

83-#7-[#]11019

ROUCHER DEBOULE PROPERTY
NTS 93M/4E
OMINECA M.D.
D. GROOT LOGGING LTD.
MINERALS EXPLORATION
SMITHERS B. C.

D.C.PLECASH - GEOLOGIST. JANUARY 1983

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,019

T A B L E O F C O N T E N T S

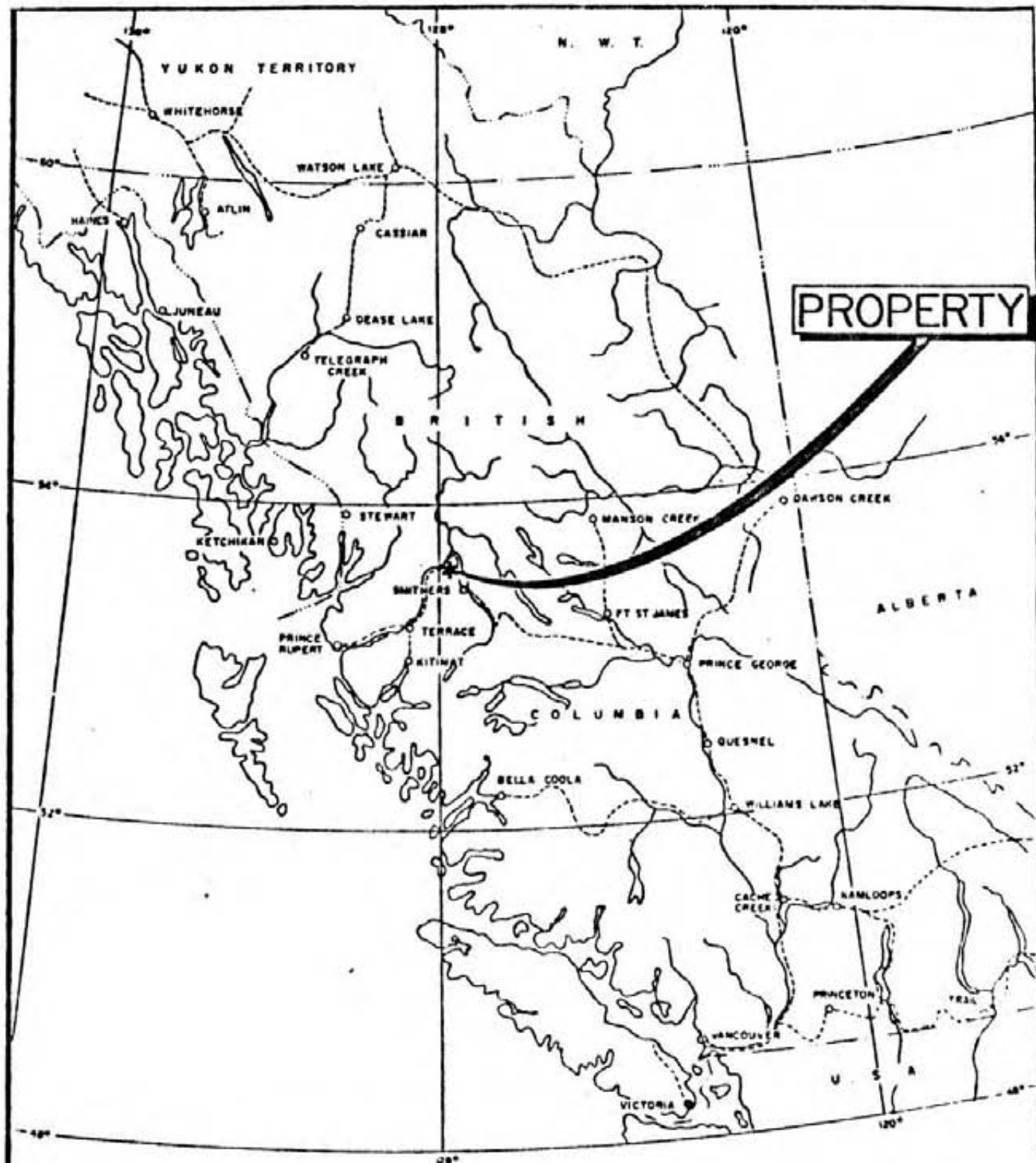
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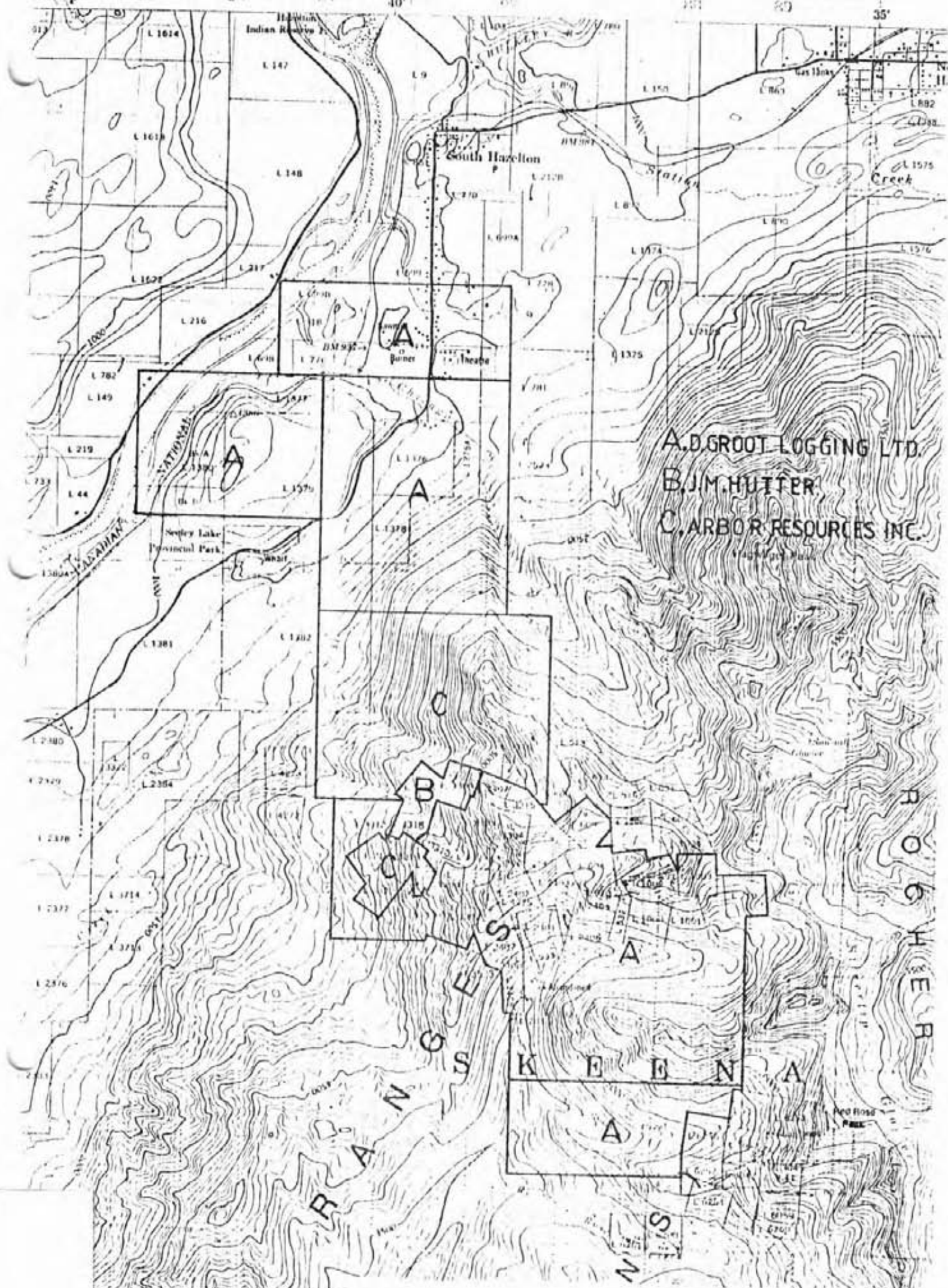


INDEX MAP

BRITISH COLUMBIA

100 km

FIG. 1



A. D. GROOT LOGGING LTD.
 B. J. M. HUTTER
 C. ARBOR RESOURCES INC.

D. GROOT LOGGING LTD.
 ROUCHER DEBOULE PROPERTY
 HAZELTON, B.C. AREA
 PROPERTY MAP

SCALE: 1:50000
 DWN; D.C.P.

DATE: OCT. 1981
 NTS: 93M/4E

VICTORIA, ROUCHER DEBOULE & ARMAGOSA GROUPS

ROUCHER DEBOULE MOUNTAINS

HAZELTON, B.C.

INTRODUCTION:

The Victoria and Roucher Deboule properties comprise a contiguous group of reverted crown grants and mineral claims located on the western flank of Roucher Deboule Mountain, south of Hazelton, B.C.

Numerous mineralized veins are known to occur on the property; from the scheelite veins in the Armagosa Creek area adjacent to Cominco's Red Rose property, to the Roucher Deboule mine area and thence to the Victoria area.

This report deals primarily with the Victoria No. 2 vein which was examined in detail by the author, information gathered from various government publications and company reports is also included.

CLAIMS, LOCATIONS AND ACCESS

The Victoria, Roucher Deboule and Armagosa property comprises of 37 reverted crown granted claims, fractions and 3 mineral claims of 36 units for a total of 73. Details of which are to be found further on in the report.

The claims are located 11km. south of the settlement of South Hazelton, B.C. on which the often very steep western slope of the Roucher Deboule Range at about 1220m. above sea level to about 1950m. above sea level.

Access to the Northern or Victoria part of the property is via a steep narrow bush road that branches off Comeau Ranch Road, access to the Southern or Roucher Deboule and Armagosa part of the property is via the Juniper Creek Road which leaves Highway 16 at Skeena Crossing some 20km. Southwest of South Hazelton, B.C.

Infra-structure in the area is well developed with a paved highway, transcontinental rail line and electric transmission line all within 5km. of the property.

A reverted crown grant has the same status as a one unit mineral claim. It is acquired by application rather than by staking, the area is identical to the lapsed crown grant.

<u>NAME OF CLAIM</u>	<u>LOT NO.</u>	<u>RECORD NO.</u>	<u>RECORDING DATE</u>	<u>EXPIRTY DATE</u>
Hazelton View	3299	401	Aug. 1976	Aug. 25, 1992
Lead Pick	3300	402	"	"
Moose	3301	403	"	"
Elk	3302	404	"	"
Delta Fraction	604	455	Oct. 1976	Oct. 26, 1992
Joe Fraction	533	456	"	"
Juniper	2400	457	"	"
Balsam	2401	458	"	"
Jack Pine	2402	459	"	"
Timber Line	2403	460	"	"
Iowa	2404	461	"	"
Log Cabin	2405	462	"	"
Balsam Fraction	2406	463	"	"
Pie Fraction	2407	464	"	"
Third Fraction	2408	465	"	"
Victoria	3303	466	"	"
Belle	3304	467	"	"
View Fraction	3305	468	"	"
Belle Fraction	3306	469	"	"
Mammoth	3307	470	"	"
Tiger	3308	471	"	"
Bowl Fraction	3315	472	"	"
Summit	605	555	April 1977	April 5, 1992
Great Ohio	702	556	"	"
Pilot	704	557	"	"
Summit Fraction	-	582	April 1977	April 6, 1992
Waterfall Fraction	-	583	April 1977	April 22, 1992
Coral Queen	532	616	June 1977	June 21, 1992
Lucky Jack	603	617	"	"
Islander	710	618	"	"
Golden Fleece	1001	619	"	"
Happy Jack	1003	620	"	"
Zig Zag Fraction	1005	621	"	"
Balmoral	1002	622	"	"
Highland Boy	1000	623	"	"

<u>NAME OF CLAIM</u>	<u>LOT NO.</u>	<u>RECORD NO.</u>	<u>RECORDING DATE</u>	<u>EXPIRY DATE</u>
Independance Fraction	4275	687	July 1977	July 25, 1992
Red Cross	3310	1372	Sept. 1977	Sept. 13, 1992
Leo 1-20	-	3110	Aug. 1980	Aug. 1992
Star 1-10	-	3986	Aug. 1981	Aug. 7, 1992
July 1-6	-	3987	Aug. 1981	"

CLIMATE AND TOPOGRAPHY

The property lies near the division between the dry interior plateau of central British Columbia and the warmer, humid coastal belt. Precipitation at the property would average 1.5 and 2.0m. annually with most falling as snow between November and March. Temperature extremes would vary from -35°C in winter to $+30^{\circ}$ in summer with rapid changes of up to 30°C over a matter of hours not that uncommon.

The Victoria segment of the property is characterized by precipitous slopes that are regularly swept by snow slides during the winter and by avalanches after heavy snow falls and during the spring melt. The Roucher Deboule and Armagosa segments of the property area characterized by more uniform slopes with only a minimal snow slide hazard.

ECOLOGIC SENSITIVITY

Many of the pristine mountain streams that cascade down the slopes of the Roucher Deboule Range are, according to present water quality standards, poisonous. Samples collected by the British Columbia Department of Mines (B.C.D.M.) generally above old workings gave the following upper limit: Zn. 620 PPM, Cu. 1900 PPM, Pb. 128 PPM, Ni. 180 PPM, Co. 260 PPM, As PPM, Mo. 47 PPM, Hg. 480 PPb, U. 158 PPM in silts and 0.6 PPb U and 68 PPbF in water. Natural levels below the present workings were much higher.

A well run mining operation would add little, if any, to the current, predominately natural, water pollution.

The potential for visual pollution is limited to the Victoria area as the Roucher Deboule and Armagosa workings are neatly tucked away in a mountain valley. On the Victoria property, which is visible from the Highway, waste dumps, etc. are naturally erased annually.

A mining operation would pose little threat to the present wildlife on the mountain. The 2km. "No Hunting" zone usually established around a mining operation would provide refuge to the current herd of Mountain Goats that number 2 to 4 animals.

HISTORY

The Roucher Deboule property has been active off and on from early 1910 to around 1952. The Roucher Deboule mine was placed into production in 1915 and continued intermittently until 1918. In this period 39,833 tons of ore was shipped that averaged 7.4% Cu, 0.106 oz Au., 1.578 oz Ag. An intricate and apparently very well engineered system consisting of a monorail, and inclined surface tram, a 0.8 km. narrow gauge steam driven railway across the top of the mountain and an impressive 6 km. long aerial tram down the side of the mountain was used to transport the ore to the CNR tracks in the valley floor.

Little was then done on the property until it was acquired in 1950 by Western Uranium Cobalt Mines Ltd. primarily as a means of access to the Victoria property. They, however, built a 90 ton per day mill and attempted mining some of the areas in the Roucher Deboule workings left by the previous operators. After milling some 11,650 tons grading about 4% copper the property was shut down and all equipment moved over to the Red Rose property. Since that time no work has been carried out on the Roucher Deboule claims other than limited prospecting in recent years.

The Armagosa area was probably worked on in the same era as that of the earlier work that was done on the Roucher Deboule property.

The Victoria property was apparently discovered in the same year as the Roucher Deboule. The first car load of hand sorted ore was shipped in 1918, further ore was shipped in 1926, 1928, 1940 and 1941, with a total recorded production being 90 tons grading 3.62 oz Au., 0.3 oz Ag.; 24.76% As.; +/-20% Mo. and 2.73% Co. All production being from the No. 1 vein. In 1949 and 1950 minor underground exploration and surface mapping and sampling were completed. The property lay dormant until acquired by Mr. McGowan and Mr. Craig in 1976. Presently, one man has a lease on the No. 1 vein on all ore above the No. 3. Adit from 1575 m. to surface. Only a few cuts were put in on the No. 2 and No. 3 veins that are 305 m. and 534 m. respectively due south of the No. 1 vein.

DEVELOPMENT AND PREVIOUS EXPLORATION

The underground working on the Roucher Deboule property consists of five adit level crosscuts, three sub-levels and extensive drifts along the vein. In total, over 1.6 km. of cross cutting, approximately 2.3 km. of drifting and some 750 to 800 m. of raises, winzes and internal shafts are recorded.

Of particular significance is the 1200 level cross cut adit at elevation 1280 m., which was driven north to the northern boundary of the old Roucher Deboule mining company property line. The continuance of this crosscut into the downward extensions of the Victoria mineralized zones would form a quick access with the area.

Evidence of surface exploration on the Roucher Deboule seems quite limited as there are no reports of any underground or surface diamond drilling.

On the Victoria ground the workings consist of five adits, one raise and sublevel, a winze and a number of open cuts. All underground workings are on the No. 1 vein, the most northerly of three parallel veins, which comprise the main showings of the property. The lowest adit is at 1575 m. elevation, and the highest adit at 1798 m. and the top open cut on the ridge at 1860 m. elevation. Workings on the No. 2 and No. 3 veins consist of a few open cuts and nine completed diamond drill holes on the No. 3 vein from the top diamond drill hole at 1628 m. in elevation to the lowest diamond drill hole at 1315 m. in elevation.

The Armagosa area has a few short adits and a small shaft sunk on it. Skeena Silver Mines did some trenching on the property in 1952 but the results are not available.

GEOLOGY - REGIONAL

The Roucher Deboule Range lies within the intermountain belt of the Western Cordillera and forms a segment of the Hazelton Mountains. The passively emplaced Roucher Deboule stock forms the mountain core and is surrounded on all sides by predominantly Skeena group volcanics and sediments. Three minor N-S striking faults cut both the stock and the surrounding strata.

The stock is composed primarily of porphyritic granodiorite with a younger quartz monzonite phase.

Mineralization in the Mountain Range consists, for the most part, of fissure veins and shear zone replacements although a moly porphyry is being explored at the south end of the range.

Structurally the veins are relatively simple, striking generally east-west and dipping north on the western flank of the stock and north-south with a westerly dip on the eastern flank.

Mineralogically the veins are complex with several phases of mineralization documented.

GEOLOGY - LOCAL

Eight major east-west striking north dipping veins spaced approximately 300 m. apart occur on the Victoria and Roucher Deboule property. The veins are predominantly developed within the Roucher Deboule stock but have been traced westerly into the intruded volcanics and sediments.

The progression of events resulting in the formation of veins appeared to be as follows:

- Intrusion and cooling of the Roucher Deboule stock.
- Intrusion and cooling of North-East trending quartz monzonite dikes.
- Fracturing along present vein channels.
- Intrusion of acid to intermediate porphyritic dikes along Victoria No.'s 1 and 2 and Roucher Deboule No. 3 vein fractures.
- Renewed movement along vein channels and introduction of hornblende - quartz-feldspar pegmatites together with sheelite, molybdenite and uraninite.
- Further shearing along the veins and shattering of the Victoria No. 2 dike followed by the introduction of chalcopyrite, a tin metal? and glassy quartz or arsenopyrite, safflorite, cobaltite, glaucodot, pyrrhotite and gold. (Victoria and to a lesser extent Roucher Deboule).
- Renewed movement and the local introduction of tetrahedrite, sphalerite, galena and pyrite. (Victoria No. 3?)
- Faulting along North North-West and North North-East axes and the intrusion of fine grained diorite dikes.

In spite of the number of periods movement that have apparently taken place, off sets are generally less than 30 m. and more typically less than 5 m.

In the Armagosa Creek area, which very little work has been done, probably due to the steep slopes that make the mineralized area fairly inaccessible. The several veins No.'s 1 to 7, and 11, occur in the sediments, these veins show a marked parallelism in striking North North-East and dip to the North-West. It is reported that several fine grained (diorite) dikes appear close by the vein structures. Feldspar porphyry dikes were also noted at several

points in the sheared area.

Victoria No. 2 vein consists of a feldspar porphyry dike, that, throughout its known length has been fractured and sheared. Subsequent hydrothermal activity has resulted in the introduction of hornblende-feldspar pegmatites, quartz and sulphides as fracture fillings and as replacements. In this report the dike and its intimately associated economic mineralization is referred to as Victoria No. 2 vein-dike system.

REFERENCES

J.S. Stevenson 1949 PP 82-93; E.D. Kindle, 1954 PP 84-89; A. Sutherland Brown 1960, Bull 43; Minister of Mines, B.C. Ann Repts. 1916 PP 114-115; 1917, PP 103-104; 1918, PP 112-113; 1925 PP 134; 1927 PP 132-133; 1928 PP 140; 1940 PP 76; 1941 PP 41; 1948, PP 80-82; 1949, PP 82-93; 1950 PP 99; J.J. O'Neill, 1919, PP 20-23; M.W. Jasper M.E. 1951, 1952, 1953 Reports; G. Ford, 1979 Report; D.C. Plecash 1981 Report.

VICTORIA NO.2 VEIN (CONT'D)

This system has been traced from the 1460 m. elevation which is 180 m. west of the granodiorite-volcanic contact that is at the 1570 m. elevation, then eastward for 380 m. to the shovel cut at 1827 m. From the shovel cut the vein continues eastward for 137 m. where it crosses the ridge into a boulder field at the 1900 m. elevation. The vein was located 238 m. across the boulder field at the 1879 m. elevation and then followed for another 60 m. to the 1865 elevation.

The western two thirds of the known vein-dike system is presently not exposed, except for intermittent shears of quartz with arsenopyrite and cobaltite on the south wall of the avalanche chute which occupies the trace of the system in this area. The wall and quartz-sulphide shears both strike almost due east and dip 50° to 60° to the north. The out crops which previously showed the northern contact of the dike and the old pits on the western end of the footwall vein were buried by a landslide in the fall of 1978.

Sharply angular blocks of mineralized hornblende pegmatite within the avalanche debris in the chute affirm to the presence of the system beneath the detritus. A 0.5 m. sample across the face of one block assayed 23.32 g/T Au and 62.8g/T As.

The full width of the vein dike system is only exposed at the top of the above mentioned avalanche chute where the system crosses a small ridge or spine into the next chute (shovel cut area) here the heaviest mineralization (Victoria No. 2 Vein) is on the dike hanging wall and consists of shears and lenses of arsenopyrite and cobaltite with some hornblende and quartz along the sheared dike stock contact. The shearing and mineralization both strike at 90° to 95° and dip 50° to 60° north. Subsidiary mineralized veins of fractured and sheared porphyry and hornblende pegmatite striking $\pm 125^{\circ}$ and dipping 60° north splay off of the hanging wall vein into the porphyry dike. The porphyry itself is also fractured with thin films and veinlets of arsenopyrite filling the fractures where it has not yet been weathered out.

Between the new cut which is 8 m. east of the shovel cut and the top of the ridge the vein dike system is predominantly masked by a thin veneer of granitic boulders in an avalanche chute. Several of the old pits shown on Mr. Jasper's map are partially visible but are filled with boulders.

Near the top of the steep slope where the mineralized system crosses the mountain ridge on the south wall of a small boulder filled saddle the hanging wall mineralization appears to split with a branch following the contact and the other splaying north into the granodiorite.

Further to the east on the eastern side of the large boulder field the vein dike system was observed on the steep sloping south wall of a ridge that slopes down toward the Juniper Creek area. A massive amount of hornblende up to 1.4 m. thick was observed along the hanging wall of the vein dike system but did not carry any amount of mineralization. The vein dike system seems to have more iron pyrite as it progresses eastward as the rocks are fairly well stained from oxidization.

Around the shovel cut area and eastward where the vein dike system structure has increased in width to about 2 times the normal width, a slight folding of the vein dike system must have occurred to give a minor synclinal trough. The theory was postulated from the map work done on the proposed diamond drill program plan.

OTHER VEINS

The Victoria No. 1 vein has been examined both underground and on surface, the vein is often accompanied by a dike, mineralization such as arsenopyrite, cobalt-nickel sulfarsenide and gold occurs in discontinuous lenses with next to no apparent dissemination into the dike or wall rock. The newest sugary quartz vein in the footwall granodiorites in the lower adit does not correlate with of the veins found in the workings or outcrops further up the slope. This vein is 0.5 m. in width and reported to run about 18.0 g/T in Gold.

The Victoria No. 3 vein shear continued from the 1627 m. elevation down to the 1315 m. elevation in a horizontal distance of 723 m. Very little mineralization was found in this area from the 7 diamond drill holes that intersected this shear. At the 1692 m. elevation there is a south-east striking vein that intersects the No. 3 vein shear. This south-east

striking vein has minerals of galena, sphalerite, tetrahedrite, arsenopyrite, safflorite and pyrite in it. This zone can be seen on the face of an inaccessible cliff for some distance as noted by M. Jasper 1951.

Two copper veins are reported to occur on the old Hazelton view C.G. The southern vein is thought to be the western extension of the Roucher Deboule No. 4 vein, the northern one possibly lying between the Victoria No. 3 vein and the Roucher Deboule No. 4 vein.

SAMPLING

The sampling carried out was designed to determine the validity of the previous sampling and to try and find the extension of the vein dike system. The sampling shows an interesting zone of highgrade ore around the shovel cut area and also that the gold ore does continue for at least 375 m. east of the shovel cut and also some distance to the west. It is very unfortunate that more samples cannot be taken in a systematic manner to outline the zones in detail. This is due to the steepness of the area and also that of the vein dike system being covered by slides of large boulders. Some of the samples do not cover the total zone as the vein is obscured by overburden eg. sample No. 56 and sample No. 62 of the new samples taken.

A sample collected by G. Ford from vein rubble over a width of 1 m. in the saddle in the upper ridge of the vein assayed 21.26 PPM Au. This value indicates the potential of a larger zone than noted.

CONCLUSIONS AND RECOMENDATIONS

The examination, surveying, sampling, etc. of the Victoria No. 2 vein confirms the reports and related work reported by Martin Jasper in his reports of 1951 and 1952 for Western Uranium Cobalt Mines Ltd., and by Gordon Ford for C.C.H. Resources Ltd. in his report in 1979.

While the vein dike system is somewhat inaccessible and generally poorly exposed, sufficient exposures exist to suggest that the system is continuously mineralized along its known length and in several locations attains potentially economic Gold-Cobalt grades over attractive widths. The potential for a large zone hidden under the massive boulder field exists.

The limited self-potential survey shows that there is an anomolous zone beneath the overburden that obscures the projected vein dike system.

It is recommended that the next step in our exploration program is to diamond drill the shovel cut area at depth. This exploration will be fairly expensive as access is very limited. And time is of the essence, as only three to four months of the year is clear of snow at the higher elevations. This diamond drilling would be totally backed by a helicopter. Mining, however, should pose few problems as year round access is feasible from a lower adit or via a northern extension of the Roucher Deboule workings.

PROPOSED EXPLORATION

Diamond drilling of 6 holes to determine the down dip extension of the wide shovel cut area zone. This is to be done at 2 diamond drill set ups as shown on the proposed diamond drill plan. These are the only areas that a diamond drill could be set up, due to the steep irregular boulder filled terrain.

The cost of the above work including, supervision, core logging and splitting and assaying is estimated to be around \$75,000 and \$80,000.



D.C. PLECASH
GEOLOGIST

STATEMENT OF QUALIFICATIONS

I, Donald C. Plecash, of 3869 - 12 Avenue, Box 2694, Smithers, B.C. Certify that:

- 1) I attended Queens University, Kingston, Ontario from September 1947 to May 1950.
- 2) I was employed by Yale Lead & Zinc Mines of Ainsworth, B.C. as a Mine Surveyor, Junior Engineer and Junior Geologist from 1950 to 1956.
- 3) I was employed by Canam Copper Mines Ltd. of Hope, B.C. as a Mine Engineer and Mine Geologist from 1956 to 1957.
- 4) I was employed by Reeves MacDonald Mines Ltd. of Remac, B.C. as a Mine Engineer and Mine and Exploration Geologist from 1957 to 1969.
- 5) I was employed by Norex Uranium Ltd. of 605-535 Thurlow Street, Vancouver, B.C. as Exploration Manager and Geologist from June 1969 to October 1969.
- 6) I was employed by Nadina Explorations Ltd. of 1005-789 West Pender Street, Vancouver, B.C. as Mine Engineer and Mine Geologist then Mine Manager from November 1969 to September 1973.
- 7) I was employed from September 1973 to April 1980 in another industry.
- 8) I am employed by D. Groot Logging Ltd. of Box 520, Smithers, B.C. as a Geologist from May 1980 to present time.



GEOPHYSICAL SURVEY - SELF POTENTIAL METHOD

EQUIPMENT R.S.P. - 6

THEORY:

Exploration procedures based on the flow of natural currents rely on "self potential" currents which arise spontaneously in certain bodies due to polarization of these bodies.

An electric current to be generated in a manner similar to the process taking place in a galvanic cell, one or more conductors of electricity must be in contact with one or more electrolytes (solutions of salts, acids or alkalies that are themselves electrically conductive).

The major factor in the generation of spontaneous polarization currents appears to be the difference in acidity (PH) between near surface electrolytes and the solutions of depth which normally are somewhat alkaline. It is in this phase of the phenomenon that actively oxidizing sulphides enter to give a boost to the current generation. The acids formed during oxidation of sulphides lower the PH of near surface solutions and increase the contrast between them and the less acid, neutral or alkaline electrolytes at depth. The difference in PH between near surface and deep lying electrolytes largely control the actual strengths of the electrical currents excited by that contrast.

METHOD:

Two porous pots with internal copper electrodes filled with a super-saturated solution of copper sulphate were attached to two wire leads of 16 gauge flame seal covered stranded wire whose fixed ends are connected to the RSP-6 machine. Both electrodes are moved continually with a fixed distance of separation between them, 40 feet apart. The electrodes are moved along each survey line in a leap-frog fashion, e.g. A to B, B to C, C to D, etc. This method produces the gradient of the potential or electric field along the lines surveyed.

ROUCHER DEBOULE
SELF POTENTIAL RSP-6 READINGS

LINE 23

23 - 1N = 0
23 - 2N = 0
23 - 3N = 0
23 - 4N = +1
23 - 5N = +10
23 - 6N = -1

LINE 21

21 - 1N = +4
21 - 2N = -19
21 - 3N = +10
21 - 4N = -29
21 - 5N = +20
21 - 6N = +13
21 - 7N = -35
21 - 8N = -35
21 - 9N = -35
21 - 10N = +2

LINE 17

17 - 1S = +20
17 - 2S = +8
17 - 3S = +9
17 - 4S = 0
17 - 5S = +10
17 - 6S = +4
17 - 7S = -1
17 - 8S = 0
17 - 9S = -18

LINE 15

15 - 1N = +19
15 - 2N = +15
15 - 3N = -2
15 - 4N = +30
15 - 5N = +20
15 - 6N = -9
15 - 7N = 0
15 - 8N = -9
15 - 9N = +1
15 - 10N = -4
15 - 11N = +27
15 - 12N = +14

LINE 12

12 - 1S = +28
12 - 2S = +3
12 - 3S = +13
12 - 4S = +3
12 - 5S = -24
12 - 6S = +9
12 - 7S = +32
12 - 8S = -23
12 - 9S = +19
12 - 10S = -31
12 - 11S = +39
12 - 12S = 0

LINE 7

7 - 1N = -15
7 - 2N = +1
7 - 3N = -18
7 - 4N = +5
7 - 5N = -13
7 - 6N = +10
7 - 7N = -20
7 - 8N = +42
7 - 9N = +21
7 - 10N = 0

LINE 5

5 - 1N = -5
5 - 2N = -38
5 - 3N = +23
5 - 4N = -17
5 - 5N = -3
5 - 6N = +12

LINE 2

2 - 1N = -8
2 - 2N = -22
2 - 3N = -45
2 - 4N = +5
2 - 5N = +2
2 - 6N = -14

ROUCHER DEBOULE

COST STATEMENT

1982

Road Building	\$ 5,701.24
Self Potential Survey	3,142.13
Prospecting, Sampling, Assaying, Reports, Etc.	10,798.88
Equipment, Rentals, Helicopters	<u>1,154.80</u>

\$ 20,797.05


D.C. PLECASH
GEOLOGIST

COST BREAKDOWN
 SELF POTENTIAL SURVEY
 1982

Base Line 731.5 m.
 Cross Lines 841.3 m.

Line Cutter and Helper		
Ken Groot 7 days @ \$118.30/Day includes fringes	\$ 828.10	
Supervisor and Instrument Operator 9 days @ \$196.45/day		
D. Plecash 9 Days @ 196.43/day	1,767.87	
4 x 4 Vehicle		
7 days @ \$35.00/Day	245.00	
Fuel, Oil, Repairs	201.16	
Report		
Maps, Blue Printing, Typing, etc.	<u>100.00</u>	
		<u>\$ 3,142.13</u>

\$1.997 per meter

Cost Distribution

Tiger	R 471	\$ 1,888.42	
Red Cross	R 1372	116.26	
Belle Fra.	R 469	590.72	
Victoria	R 466	<u>546.73</u>	
			<u>\$ 3,142.13</u>


 D.C. PLECASH
 GEOLOGIST

COST BREAKDOWN
PROSPECTING, SAMPLING, ASSAYING, ETC.
1982

Transportation	
Helicopter	\$ 1,154.80
4 x 4 Vehicle	
18 Days @ \$35.00/Day	630.00
Fuel, Oil, Repairs	516.28
Wages	
Supervision, Mapping Etc.	
D.C. Plecash 25 Days @ \$196.43/Day	4,910.75
Helper	
K. Groot 18 Days @ \$118.30/Day	2,129.40
Maps	
McElhanney Surveying & Engineering Ltd.	1,465.00
Report	
Maps, Blue Printing, Typing, Etc. (Est.)	125.00
Assaying	
Assay Costs & Greyhound Freight	<u>1,022.45</u>
	<u>\$ 11,953.68</u>

Cost Disbribution

Tiger	R471	\$ 3,678.15
Summit Fra.	R582	2,451.70
Belle Fra.	R469	<u>5,823.83</u>
		<u>\$ 11,953.68</u>


D.C. PLECASH
GEOLOGIST



CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : GROOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLECASH
BOX 520
SMITHERS, B.C. V0J 2N0

CERT. # : A8212165-001
INVOICE # : 18212165
DATE : 30-JUL-82
P.O. # : NONE

ATTN: BUD PLECASH

Wt. (g)	Sample description	Prep code	Co %	Ag FA oz/T	Au FA oz/t			
0.714	6209	207	0.001	0.01	<0.003	--	--	--
1.324	6210	207	<0.001	0.02	<0.003	--	--	--
1.234	6211	207	<0.001	0.02	<0.003	--	--	--

VICTORIA No 2 SEM



MEMBER
CANADIAN TESTING
ASSOCIATION

Ken Marini
.....
Registered Assayer, Province of British Columbia

E



CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C

TELEPHONE: (604) 984-022
TELEX: 043-5259

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : GRCOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLECASH
BOX 520
SMITHERS, B.C. VOJ 2N0

** CERT. # : A8212610-001
INVOICE # : 18212610
DATE : 23-AUG-82
P.O. # : NONE
NONE

ATTN: D. C. PLECASH

Weight	Sample description	Prep code	Co %	Ag FA oz/T	Au FA oz/t			
6.10g	6212	207	0.001	<0.01	<0.003	--	--	--
3.05g	6213	207	0.002	0.04	<0.003	--	--	--
0.30g	6214	207	<0.001	0.02	<0.003	--	--	--
0.84g	6215	207	<0.001	<0.01	<0.003	--	--	--
4.57g	6216	207	0.002	<0.01	<0.003	--	--	--
4.27g	6217	207	0.002	0.02	<0.003	--	--	--
1.98g	6218	207	0.001	<0.01	<0.003	--	--	--
4.77g	6219	207	0.001	<0.01	<0.003	--	--	--
1.07g	6220	207	0.001	0.01	<0.003	--	--	--
1.98g	6221	207	0.002	0.01	<0.003	--	--	--
1.74g	6222	207	0.001	<0.01	<0.003	--	--	--

VICTORIA No. 2 vein

B. Stewart

Registered Assayer, Province of British Columbia



MEMBER
CANADIAN TESTING
ASSOCIATION

E



CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C7

TELEPHONE: (604) 984-0227
TELEX: 043-52597

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : GROOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLEKASH
BOX 520
SMITHERS, B.C. V0J 2N0

** CERT. # : A8212820-CL1
INVOICE # : 18212820
DATE : 2-SEP-82
P.C. # : NONE

ATTN: D.C. PLEKASH

Weight	Sample description	Prep code	Co %	As NAA %	Ag FA oz/T	Au FA oz/t		
0.47m	6223	207	0.220	--	0.12	0.055	--	--
1.65"	6224	207	0.420	--	0.34	1.920	--	--
2.44"	6225	207	0.200	5.630	4.16	2.806	--	--
2.62"	6426	207	0.100	--	0.10	0.686	--	--
1.95"	6427	207	0.110	--	0.32	0.156	--	--
0.70"	6428	207	0.380	--	0.10	0.900	--	--
0.21"	6429	207	0.200	--	0.16	0.328	--	--
1.78"	6430	207	0.050	--	0.90	1.926	--	--
1.98"	6431	207	0.040	--	0.04	0.058	--	--
3.47"	6432	207	<0.010	--	0.06	0.004	--	--
0.46"	6433	207	0.150	4.160	0.04	0.570	--	--
1.32"	6434	207	<0.010	0.051	0.24	0.006	--	--

Victoria No 2 vein



MEMBER
CANADIAN TESTING
ASSOCIATION

.....
Registered Assayer, Province of British Columbia

[Signature]
E



CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : GROOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLEASH
BOX 520
SMITHERS, B.C. V0J 2N0

** CERT. # : A8213586-001
INVOICE # : 18213586
DATE : 13-OCT-82
P.O. # : NONE
NONE

Sample description	Prep code	S % (Leco)	Ag FA oz/T	Au FA oz/t			
1.57" 6435	207	--	0.05	0.258	--	--	--
2.1" 6436	207	--	0.03	0.004	--	--	--
2.2" 6437	207	--	0.05	<0.003	--	--	--
2.70" 6438	207	--	0.04	<0.003	--	--	--
1.83" 6439	207	--	<0.01	<0.003	--	--	--
1.67" 6440	207	--	0.12	0.016	--	--	--
0.61" 6441	207	--	<0.01	<0.003	--	--	--

VICTORIA No. 2 VENT

[Signature]

Registered Assayer, Province of British Columbia



F



CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52591

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : GROOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLEKASH
BOX 520
SMITHERS, B.C. V0J 2N0

** CERT. # : A8213586-001
INVOICE # : I8213586
DATE : 13-OCT-82
P.O. # : NONE
NONE

Depth	Sample description	Prep code	Cu %	Pb %	Zn %	Co %	As %	NAA %	Fe %	acidX %
1.52 m	6435	207	--	--	--	0.160	--	--	--	--
2.15 m	6436	207	--	--	--	0.005	--	--	--	--
2.4	6437	207	--	--	--	<0.001	--	--	--	--
2.70 m	6438	207	--	--	--	0.001	--	--	--	--
1.82 m	6439	207	--	--	--	<0.001	--	--	--	--
1.60 m	6440	207	0.68	--	--	0.003	--	--	--	--
1.41 m	6441	207	--	--	--	<0.001	0.007	--	--	--

VICTORIA No 2 VEIN

B. Swaites

Registered Assayer, Province of British Columbia



E



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : GROUT O., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLECASH
BOX 520
SMITHERS, B.C. V0J 2N0

** CERT. # : 48213901-001
INVOICE # : 15213901
DATE : 19-JCT-82
P.O. # : NONE

Depth	Sample description	Prep code	Cu %	Co %	Fe %	acid %	S % (Leco)	Ag FA oz/T	Au FA oz/t
3.20m	6442	207	--	0.094	--	--	--	0.02	0.020
5.07"	6443	207	--	0.021	--	--	--	0.04	0.005
3.66"	6444	207	--	0.036	--	--	--	<0.01	<0.003
6.71"	6445	207	--	0.001	--	--	--	0.02	<0.003
3.54"	6446	207	--	0.006	--	--	--	0.05	<0.003
2.74"	6447	207	--	0.007	--	--	--	0.02	0.008
3.96"	6448	207	--	0.007	--	--	--	0.04	0.010
1.52"	6449	207	--	0.002	--	--	--	0.03	0.003
5.61"	6450	207	--	0.001	--	--	--	<0.01	<0.003

VICTORIA No 2 vein

Registered Assayer, Province of British Columbia



MEMBER
CANADIAN TESTING
ASSOCIATION

E



CHEMEX LABS LTD.

212 BROOKSBANK Av.
NORTH VANCOUVER, B.C.
CANADA V7J 2G1

TELEPHONE: (604) 984-0221
TELEX 043-52597

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

see INVOICE see

To: BRISTOL D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLEKASH
Box 520
SMITHERS, B.C. V0J 2N0

Invoice # : 12213901

Date : 17-OCT-82
P.O. # : 12213901
Project :

Invoice for analytical work reported in certificate(s) 48213901-001

Quantity	code	description	unit	price	amount
1	301 - Co		g		
	327 - Fe acids		g		
	330 - S	g (1.00g)			
	383 - Ag FA	02/T			
	396 - Au FA	02/T		27.00	27.00
1	327 - Fe acids		g		
	330 - S	g (1.00g)			
	383 - Ag FA	02/T			
	396 - Au FA	02/T		23.00	23.00
9	323 - Co		g		
	383 - Ag FA	02/T			
	396 - Au FA	02/T		16.00	144.00

Simple preparation and other charges :

11	207 - Assay - PULVERIZE	1.75	41.25
----	-------------------------	------	-------

TOTAL : 236.25

Please pay this amount ---> \$ 236.25

2% -- NET 30 DAYS
2.5% month (2+ per annum) charges on overdue accounts



F



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

*** INVOICE ***

To : GROOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLECASH
BOX 520
SMITHERS, B.C. V0J 2N0

** Invoice # : 18213586
Date : 13-OCT-82
P.O. # : NONE
Project NCNE

(Invoice for analytical work reported on certificate(s) A8213596-001

Quantity	code	description	unit	price	amount
9	323 - Co	%			
	383 - Ag FA	oz/T			
	396 - Au FA	oz/t		16.00	144.00
5	301 - Cu	%			
	323 - Co	%			
	383 - Ag FA	oz/T			
	396 - Au FA	oz/t		21.00	105.00
2	301 - Cu	%			
	323 - Co	%			
	326 - Fe acidX	%			
	380 - S	% (Laco)			
	383 - Ag FA	oz/T			
	396 - Au FA	oz/t		36.00	72.00
1	301 - Cu	%			
	312 - Pb	%			
	316 - Zn	%			
	323 - Co	%			
	326 - Fe acidX	%			
	380 - S	% (Laco)			
	383 - Ag FA	oz/T			
	396 - Au FA	oz/t		46.00	46.00
1	323 - Co	%			
	330 - As NAA	%			
	383 - Ag FA	oz/T			
	396 - Au FA	oz/t		24.00	24.00

Sample preparation and other charges :

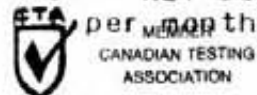
18	207 - Assay - PULVERIZE		3.75	67.50
----	-------------------------	--	------	-------

TOTAL \$ 458.50

Please pay this amount ----> \$ 458.50

RMS -- NET 30 DAYS

per month (24 % per annum) charged on overdue accounts



ROUCHER DEBOULE # 194,25

B. PLECASH
903025

F



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

*** INVOICE ***

To : GROOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLECASH
BOX 520
SMITHERS, B.C. V0J 2N0

** Invoice # : I8212820

Date : 2-SEP-82
P.O. # : NONE
Project

ATTN: C.C. PLECASH

Invoice for analytical work reported on certificate(s) A8212820-001

Quantit	code	Analysed for description	unit price	amount
9	323	- Co %		
	383	- Ag FA oz/T		
	396	- Au FA oz/t	16.00	144.00
3	323	- Co %		
	330	- As NAA %		
	383	- Ag FA oz/T		
	396	- Au FA oz/t	24.00	72.00

Sample preparation and other charges :

12	207	- Assay - PULVERIZE	3.75	45.00
----	-----	---------------------	------	-------

TOTAL \$ 261.00

Please pay this amount ----> \$ 261.00

TERMS -- NET 30 DAYS

.0 % per month (24 % per annum) charged on overdue accounts

OK FOR PAYMENT
(ROUGHER DEBIT)
- 903545 D. J. [Signature]



F



CHEMEX LABS LTD.

212 BROOKSBANK A
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

*** INVOICE ***

To : GROOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLEASH
BOX 520
SMITHERS, B.C. V0J 2N0

** Invoice # : 18212610
Date : 23-AUG-82
P.C. # : NONE
Project NONE

Invoice for analytical work reported on certificate(s) A8212610-001

Quantity	Analysed for code description	unit price	amount
11	323 - Co %		
	383 - Ag FA oz/t		
	396 - AU FA oz/t	16.00	176.00

Sample preparation and other charges :

11	207 - Assay - PULVERIZE	3.75	41.25
----	-------------------------	------	-------

TOTAL \$ 217.25

Please pay this amount ----> \$ 217.25
=====

TERMS -- NET 30 DAYS

.0 % per month (24 % per annum) charged on overdue accounts



MEMBER
CANADIAN TESTING
ASSOCIATION

F



CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2G1

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

TELEPHONE (604) 984-0221
TELEFAX 043 52597

*** INVOICE ***

To : GROOT D., LOGGING LIMITED
MINERAL EXPLORATION DIVISION
ATTN: BUD PLECAH
BOX 520
SMITHERS, B.C. V0J 2N0

Invoice # : 18212165
Date : 30-JUL-82
P.O. # : NONE
Project

Invoice for analytical work reported on certificate(s) A8212165-001

Quantity	Analyzed for code description	unit price	amount
3	323 - Co %		
	383 - Ag FA oz/t		
	396 - Au FA oz/t	16.00	48.00

Sample preparation and other charges :

3	207 - Assay - PULVERIZE	3.75	11.25
---	-------------------------	------	-------

TOTAL \$ 59.25

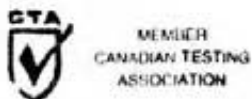
Please pay this amount ----> \$ 59.25

=====

RMS -- NET 30 DAYS

0 % per month (24 % per annum) charged on overdue accounts

*OK, for payment
BUD PLECAH
N. G. L...*



B. DEVINS CONTRACTING LTD.

P.O. BOX 62

TELEPHONE 447-2583

SMITHERS, B.C. V0J 2N0

OPERATOR'S DAILY EQUIPMENT REPORT

Location *W.C. Road on property of Murray*

Equipment No. _____ Date *March 1983*

Day Shift _____

Area *WAZELTON BL* Night Shift _____

Rancher F. Brown Hours _____

Operator's Hours _____

Machine Hours *D3 Cat* *2.5*

Hours Idle _____

Service _____

Repairs *Rate 100.00 per hr*

REMARKS *2500*

Oil on the ...

No. of Loads or Tugs _____

Type of Work _____

OPERATOR'S SIGNATURE

No 709

FOREMAN'S SIGNATURE

REMOVAL POINT - SMITHERS



OKANAGAN HELICOPTERS LTD.
 4391 AGAR DRIVE, RICHMOND, B.C. V7B 1A5
 TELEPHONE (604) 278-5502 TELEX 04-355594

GROVE D. LOGGING LTD.
 PO BOX 520
 SMITHERS, B.C.
 VOJ 200



INVOICE NUMBER

227553

INVOICE DATE

07/09/82
DAY MONTH YEAR

PAGE

1

OUR REFERENCE NO.

14-1-052425-0000-00

CUSTOMER P.O. NO.

FLIGHT DATE	FLT REF	TYPE	HRS	RATE	TOTAL
14-08-82	520005	HELL 208	1.0	1.00	1.00
				TOTAL HOURS	1.00

TARIFF CHARGES

HELL 208 - 1.0 HRS @ \$405.00/HR TARIFF RATE \$405.00
 ** TOTAL 1.0 HRS ** *****

GAS & OIL CHARGES

OIL 1.0 HRS @ \$1.00/HR \$1.00
 FUEL 23.0 GALS @ \$1.90/GAL \$43.70
 ** TOTAL GAS & OIL ** \$44.70

SEP 7 1982

INVOICE TOTAL \$ 509.70 **

TERMS OF PAYMENT ARE NET 30 DAYS FROM DATE OF INVOICE. 10% DISCOUNT IF PAID WITHIN 10 DAYS. ALL DEBITED TO ACCOUNT UNLESS OTHERWISE STATED.

SPORT



OKANAGAN HELICOPTERS LTD.
4391 AGAR DRIVE, RICHMOND, B.C. V7B 1A5
TELEPHONE (604) 278-5502 TELEX 04-355594

GRUNT O LOGGING LTD.
PO BOX 520
SMITHERS, B.C.
V7J 2W0



INVOICE NUMBER
127556

INVOICE DATE
20/09/82
DAY MONTH YEAR

PAGE
1

OUR REFERENCE NO.

CUSTOMER P.O. NO.

14-1-032425-0000-00

FLIGHT DATE	FLT RPT NO	TYPE OF A/C	A/C REG	HOURS
18-09-82	520663	BELL 206	GWSG	1.4
TOTAL HOURS				1.4
				=====

TARIFF CHARGES

ALL TAX	1.4 HRS @ \$415.00/HR TARIFF RATE	581.00
** TOTAL	1.4 HRS **	
	=====	

GAS & OIL CHARGES

GAS	1.4 HRS @ \$1.00/HR	\$1.40
FUEL	33.0 GALS @ \$1.90/GAL	\$62.70
** TOTAL GAS & OIL **		\$64.10

OCT 3 1982

O.K. PAID PAYMENT

D. J. [Signature]

904695 - ROUHEE DEBUILE

INVOICE TOTAL: 645.10 **

THIS IS A RECEIPT FOR THE AMOUNTS PAID TO US BY YOU, EITHER BY CASH OR BY DEPOSIT TO OUR ACCOUNT. ALL OF CHARGES ARE SUBJECT TO TAXES.

INVOICE

McElhanney Surveying
& Engineering Ltd.

200 - 1166 Alberni Street
Vancouver, B.C. V6E 3Z3



Please remit to:
200 - 1166 Alberni Street
Vancouver, B.C. V6E 3Z3

In account with: D. Groot Logging Ltd.,
P.O. Box 520,
Smithers, B.C.
V0J 2N0

Invoice No.

Date 5 Nov./82

Your Order No.

Our Job. No. 40015-0

Attention: Mr.D.C. Plecash

FOR PROFESSIONAL SERVICES IN RESPECT TO:

Supplying topographical mapping at the scale of 1:2,400 as outlined in
our letter dated 12 Oct./82

Final Billing

OUR FEE.... \$1,465.00


JCG:leo



BOWL FRA.
L3315

SUMMIT FRA.
L3318

BELLE
L3304

VICTORIA
L3303

RED CROSS
L3310

VIEW FRA.
L3305

BELLE FRA.
L3306

LEAD PICK
L3300

JACK PINE
L2402

TIMBER LINE
L2403

HAZELTON VIEW
L3299

1803 el.
No. 00 ADIT

VICTORIA — NO.1 VEIN
SURFACE TRACE

1705 el.

1550 el.

GRANODIORITE
QUARTZITES

1618 el.

1706 el.

1726 el.

1821 el.

1796 el.

1800 el.

1815 el.

1830 el.

1845 el.

1860 el.

1875 el.

1890 el.

1905 el.

1920 el.

1935 el.

1950 el.

1965 el.

1980 el.

1995 el.

2010 el.

2025 el.

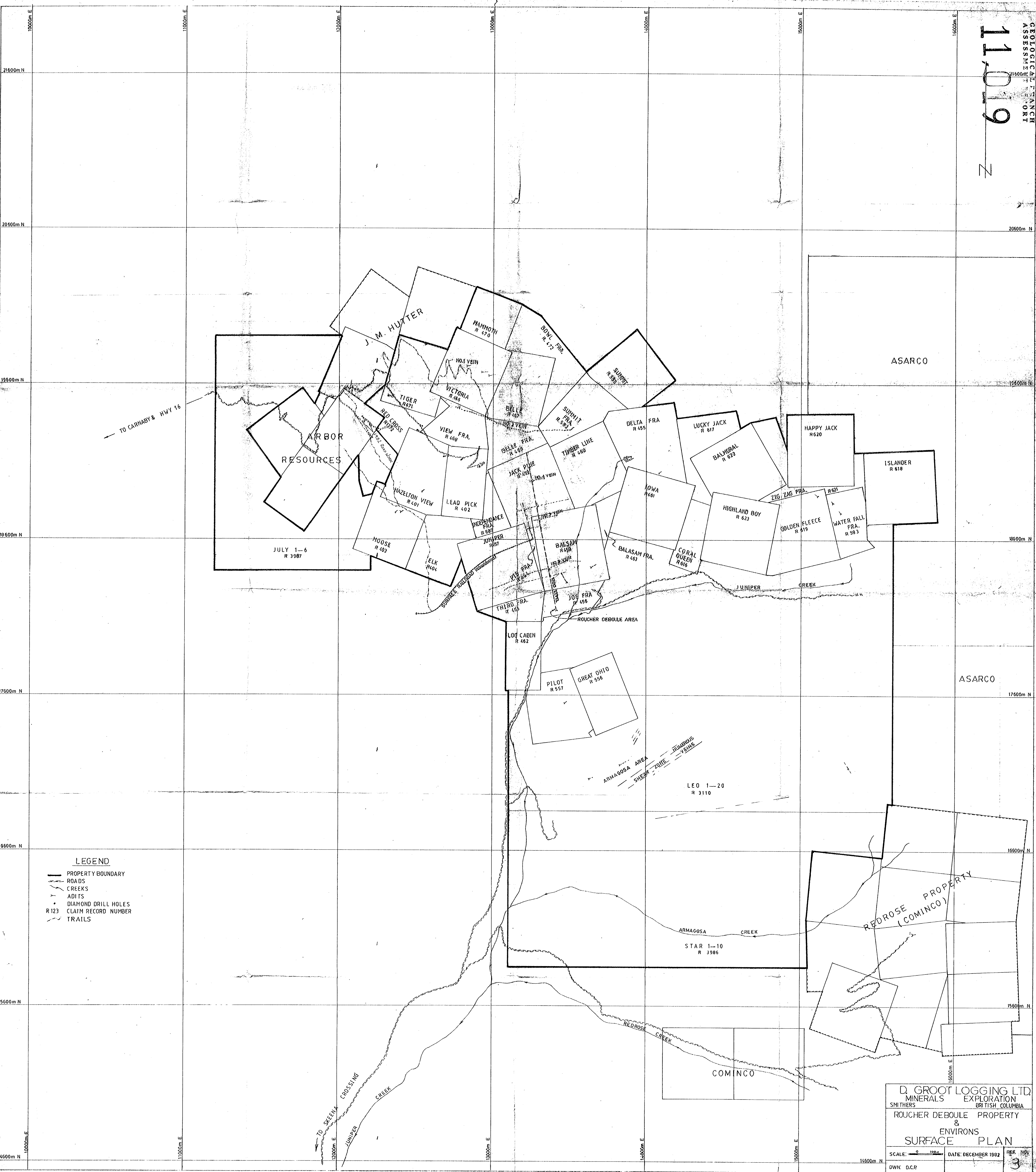
1872 el.
1865 el.
1858 el.

LEGEND

- CONTACTS
- FAULTS
- STRIKES & DIPS
- ELEVATIONS IN METERS
- HORNBLÉNDE
- PORPHYRY
- GRANODIORITE
- QUARTZITES

D.GROOT LOGGING LTD.
MINERALS EXPLORATION
SMITHERS BRITISH COLUMBIA

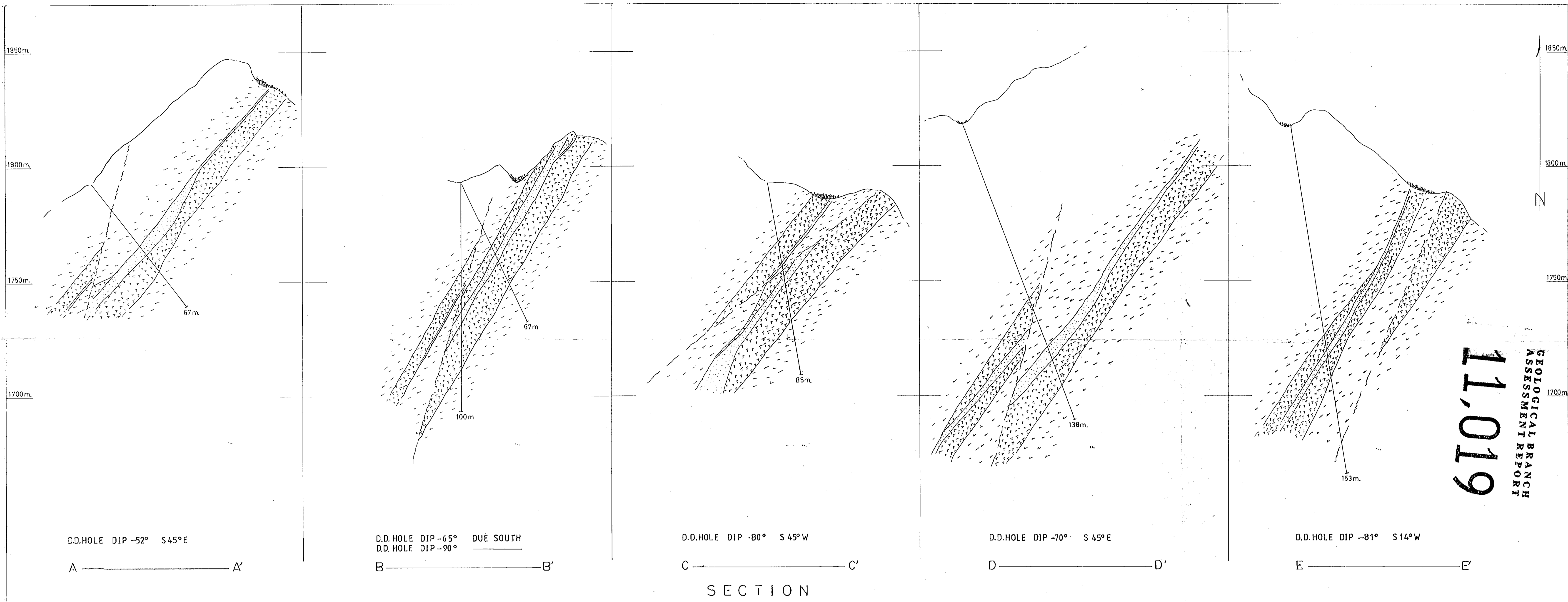
VICTORIA NO.2 VEIN
PLAN OF
SURFACE GEOLOGY



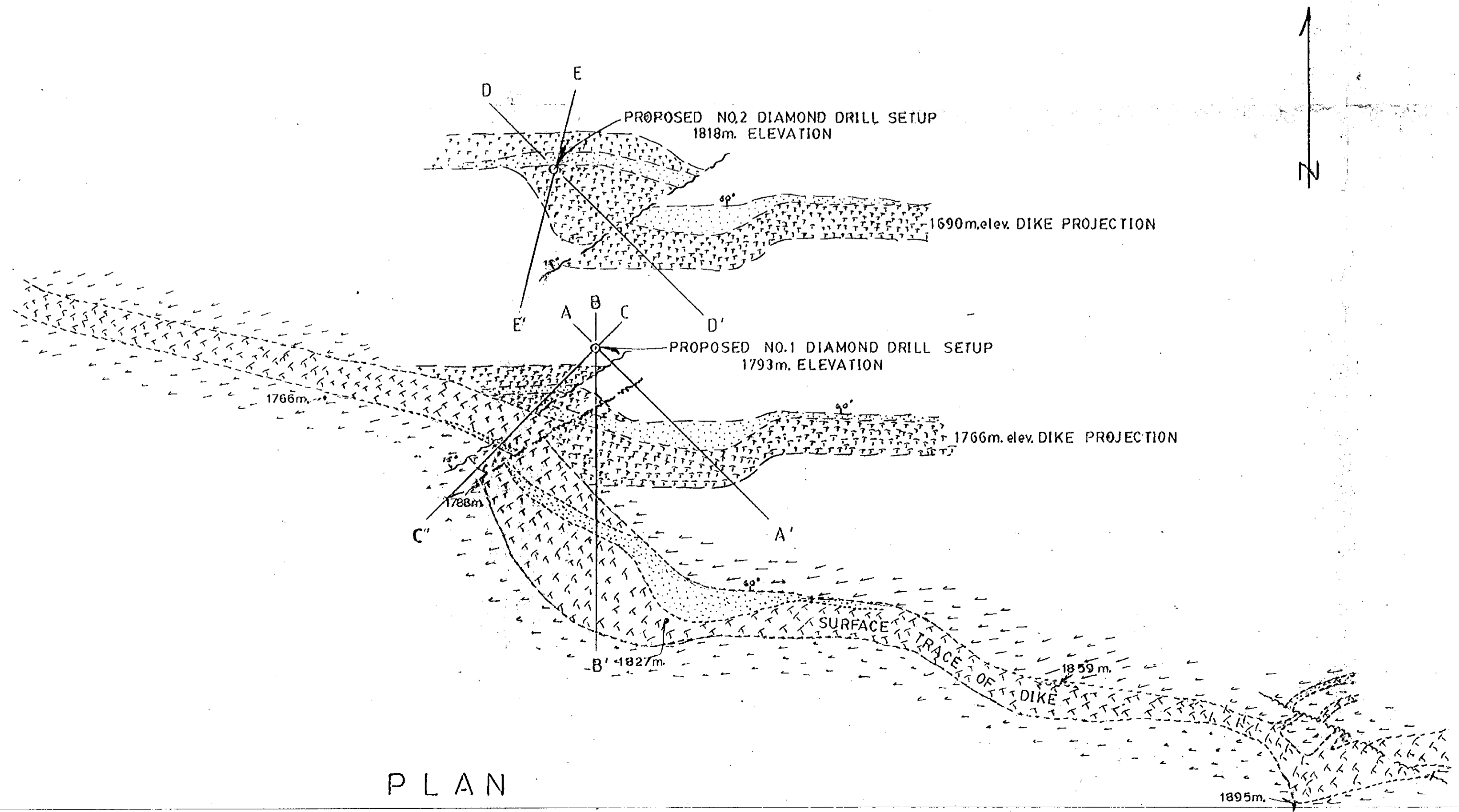
LEGEND

- PROPERTY BOUNDARY
- ROADS
- CREEKS
- ADITS
- DIAMOND DRILL HOLES
- R 123 CLAIM RECORD NUMBER
- TRAILS

D. GROOT LOGGING LTD.
 MINERALS EXPLORATION
 SMITHERS BRITISH COLUMBIA
ROUCHER DEBOLE PROPERTY & ENVIRONS SURFACE PLAN
 SCALE: 1:50,000 DATE: DECEMBER 1992 REF. NO. 3
 DWN: D.C.P.



SECTION



PLAN

NOTE: IT WAS ASSUMED THAT THE STRIKE AND DIP OF THE MAIN INDICATED FAULT AS OBSERVED ON SURFACE DID REMAIN THE SAME AT DEPTH AND ALSO THAT THE PORPHYRY DIKE WITH ITS MINERALIZATION HAS A PLUNGE NORMAL TO ITS STRIKE WITH A 60° DIP TO THE NORTH.

- LEGEND**
- PORPHYRY DIKE
 - A MORE CONCENTRATED ZONE OF MINERALIZATION ASSOCIATED WITH FELDSPAR PORPHYRY, HORNBLENDE, QUARTZ-ARSENOPYRITE DISTRIBUTED IN THE PORPHYRY DIKE.
 - GRANDIORITE
 - FAULTS
 - STRIKES & DIPS
 - ELEVATION IN METERS

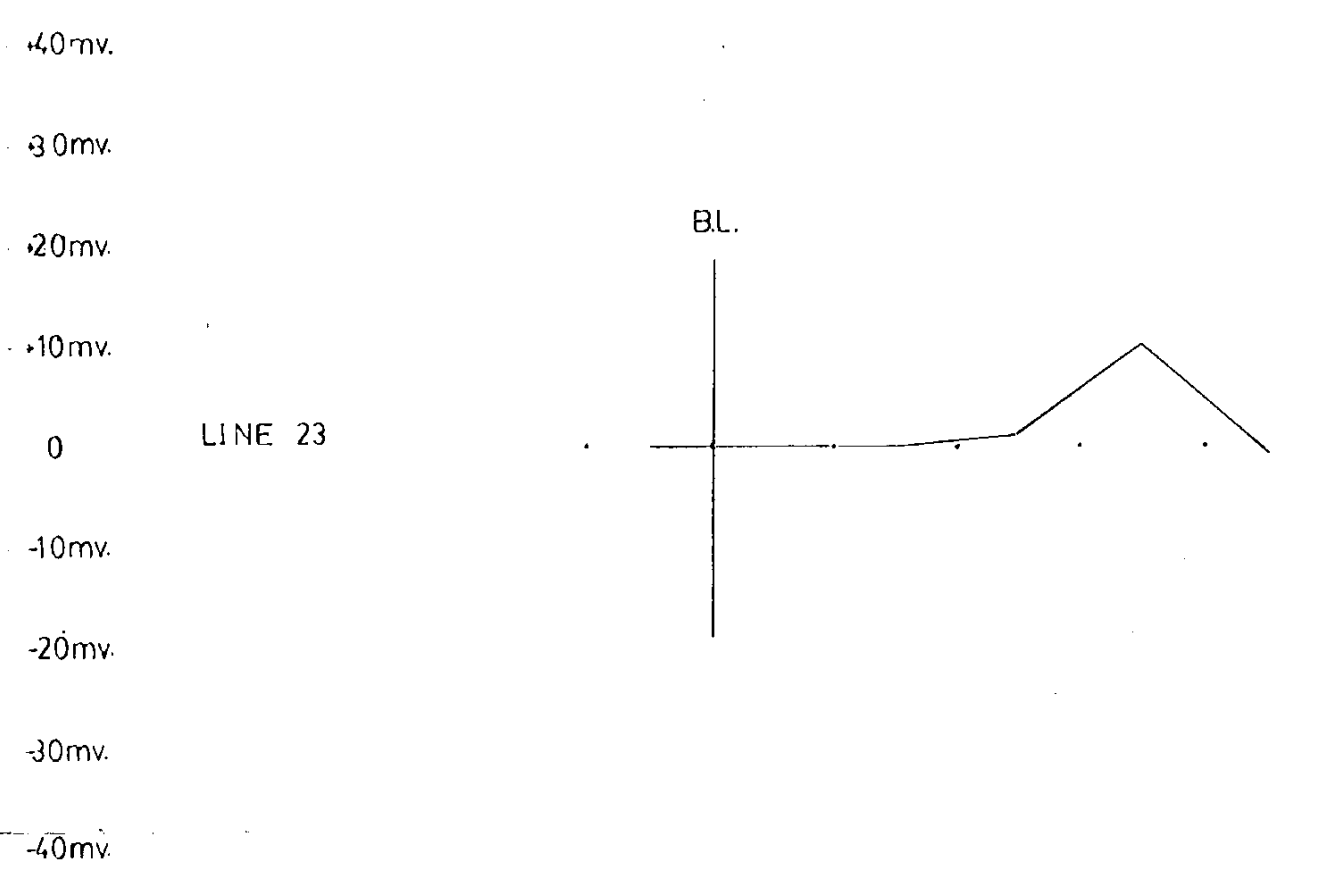
D.GROOT LOGGING LTD.
MINERALS EXPLORATION
SMITHERS BRITISH COLUMBIA

VICTORIA NO.2 VEIN
PLAN AND SECTION
OF
PROPOSED DIAMOND DRILL PROGRAM

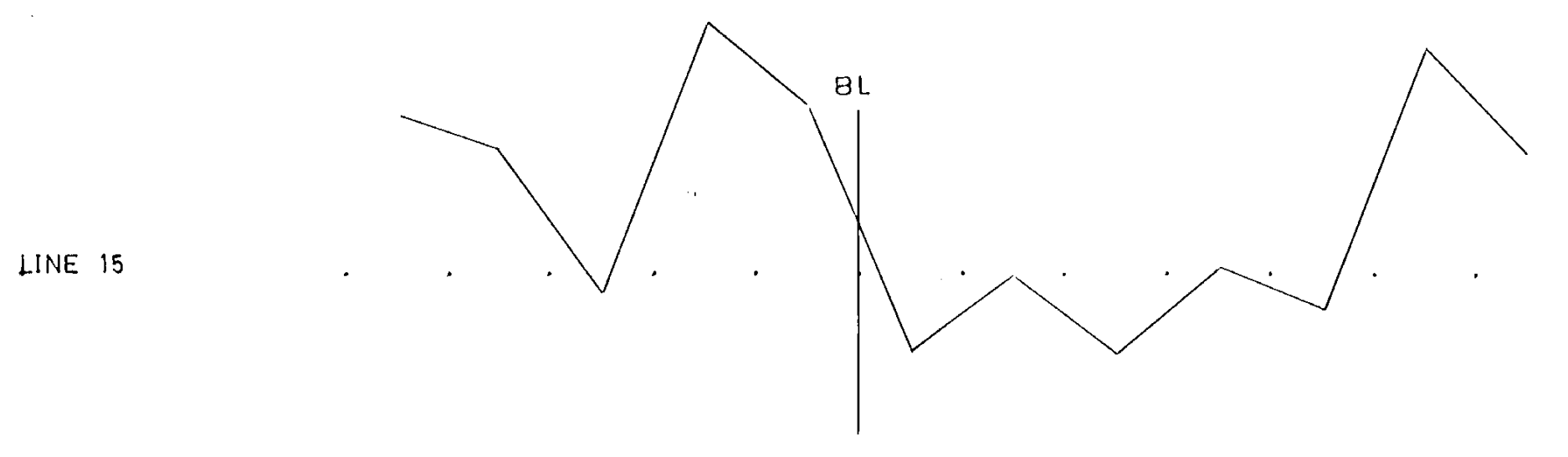
SCALE: DATE: DECEMBER 1982 REF. NO.

DWN: D.C.PLEASH

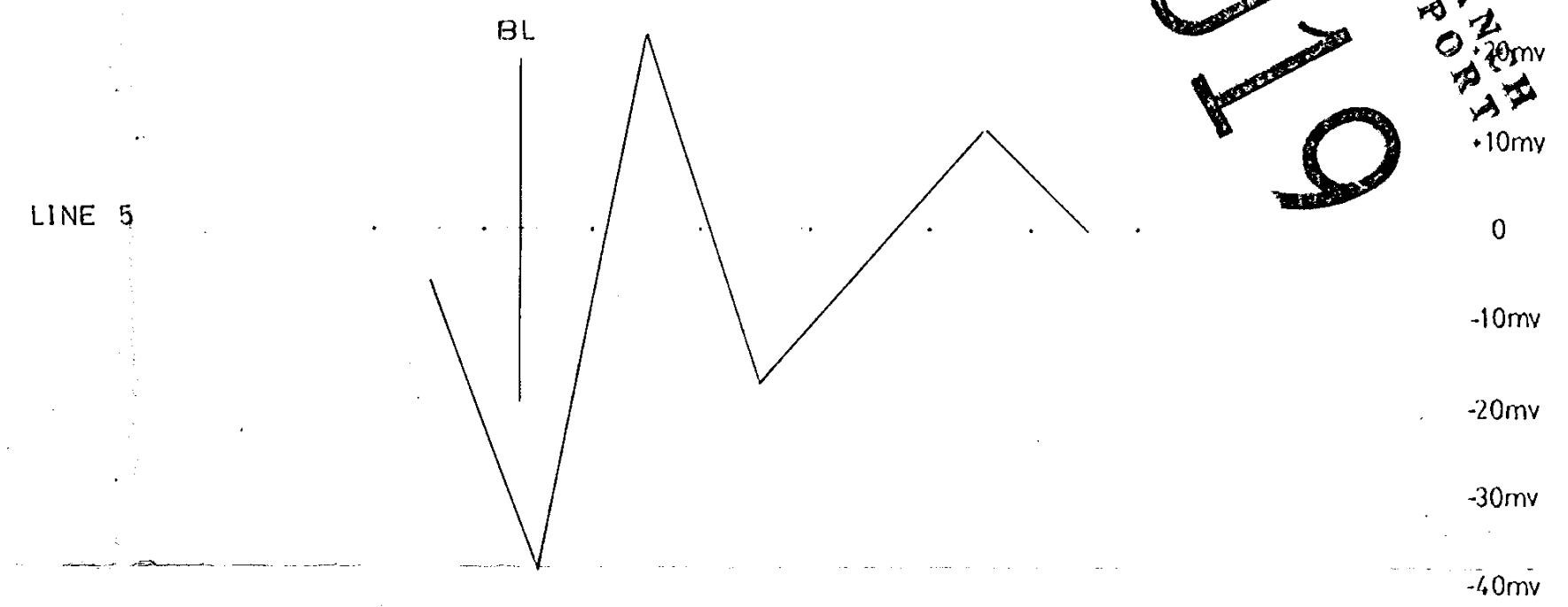
GEOLOGICAL RESEARCH
 ASSESSMENT REPORT
 11,019



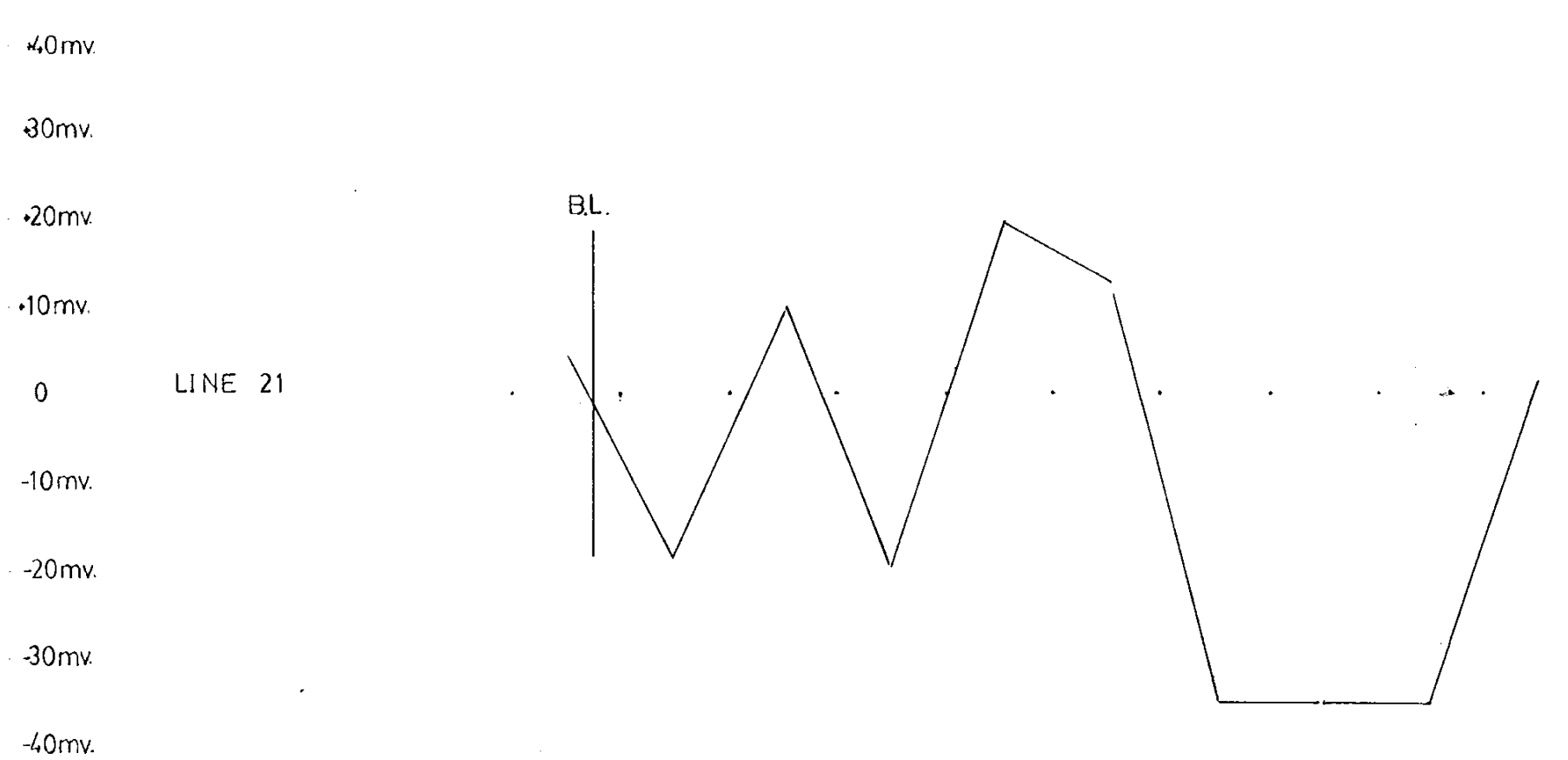
23' — 23
LOOKING - W.



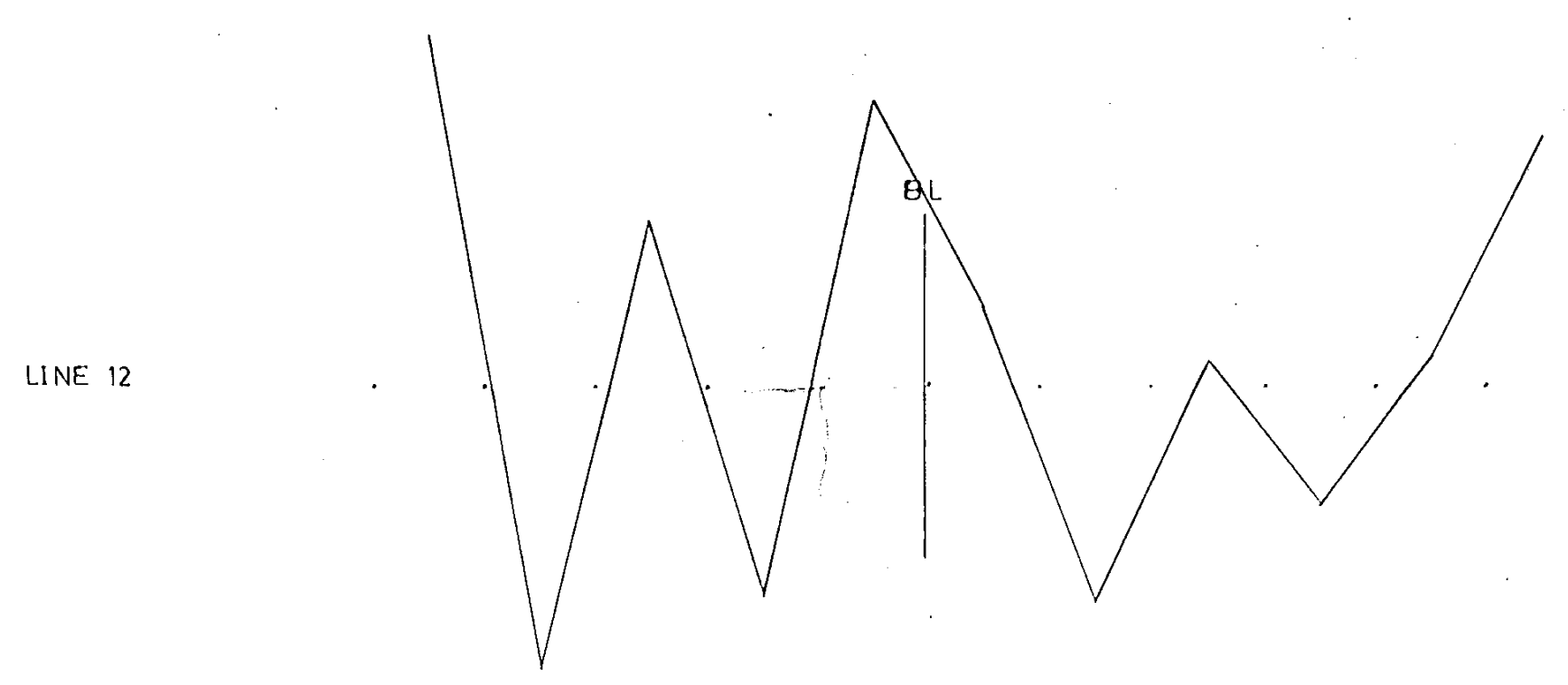
15' — 15
LOOKING - NW



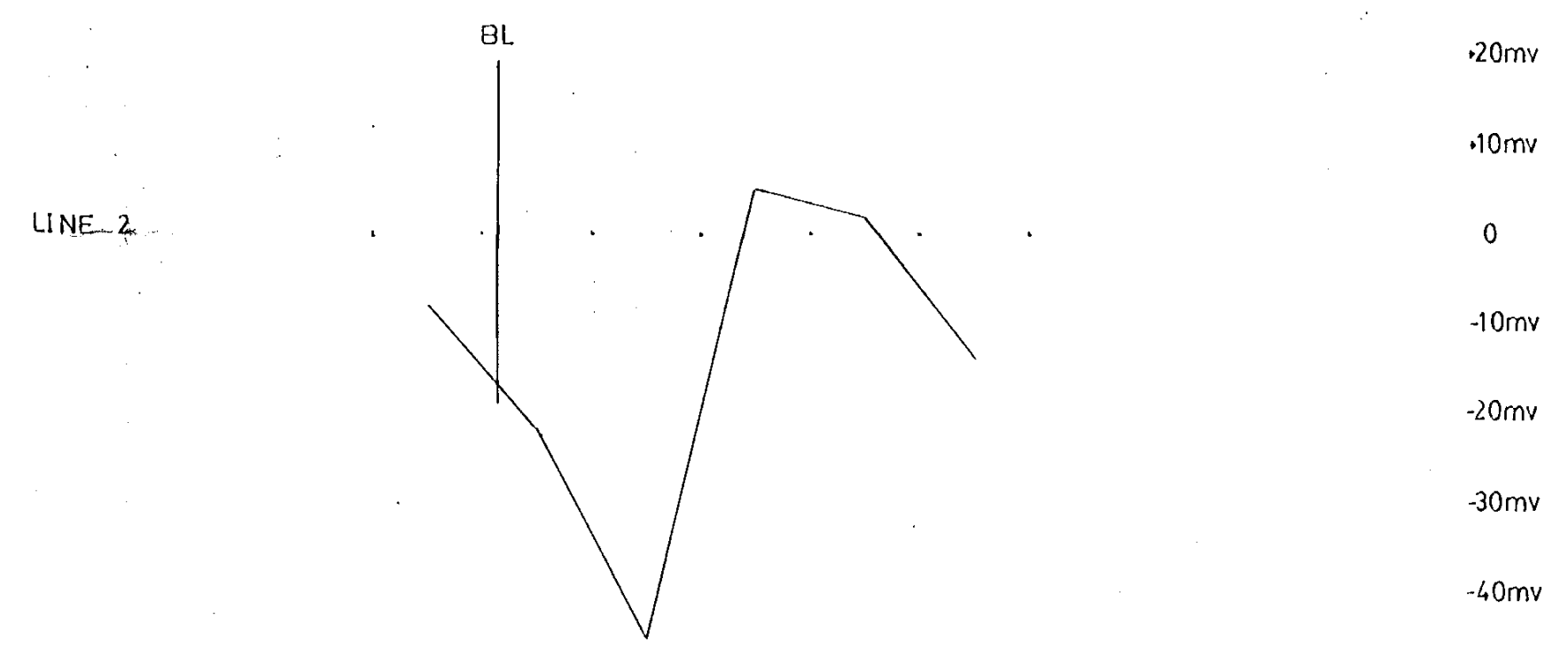
5' — 5
LOOKING - SW



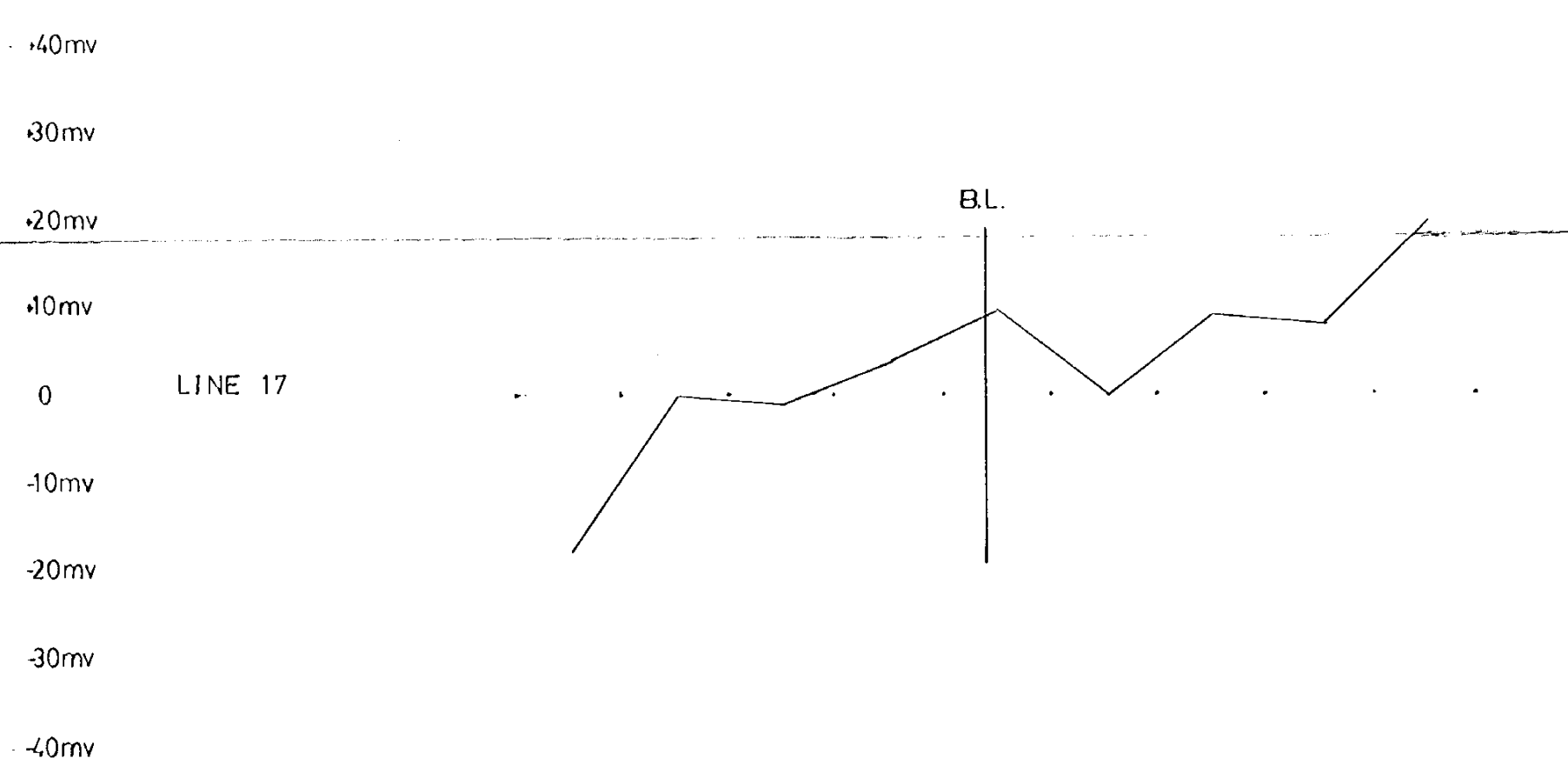
21' — 21
LOOKING - NW



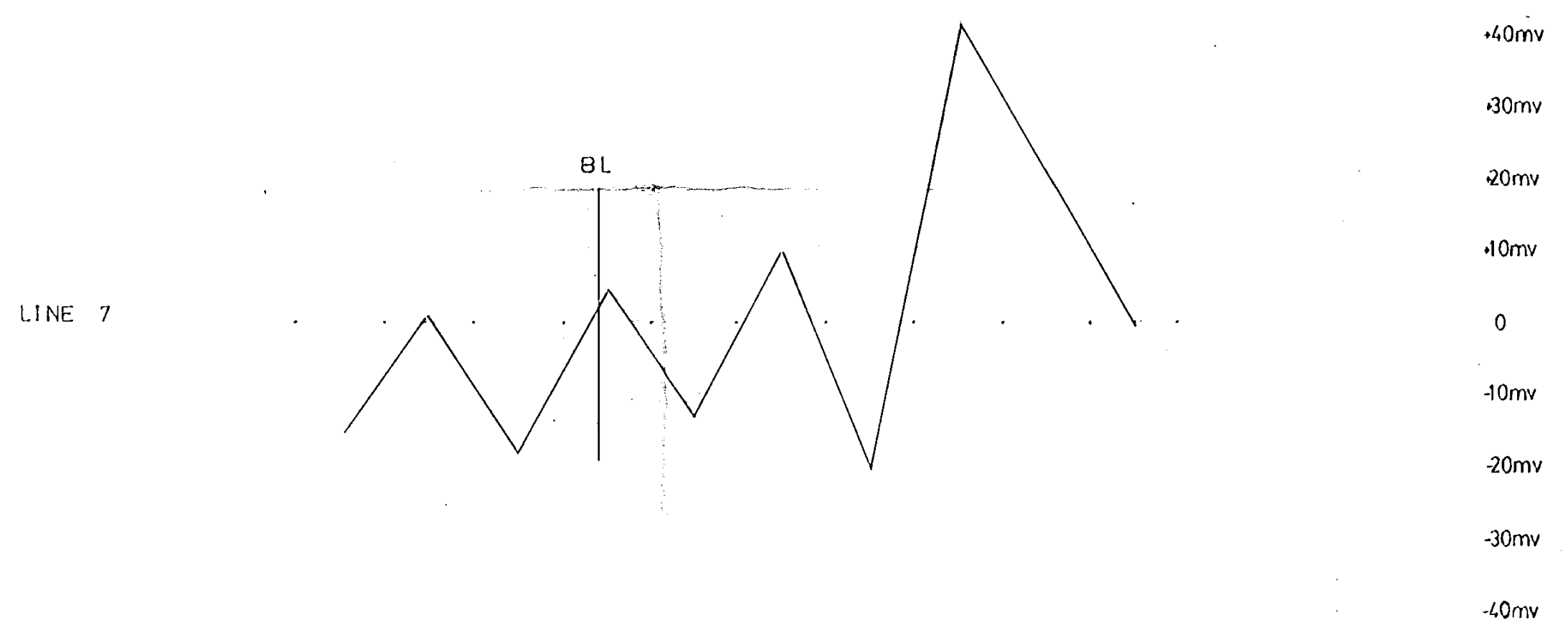
12' — 12
LOOKING - NW



2' — 2
LOOKING - SW



17' — 17
LOOKING - NW



7' — 7
LOOKING - SW

LEGEND

mv	MILLIVOLTS
W	WEST
NW	NORTHWEST
SW	SOUTHWEST
BL	BASELINE

D GROOT LOGGING LTD. MINERALS EXPLORATION SMITHERS BRITISH COLUMBIA		
VICTORIA NO.2 VEIN 1982 SELF POTENTIAL SURVEY PROFILES		
SCALE:	DATE: DECEMBER 1982	REF. NO.
DWN: D.C.PLECASH		

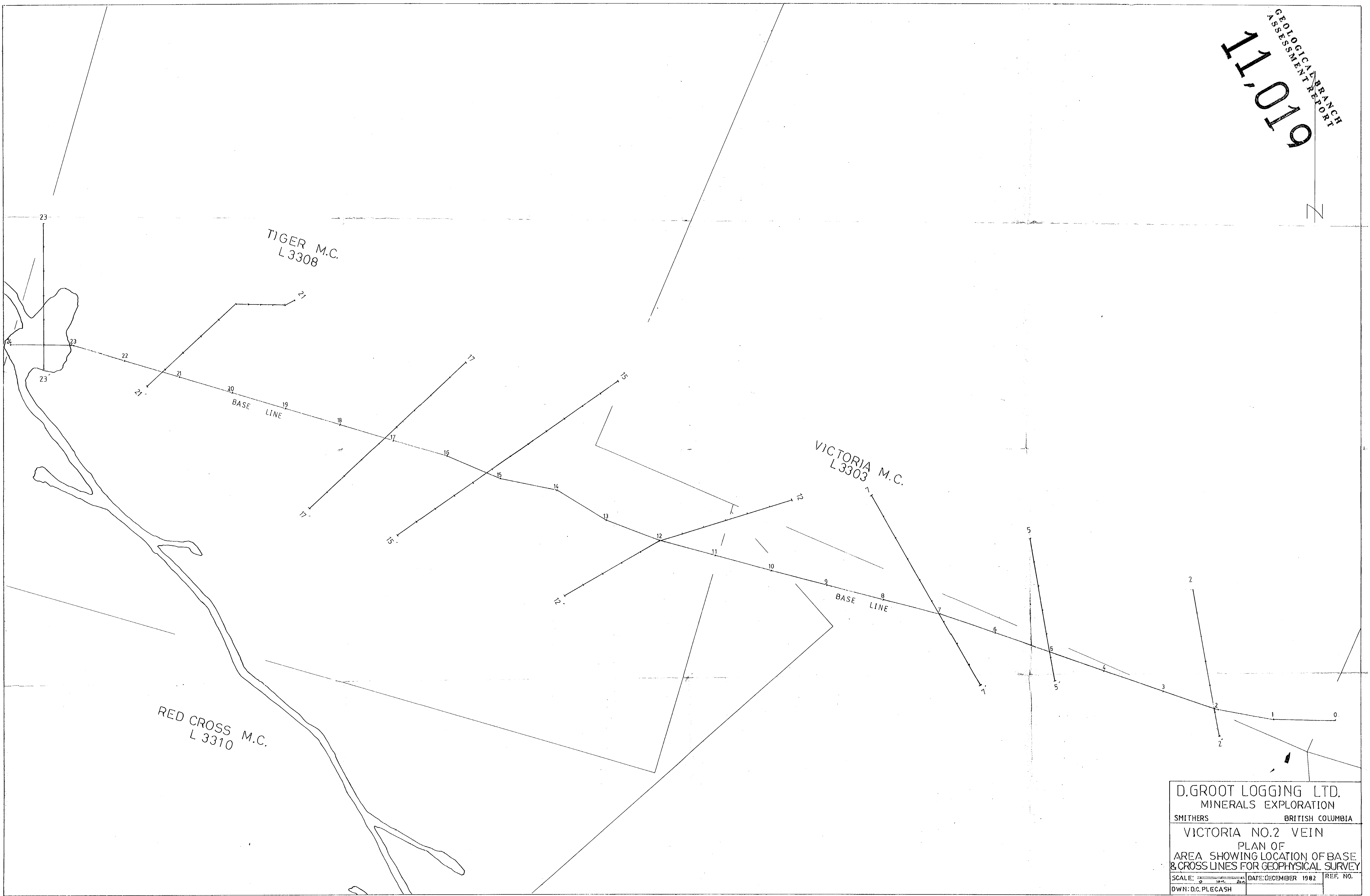
11,019
GEOLOGICAL BRANCH
ASSESSMENT REPORT

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TIGER M.C.
L 3308

VICTORIA M.C.
L 3303

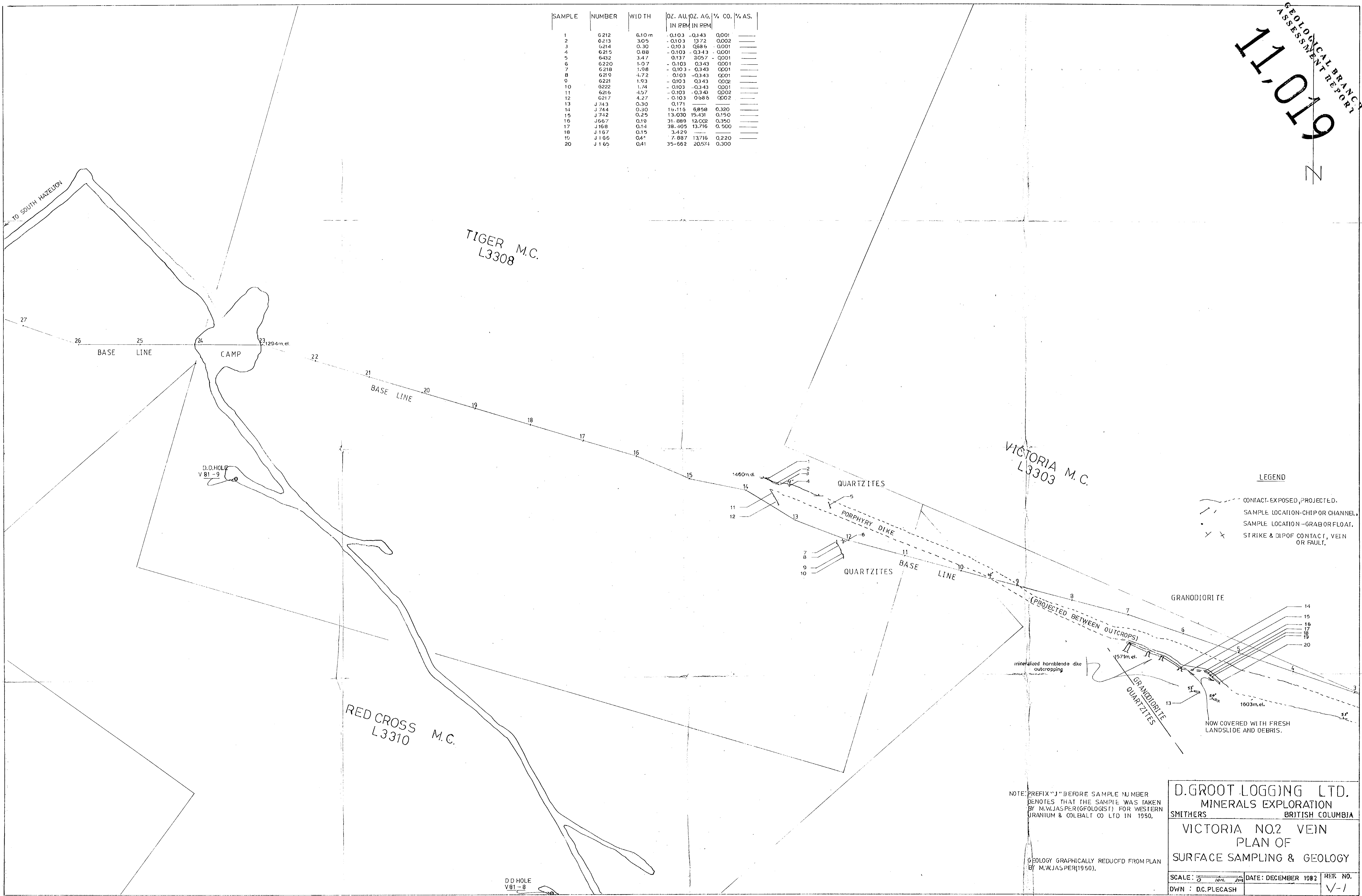
RED CROSS M.C.
L 3310



D.GROOT LOGGING LTD. MINERALS EXPLORATION		
SMITHERS	BRITISH COLUMBIA	
VICTORIA NO.2 VEIN		
PLAN OF AREA SHOWING LOCATION OF BASE & CROSS LINES FOR GEOPHYSICAL SURVEY		
SCALE: 1" = 200'	DATE: DECEMBER 1982	REF. NO.
DWN: D.C. PLEGASH		

GEOLOGICAL BRANCH
 ASSESSMENT REPORT
 610,119
 N

SAMPLE	NUMBER	WIDTH	OZ. AU.		OZ. AG.		% CO.	% AS.
			IN PERM	IN PERM	IN PERM	IN PERM		
1	6212	6.10 m	-0.103	-0.343	0.001	—	—	
2	6213	3.05	-0.103	13.72	0.002	—	—	
3	6214	0.30	-0.103	0.986	0.001	—	—	
4	6215	0.88	-0.103	-0.343	0.001	—	—	
5	6432	3.47	0.137	2057	0.001	—	—	
6	6220	1.07	-0.103	0.343	0.001	—	—	
7	6218	1.98	-0.103	-0.343	0.001	—	—	
8	6219	4.72	-0.103	-0.343	0.001	—	—	
9	6221	1.93	-0.103	0.343	0.002	—	—	
10	6222	1.74	-0.103	-0.343	0.001	—	—	
11	6216	4.57	-0.103	-0.343	0.002	—	—	
12	6217	4.27	-0.103	0.986	0.002	—	—	
13	J743	0.30	0.171	—	—	—	—	
14	J744	0.30	16.116	6.858	0.320	—	—	
15	J742	0.25	13.030	15.431	0.150	—	—	
16	J567	0.19	31.889	12.002	0.350	—	—	
17	J168	0.14	38.405	13.716	0.500	—	—	
18	J167	0.15	3.429	—	—	—	—	
19	J166	0.41	7.887	13.716	0.220	—	—	
20	J165	0.41	35.662	20.571	0.300	—	—	



LEGEND

- CONTACT-EXPOSED, PROJECTED.
- SAMPLE LOCATION-CHIP OR CHANNEL.
- SAMPLE LOCATION-GRAB OR FLOAT.
- Y X STRIKE & DIP OF CONTACT, VEIN OR FAULT.

NOTE: PREFIX "J" BEFORE SAMPLE NUMBER DENOTES THAT THE SAMPLE WAS TAKEN BY M.W. JASPER (GEOLOGIST) FOR WESTERN URANIUM & COBALT CO LTD IN 1950.

D. GROOT LOGGING LTD.
 MINERALS EXPLORATION
 SMITHERS BRITISH COLUMBIA

VICTORIA NO.2 VEIN
 PLAN OF
 SURFACE SAMPLING & GEOLOGY

SCALE: 5" = 100m. DATE: DECEMBER 1982 REF. NO. V-1
 DWN: D.C. PLECASH

GEOLOGY GRAPHICALLY REDUCED FROM PLAN BY M.W. JASPER (1950).

D.D. HOLE V81-8

SECTION 27 BRANCH
ASBESTOS
610119
N

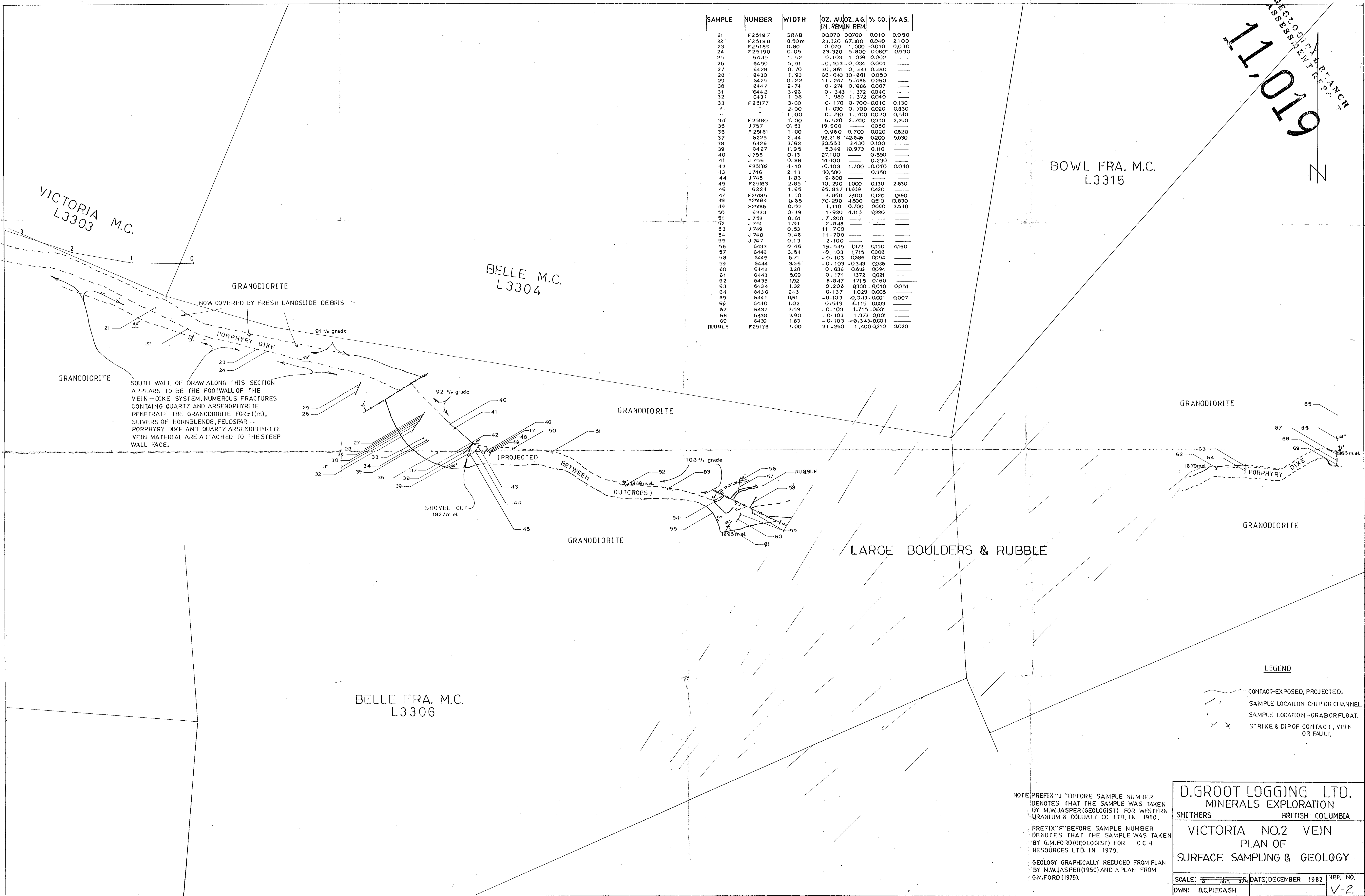
SAMPLE NUMBER	WIDTH	OZ. AU. IN PPM	OZ. AG. IN PPM	% CO.	% AS.	
21	GRAB	0.0070	0.0700	0.010	0.050	
22	F25187	0.50m	23.320	67.300	0.040	21.00
23	F25188	0.80	0.070	1.000	0.010	0.030
24	F25189	0.05	23.320	5.800	0.080	0.530
25	6449	1.52	0.103	1.029	0.002	---
26	6450	5.51	-0.103	0.034	0.001	---
27	6428	0.70	30.881	0.343	0.380	---
28	6430	1.93	66.043	30.861	0.050	---
29	6429	0.22	11.247	5.486	0.280	---
30	6447	2.74	0.274	0.686	0.007	---
31	6448	3.96	0.343	1.372	0.040	---
32	6431	1.98	1.989	1.372	0.010	---
33	F25177	3.00	0.170	0.700	0.010	0.130
"	"	2.00	1.030	0.700	0.020	0.630
"	"	1.00	0.790	1.700	0.020	0.940
34	F25190	1.00	6.520	2.700	0.050	2.250
35	J757	0.53	19.900	---	0.050	---
36	F25181	1.00	0.960	0.700	0.020	0.620
37	6225	2.44	96.218	142.646	0.200	5.630
38	6426	2.62	23.553	3.430	0.100	---
39	6427	1.95	53.49	10.373	0.110	---
40	J755	0.13	27.100	---	0.590	---
41	J756	0.88	14.400	---	0.230	---
42	F25182	4.10	-0.103	1.700	-0.010	0.040
43	J746	2.13	30.500	---	0.350	---
44	J745	1.23	9.600	---	---	---
45	F25183	2.85	10.290	1.000	0.130	2.830
46	6224	1.65	65.837	11.659	0.420	---
47	F25185	1.50	2.850	2.400	0.120	1.880
48	F25184	0.95	70.290	4.500	0.910	13.830
49	F25186	0.50	-1.110	0.700	0.050	2.540
50	6223	0.49	1.920	4.115	0.220	---
51	J752	0.61	7.200	---	---	---
52	J751	1.91	2.848	---	---	---
53	J749	0.53	11.700	---	---	---
54	J748	0.48	11.700	---	---	---
55	J747	0.13	2.100	---	---	---
56	6433	0.46	19.545	1.372	0.150	4.160
57	6440	3.64	-0.103	1.715	0.006	---
58	6445	6.71	-0.103	0.886	0.004	---
59	6444	3.66	-0.103	0.343	0.036	---
60	6442	3.20	0.636	0.838	0.094	---
61	6443	5.09	0.171	1.372	0.021	---
62	6435	1.52	8.847	1.715	0.160	---
63	6434	1.32	0.206	8.300	0.010	0.051
64	6436	2.13	0.137	1.029	0.005	---
65	6441	0.61	-0.103	0.343	0.001	0.007
66	6440	1.02	0.549	4.115	0.003	---
67	6437	2.59	-0.103	1.715	-0.001	---
68	6438	2.90	-0.103	1.372	0.001	---
69	6439	1.83	-0.103	-0.343	0.001	---
RUBBLE	F25176	1.00	21.260	1.400	0.210	3.020

BOWL FRA. M.C.
L3315

VICTORIA M.C.
L3303

BELLE M.C.
L3304

BELLE FRA. M.C.
L3306



GRANODIORITE
NOW COVERED BY FRESH LANDSLIDE DEBRIS
PORPHYRY DIKE
SOUTH WALL OF DRAW ALONG THIS SECTION APPEARS TO BE THE FOOTWALL OF THE VEIN-DIKE SYSTEM. NUMEROUS FRACTURES CONTAINING QUARTZ AND ARSENOPHYRITE PENETRATE THE GRANODIORITE FOR 1(m). SLIVERS OF HORNBLLENDE, FELDSPAR -- PORPHYRY DIKE AND QUARTZ-ARSENOPHYRITE VEIN MATERIAL ARE ATTACHED TO THE STEEP WALL FACE.

LEGEND
--- CONTACT-EXPOSED, PROJECTED.
--- SAMPLE LOCATION-CHIP OR CHANNEL.
--- SAMPLE LOCATION-GRABORFLOAT.
--- STRIKE & DIP OF CONTACT, VEIN OR FAULT.

NOTE: PREFIX "J" BEFORE SAMPLE NUMBER DENOTES THAT THE SAMPLE WAS TAKEN BY M.W. JASPER (GEOLOGIST) FOR WESTERN URANIUM & COBALT CO. LTD. IN 1950.
PREFIX "F" BEFORE SAMPLE NUMBER DENOTES THAT THE SAMPLE WAS TAKEN BY G.M. FORD (GEOLOGIST) FOR CCH RESOURCES LTD. IN 1979.
GEOLOGY GRAPHICALLY REDUCED FROM PLAN BY M.W. JASPER (1950) AND A PLAN FROM G.M. FORD (1979).

D. GROOT LOGGING LTD.
MINERALS EXPLORATION
SMITHERS BRITISH COLUMBIA
VICTORIA NO. 2 VEIN
PLAN OF
SURFACE SAMPLING & GEOLOGY
SCALE: 1:50,000 DATE: DECEMBER 1982 REF. NO. V-2
DWN: D.C. PLEASH