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PROPERTY FILE

TEXADA ISLAND MINERAL PROPERTY

Nanaimo Mining Division

N.T.S. 92F/10E, 15E

Latitude 49° 44' N
Longitude 124° 32' W

by

Grant A Hendrickson, P. Geoph.

for

Vananda Gold Ltd.

Vancouver, B.C. August 1991

SUMMARY

Vananda Gold Ltd., since its inception in 1987, has spent or caused to be spent ca. $2 million in direct exploration expenses on their 6,000 acre, Texada Island property. Of this amount, Freeport-McMoRan Gold Co. spent $1.4 million during their two year option period in 1988 and 1989. The work has mainly focused on the Vananda Camp in the northern section and areas surrounding the Texada Iron Mine in the southern sector. To date, 34 diamond drill holes totalling 9,000 metres (29,000 feet) have been drilled with soil sampling, airborne geophysics, ground magnetics, VLF, induced polarization and geological mapping completed on 80% of the land package.

During 1991, Vananda Gold spent $200,000 on diamond drilling and induced polarization. In the Vananda Camp, at the Little Billie Mine area, 5 holes, totalling 1,300 metres, were drilled to extend and confirm the mineral inventory outlined by the mine in 1951 and by Freeport in 1989. In addition, 10 km. of induced polarization was re-surveyed on the Little Billie Grid and 4.5 km. of new data was collected over the LaFarge Quarry, southeast of the Little Billie grid. In the southern area, 29.5 km. of induced polarization was completed on the Eagle Grid and detailed, follow-up induced polarization was done on the Sandy Grid.

As a result of 1991 drilling at the Little Billie Deposit, the 171,000 ton resource grading 0.21 ounces gold per ton, 0.82 ounces silver per ton and 1.3 % copper calculated in 1990, has been upgraded. Induced polarization anomalies trend southeast for 500 metres from the deposit, indicating potential for a significant increase in tonnage.

In the southern sector on the Eagle and Sandy Grids, induced polarization surveys located chargeability anomalies coincident to possible extensions of sulphide skarns from the Texada iron, copper deposit.

On the Eagle grid, a 1,000 metre by 600 metre chargeability anomaly follows a north trending diorite body with chalcopyrite-bearing skarn along its western contact. The anomaly is also, in part, on strike to the north of copper ore that was mined underground along the flat lying, volcanic-marble contact on the northern extension of the Texada Mine. North of this anomaly, four smaller chargeability highs within areas of low magnetic relief, suggest the presence of sulphide mantos and chimneys similar to the Quarry Manto, 800 metres west of the grid, that grades 0.23 opt gold. Ranging in strike length from 200 metres to 300 metres with possible thicknesses of ten to fifty metres, the mantos represent significant targets.

On the Sandy Grid, an IP chargeability anomaly with dimensions of 700 metres by 500 metres, extends north from the Lake Deposit, a magnetite-pyrrhotite deposit, into an area of low magnetic relief perhaps more indicative of pyrite, chalcopyrite mineralization. Near the northern end of this anomaly, pyrite mineralization at surface in the Lake Fault returned a gold assay of 1.123 ounces per ton in a 0.6 metre chip sample. DDH 89-26, intersected 2.2 metres of 0.302 opt gold in silicified pyrite, 100 metres vertically below this surface mineralization.

A Phase 1 test of the IP anomalies in the southern sector is recommended. Diamond drilling totalling 4,050 metres in conjunction with additional geophysics to fully delineate the targets, would cost approximately $360,000. At the Little Billie, 2,500 metres of drilling and 10 days of IP are required to test the strike extension of the known deposit. Cost for this work would be $200,000.

Assuming the anomalies are shown to have economic significance, Phase II drilling and geophysics would require 18,800 metres of diamond drilling costing $1,500,000.

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1.0 Introduction:

This report has been written with the assistance of C.N.Forster, F.G.A.C., who was the field manager responsible for Freeport-McMoRan Gold Company's work on the property and is now a geologist for Vananda Gold Ltd. The sections of the report describing the location, accessibility, climatic conditions of the property as well as the claim holdings, underlying agreements and the historical exploration and mining activities have been provided by Mr. Forster. Similar descriptions of the property are also published in an earlier Engineering Report by Peatfield, (Ph.D., P.Eng.) 1986. The geological and mineral deposit descriptions are also in part from Forster and Peatfield as well as from Ettlinger, (Ph.D., F.G.A.C.) 1990. Diamond drill results from the Little Billie and the assay data from the Paxton open pit were compiled by Forster. All of the above has been reviewed for accuracy and completeness.

The geophysical work in 1989 and 1991 was done by Delta Geoscience for Freeport-McMoRan Gold Co. and Vananda Gold Ltd., respectively. The descriptions of the geophysical surveys on the Eagle Grid, the Sandy Grid and the Little Billie areas are based on this work. The conclusions and recommendations of this report are the responsibility of G.A. Hendrickson based upon these geophysical studies and the geological work of C.N. Forster.

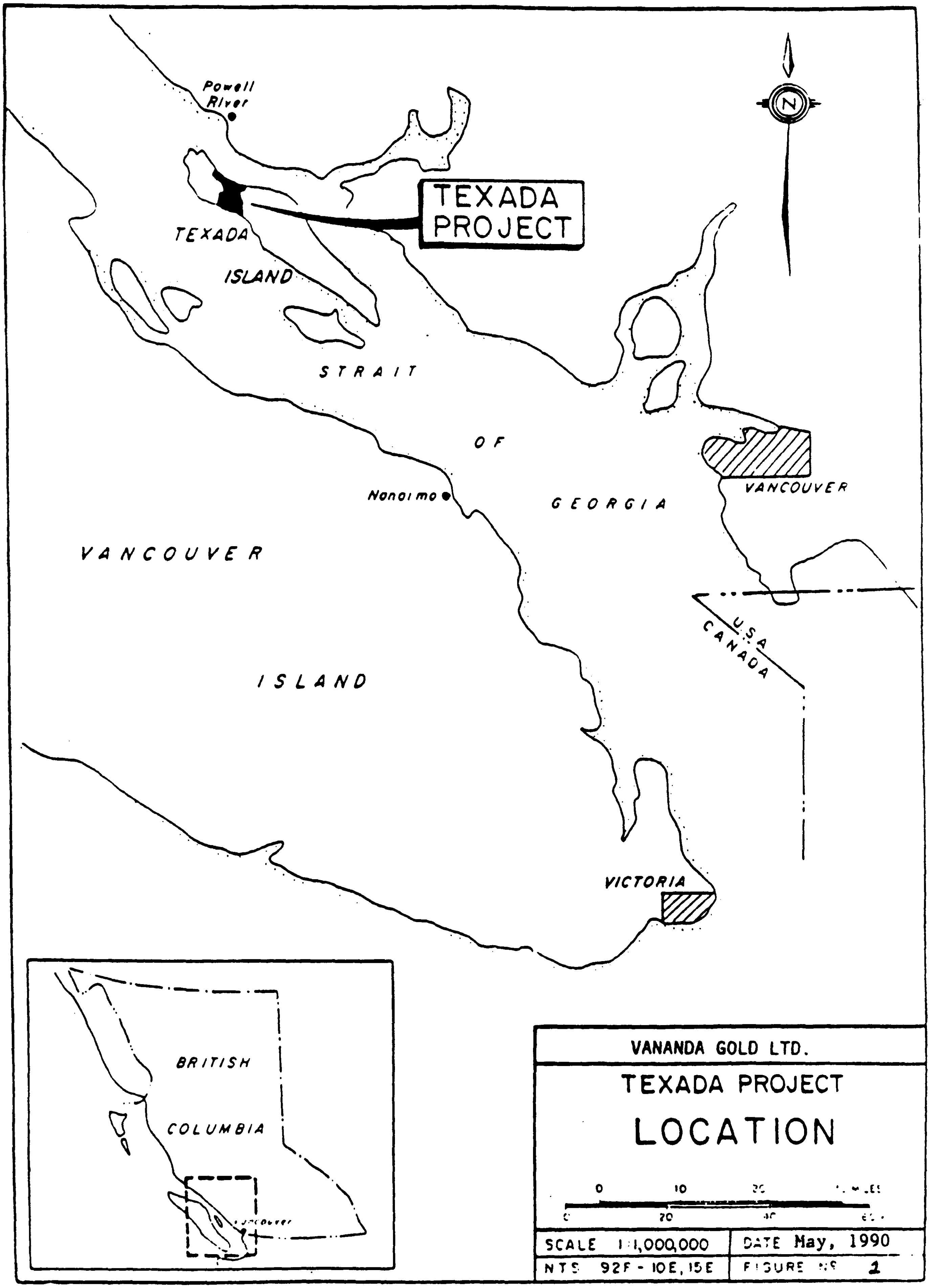
1.1 Location and Access:

The claim block is situated near the northern end of Texada Island, (Figure 1), encompassing the small town of Vananda (Pop. 700), 120 km northwest of Vancouver, B.C. Access to the island is by ferry from Powell River (Pop.14,000), or by scheduled air services into a 3,300 foot asphalt air strip near the town of Gilles Bay.

1.2 Accessibility, Climate, Local Resources:

Road access across the property is provided by paved road connecting Gillies Bay to Vananda and the Ferry terminal at Blubber Bay. From this road numerous secondary roads provide ready access to all portions of the claim block.

The northern half of the island has moderate topography with up to 500 feet


Powell River
TEXADA PROJECT
TEXADA ISLAND
STRAIT OF GEORGIA
VANCOUVER
Nanaimo
VANCOUVER ISLAND
U.S.A.
CANADA
VICTORIA
BRITISH COLUMBIA
VANANDA GOLD LTD.
TEXADA PROJECT
LOCATION
0
10
20
SCALE 1:1,000,000
DATE May, 1990
NTS 92F - 10E, 15E
FIGURE Nº 1

of relief on the claim block. Climate is cool and wet in the winter and warm and dry in summer. Snowfall and protracted cold weather are uncommon, hence year round exploration and development is possible. Yearly rainfall averages 30 inches.

The southwest portion of the claim block is actively quarried by Holnam West Materials ltd. (previously Ideal Cement Company Inc.), producing 2.9 million tons of limestone annually. The northeast corner of the claims encompass a large, dormant limestone quarry, owned by Lafarge Cement, with a small, chemical grade, limestone quarry operating immediately to the south and adjacent to the eastern boundary of the property. At the most northerly end of the island near the ferry terminal, the third operating quarry, owned by Ashgrove Cement Company, produces one million tons of limestone per annum.

Logging is an important secondary industry for the Island, with two small companies sharing the harvest. Both companies often provide heavy machinery and timber clearing services to the quarries and road and drill site preparation to the drilling contractors.

The island is well serviced with electric power as the main electrical transmission line between Vancouver Island and the mainland crosses Texada Island. The extension of the Transmountain Gas Pipeline across Texada Island to Powell River and Vancouver Island has recently been completed. The pipeline crosses the claim block from south of the Cornell mine to the east end of Priest Lake.

2.0 Claim Holdings:

Vananda Gold Ltd.'s land holdings include three mining leases, thirty-one crown granted mineral claims and eighty-nine located claim units and fractions (Appendix I), that are leased from the registered owners, Holnam West Material Ltd. The property also includes seven crown granted mineral claims, Eagle 1-7, purchased from Kargen Developments Ltd and Ileen Forward on April 15, 1991 and the two-unit Sandy Claim acquired from Johanson, Perry and Duker of Vananda through a claim swap. An independent appraisal by Vancouver law firm Lawson & Lundell of the Holnam properties, shows that all holdings are valid and encumbrance-free. Vananda Gold Ltd. has a 100% interest in all of the claims subject to underlying Net Profit and Net Smelter interests.

3.0 Mining History:

Texada Island has had a long and complex mining history, most of which involves mines located on the present Vananda Gold Ltd. property. The limestone operations are not considered here.

The property includes:

1. Four small past-producing gold/copper skarn deposits of the Vananda Camp, which includes the Marble Bay Mine, the Little Billie Mine, the Copper Queen Mine and the Cornell Mine.

2. Four open pit iron/copper skarn deposits referred to collectively as Texada Iron Mines. These include the Prescott, the Yellow Kidd, the Paxton and the Lake Deposits. in addition, there were at least four horizontal underground deposits mined beneath, and peripheral to the open pits.

3. Two limestone quarries, one of which has been shut down.

Table 1, from Peatfield, 1986, summarizes the production history of the individual deposits.

TABLE 1 - PRODUCTION HISTORY OF TEXADA ISLAND MINES

Mine	Period	Prod. (tons)	Au (oz)	Ag (oz)	Cu (M lbs)	Fe (MMt)
Cu Queen	1903-1917	4,500	1,660	12,500	398	
Cornell	1897-1917	44,500	16,600	77,400	3,016	
Little Billy	1896-1952	70,000	12,800	42,260	4,446	
Marble Bay	1899-1929	220,000	54,460	445,000	15,000	
Total Vananda Camp		339,250	85,520	577,160	22,860	
Texada Mines	1952-1976	23,000,000	31,300	833,900	58,900	11.5

PRODUCTION GRADES FOR TEXADA ISLAND MINES

Mine	Period	Prod. (ton)	Au (oz/ton)	Ag (oz/ton)	Cu (%)
Cu Queen	1903-1917	4,500	0.370	2.78	4.4
Cornell	1897-1917	44,750	0.37	1.73	3.4
Little Billy	1896-1952	70,000	0.18	0.60	1.3
Marble Bay	1899-1929	220,000	0.25	2.02	3.4
Average Vananda Camp		339,250	0.252	1.70	3.0
Texada Mines	1952-1976	23,000,000	0.001	0.036	0.14

Note: Production figures compiled by Peatfield, 1986.

4.0: Exploration History

Exploration and mining history on the island can be divided into several distinct episodes. Early work, prior to 1895, concentrated on the iron skarns, with some very small copper ore shipments from related occurrences. Between 1895 and 1919, most of the activity was on the gold-copper-silver skarn deposits of the Vananda Camp, which were developed and sustained production during this period. The final closure of these mines was related to the severe decline in copper prices following the First World War.

4.1 Early History:

After production ceased in the Vananda Camp in 1917 the Camp received only one exploration campaign prior to 1942. In 1929, A.W. Lakes directed a program of geological mapping and diamond drilled 25 holes in the Florence, Security and Cornell areas for the Central Copper and Gold Company.

Lakes concluded his lengthy report with a strong recommendation to continue work on the property, but this was not followed by the Central Copper and Gold Company because of the stock market crash in 1929 (Dolmage, 1944).

4.2 Middle History: 1942-1952

Exploration on the Little Billie Mine was revitalized in 1943 and by 1944 the three remaining Vananda mines were under the control of Industrial Metals Mining Co. Ltd. Through to 1944, IMMC de-watered the Little Billy and Copper Queen mines, rehabilitated both shafts, reconstructed the head frames, and diamond drilled 76 holes, totalling 7,700 feet from both surface and underground locations. (Dolmage, 1944; James, 1944, 1946; Stevenson, 1945).

In January, 1945, IMMC sold the properties to Vananda Mining Company (Stevenson, 1945). VMC deepened the Little Billie shaft from 280 feet to the present depth of 600 feet and drove cross-cuts at the 480 and 600 feet. In 1950 and 1951, VMC extended the 600 level drift south to the 720 level of the Copper Queen workings, where they drilled several underground holes.

At the close of operations in 1952, 17,500 tons of ore remained above the 600 foot level in the Little Billie, while drilling below the level had intersected significant copper and gold mineralization.

4.3 Recent History: 1976-1978

From 1955 to 1974, Ideal Cement acquired the crown grants and claims that comprise the Vananda Camp and in 1976 purchased the assets of Texada Mines.

In December, 1978 Shima Resources optioned the ground and undertook gravity, IP, VLF, and magnetic surveys covering most of the Vananda claims with 1000 foot spaced lines. Three targets based on coincident residual gravity, IP and magnetic anomalies were recommended for drilling (Ager & Berreta, 1979).

Six holes in 1979 and ten holes in 1980, tested the three targets; one east of the Little Billie, one immediately north of the Eagle Claims, and the third on the northern extension of the Lake Deposit. Only DDH 79-1, in the Little Billie area encountered significant mineralization:- 2 metres of 0.102 opt Au within 12 metres of 1.55% Cu, 0.052 opt Au and work was suspended.

In 1984, Cartier Resources acquired the lease from Shima and conducted IP surveys over the Cornell Mine and the Florence, Security zones. Nine holes were drilled near the Cornell Mine to locate the high-grade intercepts of Lakes, and the tenth hole was drilled to intercept the mineralization beneath the 600 Level in the Little Billie Mine. The nine holes at the Cornell were negative, and 84-10 at the Little Billie intersected 8.7 feet of 0.23 opt gold, 40 feet above the 600 level drift.

In 1986, Vananda Gold Ltd. was formed and optioned the lease from Cartier. Vananda Gold undertook extensive excavator stripping and soil geochemical surveys in the Florence-Security, Little Billie, Copper Queen and Cornell areas (Hardy 1988).

4.4 Freeport-McMoRan Gold Company; 1988 Work Program:

Freeport-McMoRan commenced work on the property in August, 1988. The program consisted of aerial photography; orthophoto mapping; airborne geophysics; reconnaissance and detailed geological mapping; 23 km of line cutting on the Sandy grid; rehabilitation of the 1984 Cartier grids (Cornell N & S grids); chip/channel sampling the Texada Mines' pits, drill core and coarse rejects from the underground workings; soil sampling and induced polarization on the Sandy and Cornell Grids; and seven NQ diamond drill holes totalling 2500 metres. Expenditures for the above work totalled approximately $600,000.

4.5 Freeport-McMoRan Gold Company: 1989 Work Program:

Freeport-McMoRan's work continued in 1989 with additional line cutting, soil sampling, geological mapping, geophysics, trenching and diamond drilling. This included 42 km of line cutting on the Eagle grid, 11 km on the Volunteer grid and 7 km on the Cornell grid. Magnetometer and VLF surveys were done on all grids, while soil sampling was done on the Eagle, Volunteer and Cornell grids. Twenty-two diamond drill holes were completed (89-8 to 89-29) totalling 5,216 metres.

Expenditures for the above totalled $800,000 for a grand total of $1,400,000.

4.6 Vananda Gold Ltd.: 1991 Work Program:

Vananda Gold's 1991 program commenced in February with five NQ diamond drill holes, totalling 1300 metres, in the Little Billie mine area.

In May, induced polarization was conducted over the Eagle grid, which had not previously been surveyed. Detailed follow-up IP, designed to improve the understanding of the depth and shape of the chargeability horizons, was done on Line 16 N of the Sandy grid, Line 7 and 15 N of the Eagle grid and Line 5 N of the Little Billie grid (Cornell N grid). Gradient array, induced polarization was also done over the LaFarge Quarry and re-done over the Little Billie grid.

Cost for the 1991 work to date is approximately $200,000, funded solely by Vananda Gold Ltd.

5.0: REGIONAL GEOLOGY

Texada Island is located along the eastern margin of the Insular tectonic belt and is interpreted to be underlain by rocks of Wrangellian affinity (Ettlinger and Ray, 1988; Bradford, 1989; Webster and Ray, 1990). Over 90% of the Island is underlain by an unknown thickness of undifferentiated Texada Formation basalts assigned to the middle to upper Triassic aged, Karmutsen Formation on Vancouver Island (Muller, 1977). Overlying these, principally in the northwestern quarter and the central areas of the island, are massive micritic, Marble Bay Formation limestones correlative to the upper Triassic Quatsino Formation on Vancouver Island (Muller, 1977). North of Gillies Bay, Cretaceous aged sandstones and shales of the Cedar District Formation unconformably overlie the Texada Volcanics.

Intrusive into the Texada and Marble Bay Formations are a suite of I-type, calc-alkaline intrusives (Webster and Ray, 1990) that are subdivided into seven distinct groups (Bradford, 1989). The largest is the Gillies stock, quartz monzonite in composition, with a U-Pb radiometric age of 178 Ma (Ettlinger and Ray, 1989). A smaller quartz diorite stock that outcrops along the coastline north of the Little Billie Mine and informally known as the Little Billie Stock has also been dated at 178 Ma (Ettlinger and Ray, 1989). Zircon from megacrystic hornblende diorite at the Cornell copper-gold mine yielded a near concordant minimum age of 175 Ma (Ettlinger, 1990).

Faulting on the island is dominated by major northwest striking, sinistral strike-slip faults (Glover, 1989; Bradford 1989). These are cut, and in part offset by, north-south and east-west faults that cut all stratigraphic and intrusive units.

Folding is broad and open with bedding in outcrop seldom exceeding 35 degrees. Centred on Vananda Gold's property is a broad, northerly plunging syncline with the main belt of limestones on the property forming its core. Adjacent to the granitic stocks, particularly in Texada Mine's Paxton Pit, tight folds around horizontal axial planes are indicative of plastic deformation in marbles above intrusive granitic stocks. On the northeastern coast line of Texada, Muller (1969) reports highly deformed carbonate beds.

6.0: PROPERTY GEOLOGY

The claims are 80% underlain by the Marble Bay limestones with the Texada basalts underlying the eastern and western margins of the property (Figure 2). Along the eastern boundary, the basalts dip shallow to moderately west under the limestones. On the western margin, the volcanics are in fault contact with the limestone.

The basalts are roughly divided into several units on the property that includes an upper amygdaloidal basalt overlying a one to three metre thick limestone bed that in turn overlies an unknown thickness of massive porphyritic basalt. A thick agglomeritic to brecciated unit with pillows appears to underlie the above in the Priest Lake area. South of the Texada mine area along the coast line, the basalts are series of intercalated pillow basalts, tuffaceous horizons and porphyritic basalts that dip shallowly to the northeast.

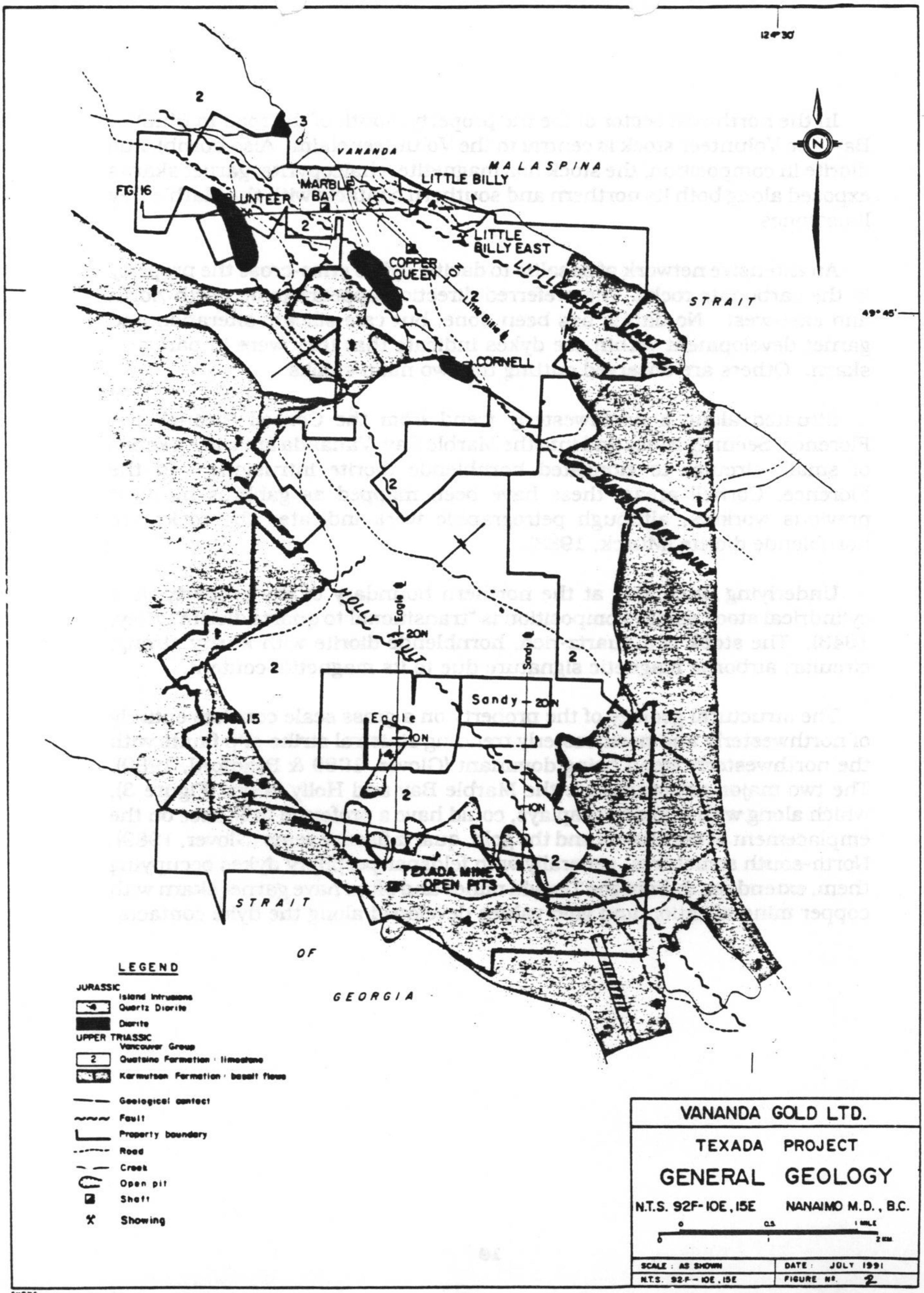
The overlying Marble Bay limestones are thick bedded, almost devoid of distinguishing marker beds and fossils and may be up to 2,000 feet in thickness (Muller, 1977). Muller makes three divisions in the carbonates on Texada: a lower, pure $CaCO_3$ limestone, a middle mixed dolomitic limestone yielding up to 17% MgO, and an upper, dolomitic unit.

Four primary intrusive bodies outcrop on the property and all have significant to potentially significant copper, gold and iron rich skarns developed along their contacts with the Marble Bay limestones and, local to the Texada Mine, the basalt.

The Little Billie stock in the northern portion is a biotite quartz diorite (tonalite– Ettlinger, 1988) with important copper, gold-rich wollastonite, garnet, diopside skarns developed in vertical pipes along embayments in the intrusive contacts.

The Gilles stock south of the Texada iron mines was responsible for the magnetite and chalcopyrite-rich amphibole, garnet skarns that developed within large embayments in the granite; as vertical magnetite pipes in the marble; and along the lower, flat lying volcanic, marble contact.

The Northwest Diorite extends north across the Eagle claims from the western flank of the Gillies stock and is hornblende diorite in composition (Bradford, 1989). Garnet, amphibole skarns with disseminated to massive pods of chalcopyrite and magnetite outcrops along the easterly dipping, western contact.



124°30'
49°45'
VANANDA
MALASPINA
STRAIT
STRAIT
OF
GEORGIA
FIG. 16
VOLUNTEER
MARBLE BAY
LITTLE BILLY
LITTLE BILLY EAST
COPPER QUEEN
CORNELL
LITTLE BILLY FAULT
HOLLY FAULT
Little Billie
Eagle
Sandy
20N
10N
FIG. 15
TEXADA MINES OPEN PITS
LEGEND
JURASSIC
Island Intrusions
Quartz Diorite
Diorite
UPPER TRIASSIC
Vancouver Group
Quatsino Formation · limestone
Karmutsen Formation · basalt flows
Geological contact
Fault
Property boundary
Road
Creek
Open pit
Shaft
Showing
VANANDA GOLD LTD.
TEXADA PROJECT
GENERAL GEOLOGY
N.T.S. 92F-10E, 15E
NANAIMO M.D., B.C.
0
0.5
1 MILE
0
1
2 KM
SCALE : AS SHOWN
DATE : JULY 1991
N.T.S. 92F - 10E, 15E
FIGURE No. 2
CHONG

In the northwest sector of the the property, south of the road to Blubber Bay, the Volunteer stock is central to the Volunteer claim. Also hornblende diorite in composition, the stock has magnetite, chalcopyrite, garnet skarns exposed along both its northern and southern contacts with the Marble Bay limestones.

An extensive network of basaltic to dacitic dykes criss-cross the property in the carbonate rocks. The preferred direction appears to be north-north and east-west. No dating has been done, but calc-silicate alteration and garnet development within the dykes indicate that they were in part pre-skarn. Others are observed cutting the two main stocks.

Situated along a northwesterly trend from the Cornell through the Florence, Security zones and into the Marble Bay, Vananda area, are a series of small, circular to elongated hornblende diorite intrusions. In the Florence, Cornell areas, these have been mapped as gabbros by most previous workers, although petrographic work indicates the rocks are hornblende diorite (Murck, 1988).

Underlying Sturt Bay at the northern boundary of the property, is a cylindrical stock whose composition is "transitional to quartz diorite", (Ney, 1943). The stock is a quartz-rich, hornblende diorite with a very strong, circular, airborne magnetic signature due to its magnetite content.

The structural geology of the property on a gross scale consists entirely of northwesterly and northeasterly trending sinistral strike-slip faults with the northwesterly trend being dominant (Glover, 1989 & Bradford, 1989). The two major structures are the Marble Bay and Holly faults (Figure 3), which along with numerous splays, could have a profound influence on the emplacement of the skarns and the gold, quartz fissure veins (Glover, 1989). North-south structures, generally with feldspar porphyry dykes occupying them, extend north from the Texada mines and often have garnet skarn with copper mineralization and gold values developed along the dyke contacts.

TABLE II

LITTLE BILLY SUMMARY ASSAYS

Vananda Gold's Texada Project:

Summary of Significant Drill Results in the Little Billie Mine Area:

DRILL HOLE	from (m)	to (m)	Interval (m)	Au (oz/ton)	Ag (oz/ton)	Cu (%)
T88-1	228.2	234.1	5.9	0.212	0.85	1.58
	241.2	243.7	2.5	0.416	2.65	5.92
T88-3	271.1	276.2	5.1	0.820	2.16	2.90
T88-4	278.9	283.5	4.6	0.499	1.55	2.57
T89-9	292.1	298.5	6.4	0.075	0.23	0.82
T91-31	175.8	177.4	1.6	0.246	1.71	3.84
	241.0	248.7	7.7	0.228	0.77	1.77
T91-32	160.2	162.0	1.8	0.141	0.56	1.45
	166.0	167.7	1.7	0.145	0.47	1.69
	204.7	206.7	2.0	0.823	1.18	1.94
	213.0	233.8	20.8	0.291	1.17	2.45
T91-33	221.7	227.4	5.7	0.372	0.50	3.11

7.0 MINERAL DEPOSITS

Texada Island hosts several gold-enriched copper and iron skarn deposits and numerous smaller skarn and replacement (manto) bodies, quartz-gold veins and quartz-filled shears. All of the past producing skarn deposits and developed skarn prospects on the island are contained within the property held by Vananda Gold Ltd. (Figure 2). Copper-gold skarn deposits were exploited in the Vananda camp on the northeast part of the island. Between 1896 and 1976 approximately 2,425 kilograms of gold, 16,368 kilograms of Ag, and 9,157 metric tons of copper were produced from 307,700 metric tons of ore from the Little Billie, Marble Bay, Cornell and Copper Queen mines (Peatfield, 1987) in the Vananda area.

Skarn mineralization at these deposits is similar to other copper skarns described by Einaudi et al. (1981) and Meinert (1983). However, the two largest deposits, worked at the Marble Bay and Little Billie mines, averaged 0.23 and 0.17 ounces Au per ton, respectively. Thus these deposits have gold grades comparable to the important Fortitude gold skarn in Nevada (Myers and Meinert, 1990) and the newly reopened Nickel Plate mine in the Hedley district (Ray et al., 1988).

At the southern end of the property, over 20,000,000 tons of magnetite and chalcopyrite ore were produced from the iron skarns of Texada Mines (Peatfield, 1987).

7.1 Little Billie Mine:

The Little Billie Mine was first operated in the 1890's and continued intermittently to 1951 producing 70,000 tons of ore grading 0.18 opt gold, 0.6 opt silver and 1.3 % copper above the 600 foot level, the lowest working level in the mine. Diamond drilling in 1951, 1988 and 1989 indicated and inferred a geological resource of approximately 171,000 tons grading 0.21 opt gold, 0.82 opt silver and 1.39 % copper (Peatfield, 1990). Three of five holes drilled in 1991, 91-31, 32 & 33, (Figure 20; Table II), enhance the resource estimated by Peatfield.

7.2 Texada Iron Mines:

The iron, copper deposits in the southern portion of the claim block produced 20,000,000 tons of magnetite, chalcopyrite skarn ore developed in marble and the peripheral to the irregular, northwest margin of the Gillies quartz monzonite stock. At the close of the mine in 1976, reserves were listed as 1,200,000 tons of 40% Fe and 0.42% Cu (Dove, 1976).

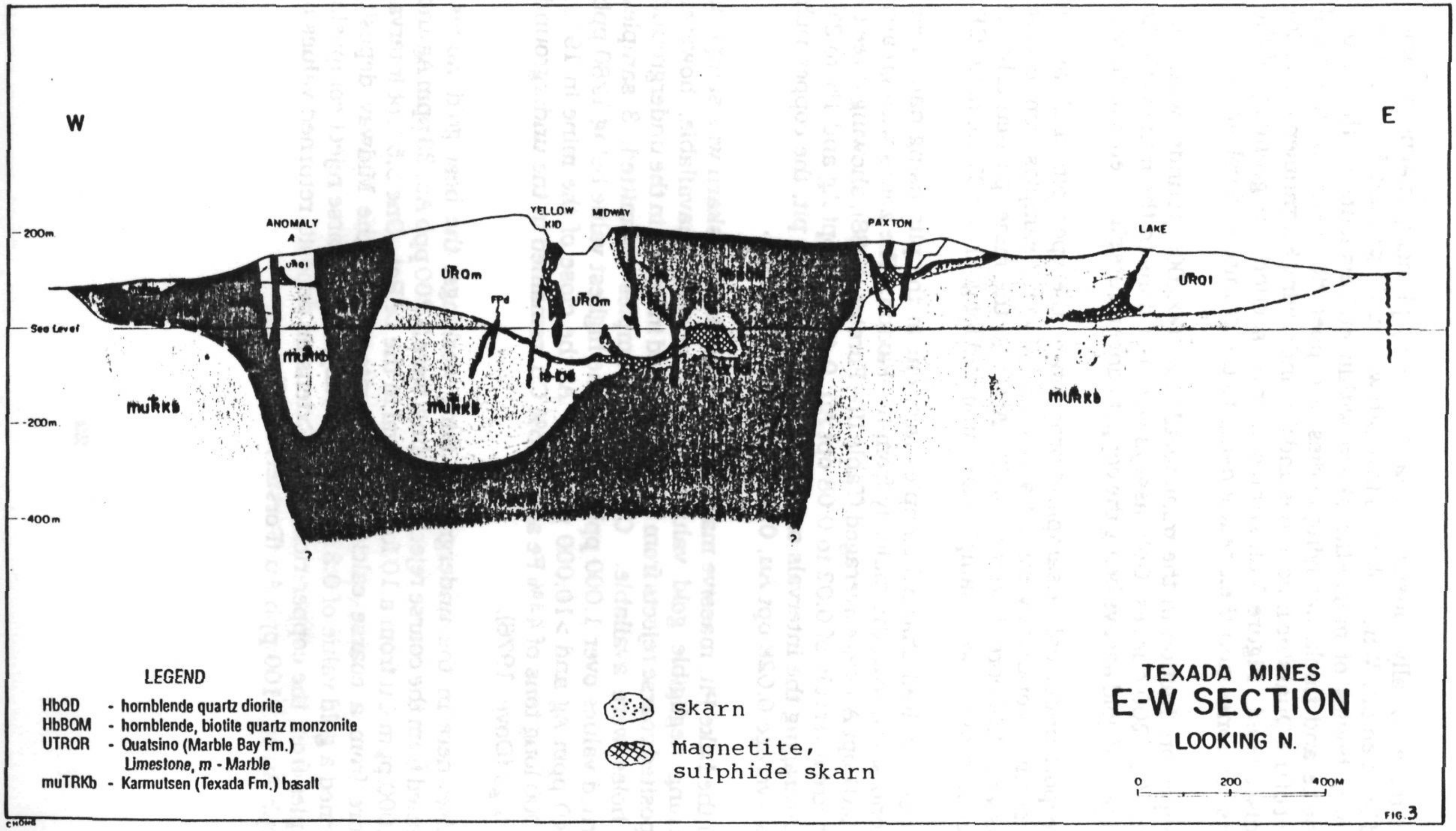

W
E
200m
Sea Level
-200m
-400m
ANOMALY A
YELLOW KID
MIDWAY
PAXTON
LAKE
URQm
muRKb
URQI
LEGEND
HbQD - hornblende quartz diorite
HbBQM - hornblende, biotite quartz monzonite
UTRQR - Quatsino (Marble Bay Fm.) Limestone, m - Marble
muTRKb - Karmutsen (Texada Fm.) basalt
skarn
magnetite, sulphide skarn
TEXADA MINES
E-W SECTION
LOOKING N.
0
200
400M

FIG. 3

The mine initially consisted of large, steeply plunging magnetite pipes mined by open pit. When followed to depth with underground development, additional bodies of magnetite skarn within embayments in the quartz monzonite and thick, flat lying bodies of copper rich-skarn at the basal contact of the Quatsino limestones and the underlying Karmutsen volcanics were discovered. Figure 3 illustrates in cross section, the geometry of the various ore zones and their relationship to the granite and volcanics.

Copper production in the mine totalled 56,000,000 pounds with gold credits of 31,200 ounces. Gold assays were not done in the mine with the only reported gold assays being the copper concentrate shipments to Japan.

Freeport undertook a sampling program in the open pits and, as the underground workings were not accessible, selected samples from coarse rejects and drill core (Forster, 1988). Areas in the mine, particularly the copper-rich zones, were sampled and analyzed for gold and 32 element ICP.

Three hundred channel samples were cut in the pits using hand held diamond saws, with the majority from the Paxton. The zones with greater than 0.01 opt Au were averaged (Table III– Forster, 1988), showing three to ten metre intervals of 0.02 to 0.08 opt Au; 0.4 to 1.0 opt Ag and 1% to 3% Cu. Averaging the intervals on the floor of the Paxton pit, the copper-rich zones average 0.028 opt Au, 0.50 opt Ag and 1.4% Cu.

In the Lake Pit, massive magnetite, pyrrhotite-rich skarn was sampled, returning negligible gold values. Drill core was unavailable, however composited coarse rejects from the mineralized intervals in the underground drill holes were available. Of the 102 samples submitted, 3 samples returned values over 1,000 ppb Au with the highest value being 1280 ppb Au, 40 ppm Ag and >10,000 ppm Cu. At the close of the mine in 1976, 460,000 long tons of 44% Fe and 0.15% Cu, remained in the underground workings (Dove, 1976).

Elsewhere in the underground mine workings, the best gold values, obtained from the coarse reject sampling, were 3,200 ppb Au, 33 ppm Ag and >10,000 ppm Cu from a 10 foot interval in the Le Roi. One 3.5 foot interval of core from a coarse calcite, chalcopyrite vein in the Midway deposit, returned a gold value of 0.37 opt Au. Finally, eight coarse reject composite samples from the copper-rich North Extension deposit, returned values of 65 ppb Au to 1100 ppb Au (Forster, 1988).

TABLE III: SIGNIFICANT PAXTON ASSAY RESULTS—1988

(From Forster, 1988)

	width (m)	oz/T Au	oz/T Ag	% Cu
Wall Sample:				
Pa 2	3	0.016	0.56	0.84
Pa 3	4	<.006		
Pa 4	1	0.017	0.47	1.12
Pa 5	3	0.038	0.76	2.26
Pa 6	2	0.018	0.39	0.81
Pa 7	4	0.019	0.41	1.10
Pa 8	4	0.030	0.65	n.a.
Pa 9	4	0.034	0.88	n.a.
Pa 10	6	0.070	0.34	0.92
Pa 11	3	0.024	0.55	1.07
Pa 12	3	0.065	0.12	3.11
11050N	9	0.032	0.76	n.a.
Floor Samples:				
Pf 1	5	0.017	0.48	0.92
Pf 2	5	0.082	1.36	3.14
Pf 3	4	0.036	0.61	1.75
Pf 4	9	0.010	0.24	0.78
Pf 5	1	0.018	0.48	1.07
Pf 6	1	0.030	0.04	1.25
Pf 7	20	0.021	0.44	1.70
Averages:	5	0.028	0.50	1.40

NB: n.a.= not assayed

8.0 GEOPYSICAL PROGRAM

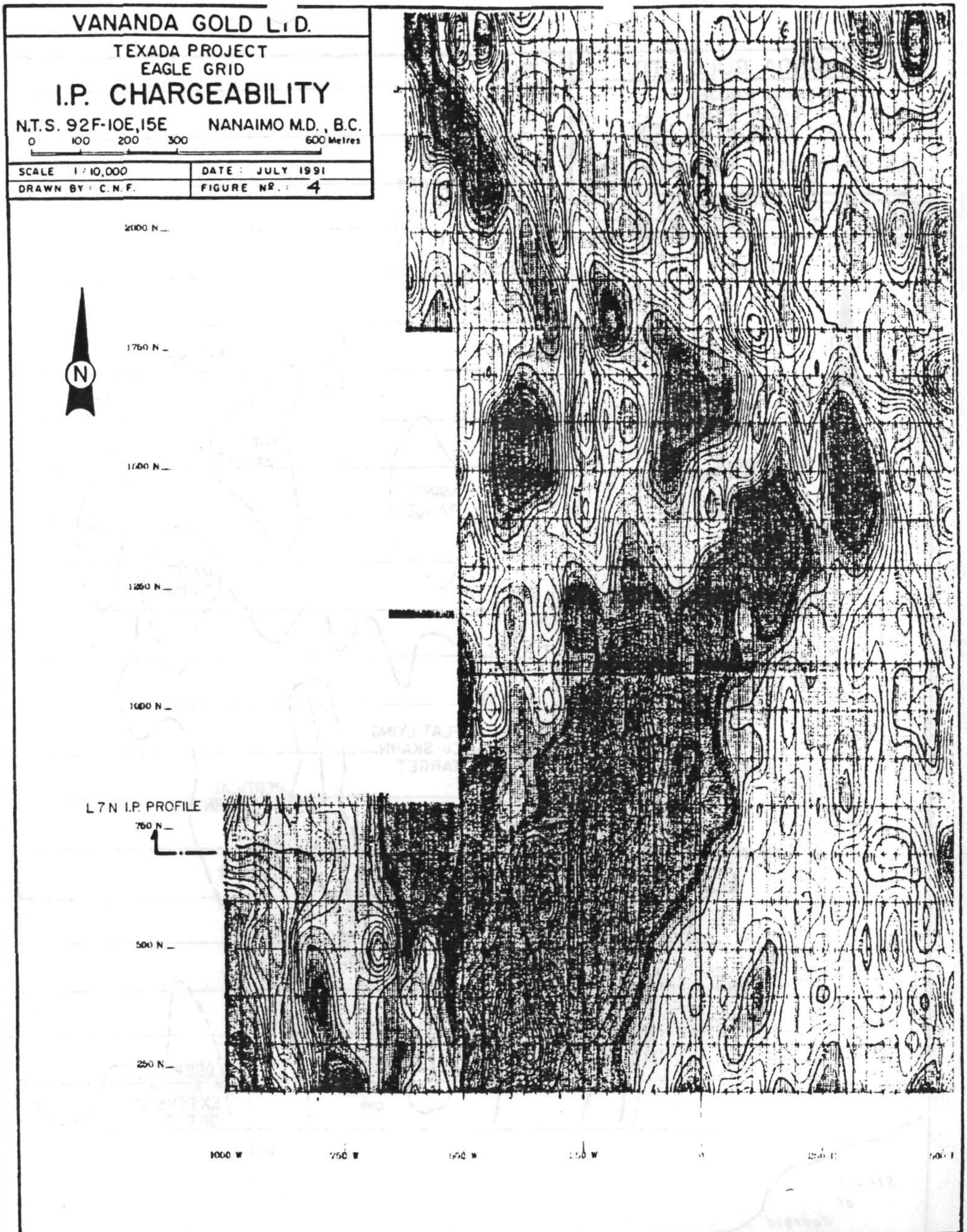
The 1991 geophysical program was undertaken at the request ofVananda Gold Ltd. for the purpose of providing better definition to induced polarization anomalies located from earlier surveys by Delta Geoscience Ltd. and Peter Walcott and Associates for Freeport-McMoRan Gold Co. In addition, induced polarization was done over the Eagle grid and the Lafarge Quarry, both of which had not previously been surveyed with IP.

8.1 Eagle Grid:

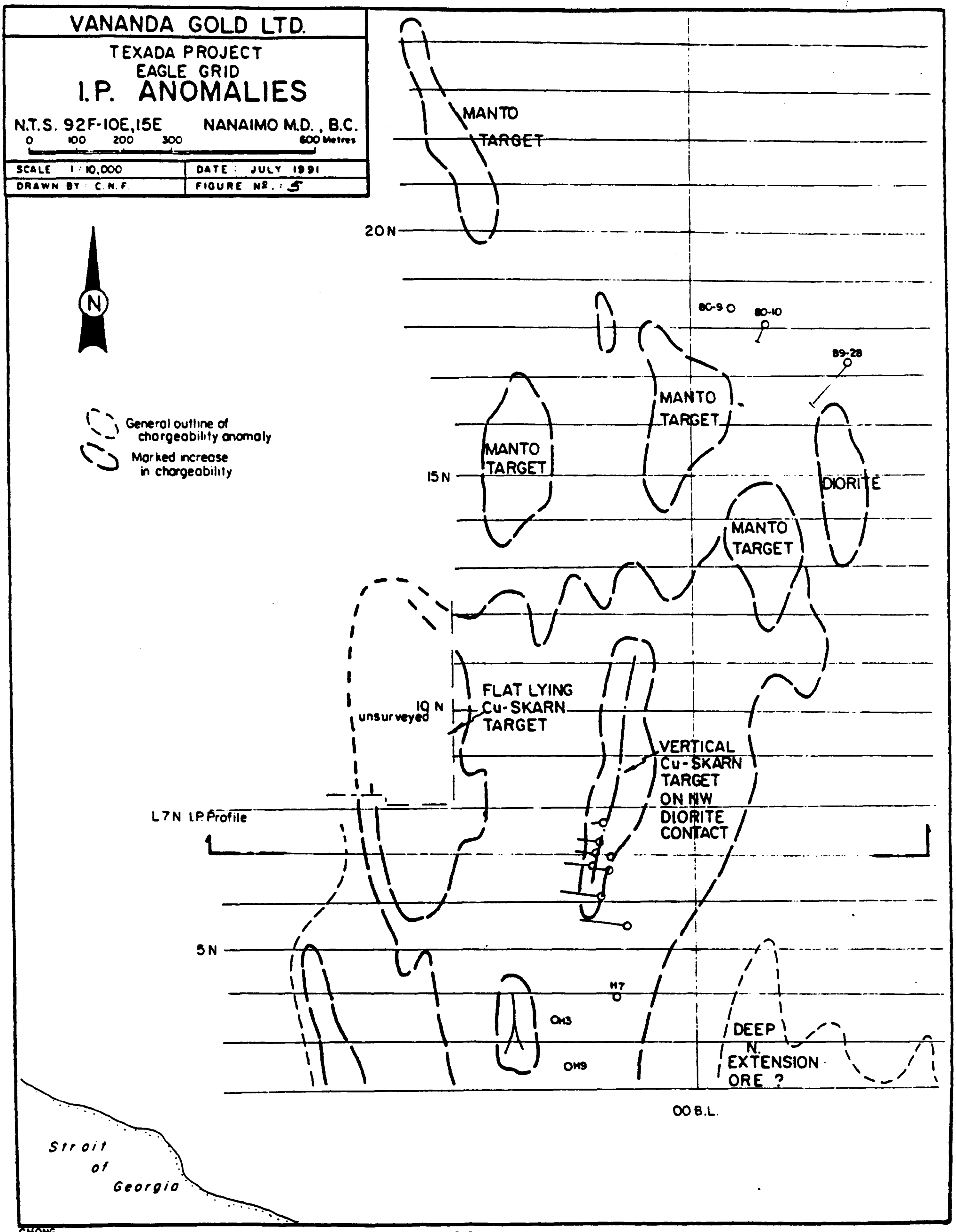
An induced polarization survey utilizing a gradient array was conducted over 29.5 line kilometres of cut line on the Eagle grid (Figure 2). Using an 1,800 metre current electrode spacing (AB) and a 50 metre pot spacing (MN), the approximate depth of penetration for the survey is 300 metres as determined by a factor of 0.165 times the AB spacing based upon the very shallow, non-conductive overburden and the relatively high bedrock resistivities.

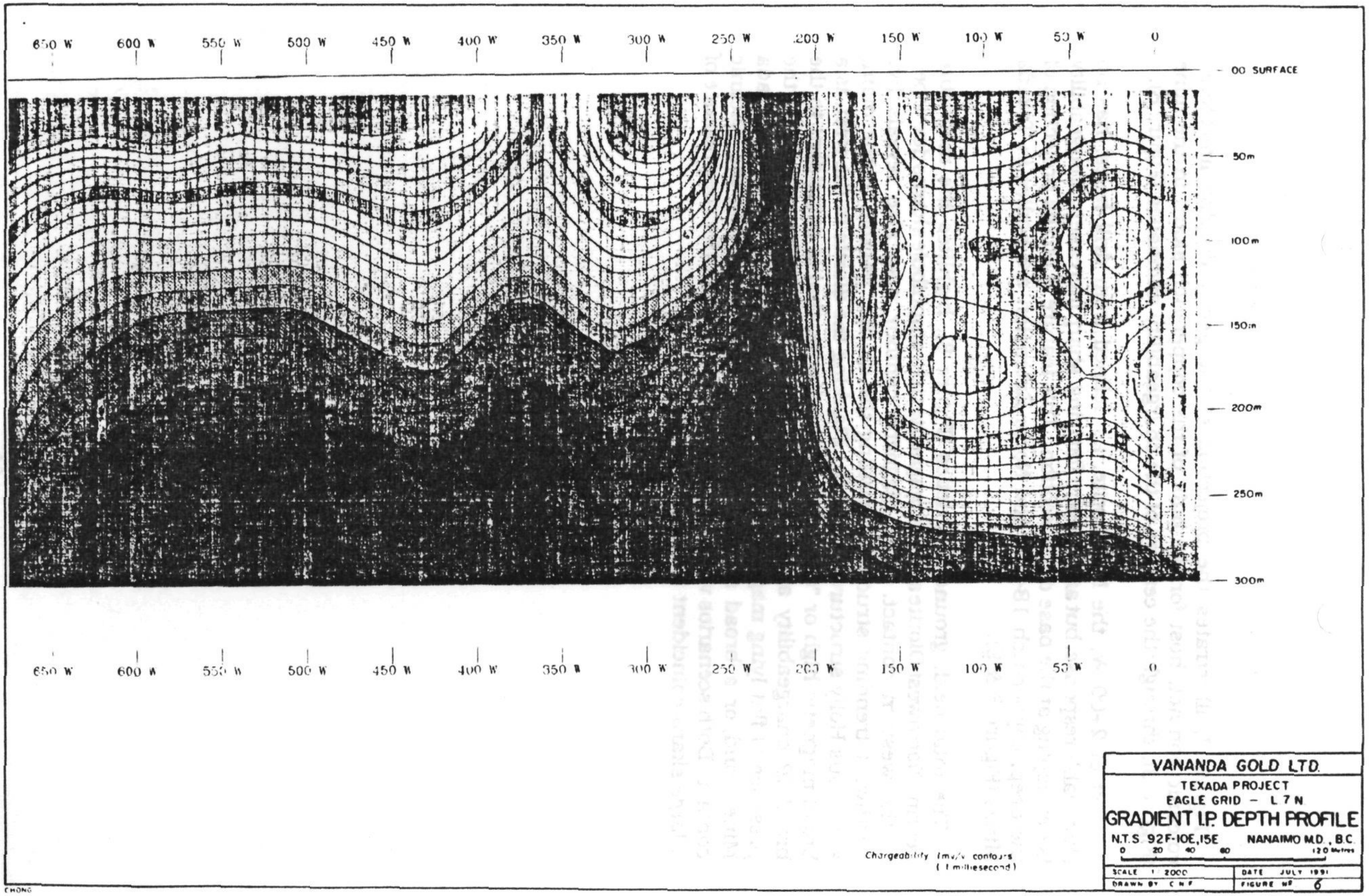
The chargeability plotted and contoured in milliseconds on Figure 4, defines a broad anomaly of greater than 17 milliseconds between 2+00 N and 13+00 N and approximately 0+00 and 8+00 W (Figure 5). The feature encompasses a NNE trending dioritic intrusive (Figure 9), that lies irregularly between 0+00 and 3+00 W. In 1962 and 1968, Texada Mines drilled eleven holes on six, 30 metre spaced fences, along the easterly dipping, western margin of the diorite. The most northerly hole, H-2, intersected disseminated to massive chalcopyrite grading up to 2.45 % over 3 metres in a 30 metre thick skarn coincident to the central axis of the chargeability high.

To locate the depth of the chargeability high, L 7+00 N was detailed by re-surveying using 4 different AB spacings; the original 1800 metre, a 1000 metre, a 500 metre and a 200 metre separation. This system was modelled after a similar survey in Albania (Langore et al, 1989) that located disseminated to massive sulphide mineralization at depths of 400 metres to 500 metres (See Appendix II for an extract of the paper). Using the 0.165 factor on the AB spacing to estimate the effective depth of investigation for the current, the chargeability is plotted as a depth profile on Figure 6, and clearly shows the anomalous chargeability is developed approximately 250 metres below surface in three distinct zones over a total width of 500 metres. With the exception of a narrow chargeability high at 2+25 W, coincident to the central axis of the anomaly, the two shallow arrays show no evidence of the chargeability anomaly detected by the deeper arrays.


VANANDA GOLD LTD.
TEXADA PROJECT
EAGLE GRID
I.P. CHARGEABILITY
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 100 200 300 600 Metres
SCALE 1:10,000
DATE: JULY 1991
DRAWN BY: C.N.F.
FIGURE No.: 4
N
2000 N
1750 N
1500 N
1250 N
1000 N
L7N I.P. PROFILE
750 N
500 N
250 N
1000 W
750 W
500 W
250 W
0
250 E
500 E

CHONG


VANANDA GOLD LTD.
TEXADA PROJECT
EAGLE GRID
I.P. ANOMALIES
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 100 200 300 600 Metres
SCALE 1:10,000
DATE: JULY 1991
DRAWN BY: C.N.F.
FIGURE No.: 5
N
General outline of chargeability anomaly
Marked increase in chargeability
MANTO TARGET
20N
80-9
80-10
89-28
MANTO TARGET
MANTO TARGET
15N
DIORITE
MANTO TARGET
FLAT LYING Cu-SKARN TARGET
10 N
unsurveyed
VERTICAL Cu-SKARN TARGET ON NW DIORITE CONTACT
L7N I.P. Profile
5N
H7
OH3
OH9
DEEP N. EXTENSION ORE ?
00 B.L.
Strait of Georgia
CHONG

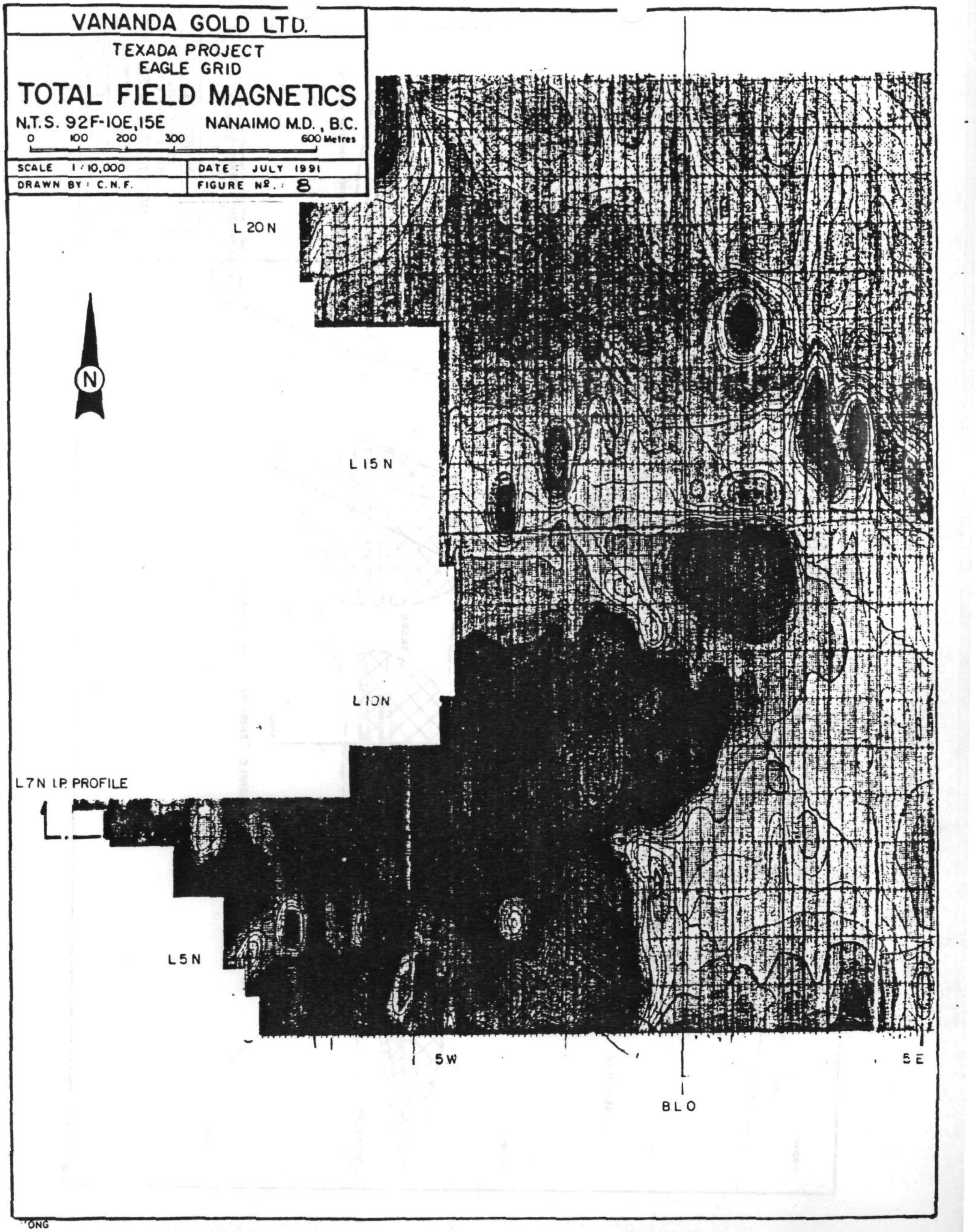


650 W
600 W
550 W
500 W
450 W
400 W
350 W
300 W
250 W
200 W
150 W
100 W
50 W
0
00 SURFACE
50m
100m
150m
200m
250m
300m
Chargeability (mv/v contours
(1 millisecond)
VANANDA GOLD LTD.
TEXADA PROJECT
EAGLE GRID - L 7 N
GRADIENT I.P. DEPTH PROFILE
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 20 40 60 120 Metres
SCALE 1:2000
DATE JULY 1991
DRAWN BY C.N.F.
FIGURE Nº 6
CHONG

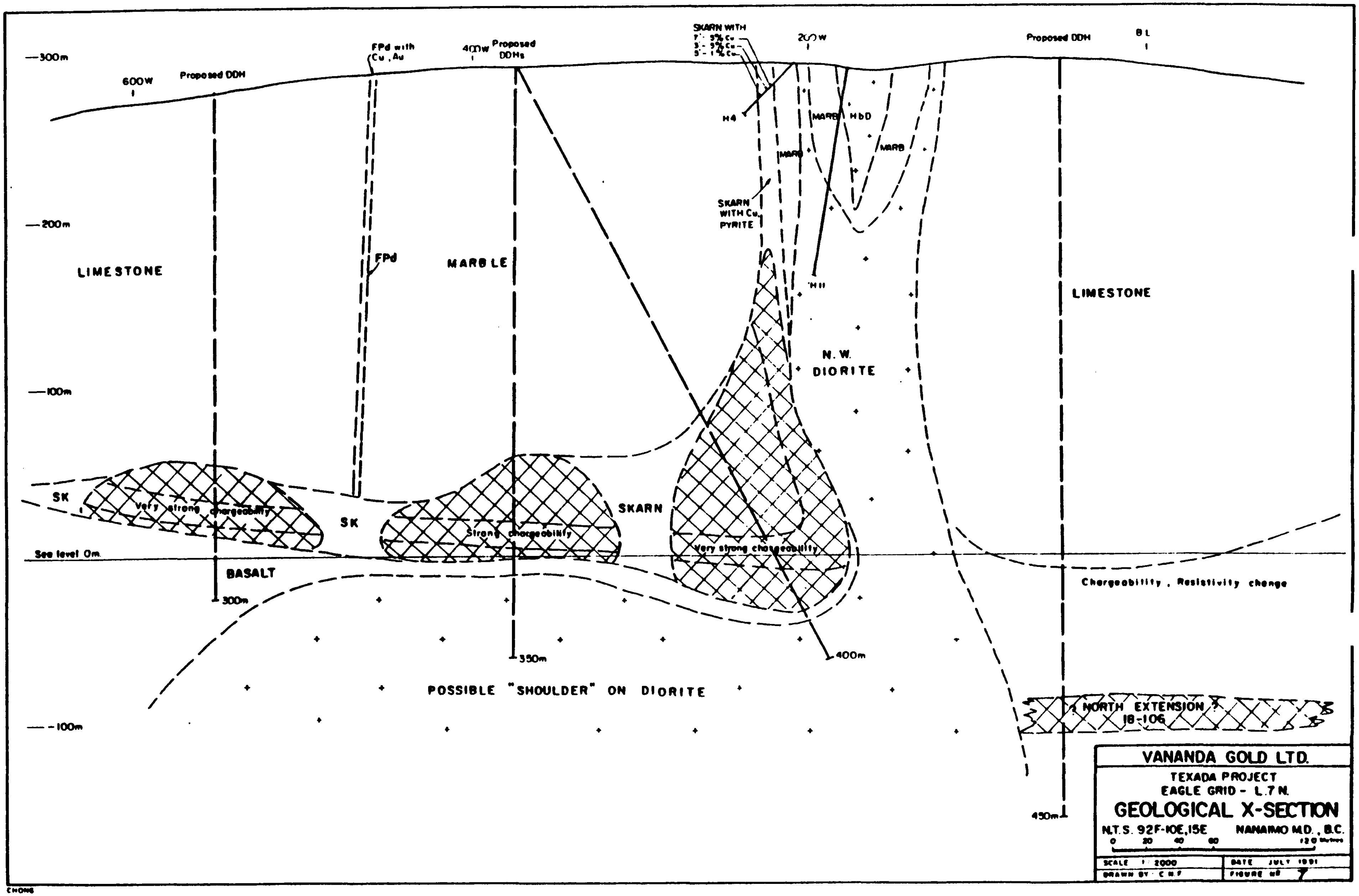
Figure 7, illustrates the projection of the gently dipping limestone, volcanic contact, host for the bulk of the copper-rich skarn in the mine (Figure 3), through the centres of the chargeability anomalies (Figure 6).

East of 2+00 W, the NW diorite, as defined from drill holes, has no chargeable response, but an apparent flat lying, sharp increase in chargeability is developing at the base of the section. This feature is on the projection of the deep, copper-rich 18-106 and North Extension ore bodies in Texada Mines (Figure 3 & 9).

The total field, ground magnetics (Figure 8), highlites the magnetite bearing Northwest Diorite and the magnetite rich, amphibole skarns developed at the western contact. The magnetic contour map also reveals five northwest trending structures, cutting the diorite, parallel to the main, auriferous Holly structure (Figure 8). Flanking the diorite to the west, is a broad magnetic high or "shoulder" to the diorite, that is coincident to the broad IP chargeability anomaly. This feature could be indicating the presence of flat lying magnetite lenses in the skarn, analogous to Texada Mines, and/or a broad shoulder to the diorite, underlying the volcanic contact. Both scenarios would be favourable indications for the presence of a large skarn coincident to the IP anomaly.



VANANDA GOLD LTD.
TEXADA PROJECT
EAGLE GRID
TOTAL FIELD MAGNETICS
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 100 200 300 600 Metres
SCALE 1:10,000
DATE: JULY 1991
DRAWN BY: C.N.F.
FIGURE Nº.: 8
L 20 N
N
L 15 N
L 10N
L 7N I.P. PROFILE
L 5 N
5W
5E
BLO



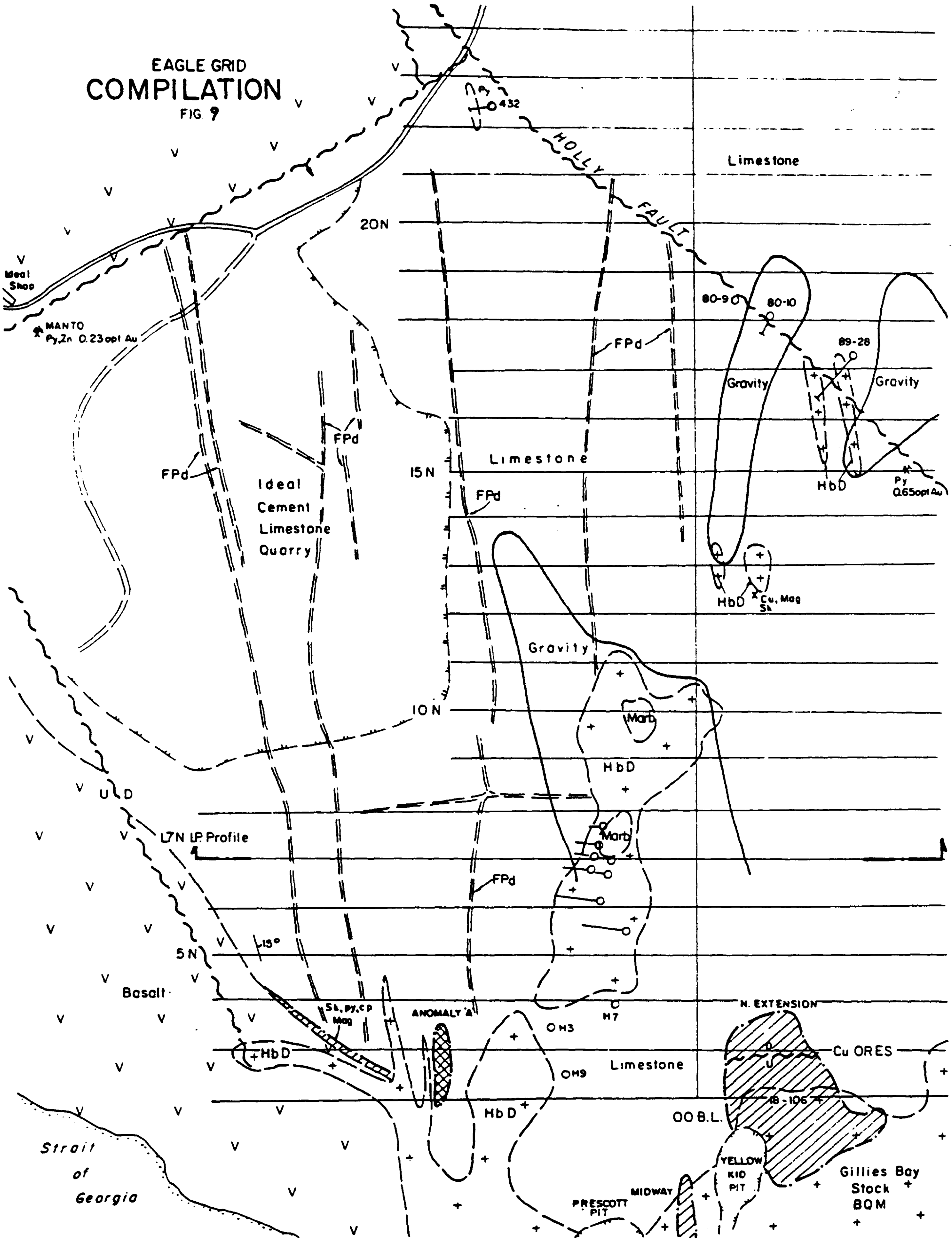
—300m
600W
Proposed DDH
FPd with Cu, Au
400W
Proposed DDHs
SKARN WITH
7' - 3% Cu
3' - 3% Cu
5' - 1% Cu
200W
Proposed DDH
BL
H4
MARB
HbD
MARB
MARB
SKARN WITH Cu, PYRITE
—200m
LIMESTONE
FPd
MARBLE
H11
LIMESTONE
N. W. DIORITE
—100m
SK
Very strong chargeability
SK
Strong chargeability
SKARN
Very strong chargeability
Sea level 0m
BASALT
300m
350m
400m
Chargeability, Resistivity change
POSSIBLE "SHOULDER" ON DIORITE
—-100m
NORTH EXTENSION ?
18-106
450m
VANANDA GOLD LTD.
TEXADA PROJECT
EAGLE GRID - L.7 N.
GEOLOGICAL X-SECTION
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 20 40 60 120 Metres
SCALE 1:2000
DATE JULY 1991
DRAWN BY C.H.F
FIGURE No 7
CHONG

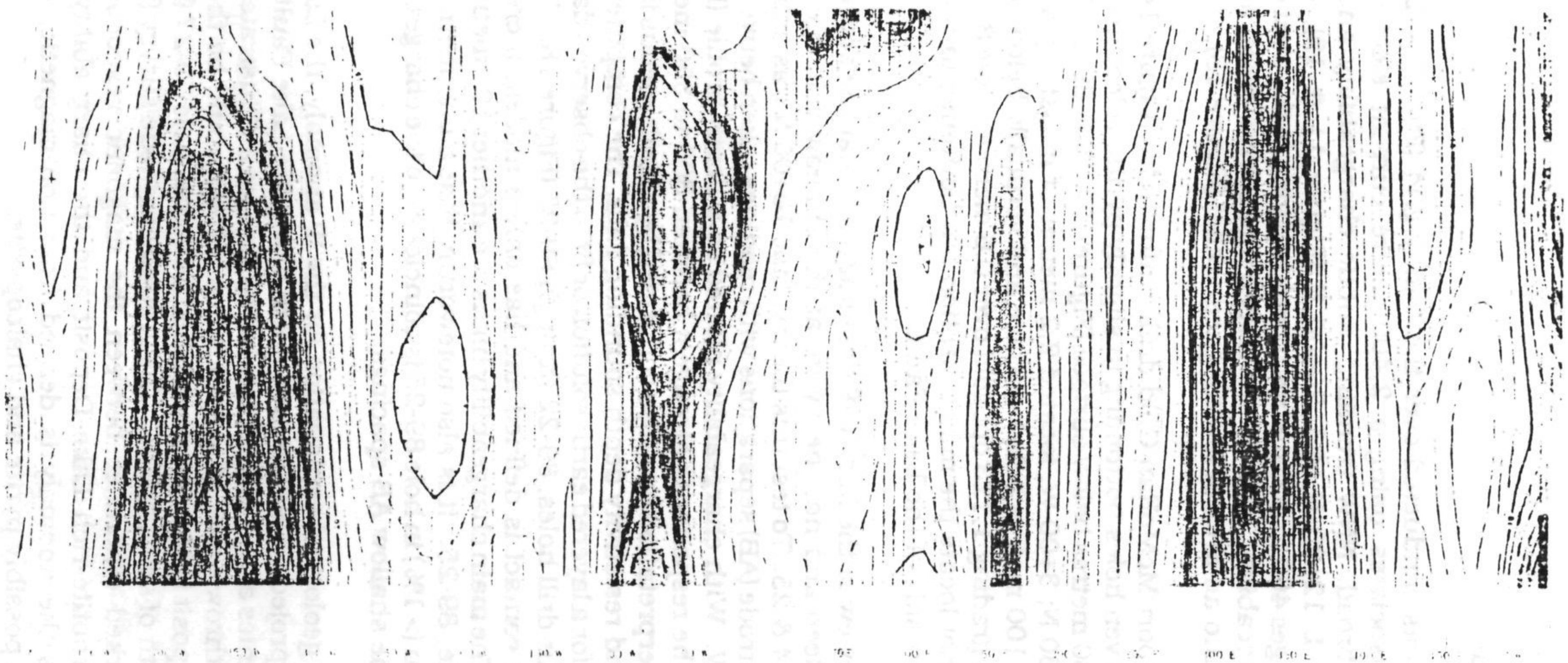
8.2 **Manto Targets**, Eagle grid:

North of the above described chargeability anomaly, four distinct chargeability highs (Figure 5), were located by the survey. These have low magnetic relief and show no response in the VLF profiles. Prospecting the lines indicates the presence of fine grained to sugary marble but no evidence of sulphide concentrations indicative of the chargeability highs. Soil geochemistry has anomalous zinc, cadmium, arsenic, copper and gold scattered around the IP highs indicating "leakage" along vertical faults and dykes that both cut and flank the anomalies.

The IP indicates 200 to 300 metre strike lengths with widths of 20 to 50 metres. A depth profile of Line 15+00 N (Figure 10), shows the chargeability response start within 50 metres of surface and continue to a depth of at least 350 metres. As the IP anomalies have no correlating magnetic expression, mineralization similar to the sphalerite, pyrite-rich manto, located 800 metres west in the quarry (Figure 9), and grading 0.23 opt gold, is a possible type source. Pyrite was encountered in Ideal Cement drill hole # 432 (Figure 9), on Line 23+00 N at the eastern edge of the northern most IP anomaly. Ideal's drill logs describe 25 metres of disseminated pyrite and goethite at the bottom of the hole, no assays were done for gold and base metals. As this appears to be flanking the anomaly it may be pyrite dispersed about a manto or chimney.

EAGLE GRID
COMPILATION
FIG. 9





Chargeability 1mv/v contours
(1 milliesecond)

VANANDA GOLD LTD.

TEXADA PROJECT
EAGLE GRID — L15N

GRADIENT I.P. DEPTH PROFILE

N.T.S. 92F-10E,15E NANAIMO M.D., B.C.

0 50 100 150 Metres

SCALE AS SHOWN	DATE: JULY 1991
DRAWN BY: C.H.F.	FIGURE No.: 10

CHONG

8.3 Sandy Grid:

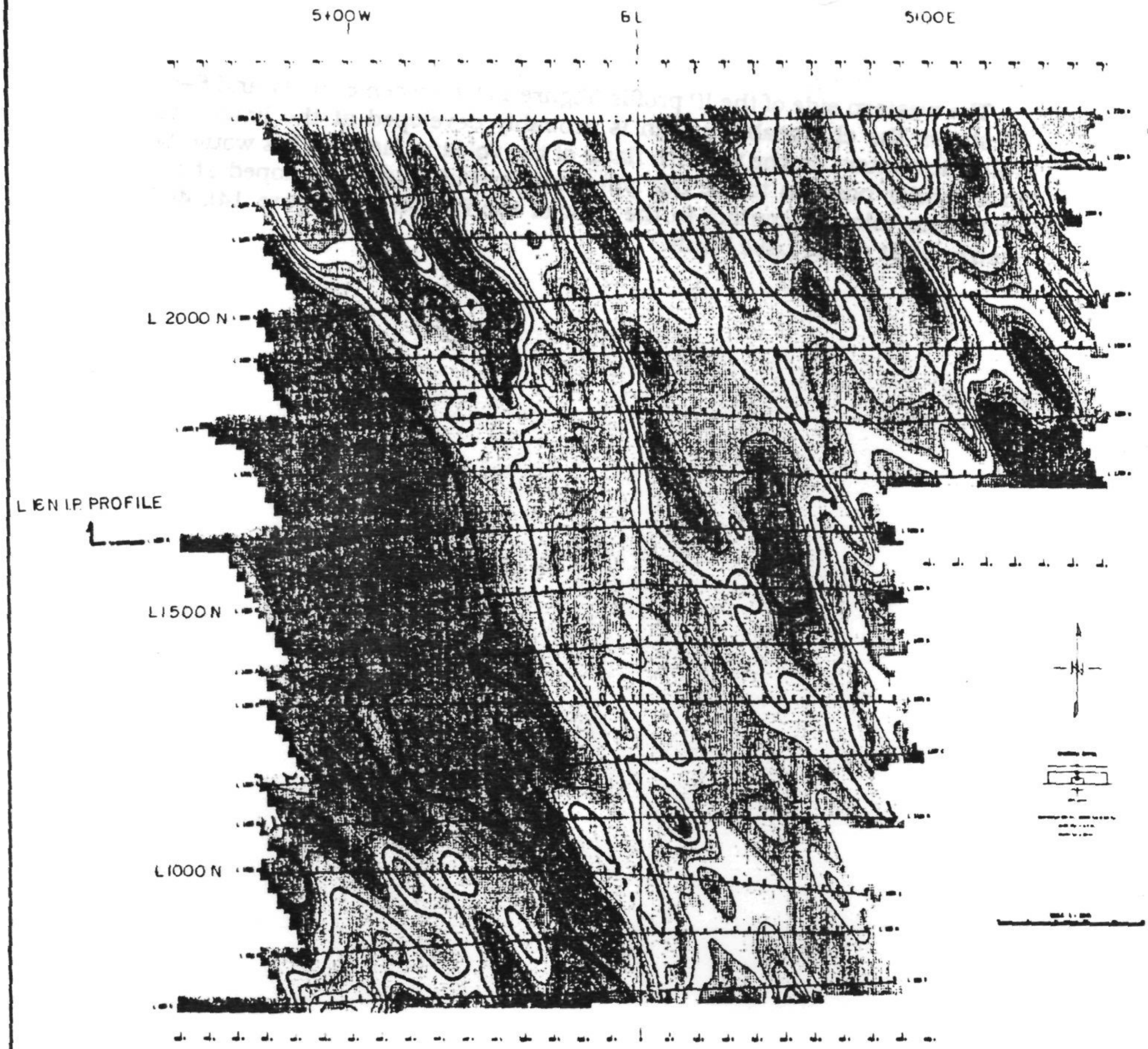
Gradient IP was conducted over the Sandy grid (Figure 2) in 1988 by Walcott and Associates using a 2,400 metre current electrode or AB separation. A broad, NNW trending, subtle chargeability anomaly was delineated from L 12+00 N to L 20+00 N (Figure 11 & 12), that when contoured averages 400 to 500 metres in width. Lying to the west of the Lake Fault, the chargeability high is developed northwest from a moderate magnetic high into an area of low magnetic relief (Figure 13).

In 1989 Freeport McMoRan Gold drilled nine holes (Figure 14), into the anomaly with seven holes bottoming in slightly pyritic volcanics, which are flat lying 20 to 80 metres below surface (Figure 15). Hole 89-26 (Figure 16), collared at 18+30 N; 3+00 W, located 2.2 metres of massive pyrite grading 0.302 opt gold, 100 metres below surface and vertically below a sulphide-rich shear zone, grading 1.123 opt gold over 0.6 metres. Hole 89-27, drilled below #26, did not locate the mineralization but bottomed in the basalt on the down thrown side of the Lake Fault.

In 1991, a review of the Sandy IP data suggests that the source of the IP could be very deep and not the pyrite at the shallow volcanic contact in DDH's 22, 23, 24 & 25. To test this theory, Line 16+00 N was detailed using five current electrode (AB) separations with readings taken between the base line and 8+00 W. With chargeability plotted as a depth profile (Figure 17), it is clear that the response is strongest between 300 to 350 metres below surface. The interpretation was also confirmed by simultaneous inversion of chargeability and resistivity depth sounding data. The computer inversion program solves for a layered earth solution or fit to the observed data. As Line 16+00 N has four drill holes, 89-22 through 89-25 (Figure 18), the shallow, pyritic volcanic contact is defined and has only a modest increase in the chargeability. The main chargeability highs are another 100 metres beneath the deepest hole, 89-25. It is also noteworthy that a one metre section of +10,000 ppm Cu (> 1%) in hole 89-25 is coincident to the chargeability spike at 3+50 W in the shallow AB spacings.

To provide a geological explanation for the IP anomaly, the Lake deposit (Figures 14), if projected 500 metres north along the Lake Fault, would lie under the volcanics about 350 metres below surface as illustrated in Figure 18. The down thrown side of the volcanics, which would be the base of a potential ore deposit is already established from drill hole 89-27 (Figure 16), 230 metres north of section 16N. The ground magnetic survey (Figure 13), shows the marked difference between the magnetic response over the magnetite, pyrrhotite-rich Lake Deposit and the chargeability anomaly, which suggests the anomaly is derived from non-magnetic, chargeable mineralization, possibly pyrite and chalcopyrite.

The western side of the IP profile (Figure 17), between 6+50 W and 8+00 W shows the chargeability high is probably developed at the limestone, volcanic contact on the western flank of the volcanic horst. This would be in a similar position to the flat lying, copper-rich skarn developed at the limestone-volcanic contact in the floor of the Paxton pit (Figure 14), 400 metres west of the Lake Fault.



VANANDA GOLD LTD.

TEXADA PROJECT

SANDY GRID

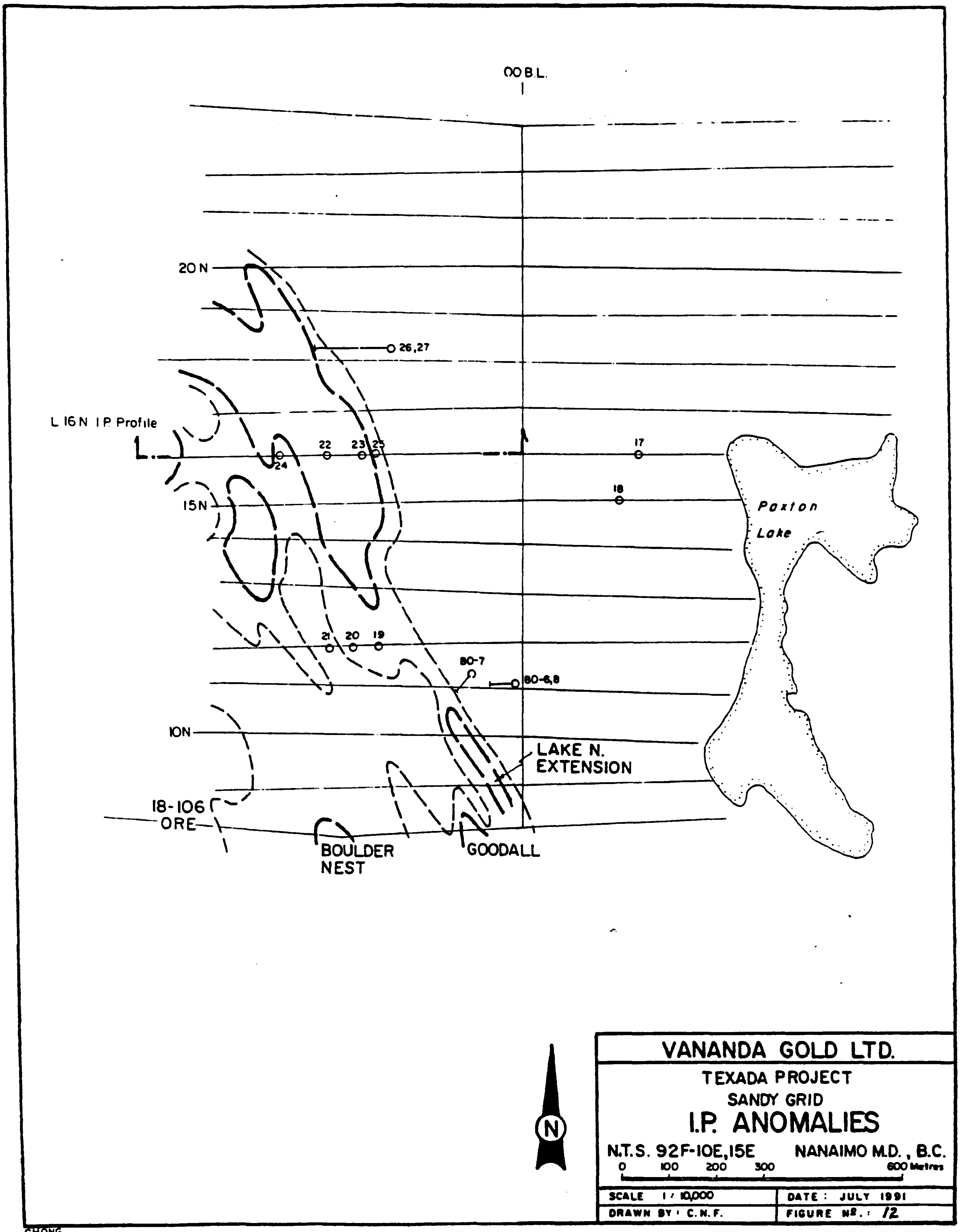
I.P. CHARGEABILITY

N.T.S. 92F-10E,15E NANAIMO M.D., B.C.

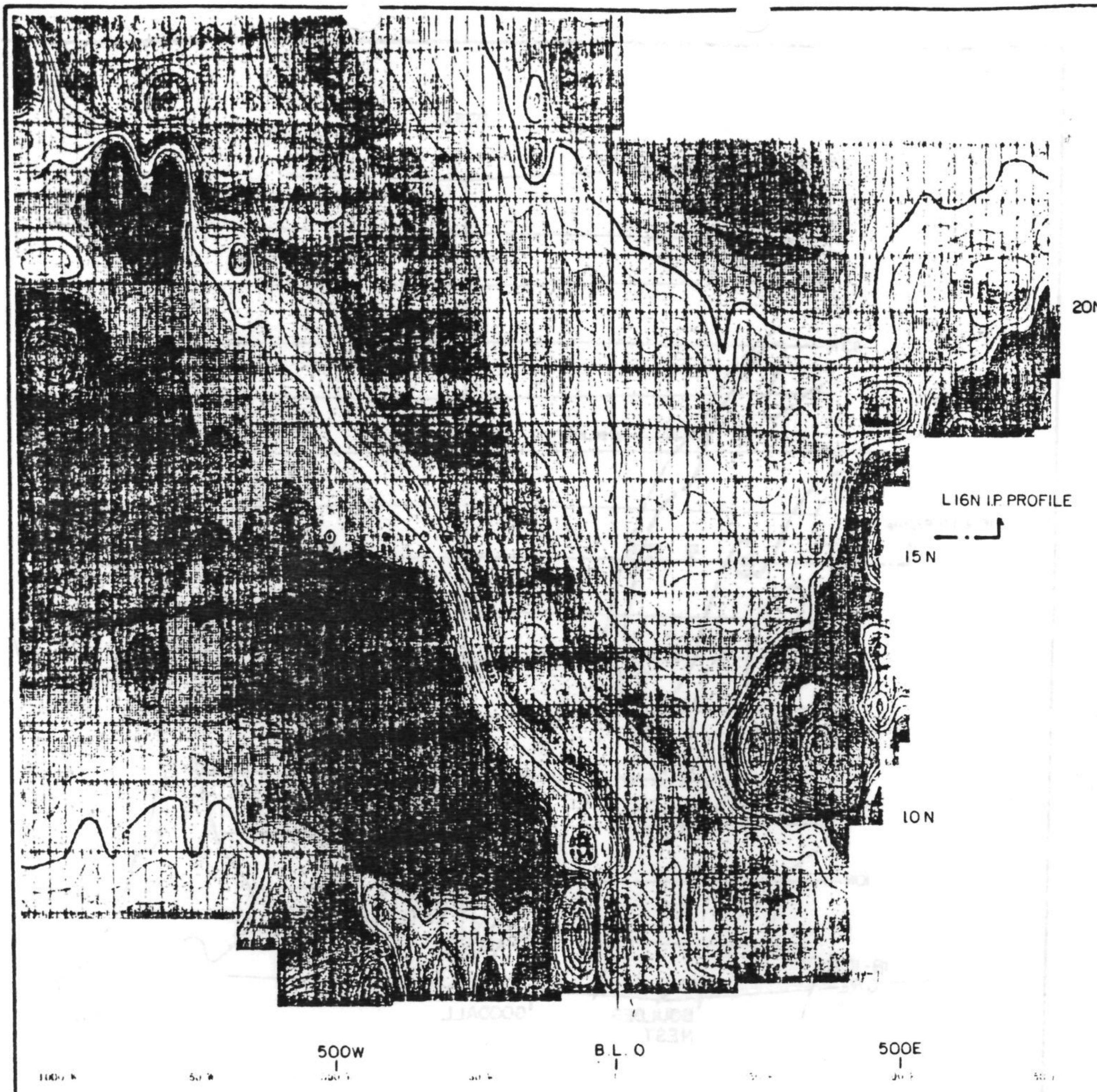
0 100 200 300 600 Metres

SCALE 1 : 10,000	DATE : JULY 1991
DRAWN BY : C.N.F.	FIGURE Nº. : 11

CHONG



00 B.L.
20 N
26,27
L 16 N I.P. Profile
22
23
25
24
17
18
15N
Paxton
Lake
21
20
19
80-7
80-6,8
10N
LAKE N.
EXTENSION
18-106
ORE
BOULDER
NEST
GOODALL
N
VANANDA GOLD LTD.
TEXADA PROJECT
SANDY GRID
I.P. ANOMALIES
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 100 200 300 600 Metres
SCALE 1 : 10,000
DATE : JULY 1991
DRAWN BY : C.N.F.
FIGURE No. : 12
CHONG



VANANDA GOLD LTD.

TEXADA PROJECT

SANDY GRID

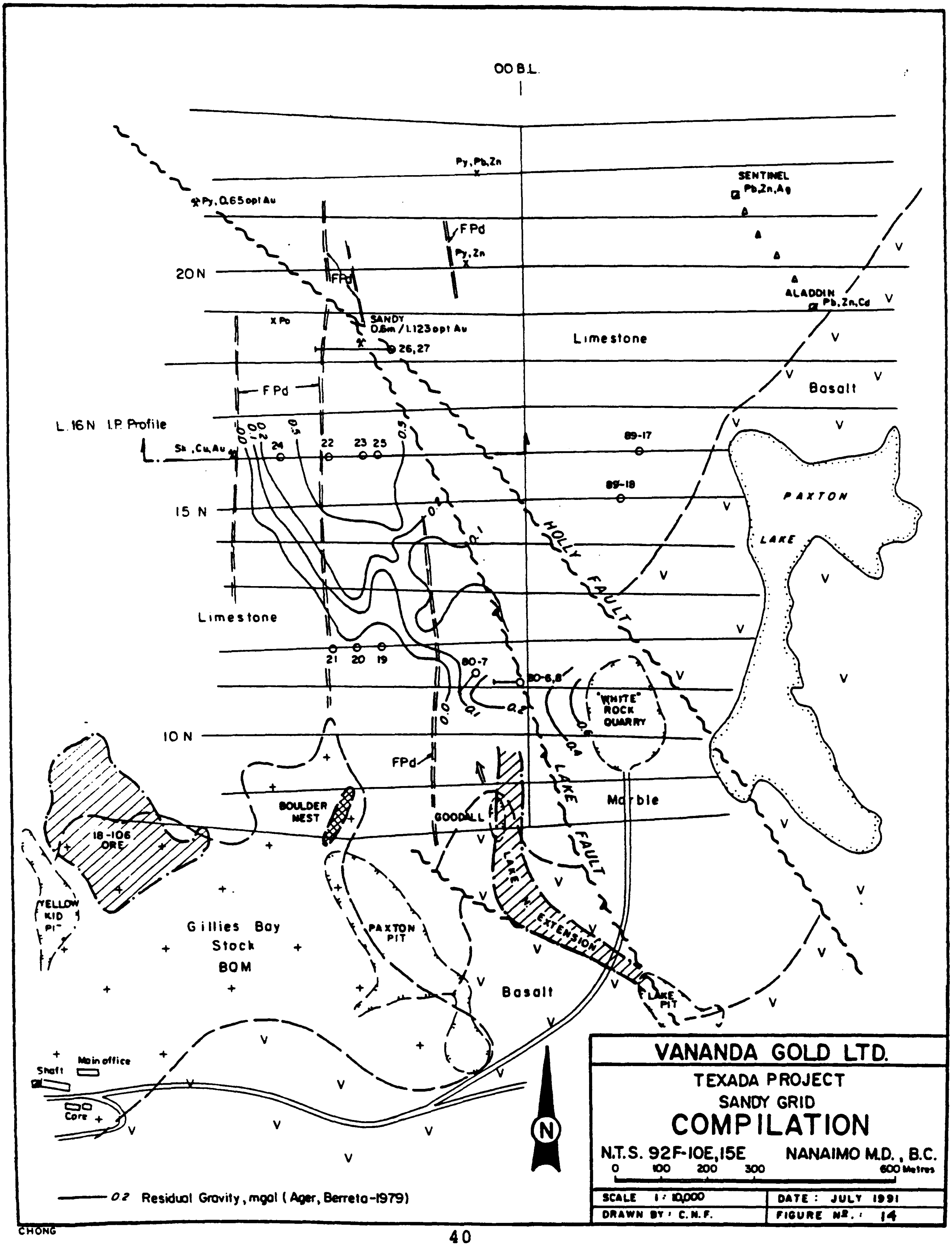
TOTAL FIELD MAGNETICS

N.T.S. 92F-10E,15E NANAIMO M.D., B.C.

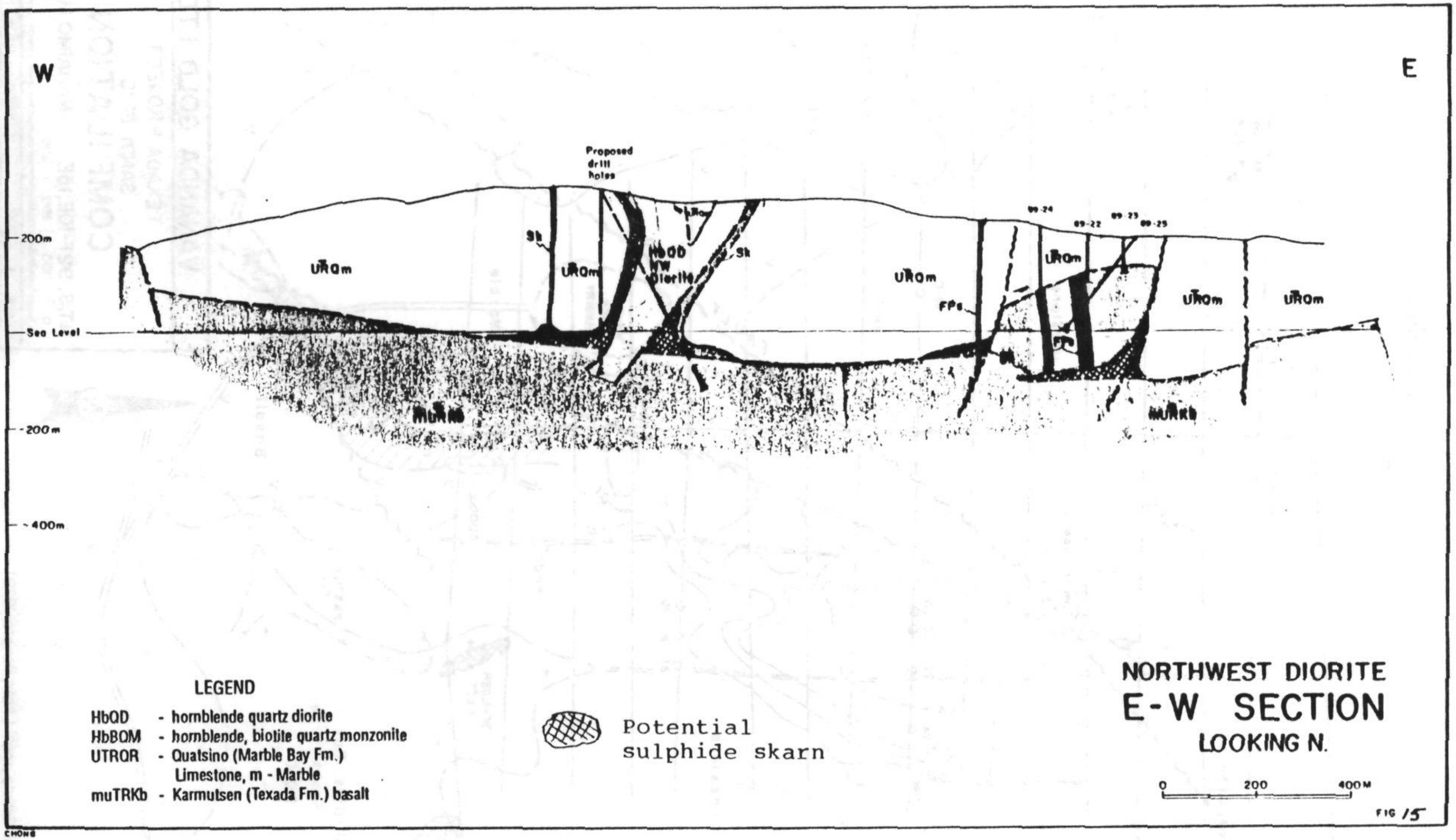
0 100 200 300 600 Metres

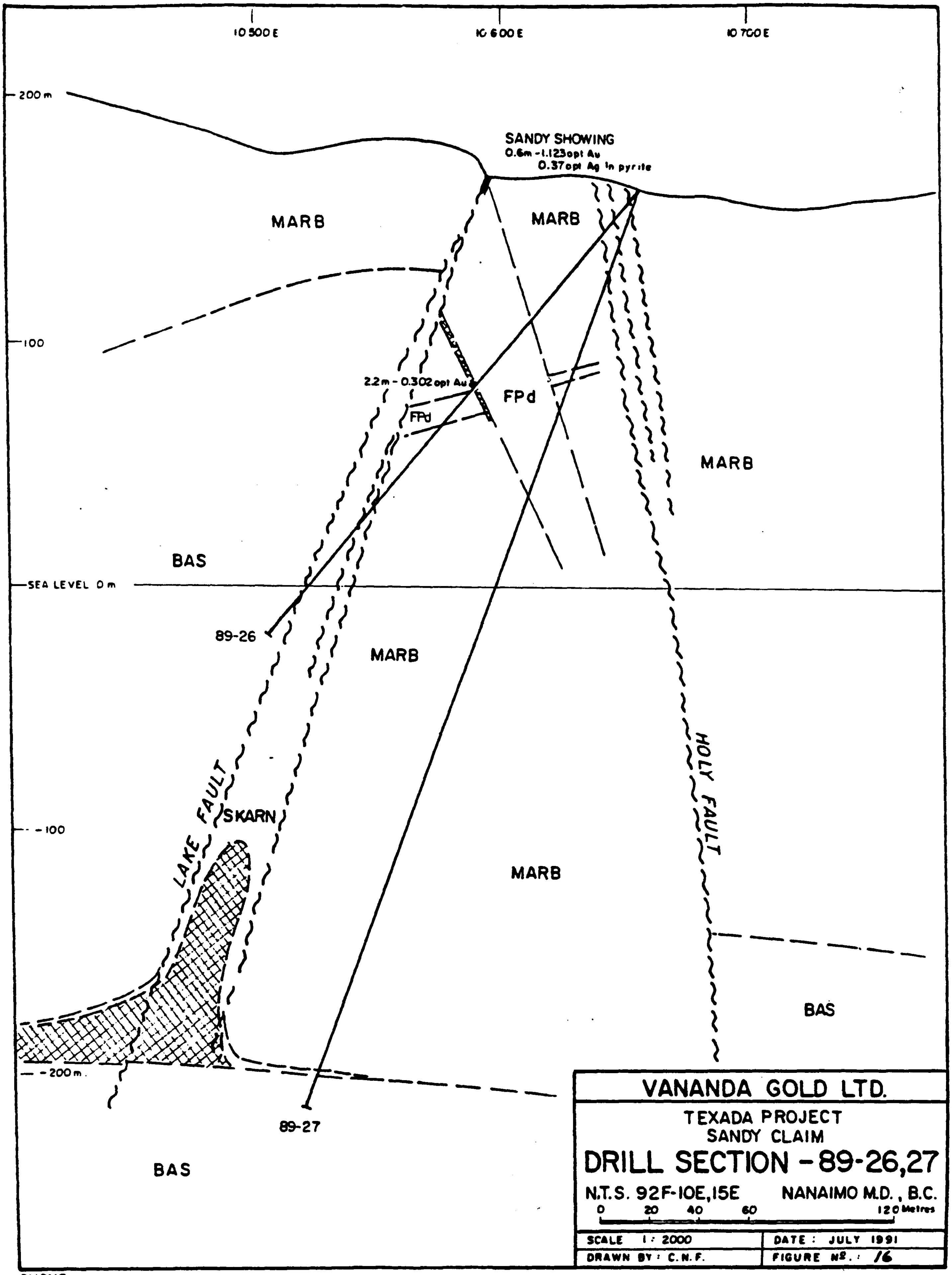
SCALE 1 : 10,000	DATE : JULY 1991
DRAWN BY : C.N.F.	FIGURE Nº. : 13

CHONG



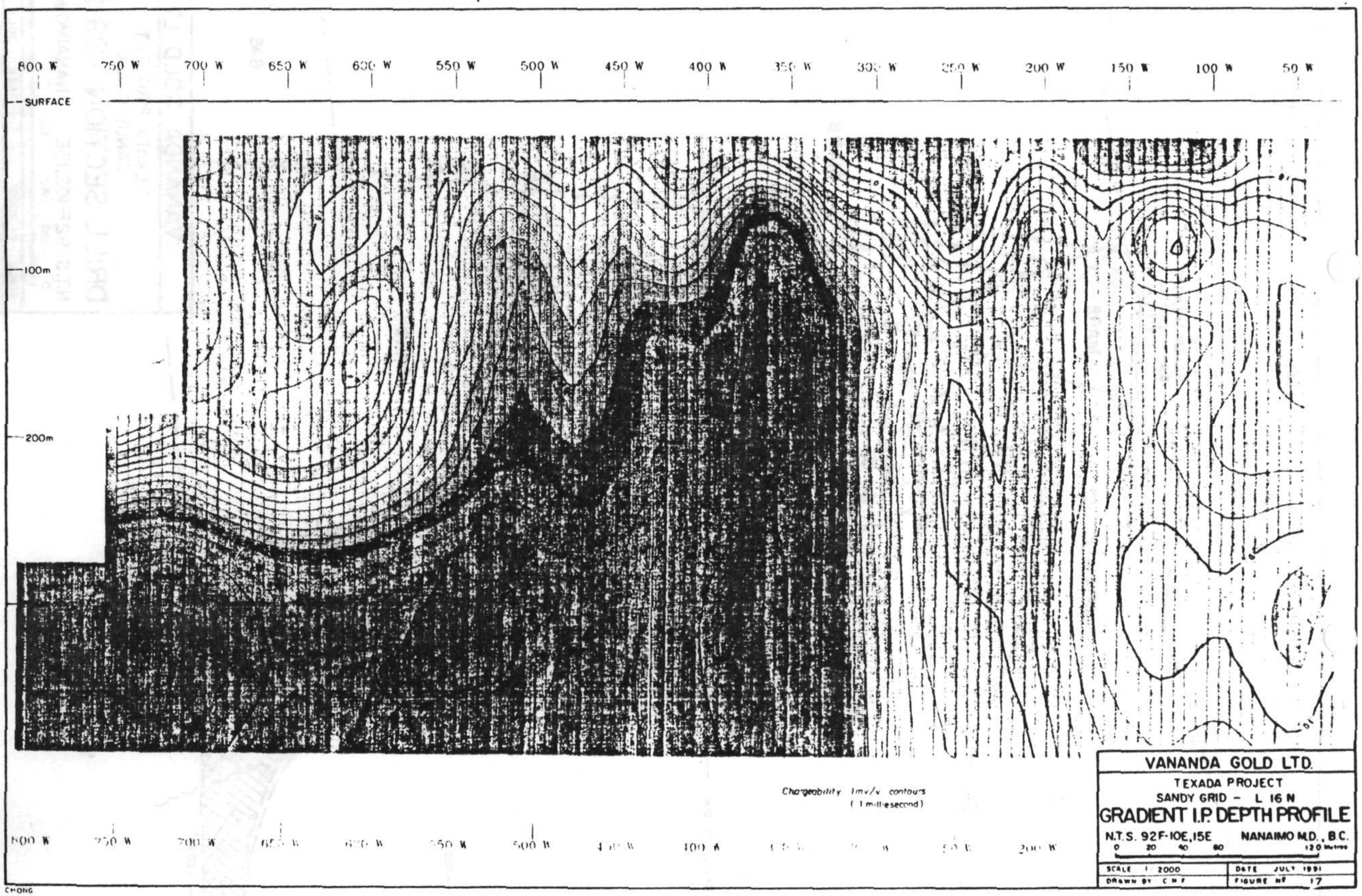
00 B.L.
Py, Pb, Zn
SENTINEL
Pb, Zn, Ag
Py, 0.65 opt Au
FPd
Py, Zn
20 N
ALADDIN
Pb, Zn, Cd
SANDY
0.6m / 1.123 opt Au
X Po
26, 27
Limestone
FPd
Basalt
L. 16 N I.P. Profile
Sk, Cu, Au
24
22
23
25
89-17
89-18
PAXTON
LAKE
15 N
HOLLY FAULT
Limestone
21
20
19
80-7
80-6, 8
"WHITE" ROCK QUARRY
10 N
FPd
LAKE
Marble
BOULDER NEST
GOODALL
18-106 ORE
FAULT
LAKE
EXTENSION
YELLOW KID PIT
Gillies Bay Stock BOM
PAXTON PIT
Basalt
LAKE PIT
Main office
Shaft
Core
N
0.2 Residual Gravity, mgal (Ager, Berreta-1979)
VANANDA GOLD LTD.
TEXADA PROJECT
SANDY GRID
COMPILATION
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 100 200 300 600 Metres
SCALE 1:10,000
DATE: JULY 1991
DRAWN BY: C.N.F.
FIGURE No.: 14
CHONG


W
E
Proposed drill holes
200m
Sea Level
-200m
-400m
HbQD
Sk
FPs
LEGEND
HbQD - hornblende quartz diorite
HbBQM - hornblende, biotite quartz monzonite
UTRQR - Quatsino (Marble Bay Fm.) Limestone, m - Marble
muTRKb - Karmutsen (Texada Fm.) basalt
Potential sulphide skarn
NORTHWEST DIORITE
E-W SECTION
LOOKING N.
0
200
400M
FIG 15

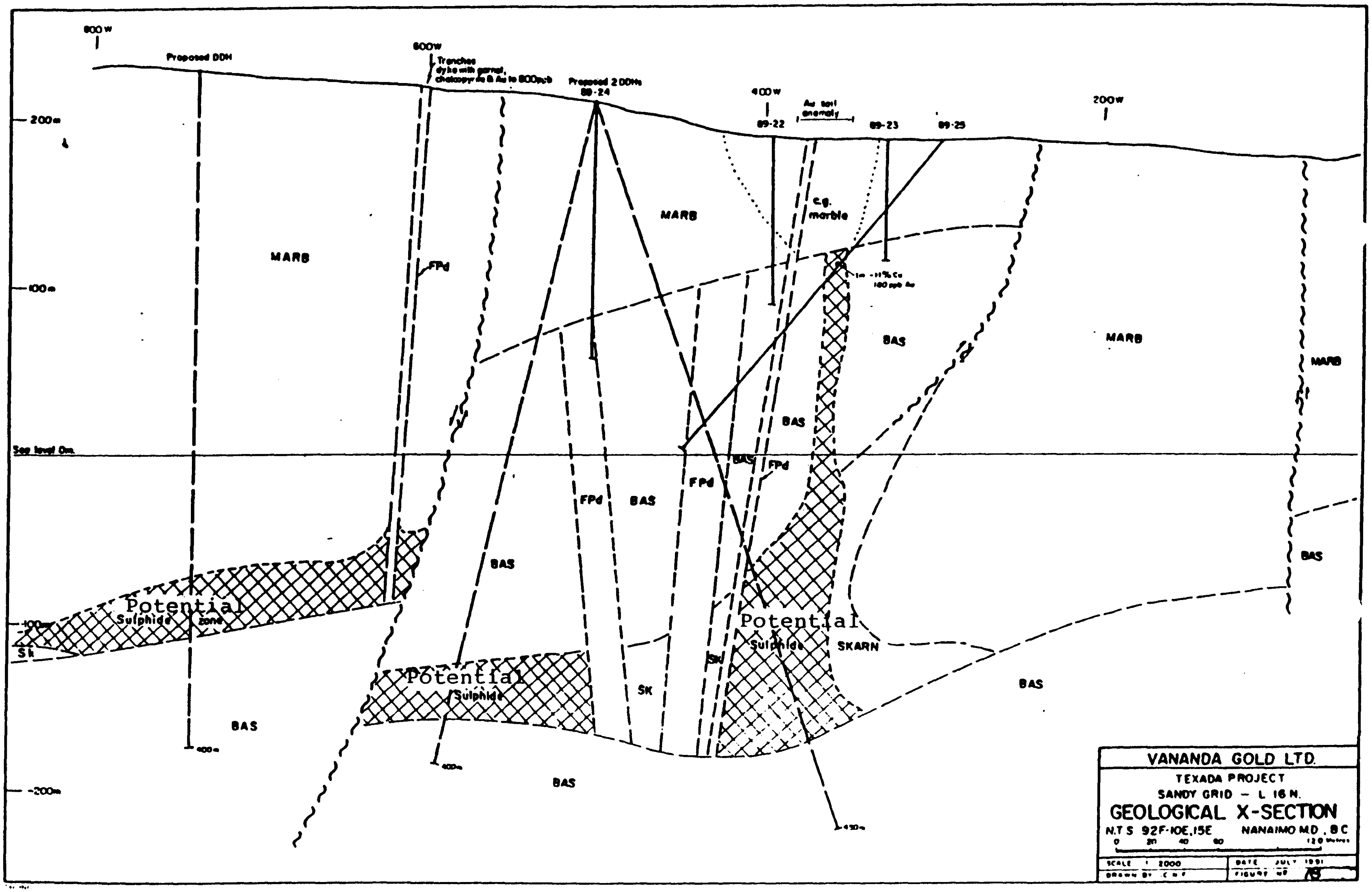


10 500 E
10 600 E
10 700 E
200 m
100
SEA LEVEL 0 m
-100
-200 m
SANDY SHOWING
0.6m - 1.123opt Au
0.37opt Ag in pyrite
MARB
MARB
MARB
MARB
MARB
2.2m - 0.302opt Au
FPd
FPd
BAS
BAS
BAS
89-26
89-27
SKARN
LAKE FAULT
HOLY FAULT
VANANDA GOLD LTD.
TEXADA PROJECT
SANDY CLAIM
DRILL SECTION - 89-26,27
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 20 40 60 120 Metres
SCALE 1 : 2000
DATE : JULY 1991
DRAWN BY : C.N.F.
FIGURE Nº. : 16

CHONG



800 W
750 W
700 W
650 W
600 W
550 W
500 W
450 W
400 W
350 W
300 W
250 W
200 W
150 W
100 W
50 W
SURFACE
100m
200m
Chargeability (mv/v contours (1 millisecond)
VANANDA GOLD LTD.
TEXADA PROJECT
SANDY GRID - L 16 N
GRADIENT I.P. DEPTH PROFILE
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0 20 40 60 120 Metres
SCALE 1: 2000
DATE JULY 1991
DRAWN BY C.H.F
FIGURE Nº 17
CHONG


VANANDA GOLD LTD.
TEXADA PROJECT
SANDY GRID – L 16 N.
GEOLOGICAL X-SECTION
N.T.S 92F-10E,15E
NANAIMO M.D., B.C
0 20 40 60 120
SCALE 1:2000
DATE JULY 1991
800 W
Proposed DDH
600W
Proposed 2 DDHs
89-24
400 W
Au soil anomaly
89-22
89-23
89-25
200W
200m
100m
Sea level 0m
-100m
-200m
MARB
FPd
BAS
c.g. marble
Potential
Sulphide
zone
SKARN
SK
Sk

8.4 Little Billie:

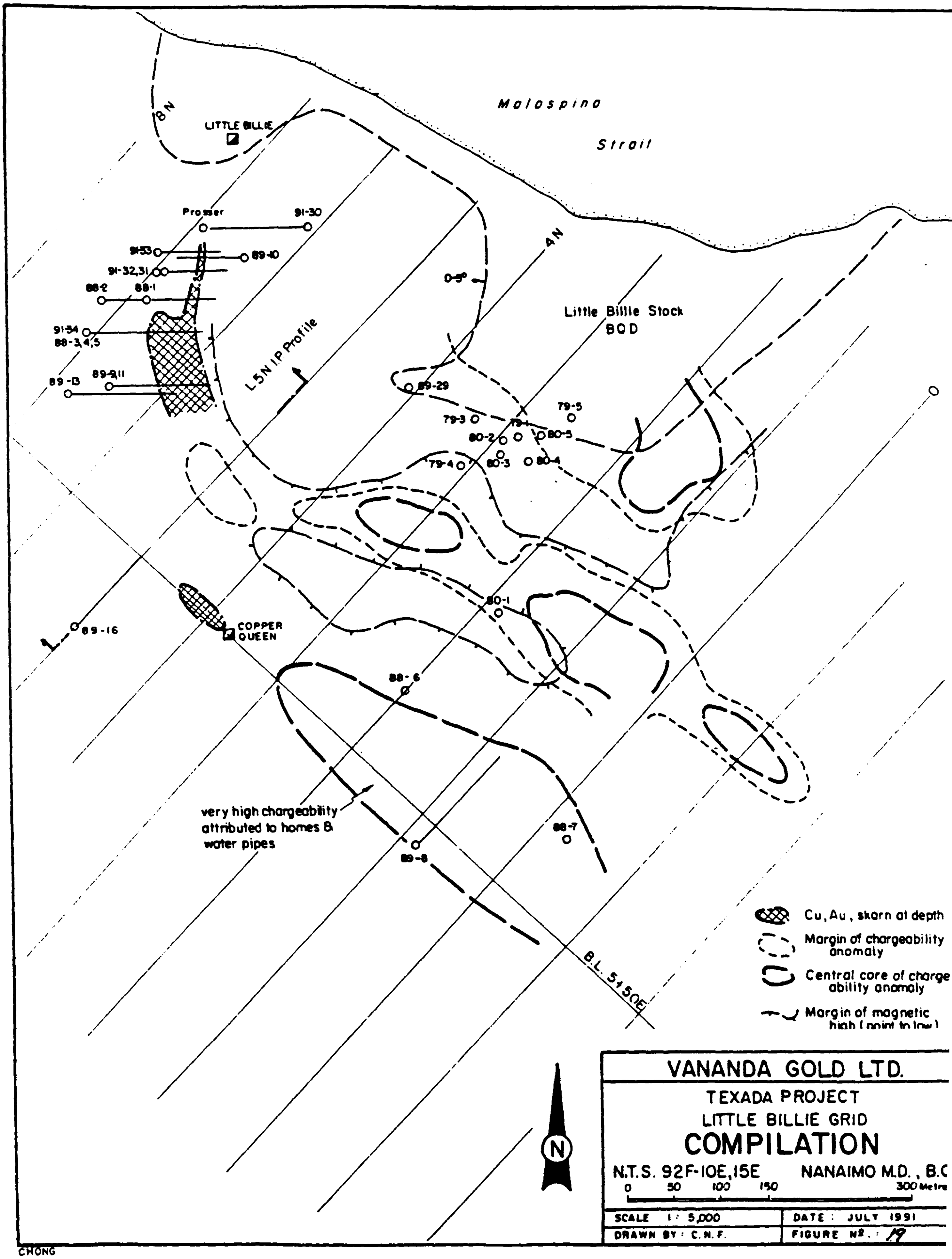
In May of 1991, gradient array, induced polarization surveys were once again carried out on the Little Billie grid (Figure 19). Previous surveys in 1988 (Walcott) and 1989 (Delta Geoscience) had defined a very strong chargeability high southeast of the Copper Queen Mine that was drill tested without success and was very likely due to cultural interference. The strength of the cultural anomaly tended to dwarf a subtle but very significant chargeability high, resistivity low extending off the southern end of the Little Billie mineralization encountered in DDH's 88-1, 88-3, 88-4, 89-9, 91-31, 91-32, and 91-33.

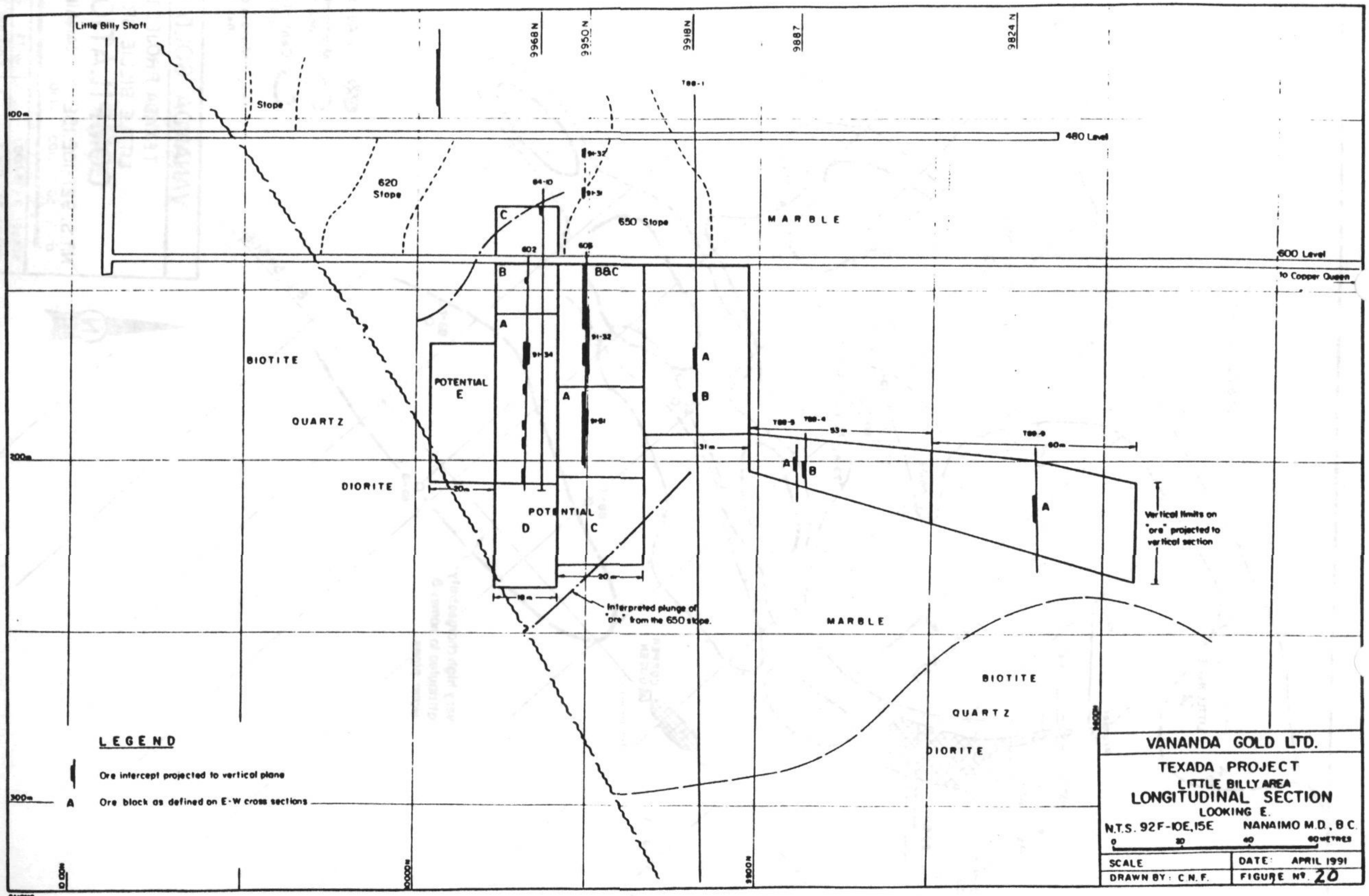
The most recent gradient survey (Figure 21), using an AB spacing of 1125 metres, obtained a weak (5 millisecond) anomaly on Line 6 North between 6+75 E and 7+25 E, directly above the mineralized skarn in DDH 89-9. A very weak trend extends from this point to the north along the axis of the mineralization. Assuming the depth extent of the gradient IP is 0.165 times the AB spacing, the known ore is mainly below the focal point of this gradient block and would not produce a significant response. Because of the close proximity of the ocean to the Little Billie mineralization, it was not possible to increase the AB spacing sufficiently to focus on the mineralization.

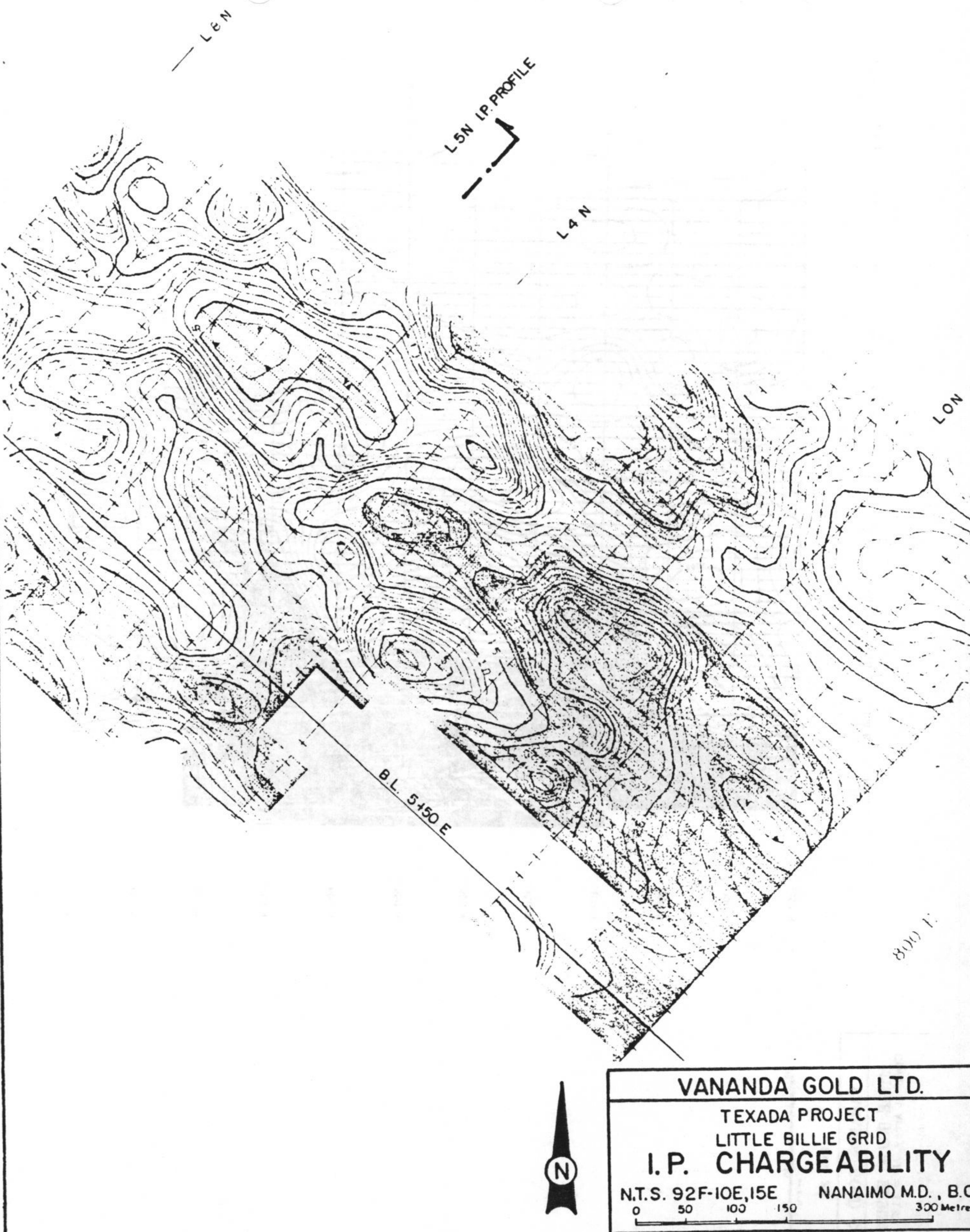
Extending from the anomaly on Line 6 N directly over the mineralization, the chargeability increases in intensity along an arcuate trace to the south and east. The chargeability plan (figure 21), clearly shows four strongly anomalous zones developed along a 500 metre trend. The resistivity plan (Figure 22), defines this trend as a distinct resistivity low developed at the southern flank of a resistivity high perhaps indicative of the Little Billie quartz diorite.

The magnetic plan (Figure 23), also defines the Little Billie stock as a magnetic high coincident to the resistivity high. A significant portion of the magnetics are caused by magnetite alteration developed along the margin of the quartz diorite and within a small copper-rich, magnetite skarn pod located in DDH 79-1 (Figure 19). In comparing the chargeability plan to the magnetic and resistivity plans, the chargeability anomaly is clearly developed along the indicated contact of the Little Billie Stock.

A Gradient IP depth profile along Line 6 N (Figure 24), suggests the chargeability anomaly is a vertical feature, attenuating to depth and to surface, along the margin of a steeply dipping resistivity high indicative of the quartz diorite (Figure 25).


Malaspina
Strait
LITTLE BILLIE
Prosser
91-30
91-53
89-10
91-32,31
88-2
88-1
91-54
88-3,4,5
89-13
89-9,11
8N
4N
L5N I.P. Profile
0-5°
Little Billie Stock
BQD
89-29
79-5
79-3
79-1
80-2
80-5
79-4
80-3
80-4
80-1
89-16
COPPER
QUEEN
88-6
very high chargeability attributed to homes & water pipes
88-7
89-8
B.L. 5+50E
Cu, Au, skarn at depth
Margin of chargeability anomaly
Central core of chargeability anomaly
Margin of magnetic high (point to low)
VANANDA GOLD LTD.
TEXADA PROJECT
LITTLE BILLIE GRID
COMPILATION
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C
0 50 100 150 300 Metres
SCALE 1:5,000
DATE: JULY 1991
DRAWN BY: C.N.F.
FIGURE Nº.: 19
CHONG


Little Billy Shaft
Stope
620 Stope
650 Stope
480 Level
600 Level
to Copper Queen
9968 N
9950 N
9918 N
9887
9824 N
100m
200m
300m
MARBLE
BIOTITE
QUARTZ
DIORITE
POTENTIAL E
POTENTIAL
D
C
B&C
20m
31m
53m
60m
Vertical limits on "ore" projected to vertical section
Interpreted plunge of "ore" from the 650 stope.
LEGEND
Ore intercept projected to vertical plane
A Ore block as defined on E-W cross sections
VANANDA GOLD LTD.
TEXADA PROJECT
LITTLE BILLY AREA
LONGITUDINAL SECTION
LOOKING E.
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
SCALE
DATE: APRIL 1991
DRAWN BY: C.N.F.
FIGURE Nº 20



VANANDA GOLD LTD.

TEXADA PROJECT

LITTLE BILLIE GRID

I.P. CHARGEABILITY

N.T.S. 92F-10E,15E NANAIMO M.D., B.C

0 50 100 150 300 Metres

SCALE 1: 5,000	DATE: JULY 1991
DRAWN BY: C.N.F.	FIGURE Nº.: 21

CHONG

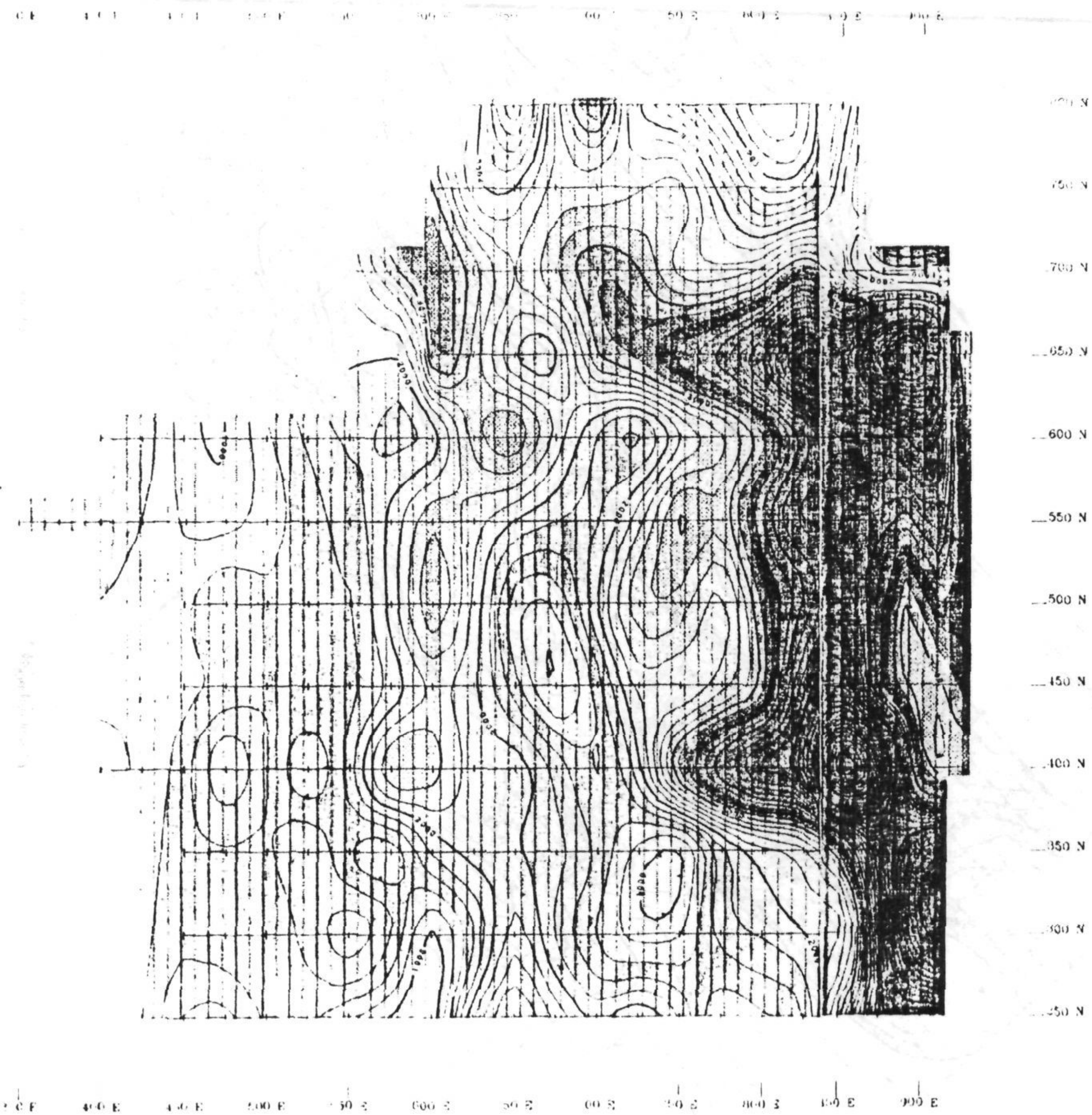
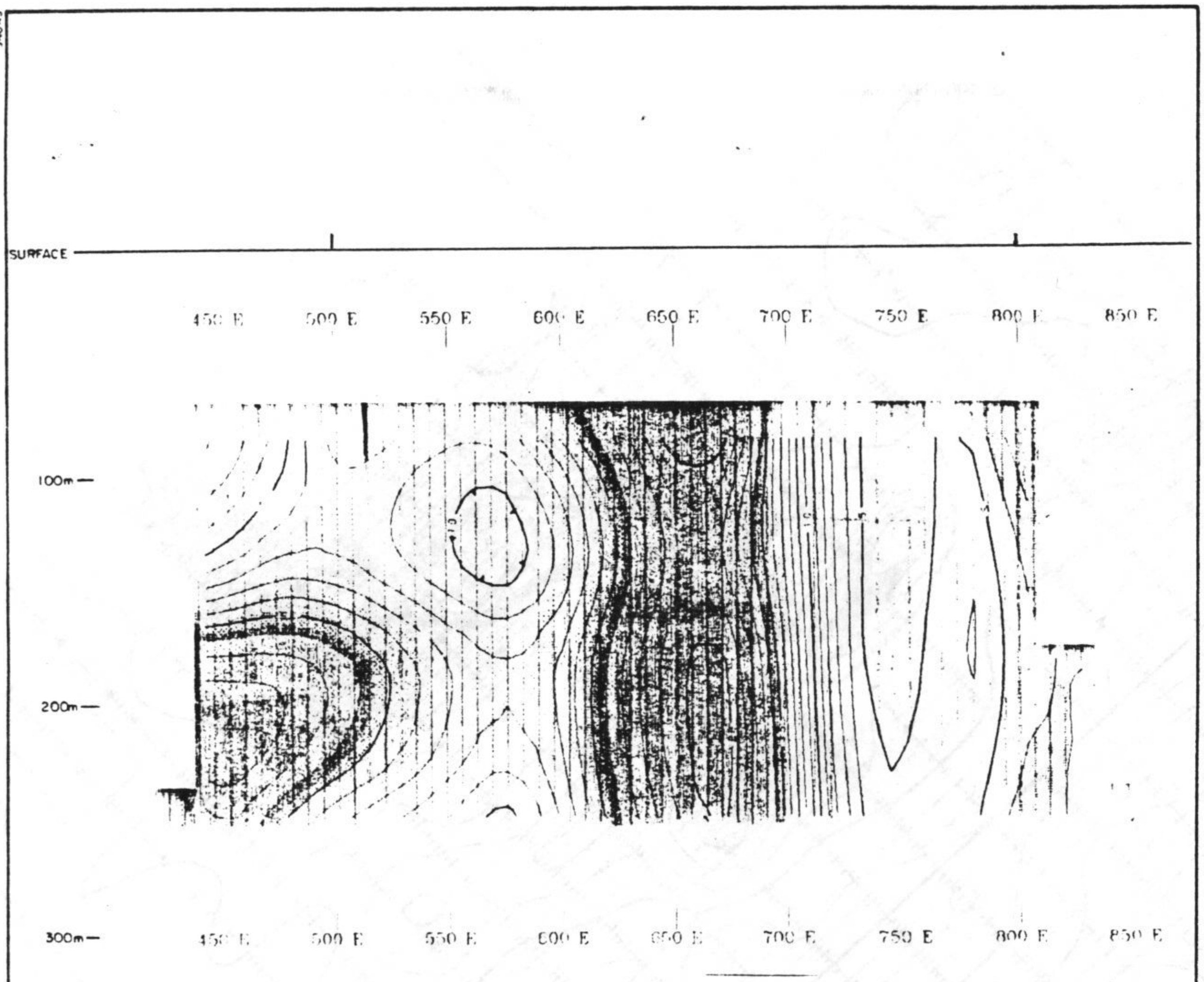


FIG 22

VANANDA GOLD COMPANY

LITTLE BILLIE, RESISTIVITY PLAN

Gradient Array, AB = 1125 m , MN = 50 m



VANANDA GOLD LTD.

TEXADA PROJECT

LITTLE BILLIE GRID – L.5N.

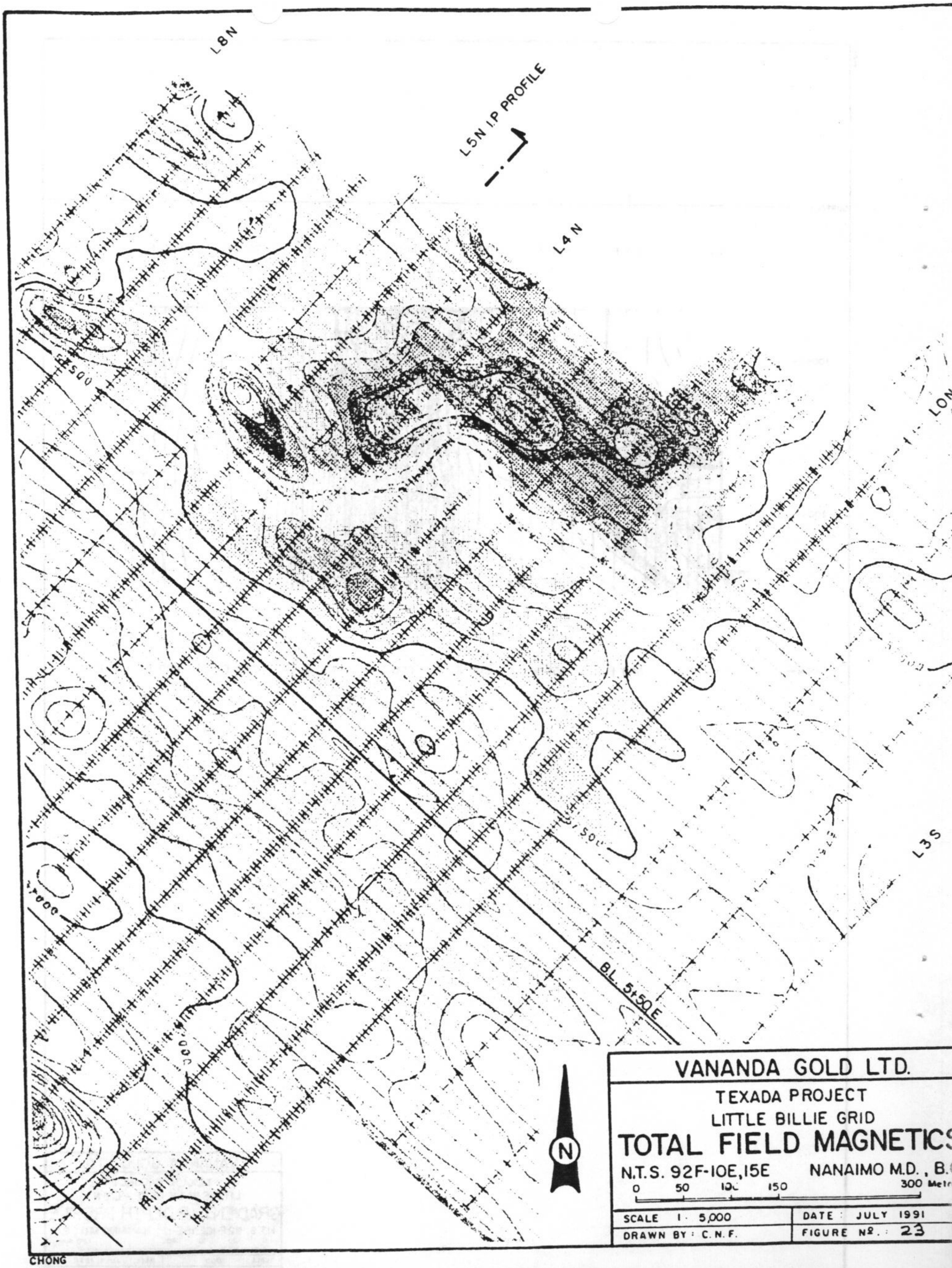
GRADIENT I.P. DEPTH PROFILE

N.T.S. 92F-10E,15E NANAIMO M.D., B.C.

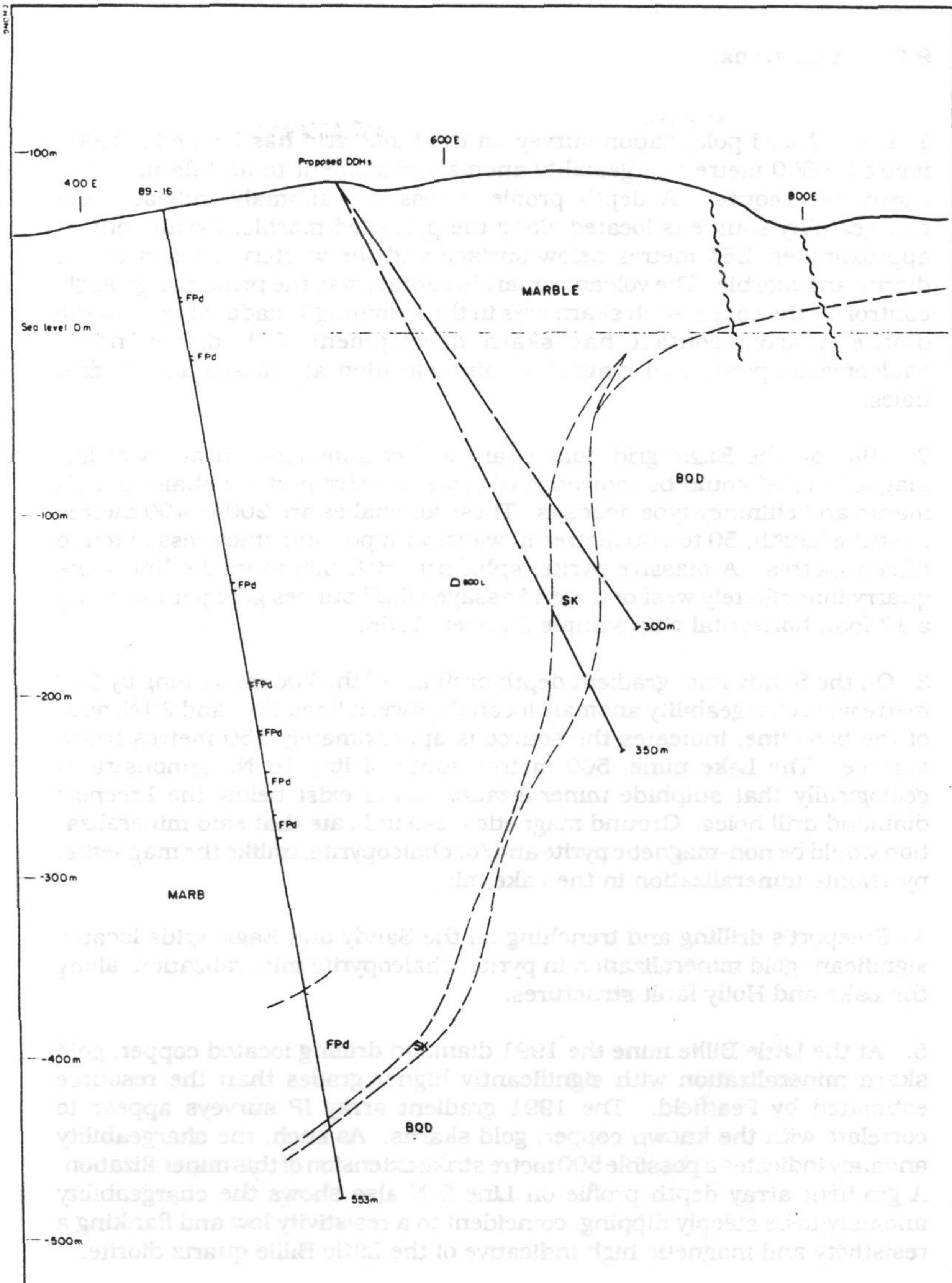
0 20 40 80 120 Metres

SCALE 1:2000 | DATE: JULY 1991

DRAWN BY: C.N.F. | FIGURE No.: 24



L8N
L5N I.P PROFILE
L4N
L0N
L3S
B.L. 5+50E
VANANDA GOLD LTD.
TEXADA PROJECT
LITTLE BILLIE GRID
TOTAL FIELD MAGNETICS
N.T.S. 92F-10E,15E
NANAIMO M.D., B.
0 50 100 150 300 Metr
SCALE 1: 5,000
DATE: JULY 1991
DRAWN BY: C.N.F.
FIGURE Nº.: 23
N
CHONG



100m
400 E
89 - 16
Proposed DDHs
600 E
800E
MARBLE
FPd
Sea level 0 m
FPd
BQD
-100m
FPd
800L
SK
300m
-200 m
FPd
FPd
350m
FPd
FPd
-300m
MARB
FPd
SK
-400m
BQD
553m
-500m
VANANDA GOLD LTD.
TEXADA PROJECT
LITTLE BILLIE GRID - L.5 N.
GEOLOGICAL X-SECTION
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
SCALE 1:2000
DRAWN BY: C.N.F.
DATE: JULY 1991
FIGURE No.: 25

9.0 Conclusions:

1. The induced polarization survey on the Eagle grid has located a 1,000 metre by 600 metre chargeability anomaly coincident to and flanking the Northwest Diorite. A depth profile across the anomaly indicates the chargeability source is located along the projected marble, basalt contact approximately 250 metres below surface and the western contact of the diorite and marble. The volcanic, marble contact was the principal geologic control for the copper-rich skarn ores in the adjoining Texada mines and the diorite, marble contact has skarn development with disseminated chalcopyrite, pyrite and magnetite mineralization at surface and in drill holes.

2. Also on the Eagle grid, four chargeability anomalies in areas of low magnetic relief could be indicative of some massive pyrite, sphalerite rich manto and chimney type deposits. These anomalies are 200 to 400 metres in strike length, 50 to 100 metres in width with possible thickness of ten to fifteen metres. A massive pyrite, sphalerite rich manto in the limestone quarry immediately west of the grid assayed 0.23 ounces gold per ton along a 17 foot, horizontal chip sample (Forster, 1988).

3. On the Sandy grid, gradient depth profiling of the 700 metre long by 500 metre wide chargeability anomaly located between lines 12 N and 20 N, west of the base line, indicates the source is approximately 350 metres below surface. The Lake mine, 500 metres south of line 16 N, demonstrates geologically that sulphide mineralization could exist below the Freeport diamond drill holes. Ground magnetics also indicate that said mineralization would be non-magnetic pyrite and/or chalcopyrite, unlike the magnetite, pyrrhotite mineralization in the Lake mine.

4. Freeport's drilling and trenching on the Sandy and Eagle grids located significant gold mineralization in pyrite, chalcopyrite mineralization along the Lake and Holly fault structures.

5. At the Little Billie mine the 1991 diamond drilling located copper, gold skarn mineralization with significantly higher grades than the resource estimated by Peatfield. The 1991 gradient array IP surveys appear to correlate with the known copper, gold skarns. As such, the chargeability anomaly indicates a possible 500 metre strike extension of this mineralization. A gradient array depth profile on Line 6 N also shows the chargeability anomaly to be steeply dipping, coincident to a resistivity low and flanking a resistivity and magnetic high indicative of the Little Billie quartz diorite.

10.0 Recommendations:

10.1 Phase I:

Geophysics:

1. Eagle Grid: The gradient IP coverage should be expanded to cover Ideal Cement's quarry and extended to complete the northern end of the grid over the Lucky Jack showing. At least two additional gradient IP depth sections should be done.

2. Sandy Grid: Line 18 N should be profiled with the gradient IP to locate the northern extension of the IP anomaly with respect to DDH's 89-26 & 27. It is possible that 89-26 could be deepened to test the chargeability anomaly. Additionally down hole EM and IP should be completed on DDH 89-27 to test for disseminated and/or semi-massive sulphides in the fault zone located immediately west of the drill hole, at the bottom volcanic contact.

3. Little Billie: Additional gradient profiles over the chargeability high extending from the known mineralization should be completed to further control future diamond drilling. Several of these lines should be extended to the southwest (grid west) to profile the Florence and Security areas. Down-hole IP and EM should also be completed on drill holes 89-8 & 12 to test for possible sulphide zones that could have been near misses and as a final test of the large IP feature southeast of the Copper Queen.

4. Down hole EM and IP should be done on all holes recommended for Phase I drilling.

Diamond Drilling:

1. Eagle Grid: 4 drill holes totalling 1,400 metres (4,600 feet) are proposed to test the four principal chargeability anomalies on Line 7 N.

2. Manto Targets: At least one 250 metre (800 foot) hole to test each of the four IP chargeability highs is required.

3. Sandy Grid: 3 drill holes totalling 1,250 metres (4,100 feet) to test the three chargeability highs on the Line 16 N profile and at least one 400 metre hole to test the IP anomaly west of the DDH 89-26 & 27 drill holes, 230 metres north of Line 16 N.

4. Little Billie: Drill 5 sections with 2 holes per section to test the southeasterly trend of the IP anomaly. Approximately 500 metres per section for a total of 2,500 metres (8,000 feet).

10.2 Phase I Budget:

Sandy and Eagle:

Geophysics: 15 days @ $1,500	$22,500
Diamond Drilling: 4,050 m (13,500') @ $65/m	265,000
Assay 10,000	
Roads and sites:	5,000
Geological supervision and field support:	50,000
Totals:	352,500

Little Billie:

Geophysics: 10 days @ $1500/ day	$15,000
Diamond Drilling: 2500 m @ $65/m	162,500
Assays:	5,000
Roads and sites:	2,500
Geological and field support:	25,000
Totals:	$210,000
Contingency @ 10%	50,000

Grand Total: **$612,500**

10.3 Phase II:

Geophysics:

Assuming the Phase I drilling proves the current geophysical approach to this geological situation is reasonably accurate in locating economic sulphide mineralization, the remaining lines on the Eagle and Sandy grids should be profiled. Broader current electrode spreads may help to look deeper into the mineralizing system. North south lines should be run to provide possible plunge information on the sulphide zones. The continuation of the IP depth profiles would greatly facilitate ensuing Phase II drill program.

Diamond drilling:

To ultimately test and define the tonnage potential of the correlating geophysical and geological targets, assuming economic mineralization was encountered in phase I on all three grids, the anomalies will have to be drilled on 100 metre spaced sections for the Eagle and Sandy grid anomalies and 50 metre sections for the Little Billie grid anomaly. Drill hole spacing on the individual sections should be 100 metres. However for a Phase II program this would prove to be a significant expense, therefore it is recommended that initially the anomalies be drilled off on 200 metre sections to determine their ultimate potential. On the Little Billie anomaly, four additional sections to in fill the Phase I drilling would be warranted assuming positive results in the Phase I work.

Eagle Grid:	
5 sections with 4 holes per section:	7,000 m
Mantos: four targets:	
1 section per manto with 3 holes per section:	3,000 m
Sandy Grid:	
3 sections with 5 holes per section:	5,200 m
Little Billie:	
4 sections with 3 holes per section:	3,600 m
Total Drilling:	18,800 m

11.0 Statement of Qualifications

Grant A. Hendrickson

- B. Science, University of British Columbia, Canada 1971, Geophysics options.

- For the past 20 years, I have been actively involved in mineral exploration projects throughout Canada, the United States, Europe and Central and South America.

- Registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia, Canada.

- Registered as a Professional Geophysicist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, Canada.

- Active member of the Society of Exploration Geophysicists, European Association of Exploration Geophysicists and the British Columbia Geophysical Society.

- I have no financial interest, either directly or indirectly, in the properties or securities of Vananda Gold Ltd.

Dated at Delta, British Columbia, Canada, this 5 day of Nov, 1991.

G. Hendrickson

Grant A. Hendrickson

PROFESSIONAL PROVINCE OF G. A. HENDRICKSON BRITISH COLUMBIA GEOSCIENTIST

10.4 Phase II Budget:

Geophysics:45 days @ $1,500	$68,000
Diamond drilling: 18,800 m @ $65 / m	1,222,000
Assay:	50,000
Roads and Sites:	20,000
Geological supervision and field support:	100,000
Totals:	**$1,500,000**

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APPENDIX I

VANANDA GOLD LTD.

Property Holdings

APPENDIX I

PROPERTY HOLDINGS

Mining Leases

Cinnabar
Alladin
Vananda

Crown Grants

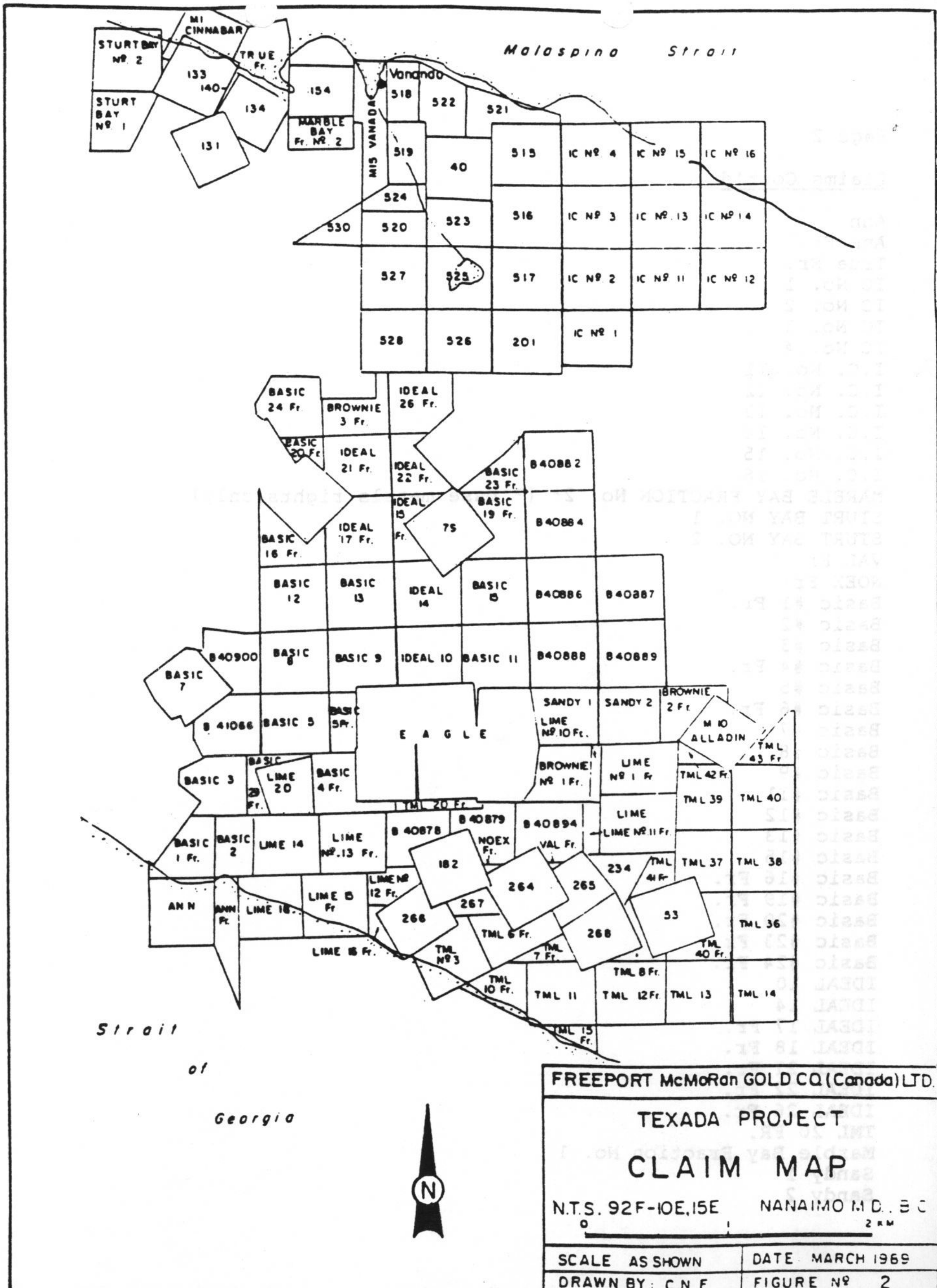
Copper Queen
Eastgate
Lucky Jack
Volunteer
Europe
Great Copper Chief
Toothpick FR
Marble Bay
Cameron
Cornell
Goodall FR
Leroi
Boulder Nest
Jack North
Yellow Kid
L.M.C.
McLeod #3
McLeod #4
McLeod #5
McLeod #6
McLeod #7
McLeod #8
McLeod #1
McLeod #2 FR
Lap #1 FR
Lap #2 FR
Lap #3 FR
Lap #4 FR
Lap #5
Lap #6
Lap #8
Eagle
Eagle No. 1
Eagle No. 2
Eagle No. 3
Eagle No. 4
Eagle No. 5
Eagle No. 6

Claims

BASIC 29 Fr.
Brownie No. 1 Fr.
Brownie #2 Fr.
Brownie #3 Fr.
B-40878
B-40879
B-40882
B-40884
B-40886
B-40887
B-40888
B-40889
B. 41066
B. 40900
B. 40894
Lime
Lime No. 1 Fr.
T.M.L. No. 3
Lime No. 10 Fr.
Lime No. 11 Fr.
Lime No. 12 Fr.
Lime No. 13 Fr.
Lime 14
Lime 15 Fr
Lime 16 Fr
T.M.L. #6 Fr.
T.M.L. #7 Fr.
T.M.L. #8 Fr.
T.M.L. #9 Fr.
T.M.L. #10 Fr.
T.M.L. #11
T.M.L. #12 Fr.
T.M.L. #13
T.M.L. #14
T.M.L. #15 Fr.
TML 36
TML 37
TML 38
TML 39
TML 40
T.M.L. #41 Fr.
T.M.L. #42 Fr.
T.M.L. #43 Fr.
Lime #18
Lime #20

Claims Cont'd

Ann
Ann Fr.
True Fr.
IC No. 1
IC No. 2
IC No. 3
IC No. 4
I.C. No. 11
I.C. No. 12
I.C. No. 13
I.C. No. 14
I.C. No. 15
I.C. No. 16
MARBLE BAY FRACTION No. 2* (* base metals rights only)
STURT BAY NO. 1
STURT BAY NO. 2
VAL Fr
NOEX Fr
Basic #1 Fr.
Basic #2
Basic #3
Basic #4 Fr.
Basic #5
Basic #6 Fr.
Basic #7
Basic #8
Basic #9
Basic #11
Basic #12
Basic #13
Basic #15
Basic #16 Fr.
Basic #19 Fr.
Basic #20 Fr.
Basic #23 Fr.
Basic #24 Fr.
IDEAL 10
IDEAL 14
IDEAL 17 Fr.
IDEAL 18 Fr.
IDEAL 21 Fr.
IDEAL 22 Fr.
IDEAL 26 Fr.
TML 20 FR.
Marble Bay Fraction No. 1
Sandy 1
Sandy 2


Malaspina Strait
Strait of Georgia
Vananda
STURT BAY Nº. 2
STURT BAY Nº. 1
MI CINNABAR
TRUE Fr.
133
140
134
131
154
MARBLE BAY Fr. Nº. 2
MIS VANADA
518
522
521
519
40
515
IC Nº. 4
IC Nº. 15
IC Nº. 16
524
530
520
523
516
IC Nº. 3
IC Nº. 13
IC Nº. 14
527
525
517
IC Nº. 2
IC Nº. 11
IC Nº. 12
528
526
201
IC Nº. 1
BASIC 24 Fr.
BROWNIE 3 Fr.
IDEAL 26 Fr.
BASIC 20 Fr.
IDEAL 21 Fr.
IDEAL 22 Fr.
BASIC 23 Fr.
B 40882
IDEAL 15 Fr.
75
BASIC 19 Fr.
B 40884
BASIC 16 Fr.
IDEAL 17 Fr.
BASIC 12
BASIC 13
IDEAL 14
BASIC 15
B 40886
B 40887
B 40900
BASIC 8
BASIC 9
IDEAL 10
BASIC 11
B 40888
B 40889
BASIC 7
B 41066
BASIC 5
BASIC 5 Fr.
EAGLE
SANDY 1
SANDY 2
BROWNIE 2 Fr.
LIME Nº. 10 Fr.
M 10 ALLADIN
TML 43 Fr.
BASIC 3
LIME 20
BASIC 4 Fr.
BROWNIE Nº. 1 Fr.
LIME Nº. 1 Fr.
TML 42 Fr.
TML 39
TML 40
TML 20 Fr.
BASIC 1 Fr.
BASIC 2
LIME 14
LIME Nº. 13 Fr.
B 40878
B 40879
B 40894
NOEX Fr.
VAL Fr.
LIME
LIME Nº. 11 Fr.
182
234
TML 41 Fr.
TML 37
TML 38
ANN
ANN Fr.
LIME 16
LIME 15 Fr.
LIME Nº. 12 Fr.
266
267
264
265
53
TML 36
TML 6 Fr.
268
LIME 16 Fr.
TML Nº. 3
TML 7 Fr.
TML 40 Fr.
TML 10 Fr.
TML 11
TML 8 Fr.
TML 12 Fr.
TML 13
TML 14
TML 15 Fr.
N
FREEPORT McMoRan GOLD CO. (Canada) LTD.
TEXADA PROJECT
CLAIM MAP
N.T.S. 92F-10E,15E
NANAIMO M.D., B.C.
0
1
2 KM
SCALE AS SHOWN
DATE MARCH 1989
DRAWN BY: C.N.F.
FIGURE Nº 2

CHONG