	0.2	0.2	13	27	30			
6+00	0.02	0.2	0.2	7	43	43			
6+50	0.02	0.2	0.2	21	35	47			
7+00	0.02	0.2	0.2	6	37	33			
7+50	0.02	0.2	0.2	9	31	39			
8+00	0.02	0.2	0.2	11	44	51			
9+50 E	0.02	0.2	0.2	13	36	38			
L7N 0+50W	0.02	0.2	0.2	15	35	43			
1+00	0.02	0.2	0.2	10	34	29			
1+50	0.02	0.2	0.2	14	33	39			
2+00	0.02	0.2	0.2	9	38	28			
2+50	0.02	0.2	0.2	15	42	36			
3+00	0.02	0.2	0.2	22	34	41			
3+50	0.02	0.2	0.2	15	28	27			
4+00	0.02	0.2	0.2	11	36	36			
4+50	0.02	0.3	0.2	12	36	45			
5+00	0.02	0.2	0.2	8	24	34			
5+50	0.02	0.8	0.2	9	47	41			
6+00	0.02	1.2	0.2	17	50	35			
6+50	0.02	0.4	0.2	12	34	21			
7+00	0.02	0.2	0.2	5	37	34			
7+50	0.02	0.5	0.2	7	37	34			
8+00	0.02	0.2	0.2	9	45	37			
8+50	0.02	0.2	0.2	11	44	45			
9+00	0.02	1.2	0.2	12	42	102			
9+50	0.02	0.9	0.2	12	35	27			
10+00	0.02	1.0	0.2	22	48	32			
10+50	0.02	0.2	0.2	10	36	39			
11+00	0.02	0.2	0.2	6	35	31			
11+50	0.02	0.7	0.2	10	33	31			
12+00	0.02	0.7	0.2	19	43	33			
12+50	0.02	0.5	0.2	24	45	25			
13+00 W	0.02	0.5	0.2	12	38	22			

/ continued on page 12

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MARKED	GOLD	SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxx	xxxxxxxxxxxxxx
	Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L7N 13+50 W	0.02	0.4	14	39	27			
14+00	0.02	0.4	28	48	47			
14+50	0.02	0.8	7	39	36			
15+00 W	0.02	1.1	15	44	42			
L8N 0+50 E	0.02	0.2	18	26	34			
1+00	0.02	0.2	22	33	53			
1+50	0.02	0.2	7	24	45			
2+00	0.02	0.2	12	22	27			
2+50	0.02	0.2	10	28	22			
3+00	0.02	0.2	12	37	26			
3+50	0.02	0.2	11	28	38			
4+00	0.02	0.6	10	29	44			
4+50	0.02	0.2	16	31	35			
5+00	0.02	0.2	14	27	33			
5+50	0.02	0.3	12	52	57			
6+00	0.02	0.7	12	43	57			
6+50	0.02	0.5	13	43	55			
7+00	0.02	0.3	7	38	38			
7+50	0.02	0.2	11	26	23			
9+00	0.02	0.4	15	27	38			
9+50	0.02	0.7	6	37	45			
10+00 E	0.02	0.6	6	26	37			
L8N 0+50 W	0.02	0.3	12	39	26			
1+00	0.02	0.7	34	29	34			
1+50	0.02	0.3	13	32	38			
2+00	0.02	0.3	26	25	56			
2+50	0.02	0.3	14	38	45			
3+00	0.02	0.5	10	30	37			
3+50	0.02	0.7	6	37	38			
4+00	0.02	0.6	23	40	47			
4+50	0.02	0.7	12	33	38			
5+00	0.02	0.6	13	35	41			
5+50	0.02	0.4	14	38	54			
6+00 W	0.02	0.5	16	45	52			

/ continued on page 13

NOTE REJECTS RETAINED ONE MONTH PULPS RETAINED THREE MONTHS ON REQUEST PULPS AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR

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L. Wong PROVINCIAL ASSAYER

Analytical and Consulting Chemists, Bulk Cargo Specialists, Surveyors, Inspectors, Samplers, Weighers

MEMBER: American Society For Testing Materials • The American Oil Chemists Society • Canadian Testing Association
REFEREE AND OR OFFICIAL CHEMISTS FOR: National Institute of Oilseed Products • The American Oil Chemists' Society
OFFICIAL WEIGHMASTERS FOR: Vancouver Board Of Trade

CERTIFICATE OF ASSAY

Date: Jan. 27, 1988

File: 8712-1152



SGS SUPERVISION SERVICES INC.

General Testing Laboratories Division

1001 East Pender Street,
Vancouver, B.C., Canada. V6A 1W2
Telephone: (604) 254-1647
Telex: 04-507514

TO: IGNA ENGINEERING & CONSULTING LTD.

(page 13)

We hereby certify that the following are the results of assays on:

soil samples

MARKED	GOLD		SILVER	Copper	Lead	Zinc	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L8N 6+50 W	0.02	0.2		7	31	39			
7+00	0.02	0.7		13	39	56			
7+50	0.02	0.6		15	60	47			
8+00	0.02	0.7		10	49	68			
8+50	0.02	0.6		14	30	32			
9+00	0.02	0.2		5	31	43			
9+50	0.02	0.3		12	21	23			
10+00	0.02	0.6		8	36	32			
10+50	0.02	0.7		14	145	37			
11+00	0.02	0.6		13	51	28			
11+50	0.02	1.5		7	63	56			
12+00	0.02	0.3		13	31	19			
12+50	0.02	0.8		13	29	23			
13+00	0.02	0.2		19	38	37			
13+50	0.02	0.7		11	48	39			
14+00	0.02	0.7		6	47	42			
14+50	0.02	0.6		15	40	40			
15+00	0.02	0.9		18	38	24			
L9N 0+50 E	0.02	0.7		16	47	44			
1+00	0.02	0.4		15	35	22			
1+50	0.02	0.2		18	62	92			
2+00	0.02	0.2		20	29	28			
2+50	0.02	0.8		15	49	76			
3+00	0.02	0.8		17	40	35			
3+50	0.02	1.0		16	50	61			
4+00	0.02	1.0		11	48	25			
4+50	0.02	1.3		9	52	58			
5+00	0.02	1.1		11	53	48			
5+50	0.02	1.0		21	42	31			
6+00	0.02	1.1		7	55	61			
6+50	0.02	0.8		12	114	23			
7+00 E	0.02	0.4		9	48	32			
L9N 0+50 W	0.02	0.8		15	39	35			
1+00	0.02	0.9		12	42	48			
1+50 W	0.02	1.2		6	36	38			

/ continued on page 14

NOTE REJECTS RETAINED ONE MONTH PULPS RETAINED THREE MONTHS ON REQUEST PULPS AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR.

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 General Testing Laboratories Division
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TO: IGNA ENGINEERING & CONSULTING LTD.

(page 14)

We hereby certify that the following are the results of assays on: soil samples

MARKED	GOLD	SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxx	xxxxxxxxxxx
	Au(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L9N 2+00 W	0.02	1.3	15	52	35			
2+50	0.02	1.9	16	60	40			
3+00	0.02	1.8	16	61	39			
3+50	0.02	1.7	10	56	54			
4+00	0.02	2.4	12	57	38			
4+50	0.02	0.8	15	32	40			
5+00	0.02	1.2	13	66	77			
5+50	0.02	1.3	63	68	56			
6+00	0.02	1.4	15	146	140			
6+50	0.02	1.6	17	76	48			
7+00	0.02	1.2	15	45	37			
7+50	0.02	1.9	13	61	38			
8+00	0.02	2.0	7	55	55			
8+50	0.02	1.4	10	36	36			
9+00	0.02	1.8	10	44	30			
9+50	0.02	0.5	15	37	42			
10+00	0.02	0.2	10	32	33			
10+50	0.02	0.2	6	33	31			
11+00	0.02	0.4	7	60	40			
11+50	0.02	1.2	9	44	34			
12+00	0.02	1.4	12	54	30			
12+50	0.02	1.4	20	46	27			
13+00	0.02	2.1	7	55	61			
13+50	0.02	1.1	11	43	49			
14+00	0.02	1.2	12	44	43			
14+50	0.02	1.5	13	65	65			
15+00 W	0.02	0.5	11	24	30			
L10N 0+50 E	0.02	0.9	10	30	28			
1+00	0.02	0.9	11	48	44			
1+50	0.02	0.9	14	44	34			
2+00	0.02	1.0	13	52	66			
2+50	0.02	1.1	15	42	35			
3+00	0.02	0.8	16	22	19			
3+50	0.02	1.3	11	28	26			
4+00	0.02	1.7	9	44	28			
4+50	0.02	0.2	41	30	41			
5+00 E	0.02	0.6	6	35	51			

/ continued on page 15

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TO: IGNA ENGINEERING & CONSULTING LTD.

(page 15)

We hereby certify that the following are the results of assays on: soil samples

MARKED	GOLD		SILVER	Copper	Lead	Zinc	xxxxxxx	xxxxxxxxxxx	xxxxxxxxxxx
	Au(ppm)	Ag(ppm)	Ag(ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)			
L10N 5+50E	0.02	1.3		7	49	37			
6+00E	0.02	0.5		12	49	52			
L10N 0+50 W	0.02	0.3		13	42	37			
1+00	0.02	1.0		12	42	49			
1+50	0.02	0.2		14	25	34			
2+00	0.02	0.2		13	47	45			
2+50	0.02	1.0		22	71	50			
3+00	0.02	1.5		11	59	49			
3+50	0.02	1.3		10	92	78			
4+00	0.02	0.4		8	34	36			
4+50	0.02	0.9		10	34	37			
5+00	0.02	1.0		8	56	37			
6+00	0.02	1.5		7	47	20			
10+50	0.02	0.7		12	40	33			
11+00	0.02	0.7		13	35	20			
11+50	0.02	0.5		10	32	27			
12+00	0.02	0.2		13	24	38			
12+50	0.02	0.2		12	31	27			
13+00	0.02	0.2		12	39	31			
13+50	0.02	1.3		13	29	43			
14+00	0.02	1.0		8	61	69			
14+50	0.02	0.8		11	34	29			
15+00 W	0.02	0.9		6	29	18			
L10N 0+50 W	0.02	0.2		13	43	47			
1+00	0.02	0.3		6	60	63			
1+50	0.02	0.4		5	37	61			
2+00	0.02	0.3		4	47	64			
2+50	0.02	0.7		14	57	55			
3+00	0.02	0.2		6	27	39			
3+50	0.02	0.2		9	35	25			
4+00	0.02	0.2		12	34	20			
4+50	0.02	0.4		14	118	39			

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TOTEM GOLD PROJECT

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LOON

mag man

Totem Gold

1.	2.	0.	39
1500.00W	57652.7		10:18:49
1475.00W	57701.6		10:17:31
1450.00W	57706.2		10:16:02
1425.00W	57603.5		10:14:39
1400.00W	57623.4		10:13:33
1375.00W	57673.5		10:12:29
1350.00W	57640.0		10:11:05
1325.00W	57665.1		10:09:33
1300.00W	57708.8		10:08:23
1275.00W	57851.3		10:07:25
1250.00W	57781.9		10:06:28
1225.00W	57889.9		10:05:30
1200.00W	57900.4		10:04:32
1175.00W	57804.1		10:03:20
1150.00W	57755.9		10:02:03
1125.00W	57794.6		10:00:58
1100.00W	57847.5		09:59:54
1075.00W	57802.1		09:57:34
1050.00W	57696.7		09:54:38
1025.00W	57753.1		09:52:54
1000.00W	57701.6		09:47:08
975.00W	57776.4		09:44:51
950.00W	57854.9		09:43:09
925.00W	58024.8		09:42:05
900.00W	57855.5		09:40:37
875.00W	57798.0		09:38:34
850.00W	57822.4		09:37:07
825.00W	57757.5		09:35:45
800.00W	57708.7		09:34:25
775.00W	57752.0		09:33:17
750.00W	57768.5		09:31:59
725.00W	57770.2		09:30:30
700.00W	57730.1		09:28:06
675.00W	57733.4		09:26:14
650.00W	57724.6		09:24:49
625.00W	57775.5		09:23:22
600.00W	57687.7		09:21:44
575.00W	57689.6		09:15:33

11:	2.	200.N	40
1500.00W	57551.4	10:41:28	
1475.00W	57582.1	10:42:53	
1450.00W	57884.5	10:44:37	
1425.00W	57714.0	10:46:11	
1400.00W	57778.1	10:47:20	
1375.00W	57813.1	10:48:44	
1350.00W	57788.2	10:50:27	
1325.00W	57779.4	10:51:17	
1300.00W	57780.0	10:53:09	
1275.00W	57787.8	10:55:05	
1250.00W	57701.4	10:58:28	
1225.00W	57777.2	11:01:18	
1200.00W	57691.8	11:03:32	
1175.00W	57658.3	11:05:35	
1150.00W	57663.2	11:09:05	
1125.00W	57548.7	11:13:54	
1050.00W	57564.8	11:15:29	
1025.00W	57685.9	11:17:15	
1000.00W	57738.0	11:18:56	
975.00W	57713.8	11:24:12	
950.00W	57799.1	11:25:36	
925.00W	57814.7	11:26:39	
900.00W	57762.8	11:27:41	
875.00W	57737.4	11:28:34	
850.00W	57703.9	11:29:41	
825.00W	57720.0	11:30:40	
800.00W	57717.4	11:32:29	
775.00W	57839.4	11:33:41	
750.00W	57859.3	11:34:52	
725.00W	57812.7	11:36:05	
700.00W	57831.0	11:37:07	
675.00W	57814.6	11:38:03	
650.00W	57737.9	11:39:09	
625.00W	57701.6	11:40:16	
600.00W	57737.7	11:42:04	
575.00W	57729.8	11:43:33	
550.00W	57774.9	11:44:50	
525.00W	57810.4	11:45:54	
500.00W	57826.8	11:47:36	
475.00W	57805.1	11:49:19	

2

2001

W:	2.	0.	5
	575.W	57687.0	08:18:48
	575.W	57688.6	08:19:16
	575.W	57693.2	08:19:27
	575.W	57686.2	08:19:42
	575.W	57686.9	08:19:55
W:	2.	100.N	64
	1500.W	57469.8	11:00:27
	1475.W	57482.1	11:01:46
	1450.W	57671.2	11:02:59
	1425.W	57743.0	11:04:17
	1400.W	57756.0	11:05:41
	1375.W	57690.2	11:06:57
	1350.W	57721.4	11:08:21
	1325.W	57616.6	11:10:01
	1300.W	57714.2	11:12:18
	1275.W	57762.6	11:14:04
	1250.W	57876.4	11:16:31
	1225.W	57813.0	11:18:07
	1200.W	57901.1	11:19:42
	1175.W	58097.8	11:20:52
	1150.W	57754.5	11:22:20
	1125.W	57815.7	11:23:40
	1100.W	57774.7	11:25:34
	1075.W	57779.7	11:26:51
	1050.W	57751.7	11:27:58
	1025.W	57657.4	11:28:57
	1000.W	57672.8	11:30:42
	975.W	57831.6	11:34:03
	950.W	57749.7	11:35:15
	925.W	57814.1	11:36:08
	900.W	57680.7	11:37:01
	875.W	57673.3	11:38:00
	850.W	57740.4	11:38:54
	825.W	57771.3	11:39:48
	800.W	57703.6	11:40:48
	775.W	57807.3	11:41:51
	750.W	57823.4	11:42:35
	725.W	57742.3	11:43:19
	700.W	57802.6	11:44:20
	675.W	57712.9	11:45:17
	650.W	57732.3	11:46:09
	625.W	57672.8	11:47:05
	600.W	57660.3	11:48:25
	575.W	57625.6	11:49:19
	550.W	57575.9	11:50:25
	525.W	57625.5	11:51:42
	500.W	57612.3	11:52:38
	475.W	57581.6	11:53:43
	450.W	57595.6	11:54:39
	425.W	57643.6	11:55:49
	400.W	57652.8	11:56:55
	375.W	57681.5	11:58:19
	350.W	57710.7	12:00:08
	325.W	57599.2	12:01:10
	300.W	57561.4	12:02:40
	275.W	57514.4	12:03:44
	250.W	57339.6	12:06:14
	225.W	57439.3	12:08:18
	200.W	57588.1	12:10:18
	175.W	57681.3	12:12:55
	150.W	57673.5	12:14:24

(3)

Toten Group Project

L 100N

100.W	57748.0	12:17:57	
75.W	57821.7	12:19:18	
50.W	57891.8	12:20:35	
25.W	57897.0	12:22:00	
0.	57836.6	12:22:47	L100N/00W
0.	57837.6	12:24:00	B.L.100N
0.	57836.5	12:24:17	B.L.100N
0.	57835.3	12:23:39	B.L.100N

(4)

H:	2.	600.N	29
700.W	57748.1	08:56:38	
675.W	57652.7	08:57:53	
650.W	57707.6	08:59:04	
625.W	57752.0	08:59:56	
600.W	57615.9	09:00:49	
575.W	57711.1	09:01:40	
550.W	57658.1	09:02:51	
525.W	57681.5	09:04:02	
500.W	57604.6	09:05:07	
475.W	57544.2	09:06:00	
450.W	57638.8	09:07:12	
425.W	57676.0	09:08:28	
400.W	57695.8	09:09:56	
375.W	57771.5	09:11:57	
350.W	57772.5	09:13:11	
325.W	57701.9	09:14:33	
300.W	57602.1	09:15:42	
275.W	57728.5	09:16:58	
250.W	57796.6	09:18:32	
225.W	57771.0	09:19:53	
200.W	57729.4	09:21:52	
175.W	57797.7	09:23:42	
150.W	57707.1	09:25:00	
125.W	57855.2	09:26:47	
100.W	58006.7	09:28:37	
75.W	57899.6	09:30:16	
50.W	57849.8	09:31:11	
25.W	57752.9	09:32:19	
0.	57714.8	09:33:29	

L600N

H:	2.	700.N	61
1500.00W	57734.1	10:46:00	
1475.00W	57755.8	10:45:07	
1450.00W	57780.8	10:44:09	
1425.00W	57729.6	10:43:19	
1400.00W	57751.7	10:42:24	
1375.00W	57799.6	10:41:35	
1350.00W	57803.3	10:40:35	
1325.00W	57780.8	10:39:25	
1300.00W	57739.7	10:38:43	
1275.00W	57806.3	10:37:57	
1250.00W	57865.8	10:36:58	
1225.00W	57802.5	10:36:00	
1200.00W	57855.6	10:34:54	
1175.00W	57822.8	10:33:48	
1150.00W	57813.8	10:32:55	
1125.00W	57814.7	10:31:56	
1100.00W	57861.6	10:31:11	
1075.00W	57876.8	10:30:17	
1050.00W	57718.1	10:29:16	
1025.00W	57799.4	10:28:18	
1000.00W	57798.9	10:27:20	
975.00W	57740.2	10:26:00	
950.00W	57791.4	10:24:45	
925.00W	57765.0	10:23:46	
900.00W	57931.4	10:22:45	
875.00W	57882.6	10:21:40	
850.00W	57845.7	10:20:41	

L700N

5

800.00W	57994.5	10:18:07
775.00W	57829.7	10:16:53
750.00W	57762.5	10:15:28
725.00W	57767.3	10:14:10
700.00W	57697.7	10:12:22
675.00W	57732.0	10:11:02
650.00W	57703.0	10:09:29
625.00W	57654.6	10:08:06
600.00W	57672.3	10:06:28
575.00W	57638.1	10:04:55
550.00W	57664.1	10:03:07
525.00W	57703.8	10:01:26
500.00W	57681.8	10:00:04
475.00W	57728.1	09:58:54
450.00W	57706.2	09:57:46
425.00W	57733.2	09:56:33
400.00W	57627.7	09:55:24
375.00W	57720.2	09:54:30
350.00W	57727.4	09:53:29
325.00W	57692.7	09:52:42
300.00W	57739.4	09:51:38
275.00W	57805.2	09:50:21
250.00W	57784.0	09:48:39
225.00W	57825.8	09:47:43
200.00W	57799.2	09:46:52
175.00W	57898.4	09:45:51
150.00W	57809.3	09:44:58
125.00W	57890.9	09:44:12
100.00W	57839.7	09:43:01
75.00W	57791.5	09:42:05
50.00W	57829.5	09:41:03
25.00W	57822.0	09:39:39
00.E	57733.1	09:38:13

H:	2.	0.	23
575.W	57572.1		09:08:06
550.W	57589.0		09:09:06
525.W	57609.9		09:10:07
500.W	57543.3		09:11:04
475.W	57503.3		09:12:02
450.W	57560.8		09:13:09
425.W	57558.1		09:15:16
400.W	57519.8		09:16:48
375.W	57503.2		09:18:06
350.W	57474.3		09:19:00
325.W	57496.9		09:20:25
300.W	57496.4		09:21:48
275.W	57530.3		09:26:52
250.W	57429.2		09:28:31
225.W	57262.8		09:29:45
200.W	57385.9		09:31:04
175.W	57556.0		09:32:50
150.W	57540.4		09:34:16
125.W	57571.9		09:35:18
100.W	57526.4		09:37:03
75.W	57655.0		09:38:25
50.W	57805.8		09:40:14
25.W	57850.2		09:47:49

6

Totem Grid

L COM

00W 57842.4

H:	2.	1.N	20
B.L. 0.	57842.4		09:51:09
B.L. 25.N	57849.2		09:52:58
B.L. 50.N	57775.7		09:58:33
B.L. 75.N	57841.8		10:00:31
B.L. 100.N	57860.3		10:02:37
B.L. 125.N	57833.7		10:04:19
B.L. 150.N	57833.6		10:08:00
B.L. 175.N	57896.6		10:10:23
B.L. 200.N	57929.2		10:12:36
B.L. 225.N	57925.6		10:16:32
B.L. 250.N	57805.5		10:18:47
B.L. 275.N	57797.4		10:20:38
B.L. 300.N	57808.3		10:22:30

Baseline 00

1/2 a:

7

B.L. 325.N	57779.4	10:24:44
B.L. 350.N	57825.1	10:28:40
B.L. 375.N	57814.7	10:31:26
B.L. 400.N	57772.2	10:33:32
B.L. 425.N	57807.8	10:35:47
B.L. 450.N	57807.3	10:37:57
B.L. 475.N	57768.7	10:40:10
H: 2.	100.N	41
0.	57821.3	16:17:07
25.E	57587.4	16:13:01
50.E	57537.8	16:10:35
75.E	57581.9	16:08:31
100.E	57593.2	16:07:12
125.E	57599.9	16:06:03
150.E	57647.9	16:05:07
175.E	57655.4	16:04:07
200.E	57565.3	16:01:32
225.E	57511.7	15:58:50
250.E	57509.0	15:54:47
275.E	57503.8	15:51:46
300.E	57461.0	15:49:22
325.E	57483.7	15:47:17
350.E	57576.9	15:45:45
375.E	57655.0	15:44:17
400.E	57530.2	15:43:05
425.E	57585.0	15:41:32
450.E	57599.3	15:40:33
475.E	57674.7	15:39:37
500.E	57695.7	15:38:39
525.E	57826.0	15:37:40
550.E	57741.7	15:36:08
575.E	57788.2	15:35:03
600.E	57798.4	15:34:00
625.E	57827.1	15:32:59
650.E	57803.8	15:32:01
675.E	57829.8	15:30:41
700.E	57829.2	15:29:40
725.E	57829.2	15:28:30
750.E	57888.0	15:27:35
775.E	57857.6	15:26:38
800.E	57905.9	15:25:39
825.E	57878.3	15:24:42
850.E	57889.2	15:23:48
875.E	57881.9	15:22:33
900.E	57901.0	15:21:37
925.E	57930.5	15:20:40
950.E	57823.6	15:19:27
975.E	57882.5	15:18:22
1000.E	57817.1	15:17:11

B.L. 500N 57782.6

~~57827.1~~

L 100N

H: 2.	-	-
475.00W	57784.4	11:44:08
450.00W	57740.4	11:45:44
425.00W	57711.3	11:46:55
400.00W	57663.3	11:48:17
375.00W	57665.2	11:49:08
350.00W	57630.4	11:50:28
325.00W	57580.2	11:51:35
300.00W	57409.4	11:53:48
275.00W	57629.3	11:58:16
250.00W	57656.1	12:00:45
225.00W	57772.3	12:03:16
200.00W	57692.4	12:08:19
175.00W	57640.1	12:13:10
150.00W	57758.3	12:15:35
125.00W	57830.1	12:19:17
100.00W	57774.2	12:21:24

Line 300.00W

L 300N

(8)

75.00W	57924.3	12:23:35
50.00W	57890.9	12:24:51
25.00W	57815.9	12:26:08
.00W	57761.1	12:26:57
25.00E	57706.0	12:36:10
50.00E	57671.1	12:37:21
75.00E	57624.7	12:38:49
100.00E	57504.2	12:41:16
125.00E	57607.3	12:44:58
150.00E	57609.1	12:48:26
175.00E	57616.6	12:55:05
200.00E	57660.2	12:56:18
225.00E	57728.7	12:58:11
250.00E	57702.2	12:59:10
275.00E	57619.2	13:00:07
300.00E	57656.5	13:01:14
325.00E	57633.2	13:02:09
350.00E	57676.7	13:03:15
375.00E	57680.2	13:05:49
400.00E	57636.9	13:08:22
425.00E	57629.6	13:10:40
450.00E	57617.0	13:12:29
475.00E	57572.2	13:15:05
500.00E	57632.4	13:18:06
525.00E	57621.5	13:19:48
550.00E	57595.3	13:21:12
575.00E	57562.8	13:23:05
600.00E	57470.7	13:27:47
625.00E	57555.5	13:31:20
650.00E	57581.8	14:26:45
675.00E	57628.6	14:29:08
700.00E	57556.9	14:32:10
725.00E	57622.1	14:35:02
750.00E	57624.7	14:38:58
775.00E	57533.0	14:42:14
800.00E	57635.4	14:46:15
825.00E	57762.1	14:50:59
850.00E	57783.3	14:56:42
875.00E	57779.2	14:59:07
900.00E	57757.1	15:02:48
925.00E	57880.8	15:05:49
950.00E	57798.7	15:07:45
975.00E	57766.8	15:09:49
1000.00E	57757.8	15:11:50

L 300N

H:	2.	500.N	20
	475.W	57698.8	11:26:32
	450.W	57643.5	11:23:38
	425.W	57619.1	11:18:33
	400.W	57490.1	11:14:30
	375.W	57690.2	11:10:50
	350.W	57619.6	11:09:08
	325.W	57675.2	11:06:59
	300.W	57743.3	11:03:27
	275.W	57784.6	11:02:09
	250.W	57716.7	11:00:53
	225.W	57773.5	10:59:34
	200.W	57762.7	10:58:25
	175.W	57785.3	10:57:28
	150.W	57853.4	10:56:28
	125.W	57793.7	10:55:30
	100.W	57904.3	10:54:33
	75.W	57945.6	10:53:44
	50.W	57937.2	10:48:07
	25.W	57903.3	10:46:47
	0.	57782.6	10:44:45

L 500N

B.L. 500N

9

H:	2.	- 0.	46
	575.W	57657.8	08:52:25
	575.W	57672.5	08:55:05
	575.W	57668.6	15:41:23
	575.W	57668.1	15:41:39
	575.W	57669.4	15:40:53
	0.	57701.2	09:16:53
	25.00N	57758.6	09:18:34
	50.00N	57843.5	09:20:57
	75.00N	57789.5	09:22:27
	100.00N	57664.1	09:23:45
	125.00N	57713.6	09:27:41
	150.00N	57682.1	09:29:49
	175.00N	57706.8	09:33:00
	200.00N	57740.6	09:34:52
	225.00N	57813.4	09:36:09
	250.00N	57709.4	09:37:19
	275.00N	57744.7	09:38:44
	300.00N	57700.0	09:40:29
	325.00N	57787.2	09:43:16
	350.00N	57805.4	09:45:19
	375.00N	57832.6	09:46:35
	400.00N	57838.0	09:48:49
	425.00N	57842.1	09:50:52
	450.00N	57728.9	09:52:09
	475.00N	57775.2	09:53:38
	500.00N	57729.4	09:55:42
	525.00N	57758.8	09:57:30
	550.00N	57685.5	09:59:54
	575.00N	58023.0	10:01:12
	600.00N	57750.2	10:02:49
	625.00N	57845.2	10:04:16
	650.00N	57633.2	10:05:24
	675.00N	57709.2	10:06:32
	700.00N	57769.2	10:08:19
	725.00N	57725.1	10:11:34
	750.00N	57809.8	10:14:25
	775.00N	57772.4	10:17:54
	800.00N	57867.7	10:21:25

Totem Gold Project

7 10:50 W

875.00N 57919.2 10:23:39
850.00N 57829.1 10:25:43
875.00N 57853.3 10:27:17
900.00N 57831.9 10:29:19
925.00N 57908.7 10:32:05
950.00N 57862.8 10:41:19
975.00N 57858.9 10:42:35
1000.00N 57932.5 10:43:35

(10)

H: 2. 300.N 42

1500.00W 57773.9 14:45:51
1475.00W 57811.0 14:47:14
1450.00W 57775.3 14:49:02
1425.00W 57765.8 14:50:09
1400.00W 57921.1 14:51:46
1375.00W 57923.6 14:53:00
1350.00W 57815.8 14:54:43
1325.00W 57737.4 14:55:58
1300.00W 57745.8 14:57:32
1275.00W 57705.4 14:58:27
1250.00W 57728.8 14:59:51
1225.00W 57586.3 15:00:36
1200.00W 57631.9 15:01:36
1175.00W 57756.0 15:03:19
1150.00W 57610.4 15:05:56
1125.00W 57731.9 15:07:25
1100.00W 57676.7 15:09:55
1075.00W 57702.0 15:10:40
1050.00W 57732.7 15:11:35
1025.00W 57724.1 15:12:27
1000.00W 57705.2 15:13:34
975.00W 57899.5 15:17:07
950.00W 57784.9 15:17:52
925.00W 57861.3 15:18:36
900.00W 57816.9 15:19:24
875.00W 57723.8 15:20:27
850.00W 57751.0 15:21:30
825.00W 57770.9 15:22:15
800.00W 57679.0 15:23:00
775.00W 57774.5 15:24:16
750.00W 57813.1 15:25:06
725.00W 57807.4 15:25:49
700.00W 57872.6 15:26:40
675.00W 57831.6 15:27:33
650.00W 57745.1 15:28:38
625.00W 57872.8 15:29:52
600.00W 57925.1 15:30:45
575.00W 57735.1 15:31:33
550.00W 57763.0 15:32:21
525.00W 57783.0 15:33:06
500.00W 57753.1 15:33:49
475.00W 57789.2 15:34:41

L 300N

b VLF TME 1

H: 2. 400.N 21

1500.00W 57796.9 14:42:48
1475.00W 57799.2 14:41:58
1450.00W 57732.3 14:41:17
1425.00W 57694.3 14:40:29
1400.00W 57680.6 14:39:40
1375.00W 57679.6 14:39:07
1350.00W 57748.2 14:38:15
1325.00W 57665.9 14:37:34
1300.00W 57635.4 14:36:51
1275.00W 57664.8 14:36:04
1250.00W 57721.2 14:35:06
1225.00W 57683.6 14:34:03
1200.00W 57669.8 14:33:05
1175.00W 57700.7 14:32:00

L 400N

1130.00W	57705.0	14:31:37
1125.00W	57768.4	14:30:58
1100.00W	57762.4	14:30:21
1075.00W	57831.1	14:29:42
1050.00W	57757.5	14:28:46
1025.00W	57840.0	14:27:08
1000.00W	57769.8	14:28:06
H:	2.	500.N 36

(11)

1500.00W	57721.7	13:47:39
1475.00W	57655.4	13:46:48
1450.00W	57682.9	13:45:34
1425.00W	57789.6	13:44:45
1400.00W	57762.4	13:43:49
1375.00W	57724.4	13:42:57
1350.00W	57792.8	13:42:16
1325.00W	57740.5	13:41:20
1300.00W	57706.9	13:40:35
1275.00W	57707.6	13:39:54
1250.00W	57784.3	13:38:52
1225.00W	57759.7	13:37:11
1200.00W	57724.8	13:36:25
1175.00W	57732.8	13:35:32
1150.00W	57694.9	13:34:42
1125.00W	57822.7	13:33:49
1100.00W	57685.1	13:33:23
1075.00W	57811.0	13:32:23
1050.00W	57722.9	13:31:37
1025.00W	57751.9	13:29:53
1000.00W	57768.6	13:30:53
1000.00W	57722.7	13:23:23
975.00W	57818.6	13:22:18
950.00W	57863.5	13:21:28
925.00W	57829.4	13:20:03
900.00W	57689.0	13:18:59
875.00W	57784.6	13:18:02
850.00W	57848.8	13:17:07
825.00W	57671.9	13:16:04
800.00W	57714.2	13:15:07
775.00W	57747.8	13:14:24
750.00W	57685.1	13:13:07
725.00W	57705.9	13:11:38
700.00W	57663.0	13:10:36
675.00W	57870.4	13:09:51
650.00W	57780.0	13:08:19
H:	2.	600.N 34

L 500N

1500.00W	57744.7	13:53:02
1475.00W	57715.5	13:54:37
1450.00W	57771.3	13:56:23
1425.00W	57770.2	13:57:48
1400.00W	57735.7	13:59:34
1375.00W	57747.0	14:00:57
1350.00W	57795.5	14:02:06
1325.00W	57795.5	14:03:16
1300.00W	57739.4	14:04:15
1275.00W	57681.5	14:05:12
1250.00W	57761.0	14:06:30
1225.00W	57744.3	14:07:49
1200.00W	57824.9	14:08:51
1175.00W	57789.7	14:10:05
1150.00W	57783.9	14:10:56
1125.00W	57743.8	14:11:58
1100.00W	57804.1	14:13:19
1075.00W	57865.6	14:14:51
1050.00W	57833.9	14:15:59
1025.00W	57915.2	14:17:10
1000.00W	57728.0	14:17:25

L 600N

(12)

1000.00W	57773.5	14:18:43
975.00W	57737.4	12:54:25
950.00W	57684.9	12:54:59
925.00W	57748.5	12:55:38
900.00W	57776.8	12:56:22
875.00W	57792.4	12:57:17
850.00W	57956.9	12:58:02
825.00W	57894.0	12:58:58
800.00W	57814.2	12:59:40
775.00W	57898.6	13:00:20
750.00W	57812.2	13:00:59
725.00W	57697.7	13:01:39
700.00W	57714.0	13:02:38

H: 2. 800.N 33

1500.00W	57743.9	11:57:46
1475.00W	57722.7	11:57:01
1450.00W	57701.0	11:56:17
1425.00W	57661.5	11:55:11
1400.00W	57646.8	11:54:26
1375.00W	57669.6	11:53:46
1350.00W	57641.2	11:53:05
1325.00W	57692.9	11:52:18
1300.00W	57678.4	11:51:34
1275.00W	57677.4	11:50:47
1250.00W	57695.5	11:50:04
1225.00W	57738.8	11:49:21
1200.00W	57669.1	11:48:48
1175.00W	57768.2	11:48:00
1150.00W	57764.0	11:47:11
1125.00W	57704.5	11:44:05
1100.00W	57757.2	11:42:51
1075.00W	57766.2	11:41:52
1050.00W	57786.4	11:41:06
1025.00W	57906.1	11:40:09
1000.00W	57922.3	11:38:31
975.00W	57832.9	11:37:47
950.00W	57939.0	11:36:28
925.00W	57928.4	11:35:29
900.00W	57893.2	11:34:10
875.00W	57797.1	11:32:50
850.00W	57732.5	11:31:33
825.00W	57826.0	11:30:01
800.00W	57892.9	11:28:20
775.00W	57832.2	11:26:06
750.00W	57818.3	11:23:50
725.00W	57741.1	11:19:44
700.00W	57778.3	11:21:49

800 N

H: 2. 900.N 33

1500.00W	57715.1	12:15:12
1475.00W	57719.3	12:16:37
1450.00W	57775.8	12:17:59
1425.00W	57707.3	12:19:08
1400.00W	57696.3	12:20:35
1375.00W	57688.4	12:21:53
1350.00W	57584.2	12:23:06
1325.00W	57705.3	12:24:39
1300.00W	57628.8	12:26:47
1275.00W	57707.4	12:28:42
1250.00W	57761.1	12:30:20
1225.00W	57822.5	12:32:47
1200.00W	57785.6	12:33:43
1175.00W	57778.4	12:36:01
1150.00W	57824.6	12:38:14
1125.00W	57862.0	12:39:46
1100.00W	57883.6	12:41:20
1075.00W	57875.2	12:42:53

900 N

13

1050.00W	57856.8	12:43:50
1025.00W	57818.2	12:44:48
1000.00W	57812.3	12:46:15
975.00W	57817.7	10:56:05
950.00W	57934.7	10:58:17
925.00W	57888.2	10:59:09
900.00W	57798.0	11:00:22
875.00W	57786.5	11:00:59
850.00W	57801.3	11:01:37
825.00W	57739.8	11:02:14
800.00W	57780.2	11:02:56
775.00W	57806.0	11:03:45
750.00W	57745.7	11:04:23
725.00W	57758.6	11:06:32
700.00W	57571.3	11:08:37

14

H:	2.	0.	3
	575.W	57482.2	09:31:31
	575.W	57482.3	09:31:44
	550.W	57485.6	09:31:14
H:	2.	200.N	40
	475.00W	57426.9	14:39:53
	450.00W	57538.8	14:36:55
	425.00W	57436.9	14:34:46
	400.00W	57430.7	14:30:15
	375.00W	57405.0	14:27:27
	350.00W	57438.9	14:25:32
	325.00W	57201.8	14:19:43
	300.00W	57267.4	14:16:36
	275.00W	57340.8	14:11:55
	250.00W	57331.6	14:08:40
	225.00W	57395.5	14:07:37
	200.00W	57456.0	14:06:26
	175.00W	57437.2	14:05:32
	150.00W	57498.3	14:04:39
	125.00W	57518.3	14:03:45
	100.00W	57481.9	14:02:54
	75.00W	57589.9	14:01:37
	50.00W	57668.2	14:00:47
	25.00W	57778.6	13:59:57
	0.00E	57697.3	13:53:51
	25.00E	57609.2	13:52:36
	50.00E	57593.5	13:50:47
	75.00E	57406.7	13:47:27
	100.00E	57378.8	13:45:18
	125.00E	57443.7	13:44:03
	150.00E	57457.5	13:43:01
	175.00E	57457.6	13:41:55
	200.00E	57545.7	13:40:31
	225.00E	57494.8	13:39:37
	250.00E	57418.8	13:38:16
	275.00E	57425.1	13:35:33
	300.00E	57456.6	13:31:24
	325.00E	57414.5	13:29:07
	350.00E	57452.0	13:27:28
	375.00E	57432.5	13:25:17

Toten Gold Project

L200N

(18)

400.00E	57362.6	13:23:46
425.00E	57304.3	13:22:50
450.00E	57311.8	13:20:56
475.00E	57354.9	13:18:31
500.00E	57334.9	13:16:27
H:	2. 400.N	44
1000.00W	57640.2	15:07:18
975.00W	57634.3	15:08:59
950.00W	57567.1	15:10:21
925.00W	57602.8	15:11:19
900.00W	57580.8	15:12:24
875.00W	57579.4	15:13:30
850.00W	57534.6	15:14:19
825.00W	57644.8	15:15:20
800.00W	57611.6	15:16:20
775.00W	57714.9	15:17:17
750.00W	57682.4	15:18:23
725.00W	57617.8	15:19:27
700.00W	57597.7	15:20:29
675.00W	57605.9	15:21:19
650.00W	57624.7	15:22:44
625.00W	57623.8	15:23:53
600.00W	57676.5	15:24:50
575.00W	57618.5	15:25:52
550.00W	57604.8	15:27:15
525.00W	57527.8	15:28:11
500.00W	57508.7	15:29:16
475.00W	57498.7	15:30:05
450.00W	57500.2	15:31:10
.00W	57617.1	12:42:15
25.00E	57538.0	12:43:20
50.00E	57478.0	12:44:21
75.00E	57478.9	12:45:12
100.00E	57263.5	12:46:10
125.00E	57350.8	12:47:30
150.00E	57394.8	12:49:13
175.00E	57477.7	12:50:56
200.00E	57490.0	12:52:22
225.00E	57511.1	12:54:00
250.00E	57436.1	12:55:15
275.00E	57461.6	12:56:29
300.00E	57414.9	12:57:32
325.00E	57464.7	12:58:40
350.00E	57504.7	12:59:46
375.00E	57553.7	13:00:58
400.00E	57509.7	13:02:00
425.00E	57491.8	13:03:13
450.00E	57463.2	13:04:15
475.00E	57376.6	13:05:24
500.00E	57509.1	13:07:01
H:	2. 600.N	21
.00E	57511.4	12:26:42
25.00E	57462.8	12:25:35
50.00E	57445.8	12:23:52
75.00E	57429.5	12:22:37
100.00E	57402.9	12:19:54
125.00E	57274.5	12:18:10
150.00E	57397.6	12:16:58
175.00E	57424.8	12:15:55
200.00E	57396.5	12:14:49
225.00E	57367.7	12:13:50
250.00E	57454.4	12:12:42
275.00E	57452.5	12:11:12
300.00E	57553.0	12:10:10
325.00E	57629.7	12:08:54
350.00E	57401.9	12:07:52

L 400 N

L 600 N

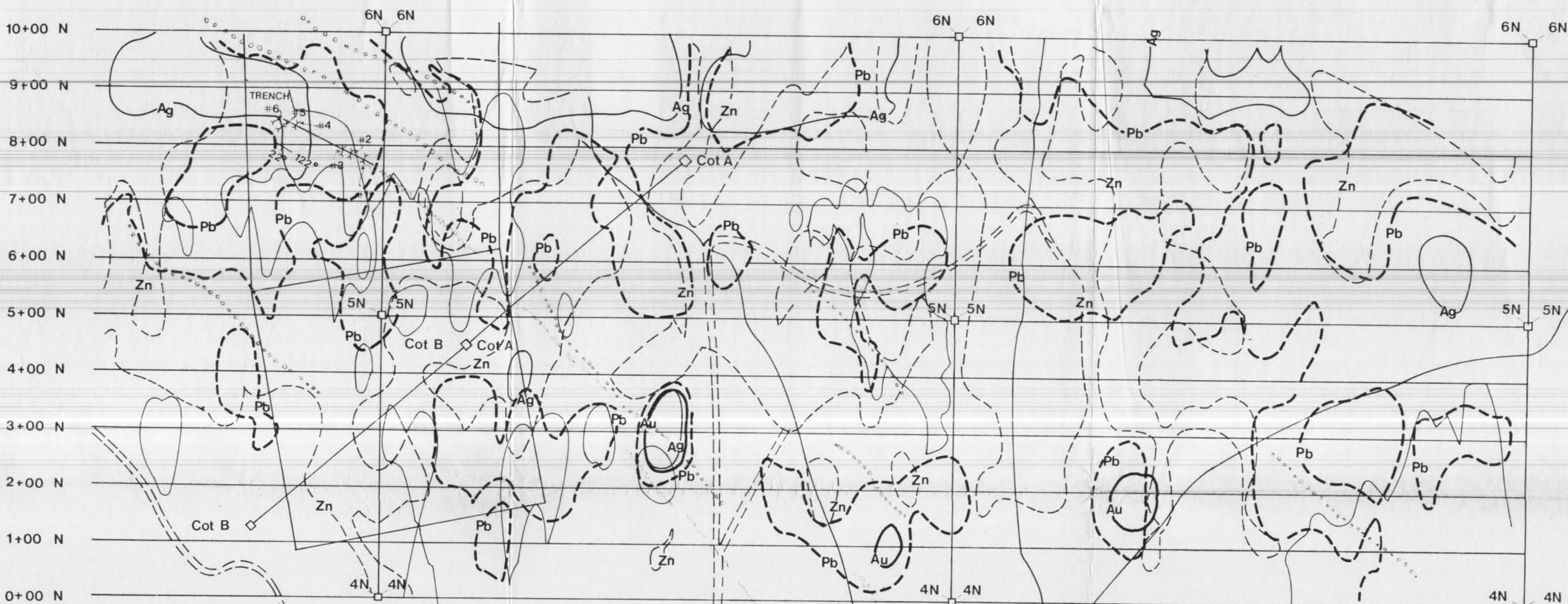
375.00E	57569.7	12:07:00
400.00E	57628.9	12:05:38
425.00E	57619.5	12:04:43
450.00E	57612.7	12:03:40
475.00E	57609.1	12:02:18
500.00E	57612.9	12:01:08
H: 2.	700.N	11
0.00W	57533.7	10:54:35
50.00E	57484.0	10:59:14
100.00E	57387.8	11:02:45
150.00E	57383.8	11:05:41
200.00E	57386.3	11:10:09
250.00E	57374.6	11:16:17
300.00E	57603.3	11:27:05
350.00E	57687.4	11:37:06
400.00E	57547.4	11:41:21
450.00E	57680.3	11:46:44
500.00E	57589.7	11:50:16
F: 2.	800.N	17
700.00W	57559.4	10:05:05
650.00W	57343.5	10:07:12
600.00W	57505.0	10:09:18
550.00W	57553.5	10:15:58
500.00W	57471.7	10:17:26
450.00W	57522.3	10:19:20
400.00W	57543.5	10:21:16
350.00W	57590.1	10:23:05
300.00W	57614.8	10:24:58
250.00W	57616.1	10:27:37
200.00W	57680.3	10:30:01
150.00W	57591.0	10:33:26
100.00W	57619.9	10:37:15
50.00W	57663.8	10:39:27
.00W	57536.5	10:41:04
50.00E	57475.2	10:43:07
100.00E	57415.8	10:47:32

16

L JUN

L JUN

15+00 W 14+00 W 13+00 W 12+00 W 11+00 W 10+00 W 9+00 W 8+00 W 7+00 W 6+00 W 5+00 W 4+00 W 3+00 W 2+00 W 1+00 W 0+00 W E 1+00 E 2+00 E 3+00 E 4+00 E 5+00 E 6+00 E 7+00 E 8+00 E 9+00 E 10+00 E



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Gold Dust Claim

Totem Gold Claim

German Basin Claim

To Highway

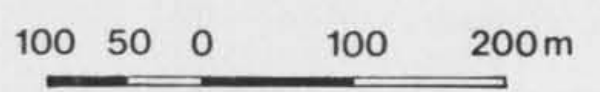
	Au	Ag	Pb	Zn
	oz/st	oz/st	%	%
2701 TRENCH 1	0.004	0.62	0.56	0.27
2702 " 1	0.008	0.20	0.06	0.04
2703 " 1	0.012	0.56	0.06	0.03
2704 TRENCH 2	0.004	0.20	0.07	0.03
2705 " 2	0.006	0.26	0.04	0.02
2706 TRENCH 4	0.002	0.35	0.19	0.10
2707 " 4	0.002	0.05	0.08	0.01
2708 TRENCH 5	0.016	2.97	0.33	0.02
2709 " 5	0.002	4.05	0.04	0.01

LEGEND

- VLF conductor (Seattle)
- ~~~~~ VLF conductor (Annapolis)
- Magnetic anomaly

Soil anomalies:

- Au
- Ag
- Pb
- - - Zn



IGNA
engineering &
consulting ltd

DOBRANA RESOURCES ltd

TOTEM GOLD
COMPILATION MAP
Location of workings

NTS 82F/7E

DATE
FEB. 88.

FIG. 5



GEOLOGICAL BRANCH
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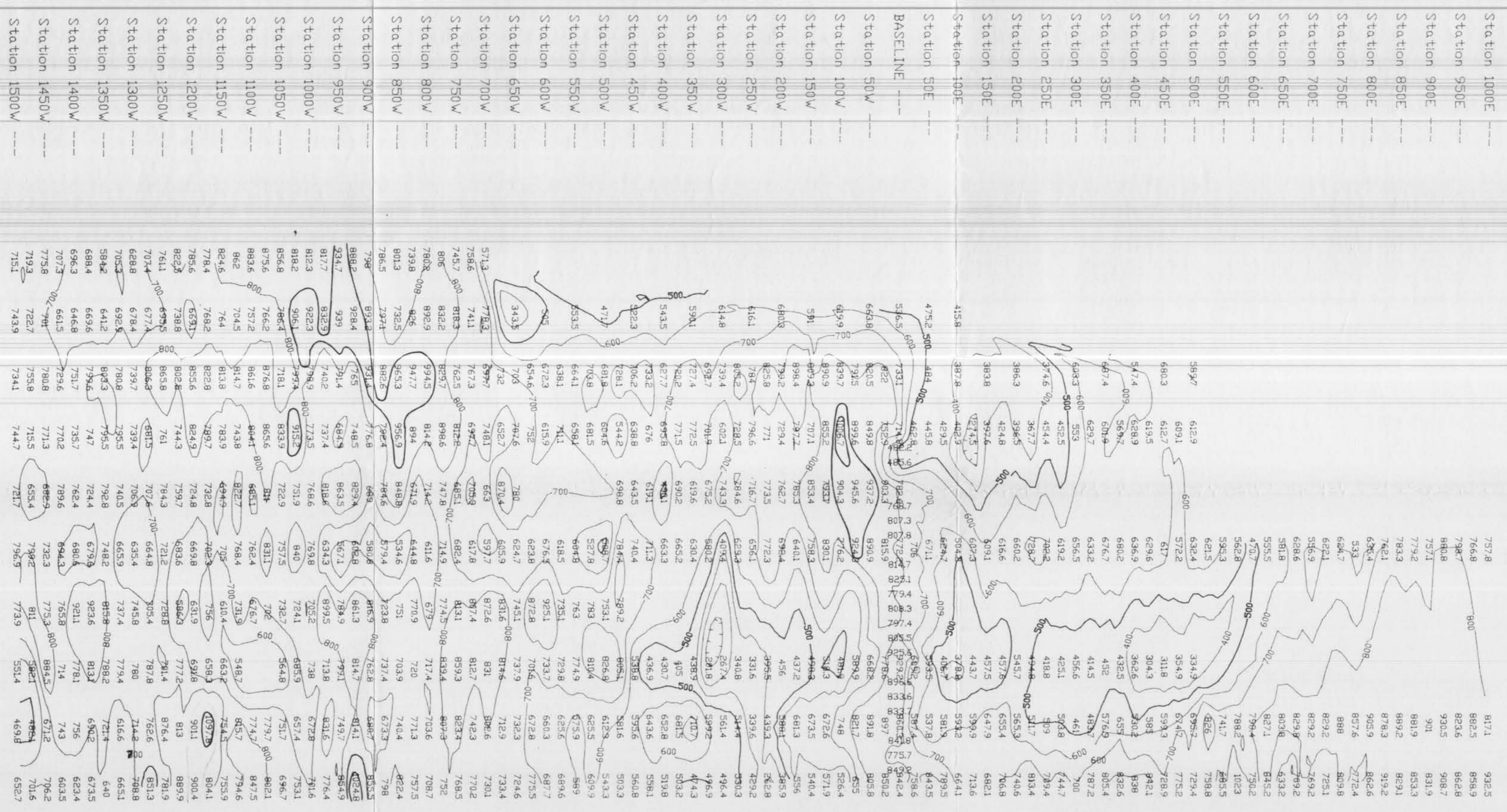
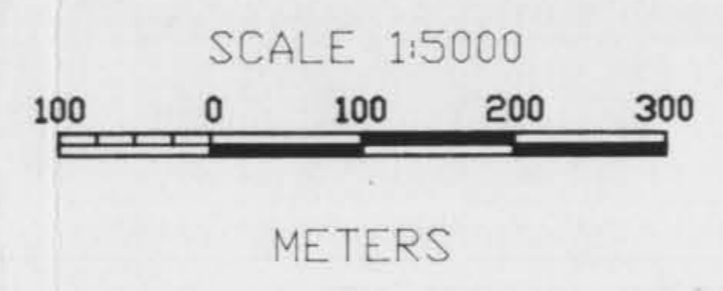
TOTAL MAGNETIC
FIELD STRENGTH

NELSON M.D., B.C.

N.T.S. 82F - 7E	DATE: FEBRUARY 1988
PLOTTED BY RPM.	FIGURE NO. 6

--- Line 900N
--- Line 800N
--- Line 700N
--- Line 600N
--- Line 500N
--- Line 400N
--- Line 300N
--- Line 200N
--- Line 100N
--- Line 0N

BASE MAG VALUE: 57,000 GAMMAS
CONTOUR INTERVAL: 100 GAMMAS





SCALE 1:5000
100 0 100 200 300

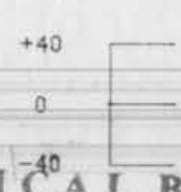
METERS

PROFILE LEGEND

INPHASE: _____

QUADRATURE:

PROFILE SCALE
(VALUES IN PERCENT)



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TOTEM GOLD PROJECT

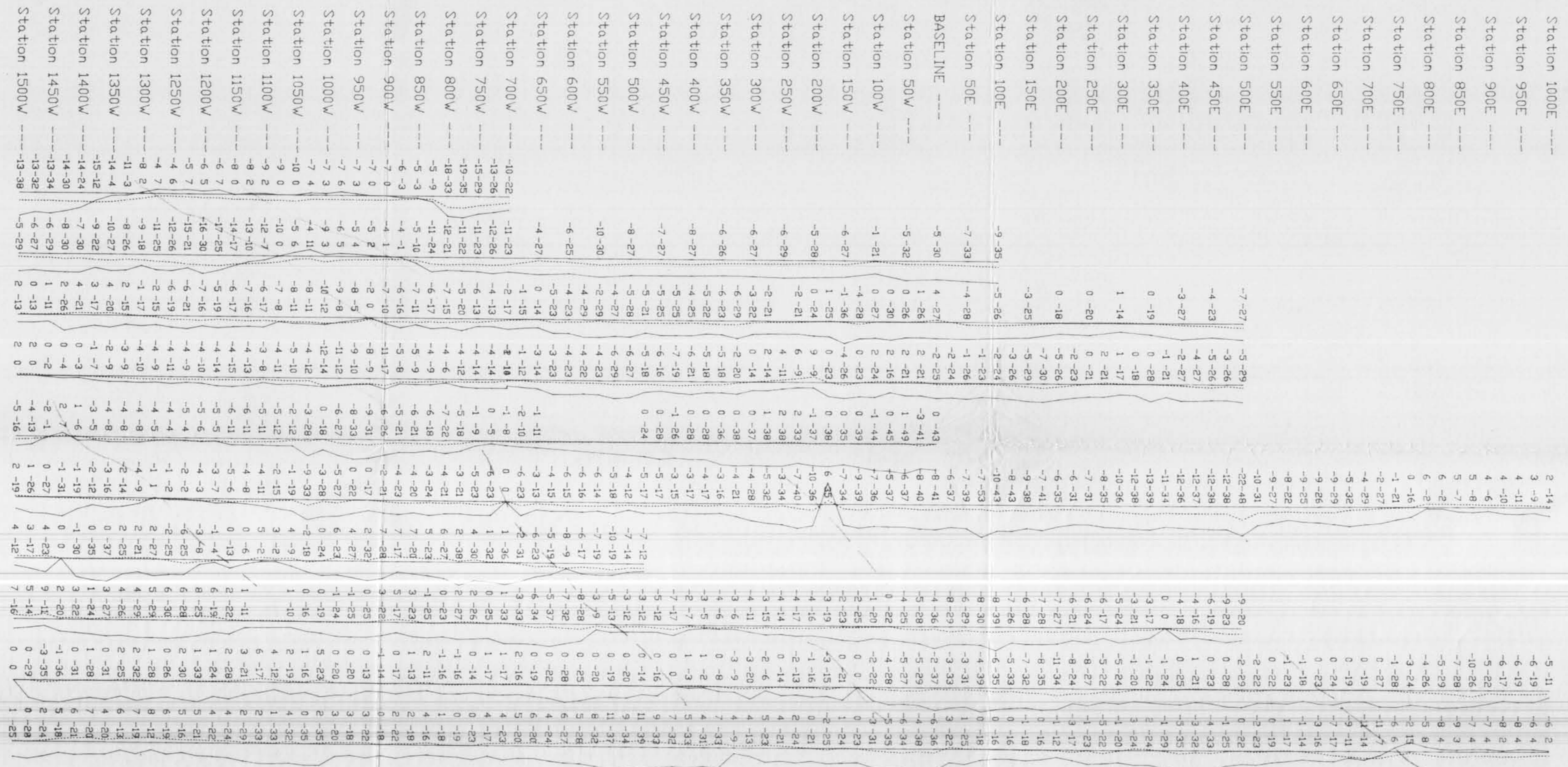
FOR: DOBRANA RESOURCES LTD.

BY: IGNA ENGINEERING AND CONSULTING LTD.

PLOTTED BY: RPM MAPPING
AND COMPUTER SERVICES LTD.

VLF - EM (SEATTLE)
PROFILES OF VERTICAL
INPHASE AND QUADRATURE
NELSON M.D., B.C.

N.T.S.: 82F - 7E DATE: FEBRUARY 1988
PLOTTED BY: R.P.M. FIGURE NO. 7



FOR EACH POSITION
LOWER NUMBER ON PAGE IS INPHASE
UPPER NUMBER ON PAGE IS QUADRATURE



PROFILE LEGEND
 INPHASE: _____
 QUADRATURE: _____

PROFILE SCALE
 (VALUES IN PERCENT)

GEOLOGICAL BRANCH
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TOTEM GOLD PROJECT

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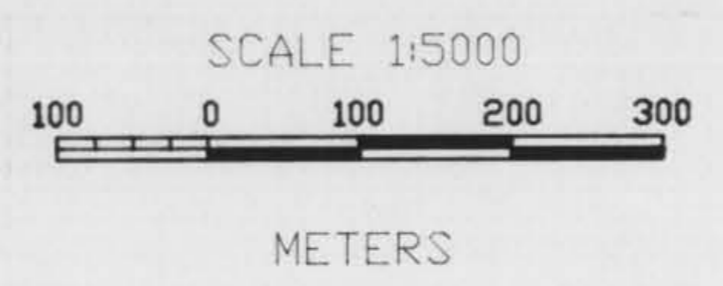
BY: IGNA ENGINEERING AND CONSULTING LTD.

PLOTTED BY: RPM MAPPING
 AND COMPUTER SERVICES LTD.

**VLF - EM (ANNAPOLIS)
 PROFILES OF VERTICAL
 INPHASE AND QUADRATURE**
 NELSON M.D., B.C.

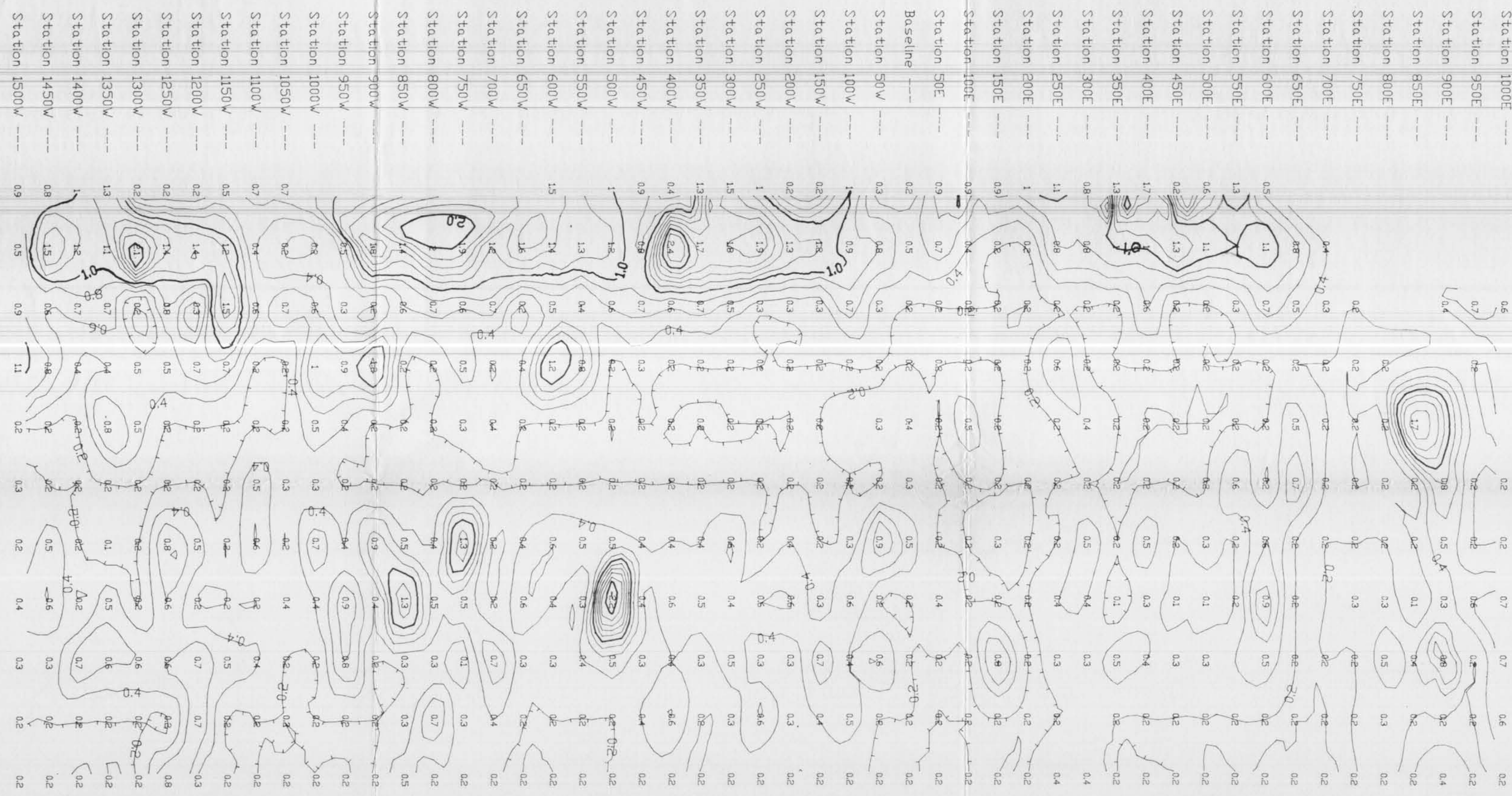
N.T.S. 82F - 7E	DATE: FEBRUARY 1988
PLOTTED BY R.P.M.	FIGURE NO. 8

Line 800N
 Line 700N
 Line 600N
 Line 500N
 Line 400N
 Line 300N
 Line 200N
 Line 100N
 Line 0N



FOR EACH POSITION
 LOWER NUMBER ON PAGE IS INPHASE
 UPPER NUMBER ON PAGE IS QUADRATURE





--- Line 1000N
 --- Line 900N
 --- Line 800N
 --- Line 700N
 --- Line 600N
 --- Line 500N
 --- Line 400N
 --- Line 300N
 --- Line 200N
 --- Line 100N
 --- Line 0N

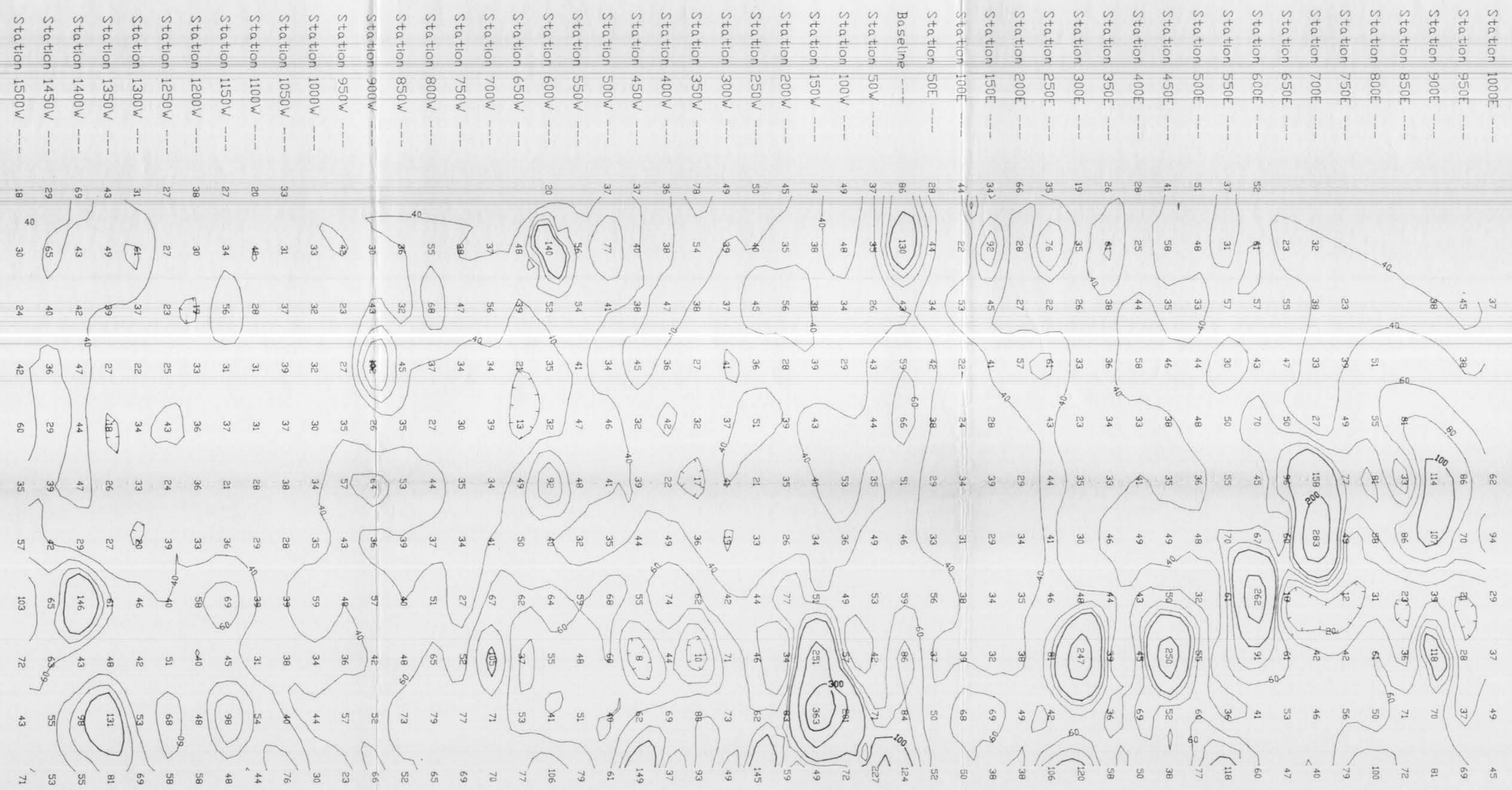
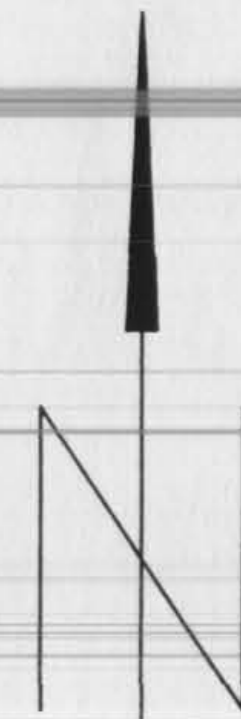
GEOLOGICAL BRANCH
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CONTOUR INTERVAL
 0.2 PPM AG
 (TICKS SIGNIFY AREAS BELOW 0.2 PPM)



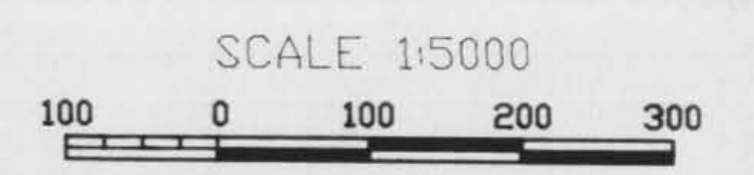
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TOTEM GOLD PROJECT	
FOR: DOBRANA RESOURCES LTD.	
BY: IGNA ENGINEERING AND CONSULTING LTD.	
PLOTTED BY: RPM MAPPING AND COMPUTER SERVICES LTD.	
SOIL GEOCHEMISTRY SILVER	
NELSON M.D., B.C.	
N.T.S. 82F - 7E	DATE: FEBRUARY 1988
PLOTTED BY: RPM.	FIGURE NO. 9



--- Line 1000N
 --- Line 900N
 --- Line 800N
 --- Line 700N
 --- Line 600N
 --- Line 500N
 --- Line 400N
 --- Line 300N
 --- Line 200N
 --- Line 100N
 --- Line 0N

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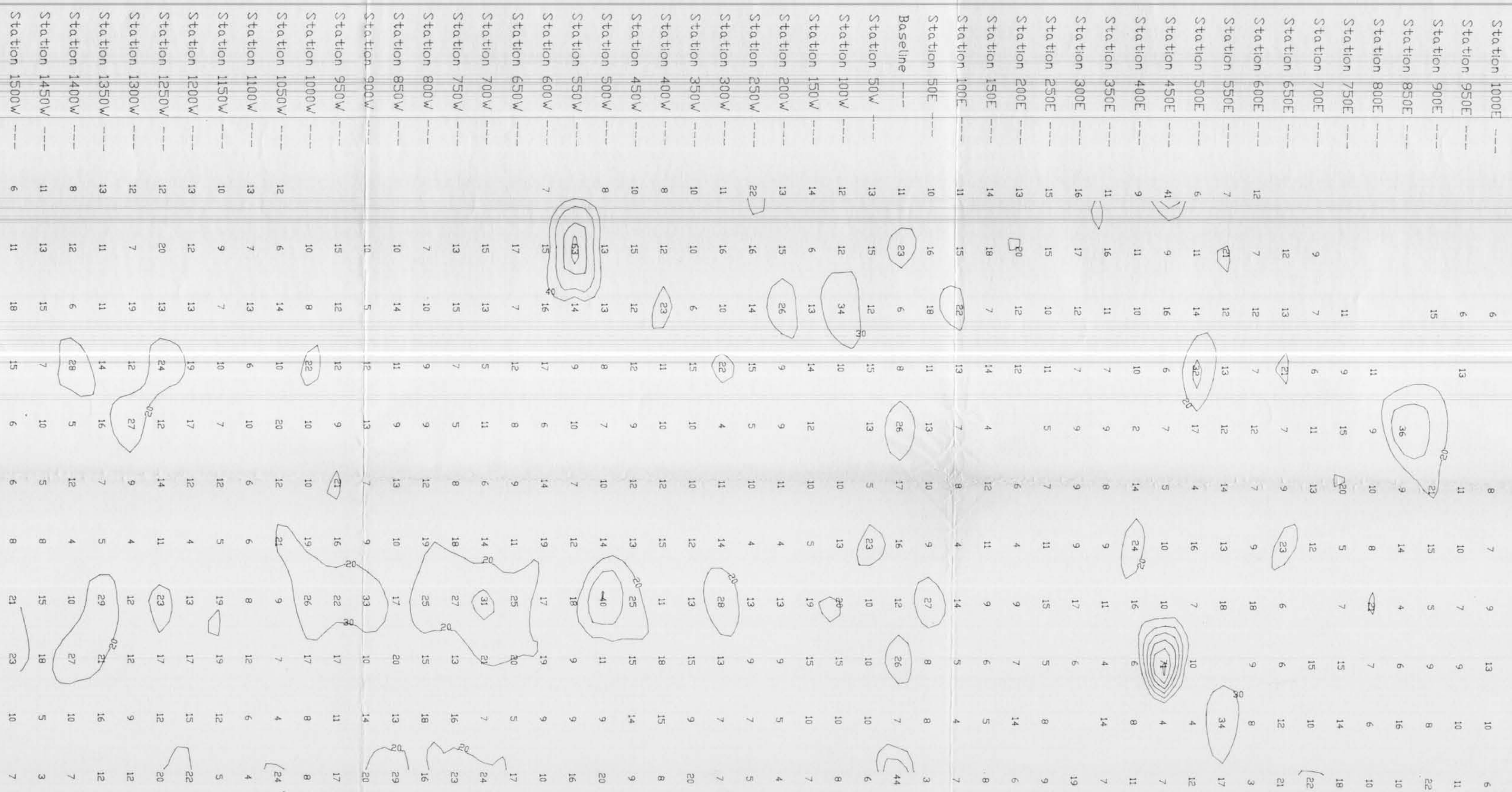


METERS

CONTOUR INTERVAL
 BELOW 100 PPM: 20 PPM ZN
 ABOVE 100 PPM: 100 PPM
 (TICKS SIGNIFY AREAS BELOW 20 PPM)

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PLOTTED BY: RPM MAPPING AND COMPUTER SERVICES LTD.	
SOIL GEOCHEMISTRY ZINC	
NELSON M.D., B.C.	
N.T.S.: 82F - 7E	DATE: FEBRUARY 1988
PLOTTED BY R.P.M.	FIGURE NO. 11

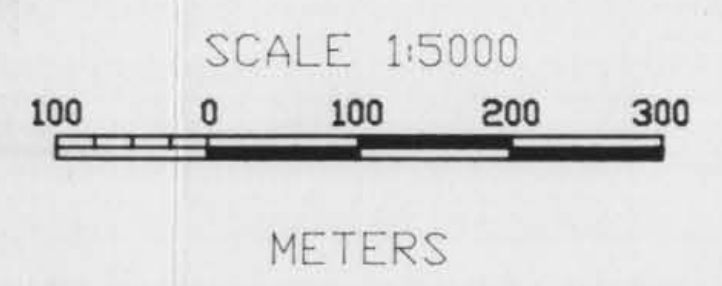


--- Line 1000N
 --- Line 900N
 --- Line 800N
 --- Line 700N
 --- Line 600N
 --- Line 500N
 --- Line 400N
 --- Line 300N
 --- Line 200N
 --- Line 100N
 --- Line 0N

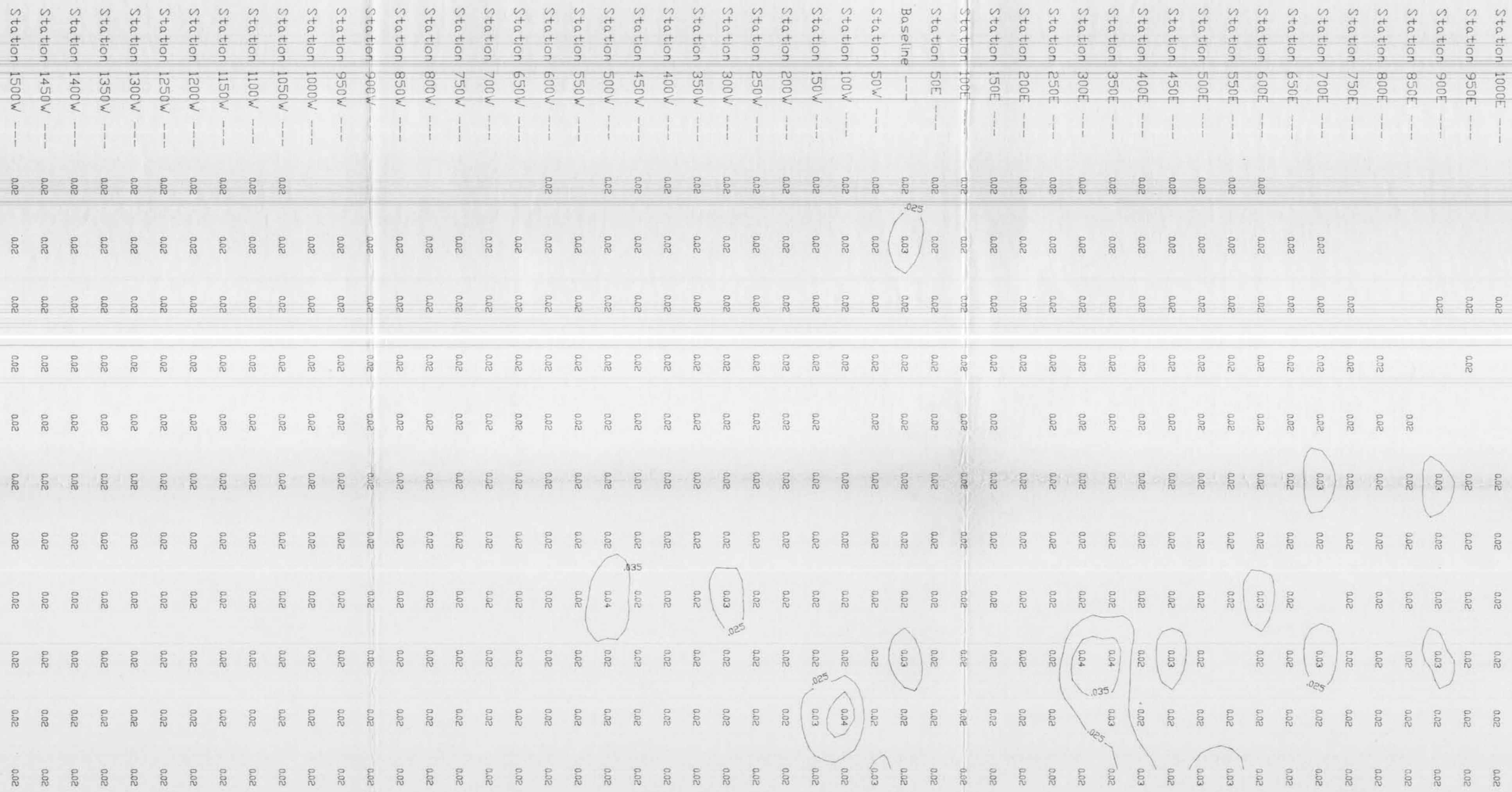
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CONTOUR INTERVAL
 10 PPM CU
 (LOWEST CONTOUR INTERVAL SHOWN: 20 PPM)



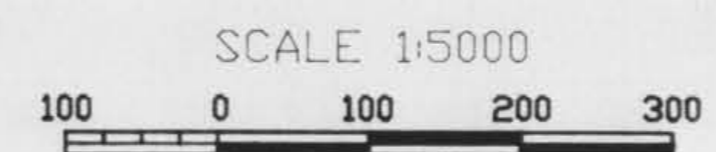
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PLOTTED BY R.P.M.	FIGURE NO. 13



--- Line 1000N
 --- Line 900N
 --- Line 800N
 --- Line 700N
 --- Line 600N
 --- Line 500N
 --- Line 400N
 --- Line 300N
 --- Line 200N
 --- Line 100N
 --- Line 0N

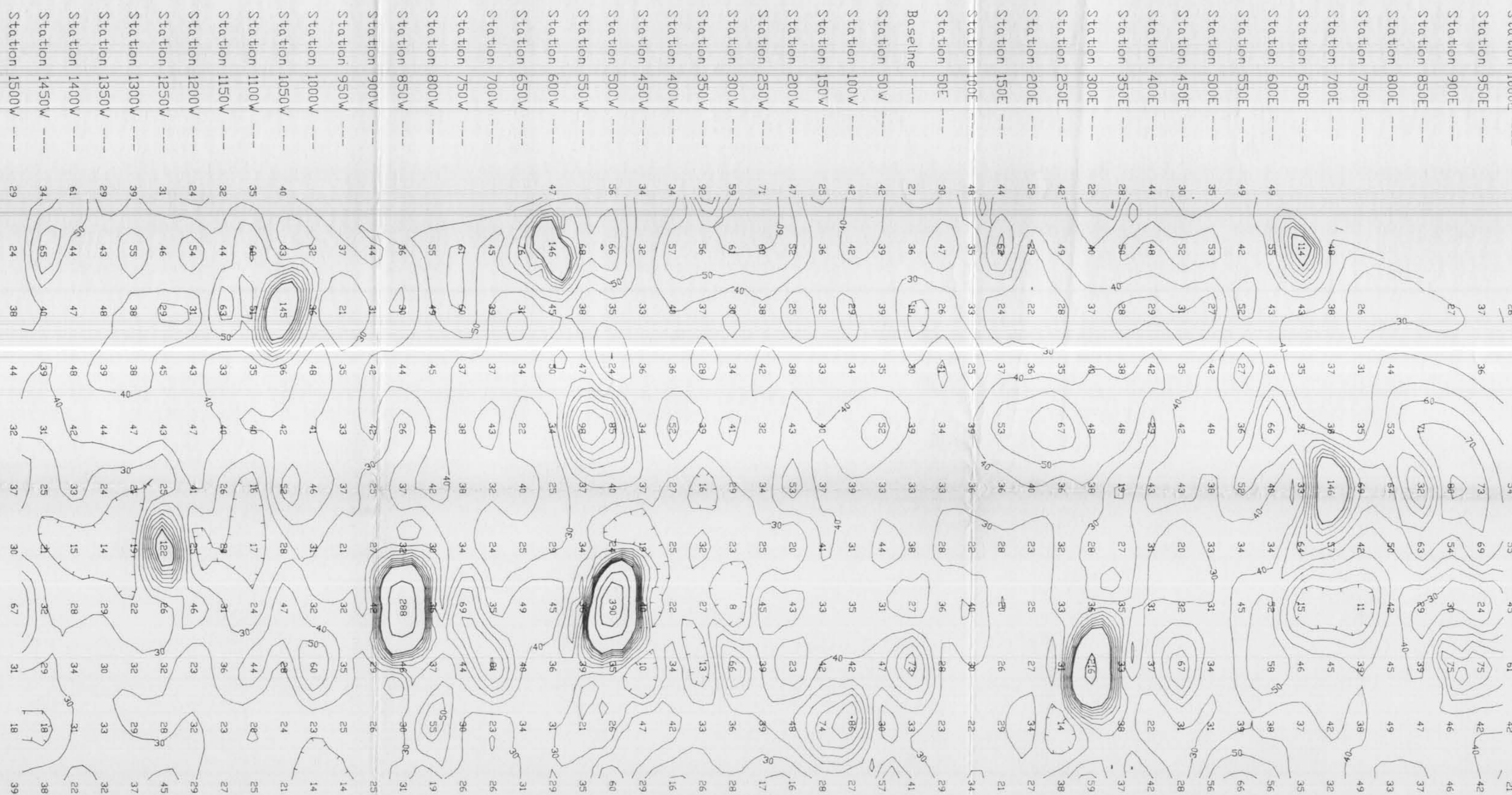
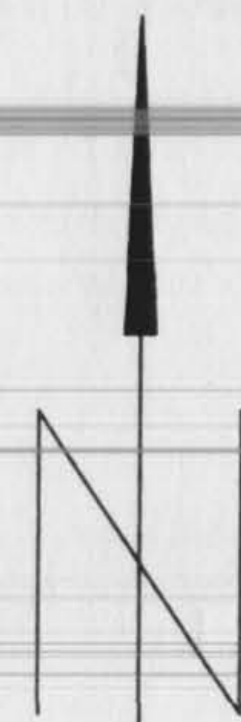
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SCALE 1:5000
 METERS
 CONTOUR INTERVAL
 0.01 PPM AU
 (FROM A BASE OF 0.005 PPM)

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PLOTTED BY: RPM MAPPING AND COMPUTER SERVICES LTD.	
SOIL GEOCHEMISTRY GOLD	
NELSON M.D., B.C.	
N.T.S. 82F - 7E	DATE: FEBRUARY 1988
PLOTTED BY R.P.M.	FIGURE NO. 12



--- Line 1000N
 --- Line 900N
 --- Line 800N
 --- Line 700N
 --- Line 600N
 --- Line 500N
 --- Line 400N
 --- Line 300N
 --- Line 200N
 --- Line 100N
 --- Line 0N

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SCALE 1:5000
 100 0 100 200 300

METERS

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**SOIL GEOCHEMISTRY
 LEAD**

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N.T.S. 82F - 7E
 PLOTTED BY R.P.M.

DATE: FEBRUARY 1988
 FIGURE NO. 10

CONTOUR INTERVAL

BELOW 100 PPM: 10 PPM PB

ABOVE 100 PPM: 100 PPM PB

(TICKS SIGNIFY AREAS BELOW 20 PPM)
 (LOWEST CONTOUR SHOWN: 20 PPM)