

ASSESSMENT REPORT

on the

1984 DEVELOPMENT PROGRAMME

on the

BLACKDOME PROPERTY

Clinton Mining Division, British Columbia
NTS 920/8W

for

Owner: BLACKDOME EXPLORATION LTD.

Operator: BLACKDOME EXPLORATION LTD.

by

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and
D.W. RENNIE, B.A.Sc., P.Eng.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

Vancouver, B.C.

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C.M. Lalonde

TABLE OF CONTENTS

	Page
INTRODUCTION	1
SUMMARY	3
LOCATION AND ACCESS	5
CLAIMS	6
HISTORY	8
REGIONAL GEOLOGY	10
PROPERTY GEOLOGY	12
ECONOMIC GEOLOGY	16
ORE MINERALOGY	17
MINING PROGRAMME	18
SURFACE PROGRAMME	24
GEOLOGY PROGRAMME	26
CONCLUSIONS	39
1984 PROGRAMME EXPENDITURES	40
LIST OF REFERENCES	41
CERTIFICATION - Carl M. Lalonde, B.Sc., F.G.A.C.	42
- D. W. Rennie, B.A.Sc., P.Eng.	43
Table I Diamond Drilling Summary	27
Table II High-Grade Drill-Hole Intersections	28
Table III Summary of Trenching	30
Table IV Summary of Stockpiled Ore	32
Table V Ore Reserves Located in 1984 Programme	38
Appendix I Diamond Drill Logs	
Appendix II Geochemical Analysis Method	

TABLE OF FIGURES

Figure No.	Title	Scale	Following Page
1.	Location Map	1:4,055,040	5
2.	Access Map	1:50,000	5
3.	Claim Map	1:50,000	7
4.	Geological Map	1:20,000	10
5.	Surface Geology - Sheet 1	1:500	In Pocket
6.	" " - " 2	1:500	"
7.	Gold Geochemistry, South Frenier Grid	1:2500	"
8.	Gold Geochemistry, North Frenier Grid	1:2500	"
9.	No. 1 Vein Cross Section - 1188	1:250	"
10.	" " " " " - 1190	1:250	"
11.	" " " " " - 1198	1:250	"
12.	" " " " " - 1202	1:250	"
13.	" " " " " - 1204	1:250	"
14.	" " " " " - 1210	1:250	"
15.	" " " " " - 1212	1:250	"
16.	" " " " " - 1216	1:250	"
17.	No. 1 Long Trench - Sheet 1	1:50	"
18.	" " " " " - " 2	1:50	"
19.	" " " " " - " 3	1:50	"
20.	No. 2 Vein Trench - Sheet 1	1:50	"
21.	" " " " " - " 2	1:50	"
22.	1960 Level Fire Assay Plan - Sheet 1	1:250	"
23.	" " " " " - " 2	1:250	"
24.	1986 Level Fire Assays	1:250	"
25.	1916 " " "	1:250	"
26.	12062N Raise Fire Assays	1:250	"
27.	12080N " " "	1:250	"
28.	12115N " " "	1:250	"
29.	12120N " " "	1:250	"
30.	1960 Level Geology - Sheet 1	1:250	"
31.	" " " " - " 2	1:250	"
32.	" " " " - " 3	1:250	"
33.	1916 " " - Sheet 1	1:250	"
34.	" " " " - " 2	1:250	"
35.	Surface Map	1:5000 ~~1:2500~~	"

Soil horizon A & B
Core stored on property

1.

INTRODUCTION

An aggressive underground and surface development programme was carried out at the Blackdome property in 1984 which successfully defined four new ore shoots south of the development headings driven in 1981 by Blackdome Exploration. The programme was divided into two phases with the first phase lasting from mid-May to mid-July and the second phase conducted from the end of August to the end of November. A total of 20 to 25 miners, staff and contractors were employed throughout the programme. A budget of 1.0 million dollars was expended during the first phase and approximately \$900,000 was spent in the second portion.

During the first part of the 1984 programme a total of 237 metres (780 feet) of underground drifting on the No. 1 Vein was completed and three raises, totalling 124 metres (407 feet), were driven to define the vertical continuity of the new ore zones. Eight diamond drill holes were drilled from surface to assist in underground development planning. The No. 1 Vein was located by bulldozer trenching and geological mapping and sampling defined the limits of three ore zones. Kerr, Dawson and Associates carried out a short soil geochemical sampling programme filling in lines not sampled by Noranda in 1982. A new road was constructed around the east side of Blackdome Mountain between the Camp and the 1960 Level portals to permit all-weather access.

During the second phase of the programme a crosscut was driven westward from the No. 1 Vein drift to intersect the No. 2 Vein on the 1960 Level. The No. 2 Vein was explored by 132.5 metres (324 feet) of drifting. A raise was driven 45 metres

(148 feet) through to surface from the 1960 Level on an ore shoot in the No. 2 Vein to prove vertical continuity to an ore zone defined in surface trenching. A sub-level drift was driven from the 12062 N Raise at the 1986 m elevation to define the updip projection of the ore shoots located on the 1960 Level. A new road was constructed to a selected portal site at the 1916 m elevation on the west side of the southeasterly trending ridge from the peak of Blackdome Mountain. Following only five days to collar a new portal a crosscut was driven 274 m (899 feet) at a 2% grade to intersect the downdip projection of the No. 1 Vein and No. 2 Vein at the 1920 m elevation. On the 1916 Level a total of 96.6 m (317 feet) of drifting was completed on the No. 1 Vein and 25.9 m (85 feet) of drifting was completed on the No. 2 Vein. A raise was driven 21.0 m (69 feet) above the 1916 Level to explore for ore mineralization but was not completed before suspension of the 1984 programme.

Surface work completed during the second phase of the programme consisted of: (1) construction of roads to a proposed tailings impoundment area, (2) major improvements to the access road from Blackdome Mountain to Brown Lake, (3) drilling three 6-inch diameter holes for water well development, (4) soil testing of the proposed tailings pond area, and (5) establishing survey control and detail contour mapping of the proposed plant site, campsite and tailings pond areas.

SUMMARY

Four new ore shoots were located during the 1984 underground and surface development programme that added 38,265 tonnes to the proven ore reserves grading 41.13 gm/tonne Au and 163.60 gm/tonne Ag. The high grade surface stockpile tonnage was increased by 2,201 tonnes grading 53.13 gm/tonne Au and 172.8 gm/tonne Ag. Tonnage added to the low grade stockpile consisted of 1,074 tonnes grading 8.33 gm/tonne Au and 37.10 gm/tonne Ag. Three ore shoots intersected in the 1960 Level South Drift were located updip in surface longitudinal trenches where geological mapping and sampling defined ore boundaries of the three zones. One ore shoot in the No. 2 Vein was traced upwards into surface trenches where the northern boundary is still open. The 12115 N Raise proved vertical continuity in the most northerly shoot in the No. 1 Vein averaging 40.22 gm/tonne Au and 132.46 gm/tonne Ag over an updip length of 61 metres. The 12062 N Raise in the central shoot in the No. 1 Vein encountered erratic grades of mineralization but has an overall average grade of 7.12 gm/tonne Au and 26.3 gm/tonne Ag between surface and the 1960 Level drift. The 12080 N Raise in the No. 2 Vein averaged 11.06 gm/tonne Au and 349.03 gm/tonne Ag over an updip length of 42.0 metres.

After a new portal was established at the 1916 Level, a crosscut heading driven at a 2% grade for a distance of 274 metres intersected the No. 2 and No. 1 Veins respectively. A strong quartz vein stockwork along 96 metres strike length in the No. 1 Vein yielded only sparse gold-silver mineralization increasing slightly in average grade south of the junction of the two veins. Diamond drilling

intersections suggest the present south face is at least 110 metres distant from the shallow southerly plunging ore horizon.

During a short soil sampling programme a new zone of quartz boulders was located 200 metres southeast of the North Portal. The quartz generally contains low gold and silver mineralization however visible gold was located during a brief examination.

Eight diamond drill holes were completed during the 1984 programme which totalled 704.85 metres. High grade mineralization was encountered in a hole on Section 11870 N, approximately 170 metres south of the present south face on the 1916 Level. Three other holes intersected ore grade mineralization.

Major improvements on the access road to Brown Lake consisted of widening and flattening switchbacks, gravelling muddy sections and installing metal culverts to improve water drainage.

Three 6-inch diameter holes drilled to search for water aquifers encountered significant quantities of water in two holes. More drilling and pumping tests are required to determine whether an adequate reservoir is present to supply the proposed mill and campsite.

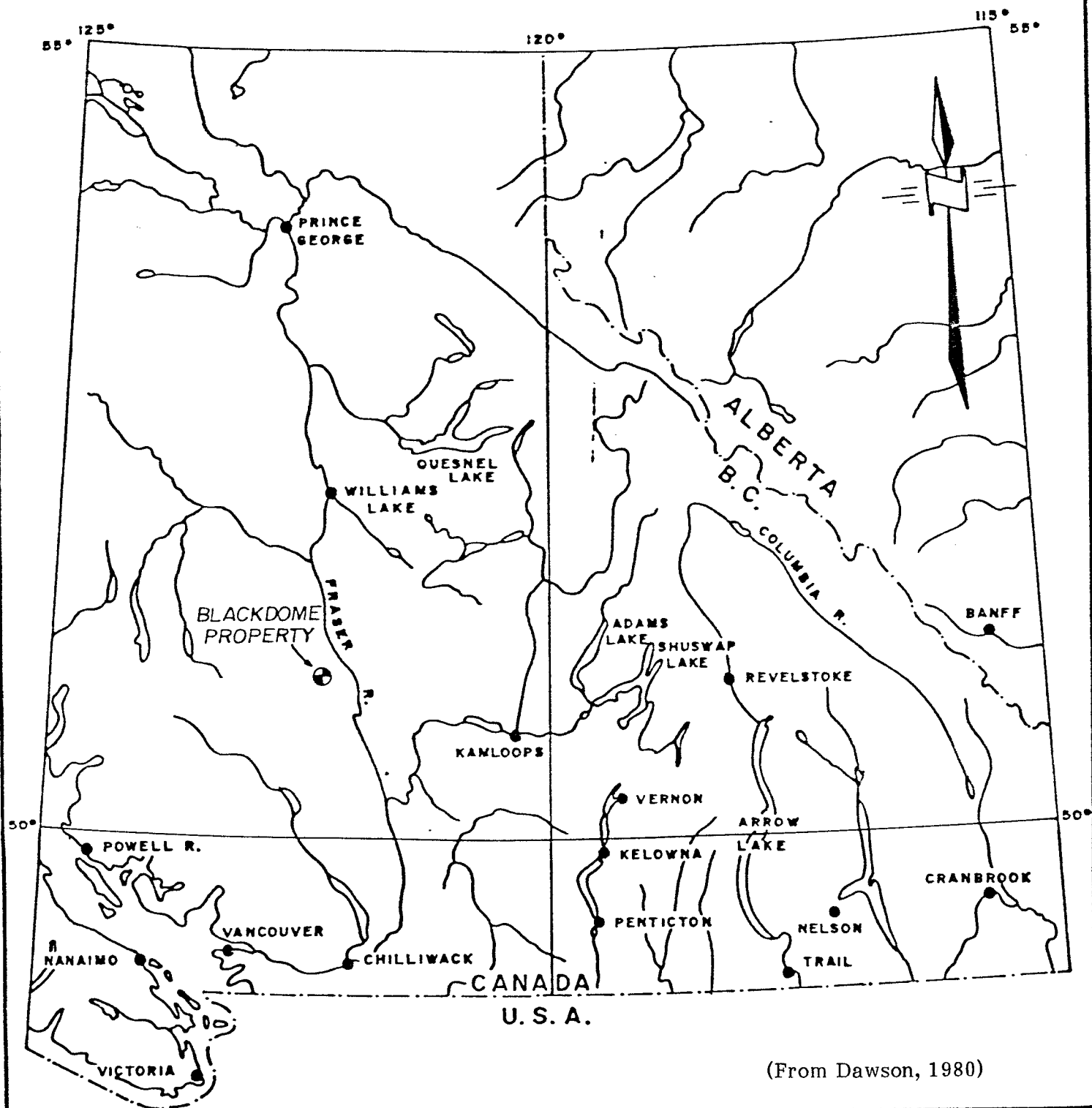
A soil testing programme completed in the proposed tailings pond determined depths to bedrock in four holes. Suitable soil characteristics are present for building a tailings dam.

LOCATION AND ACCESS

The Blackdome property is in the Clinton Mining Division at latitude $51^{\circ}20'N$, longitude $122^{\circ}29'W$ on NTS sheet 920/8 (Figure 1). It is 250 air-kilometres north-northeast of Vancouver, B.C. and 63 kilometres west-northwest of Clinton, B.C.

Access to the property is gained via 124.9 kilometres of good gravel road which leaves Highway 97 sixteen kilometres north of Clinton (Figure 2). The road is traversable all year round, although the use of four-wheel drive is advisable in wet or icy conditions.

The camp and mine workings are at an approximate elevation of 1960 metres.



(From Dawson, 1980)

BLACKDOME EXPLORATION LTD.

LOCATION MAP

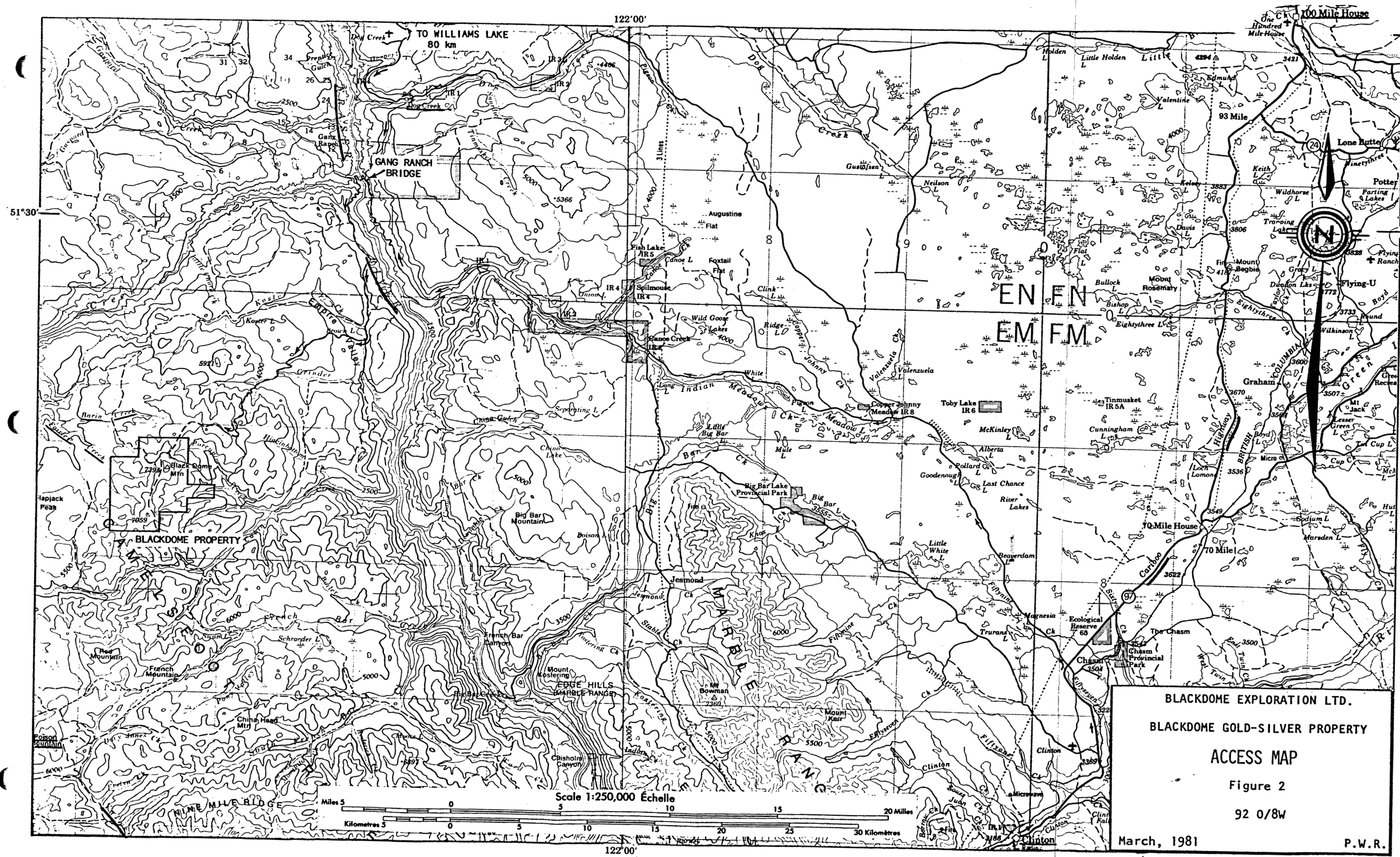
BLACKDOME PROPERTY

CLINTON MINING DIVISION, B.C.

Scale: 1" = 64 Miles

Drawn by: W.G.

FIGURE 1



CLAIMS

The Blackdome Property consists of 12 Modified Grid, four two-post and 10 crown granted mineral claims along with 13 placer leases. These claims are in the Clinton Mining Division and are shown on Mineral Titles Reference Maps M920/8W and M920/7E (Figure 3).

Pertinent claim data are listed below:

A. LOCATED CLAIMS

Claim Name	Record No.	No. of Units	Expiry Date*
Dome #1	117(8)	6	August 16, 1996
Dome #2	118(8)	12	August 16, 1996
Dome #3	119(8)	12	August 16, 1996
Dome #6	120(9)	20	September 13, 1996
Dome #7	121(9)	9	September 13, 1996
Dome #8	262(10)	6	October 27, 1996
Dome #9	263(10)	12	October 27, 1996
Dome #10	320(4)	20	April 11, 1996
Dome #11	946(12)	12	December 23, 1993
Dome #12	945(12)	12	December 23, 1993
Dome #13	944(12)	9	December 23, 1993
Dome #14	941(12)	8	December 17, 1993
Black Dome No. 1	6925(5)	1	May 15, 1996
Black Dome No. 2	6926(5)	1	May 15, 1996
Black Dome No. 3	6927(5)	1	May 15, 1996
Black Dome No. 4	6928(5)	1	May 15, 1996

* Includes credit for work done in 1984

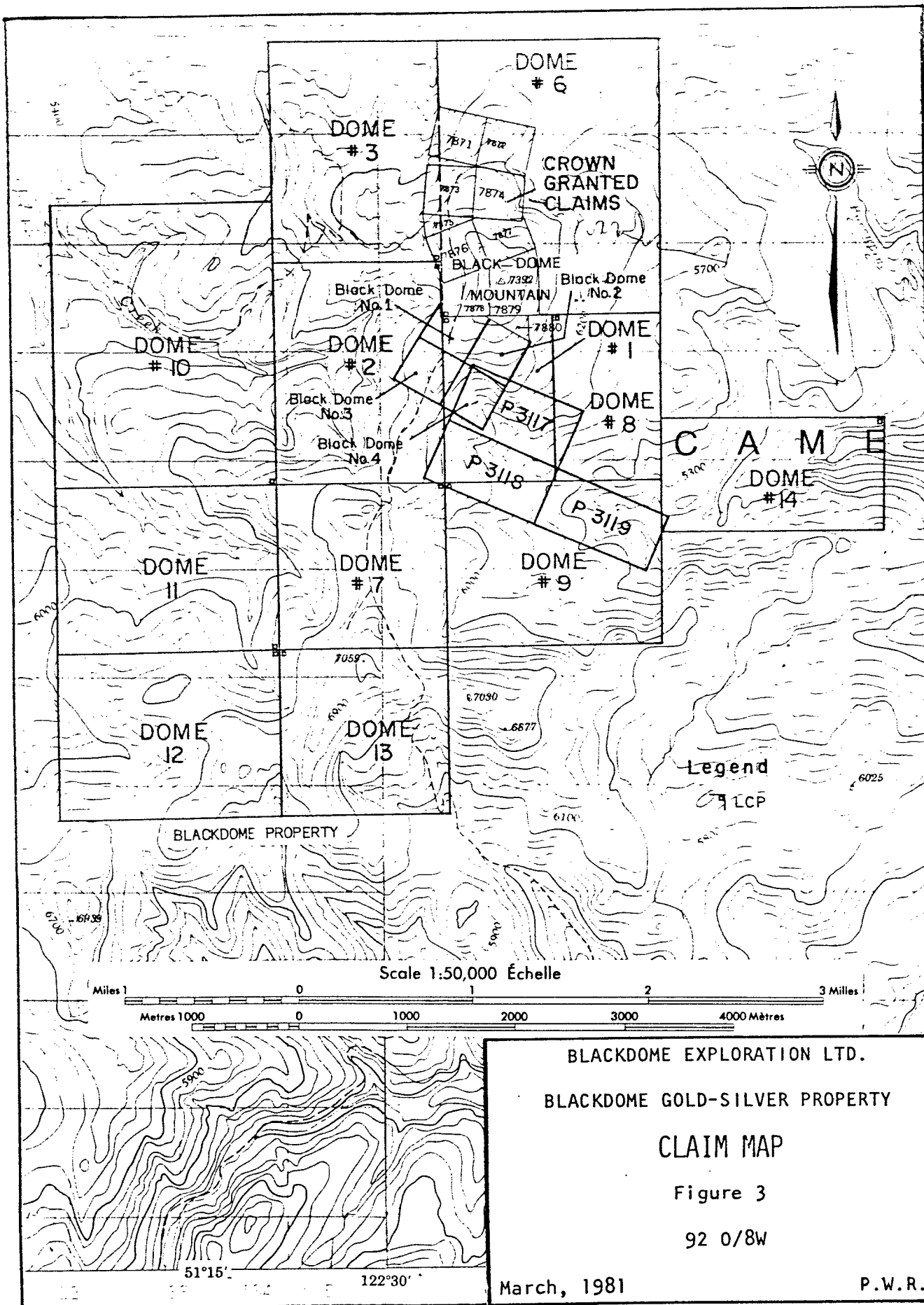
B. CROWN GRANTED CLAIMS

Claim Name	Lot No.	Annual Taxes Due
Moosehorn	7871	July 1
Saddle	7872	July 1
Whisky Jack	7873	July 1
Pinion Pine	7874	July 1
Electrum Fraction	7875	July 1
Bonanza	7876	July 1
Eldorado	7877	July 1
Black Dome	7878	July 1
Ptarmigan	7879	July 1
Sugar Bowl Fraction	7880	July 1

C. PLACER LEASES

Lease No.	Tag No.	Expiry Date*
PL 2050	P 3117	September 14, 1986
PL 2051	P 3118	September 14, 1986
PL 2052	P 3119	September 14, 1986
PL 8365	P 3120	March 10, 1989
PL 8366	P 3123	March 10, 1989
PL 8446	P 30333	May 17, 1989
PL 16023	P 39928	December 31, 1985
PL 16024	P 39929	December 31, 1985
PL 16025	P 39930	December 31, 1985
PL 16026	P 39931	December 31, 1985
PL 16027	P 39932	December 31, 1985
PL 16028	P 39933	December 31, 1985
PL 16029	P 39934	December 31, 1985

All of the claims have been acquired by Blackdome Exploration Ltd. except for Placer Lease PL 8446 which is leased to R. Blais.



(From Richardson and Carlyle, 1981)

HISTORY

The history of the Blackdome Property to 1979 is summarized by Dawson (1980) as follows:

"Gold-bearing quartz veins were discovered on Black Dome Mountain by Lawrence Frenier in 1947. He subsequently staked the main showings and prospected the ground for several years. In 1952, he optioned his claims to Empire Valley Gold Mines Ltd.

"In 1953, a new road was constructed by Empire Valley and bulldozer stripping was commenced on the optioned ground. Also in 1953, Silver Standard Mines Ltd. optioned the adjoining Schrader property to the south and east of Frenier's original claims.

"In 1954, Silver Standard did extensive trenching and sampling on the Schrader claims and drilled six short core holes aggregating 783 feet near the north end of No. 1 Vein.

"In 1955, Empire Valley Gold Mines did 300 feet of tunnelling, 150 feet on No. 14 Vein and 50 feet on Red Bird Vein. In addition, a 1700 foot airstrip was constructed.

"In 1958, Silver Standard Mines optioned the Empire Valley ground and did extensive trenching and sampling of all the vein occurrences on Black Dome Mountain.

"In 1972, Silver Standard carried out reconnaissance, geochemical soil sampling, and limited bulldozer trenching on claims located to the west and south of the original Crown grants.

"In 1973, limited prospecting and trenching was done by A. Skiber on the B. J. claims, located immediately west of the Giant and Red Bird Veins.

"In 1977, the Dome claims were staked by Barrier Reef Resources Ltd. and a programme of geological mapping, prospecting and rock geochemistry was initiated.

"In 1978, an extensive programme of exploration was carried out mainly on the southern extension of the No. 1 Vein, the so-called Ridge Zone. This work consisted of geological mapping, a ground magnetic survey and limited geochemical soil sampling. Two km of new road was constructed and 1600 lineal meters of bulldozer trenches were dug. These trenches were extensively sampled and the results integrated with the earlier Silver Standard work, further north."

Blackdome Exploration Ltd., incorporated in 1979, acquired and consolidated the claims and conducted exploration work during the period 1979-81. In that time, they established a camp and carried out trenching, diamond drilling, and underground development.

Heath Steele Mines Ltd. optioned the property in 1982 and completed more diamond drilling and underground drifting. This work met with limited success, however, and the option was dropped in late 1983.

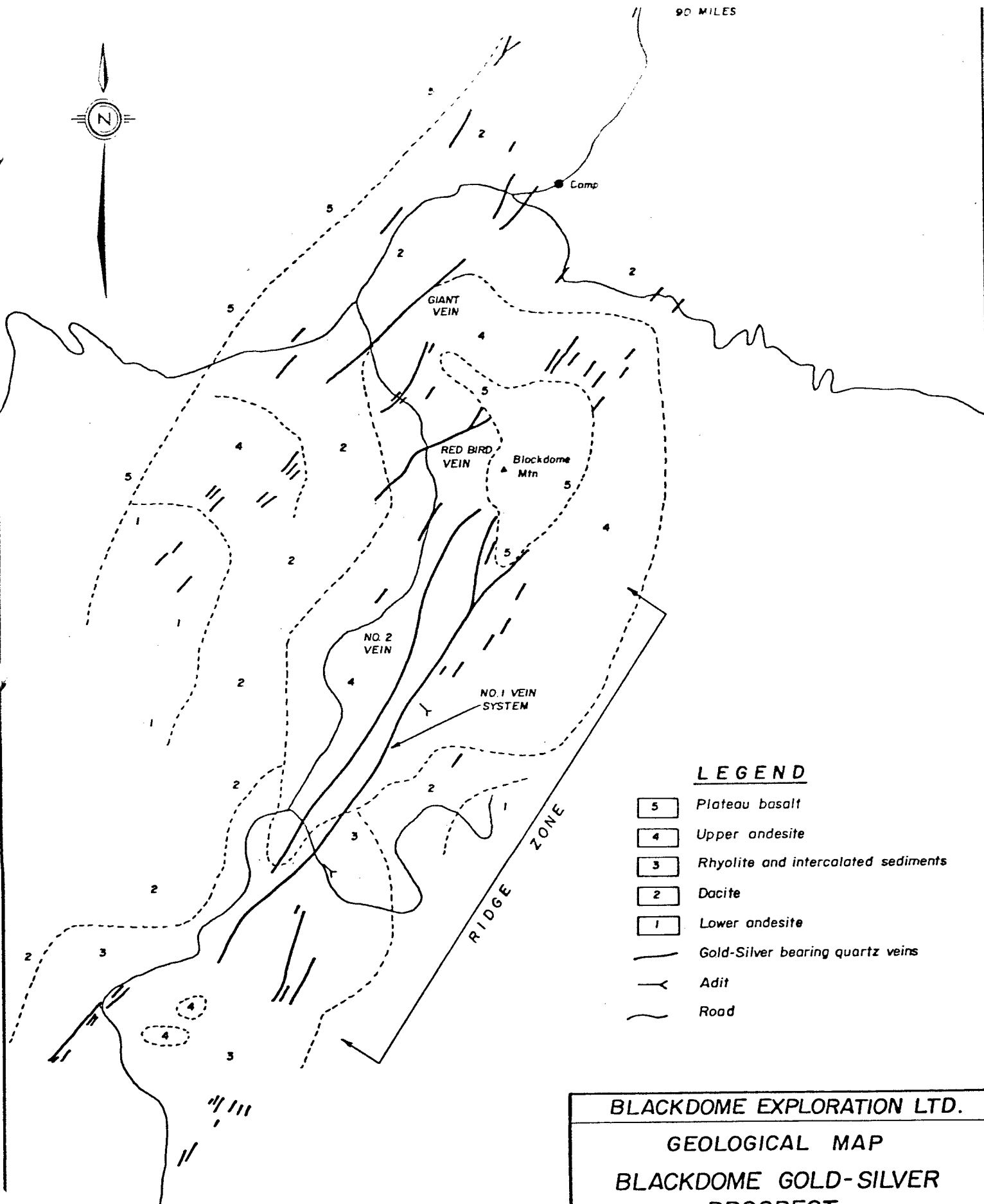
Throughout most of 1984, Blackdome Exploration continued underground and surface exploration work which is described in this report.

REGIONAL GEOLOGY (Please refer to Figure 4)

The Blackdome Property lies in an area that is underlain by Tertiary and Cretaceous volcanics and volcanoclastic sediments. The oldest rocks in the area are sediments and flows which were originally mapped as Triassic (Tipper, 1978), but have recently been correlated with the Cretaceous Spences Bridge or Kingsvale Formations (Richardson and Carlyle, 1981; Mathews and Rouse, 1984).

Overlying the Cretaceous strata are sediments, tuffs and flows of Eocene age, and it is within this sequence that precious metal mineralization has been found. In the vicinity of Blackdome Mountain, the volcanics are comprised of sub-areal welded ash-flow tuffs (ignimbrites), lapilli tuffs, flows and lahar deposits, all of which vary in composition from rhyolite to andesite. Major and trace element studies of these rocks carried out by Vivian (personal communication, 1984) has shown that they are derived from a calc-alkaline magma extruded at a continental margin. The sedimentary and volcanic rocks have been correlated with the Kamloops Group which occurs on the Ashcroft and Nicola map sheets (Duffell and McTaggart, 1952; Mathews and Ewing, 1984; Rouse, 1981).

Unconformably capping the entire sequence are basalt flows of Oligocene to Lower Miocene age. These basalts were originally thought to be Pliocene plateau lavas (Tipper, 1978; Dawson, 1980; Richardson and Carlyle, 1981), but a K-Ar age determination of 24.0 ma, obtained by Church (1980), indicates that they are Miocene. Pliocene flood basalts cover much of the region to the north and east of the Blackdome Property (Tipper, 1978).



BLACKDOME EXPLORATION LTD.

GEOLOGICAL MAP BLACKDOME GOLD-SILVER PROSPECT

CLINTON MINING DIVISION, BRITISH COLUMBIA.

 Tech. Work By:
 Kerr, Dawson and Assoc. Ltd.

 Scale:
 1:20,000

Drawn By: W.G.

Date: July, 1983.

App'd By: J.M. Dawson, P.Eng.

FIGURE 4

(From Dawson, 1983)

Apart from some relatively small intermediate to mafic dikes, intrusive rocks do not outcrop on the mine property.

The structure of the rocks in the immediate vicinity of the mine is fairly simple, but becomes more complicated to the east and southeast. Deformation of the post-Cretaceous rocks is generally moderate, with dips rarely in excess of 25 degrees. The area is, however, transected by three major fault zones: the Fraser, Hungry Valley and Yalakom Faults (Tipper, 1978; Trettin, 1961).

Several minor faults have been mapped in the area by Tipper (1978) which are probably related to the above-mentioned structures. Tensile stress in the Early Tertiary volcanics has produced a number of north-northeasterly striking fractures which are the main structural controls for epithermal gold-silver mineralization (Dawson, 1979). These fractures, the majority of which dip steeply to the northwest, have undergone normal faulting with dip-slip displacements of up to 50 metres.

PROPERTY GEOLOGY (Please refer to Figures 5 and 6)

Rock units described above that have been observed and mapped on the Blackdome Property, to date, are the Cretaceous Kingsvale Volcanics, part of the Kamloops Formation and the Miocene basalts. As was mentioned before, the gold-silver mineralization has been found only in the Eocene volcanic rocks so the other rock units will not be discussed in detail. It is not known whether ore-bearing veins exist in the Cretaceous strata as exploration of the veins has not been carried out to sufficient depth. The capping basalts are known to be post-ore, however, and do not contain veins of economic significance.

The rocks strike roughly northeast with low to moderate dips to the northwest and southeast. Locally, steep dips and overturning is evident, but this is probably a flow characteristic due to movement of partially solidified material following deposition. Dawson (1980) reports that the Eocene strata is domed into a broad anticline with a shallow northeasterly plunge.

In general, the volcanic rocks can be grouped into four units: a dacite pyroclastic sequence, a series of andesite flows and pyroclastics called the Lower Andesite, a sequence of rhyolite ignimbrites and intercalated lahar deposits known as the Rhyolite Unit and a series of andesite flows called the Upper Andesite.

The dacite has been seen on surface in Porcupine Creek and north of Lone Cabin Creek as well as along the access road to the proposed mine tailings pond and in diamond drillholes. Dawson (1980) reports that it is greenish or purplish grey to

red-brown flow-banded dacite with finely porphyritic and tuffaceous horizons. Light to medium grey or grey-brown dacite pyroclastics were uncovered in a road-cut below the 1916 level portal of the mine.

The Lower Andesite is comprised of dark green or blue-green fine-grained welded tuffs and flows, grey-green lapilli tuffs and volcanic breccia and green sub-trachytic porphyry andesite flows. At the top of the sequence is a very coarse volcanic breccia with closely-spaced bombs and clasts up to 0.5 metres in diameter. Its texture and limited extent suggest that it is a deposit of ejecta formed near a volcanic vent.

Directly overlying the Lower Andesite is a fine-grained, poorly to moderately laminated, poorly consolidated ash. It is greenish-brown in colour with a somewhat weathered appearance and contains narrow graphitic horizons. This has been grouped with the rhyolite unit.

The bulk of the rhyolites are white, buff and pale green ignimbrites, flows and lapilli tuffs. The ignimbrites are very siliceous, buff or white coloured, flow-banded and glassy with some amethystine and hematitic horizons. Also common are pale green lapilli tuffs which can be flow-banded, as well, and are frequently spherulitic. These spherules are usually between 2 millimetres to 2 centimetres in diameter, but can be up to several centimetres in diameter. The lapilli consists of angular to sub-angular and wispy fragments of vitric to porphyritic clasts and accidental fragments of earlier ash layers. Auto-brecciation of all of these rocks is commonly seen.

Intercalated with the rhyolites and the Lower Andesite are a number of coarse-grained polymictic breccias which have been labelled as "volcanic wackes" by earlier workers. They consist of closely spaced angular to sub-angular clasts of different volcanic units in a dark brown or green fine-grained silty to clayey matrix. Many of the fragments are 5 centimetres in diameter or more and, overall, they are poorly sorted. The breccias are irregularly shaped and can be as much as 35 metres thick. Rapid facies changes with the enclosing rocks are apparent from drillhole intersections, which, in cross-section, suggests that the breccias have roughly wedge-shaped or lobate boundaries. A high-energy depositional environment is suggested by the poor sorting and varied composition of the fragments, so the origin of these breccias is probably some sort of down-slope movement such as slump, landslide or lahar.

The Rhyolite Unit pinches out or is faulted off to the northeast of the 1960 level South Portal as it was not observed in the drillholes or drifts north of Line 130+00N. They are, therefore, not as widespread as the andesites which both under- and over-lie them.

The Upper Andesite is a fairly uniform layer of grey-weathering dark grey and grey-green porphyritic andesite flows. Flow-banding is evident in some horizons as are trachytic textures. It is separated from the overlying basalt by a discontinuity and in places, from the underlying rhyolite by a layer of light brown tuff.

Several basaltic to intermediate, steeply-dipping dikes cut the extrusive rocks.

The distribution of these dikes is not well understood, however, as it is difficult to distinguish them from flow units, especially in diamond drillholes. At present, it appears that the dike rock is massive, green or brown and porphyritic with a fine-grained matrix, has dark green chloritized mafic phenocrysts and grey feldspar phenocrysts usually 1-2 mm in diameter. Near faults and along fractures the groundmass is bleached white to pale green, but the chloritized phenocrysts have retained their dark green colour.

ECONOMIC GEOLOGY

Most of the exploration work completed so far has been on two quartz vein systems called the No. 1 and No. 2 Veins. The gold and silver mineralization in these two zones is hosted by quartz vein stockworks and silicified breccias situated along two roughly parallel faults. These faults strike approximately 040° and dip at angles between 55° and 65° to the northwest. There has been dip-slip displacement across both faults in excess of 20 metres and, in some cases, as much as 50 metres.

Both structures are characterized by a central shear plane containing clay and ground-up rock with many parallel to sub-parallel slips and joints. The zone of crushed rock and clay varies between 2 or 3 centimetres to 1.5 metres in thickness. The constituents of this rock flour are angular to sub-rounded fragments of wall-rock and quartz vein material from clay size to 0.4 metre diameter. The presence of sub-rounded ore-bearing fragments in the fault zones indicates that movement continued during and possibly after mineralization.

The age of the mineralization must be Middle to Late Eocene or, possibly, Early Oligocene. The lower boundary for the age of the veins (24 ma) is set by the age of the capping basalts and the upper boundary (approximately 50 ma) by the age of the uppermost member of the host rocks.

ORE MINERALOGY

The quartz stockworks consist of zones of fracturing and silicification which extend for as much as 15 metres from the faults. The silica is present as narrow veinlets from 0.1 millimetres to 5 centimetres thick, comprised of white, clear or rusty-brown massive, drusy and cockade quartz with varying amounts of limonite and pyrolusite. Ore minerals consist of native gold and silver in the form of electrum, acanthite (argentite), freibergite and assorted silver sulphosalts that are too fine-grained to identify in polished sections. Sulphide minerals that occur in minor amounts are digenite, chalcopyrite, bornite, covellite, chalcocite, arsenopyrite, tetrahedrite, sphalerite, and galena. The mode of occurrence of the ore minerals is medium- to fine-grained disseminations and irregular intergrowths of sub-hedral to anhedral grains.

Pyrite, pyrrhotite and marcasite are common minerals but do not appear to be associated with gold mineralization in the No. 1 and No. 2 Veins. However, in other veins, such as the Giant, fine gold wires and grains were observed in partially weathered pyrite cubes.

MINING PROGRAMME (Please refer to Figure 35)

Listed below are the development headings with respective distances driven in the 1984 programme:

1.	Drifts	Metres	Feet
(1)	*1960 Level South Drift - #1 Vein	237.8	780
(2)	1960 Level - 12100 N Crosscut	30.5	100
(3)	1960 Level - #2 Vein	132.5	435
(4)	1916 Level - Crosscut	274.1	899
(5)	1916 Level - #1 Vein	96.6	317
(6)	1916 Level - #2 Vein	25.9	85
(7)	1916 Level - Remuck Station	10.1	33
(8)	1916 Level - Sump	6.4	21
	Subtotal:	813.9	2670
	*Includes Remuck Station, Slashing and Bypass Drift		
2.	Raises		
(1)	1960 Level - 12489 N, #1 Vein	12.2	40
(2)	1960 Level - 12115 N, #1 Vein	60.9	200
(3)	1960 Level - 12062 N, #1 Vein	50.9	167
(4)	1960 Level - 12080 N, #2 Vein	45.1	148
(5)	1916 Level - 12120 N, #1 Vein	21.0	69
	Subtotal:	190.2	624
3.	Sub-Level Drift		
	1986 Sub-Level	82.5	271

Preparation of camp facilities began in mid-May accompanied by work on the installation of a 4-inch diameter air line and a 2-inch water line to the face of the 1960 Level South Drift. When work was completed installing a water line on surface from the North Portal, the first round in the 1960 Level South Drift was blasted on June 6. Drift crews consisted of two jackleg operators and a scooptram operator, using one of three available JS 220 scooptrams, working two shifts per day. Following a blast the scooptram stored the muck from the first round on each shift in a remuck station to permit access for the jackleg operators back to the face. While the 31 to 33 holes were being drilled in each drift round, the scooptram moved the round from the remuck station to a storage area outside the South Portal. The second round on each shift was transported directly to the storage area outside the portal. Drifts were a minimum 10 feet wide and 9 feet high, similar to the size of the 1981 headings and the miners consistently took four 6-foot length rounds per day. Most of the miners used a diamond shaped cut and each round was loaded with 1.5 cases of Tovex powder.

Ground conditions generally required only a brief period of scaling after each round and most of the 1960 Level South Drift required no rockbolting. The drillers had problems pulling drill steel from many holes and had problems loading holes because of small rock pieces wedging in holes. When drifting was completed on the 1960 Level on June 12, one 2-man crew spent a week installing split-set rockbolts, strapping and screening in a couple of areas where pieces of loose rock had fallen. During the interval between the first and second phases of the 1984 programme a rockfall of 30 to 40 tons came down at the south end of the bypass drift. Part of the cause for this loose ground was the narrow pillar left between the bypass drift

and main south drift. The 12115 N Raise was driven quite flat (45°) over the top of the bypass drift and blasting in the Raise created loose ground in the back of the drift. The 20 to 30 foot high void has been stacked full of timber.

During the first phase of the programme the dense smoke produced by the scooptram engines created a serious ventilation problem. A 30-inch diameter electric fan was installed at the bottom of the South Raise (12305 N) driven in 1981 and fresh air was blown through a 24-inch rubber tubing towards the drift face. There was insufficient air flow reaching the face so that most underground personnel were forced to wear air filter masks when travelling in the exhaust air flow between the face and the South Portal. Because the No. 2 Scooptram engine produced less carbon and obnoxious gases than the No. 1 Scooptram, it was used most of the time and the No. 1 Scooptram was kept as a spare. The No. 6 Scooptram engine, as smoky as the No. 1 Scooptram, was used mainly on surface to move ore to the high grade and low grade stockpiles. The ventilation problem was remedied before the start of the second phase of the programme when the ventilation fan was installed at the top of the 12115 N Raise and the smoky air was exhausted through this raise. The air intake through the South Portal permitted an increase volume of fresh air to flow through the active development heading.

Approximately \$12,000 was spent replacing rock drill parts by the conclusion of the 1984 programme. One of the principal reasons for this high expenditure was caused by the use of a poor quality rock drill oil supplied by Century Productions, Langley, B.C. This oil has a thin viscosity which permits a heat build-up in the inner drill parts that causes metal fatigue in the rifle bars and side rods. The

miners experienced nausea from gases emitted by the rock drills and the rock drills occasionally backfired. When the new Secan drills, purchased in September, started to show discolouration from excessive heat on the rifle bars a decision was made to change to a rock drill oil manufactured by E.F. Houghton. During the last two weeks there were less problems with rock drills breaking down.

After financing was arranged, the second phase of the development programme commenced in late August and continued until November 24. A crosscut was driven 30 metres westward on section 12100 N to test the No. 2 Vein intersected in holes drilled from surface in June and July, 1984. The quartz vein-fault zone was intersected and the south drift was driven first towards the high grade intersection in DH 149. An outstanding ore zone was defined (cut values: 60.19 gm/tonne Au and 417.26 gm/tonne Ag) over a strike length of 28.0 metres in the No. 2 Vein while drifting southwards. When the quartz veining pinched out, the south drift was stopped and the mining crew turned northward. The No. 2 Vein was explored north for a distance of 98 metres before the drive was suspended after intersecting only a few small lenses of interesting mineralization. The mining crews moved equipment out of the 1960 Level to commence a new level from the 1916 elevation portal.

A site was selected for the 1916 Level portal on the west side of the southeast trending ridge. A D-53 Komatsu bulldozer and a 966 loader stripped overburden off an area of bedrock 100 metres long by 40 metres wide during a period of 4 days. After 5 days of open cutting and installing timber sets, a portal brow was established. A crosscut development heading approximately 3.96 m (13 feet) wide

by 3.05 m (10 feet) high was driven 274 metres (898 feet) at an average grade of 2% on an azimuth of 069°. The No. 2 Vein was intersected at 253 metres from the portal and the No. 1 Vein was encountered at 269 metres. The No. 1 Vein was explored by drifting 96.6 metres north and south of the crosscut. The No. 2 Vein was drifted along for 25.9 metres south of the crosscut where it joined the No. 1 Vein.

Three raises were driven in the No. 1 Vein from the 1960 Level and one raise was driven in the No. 2 Vein from the 1960 Level. One raise was started in the No. 1 Vein from the 1916 Level which reached 21.0 m before the end of the 1984 programme. The size of the raises were generally 1.5 metres (5 feet) by 1.5 metres and rounds were drilled 1.8 metres (6 feet) long. For the first 15 to 20 metres the better raise miners drilled and blasted two rounds per shift and managed to take at least one round per shift thereafter. Two raise miners used a jackleg drill while another raise miner preferred using a stoper to drill off their rounds. While driving the 12115 N Raise, a problem developed with misfires when using Tovex explosives. After consultation with the Dupont Explosives representative, a Gelex 70% stick powder was used instead of Tovex and reblasts were no longer necessary. Later in the programme the raise miners used only one stick of Gelex in each hole to ignite the remainder of the hole loaded with Tovex.

The face of each raise round was mapped and sampled by a geologist who was responsible for guiding the direction of the raise. The 12489 N Raise was suspended after only 12 metres because the quartz veins pinched out and the raise encountered several water-filled fractures. The raise above the 1920 Level

wandered off the main No. 1 Vein quartz stockwork when it was driven on a subsidiary footwall fault zone for the last 10 to 15 metres. Before continuing, this raise will require mapping to determine where the raise should be steepened to follow the mineralized quartz stockwork.

The 12062 N Raise encountered average values of only 7.12 gm/tonne Au and 26.30 gm/tonne Ag although the drift on the 1960 Level averaged 127.81 gm/tonne Au and 124.52 gm/tonne Ag and the No. 1 Longitudinal Trench averaged 15.54 gm/tonne Au and 27.43 gm/tonne Ag. To gain information on the characteristics of the central portion of this zone a decision was made to drive a sub-level drift off the raise midway between surface and the 1960 Level. A 10 H.P. slusher and 76 cm (36 inch) wide scraper were set up in a north drift stub and a 1.5 m (5 feet) by 2.1 m (7 feet) drift was driven southward for 40 metres (131 feet) following the quartz vein stockwork. The muck from each round was scraped into the raise where it was picked up by a scooptram to be stored outside the portal. When we were confident that the sub-drift was driven past the upward plunge of the most southerly ore zone the sub-drift was stopped and the slusher and scraper were turned around to drive the sub-drift northward. The north sub-drift followed the quartz vein stockwork for 42.5 metres until it intersected the south end of the adjacent ore zone to the north. The sub-level drift defined a zone only 7.5 metres in strike length on the north side adjacent to the raise which averaged 6.39 g/tonne Au and 14.55 gm/tonne Ag. A second ore zone was outlined in the south drift over a strike length of 8.5 m that averaged 14.68 gm/tonne Au and 146.88 gm/tonne Ag.

SURFACE PROGRAMME

Several new roads were established at Blackdome Mountain during the 1984 programme. A 1.5 kilometre road was constructed around the east side of the mountain between a road previously constructed 3 kilometres south of the Camp and the South Portal mine facilities to provide easier access during winter weather conditions. This road permitted abandoning the route through the alpine terrain where blowing snow made road clearing difficult. A road was constructed from the South Portal over a distance of 1.5 kilometres to the new 1916 Level portal. A 4-wheel drive road was built into the Tailings Pond area to facilitate access for soil testing equipment and survey control. This road intersects the road into the Fairless Creek valley which will be useful for future logging and clearing operations in the Tailings Pond area.

A road improvement programme, under the supervision of Ron Blais, was completed on the access road from Brown Lake to Blackdome Mountain. Most of the switchbacks were widened and flattened, numerous metal culverts were installed to improve drainage and approximately one-third of the road was gravelled through muddy areas, predominantly through the lower section closer to Brown Lake. An expenditure of \$98,000 has upgraded the road to all-weather status.

In the proposed Tailings Pond, a soil testing programme was conducted under the supervision of Cecil Ulrich, Reimchen Ulrich Geological Engineering, to determine depth to bedrock and soil characteristics for building a tailings dam. Four drill

penetration test borings were completed and eight test pits were dug. These results will be integrated with results of previous work to provide final design and construction plans for the tailings disposal system.

Three 6-inch diameter holes were drilled by Sage Hills Well Drilling, Kamloops near the south end of Frenier Baseline to search for water aquifers capable of supplying sufficient water to operate a 200 ton per day mill and service an adjoining campsite. The first well was drilled to a depth of 400 feet and is roughly estimated to give a water yield of 150 gallons per minute. The second well was drilled to 340 feet where it was necessary to stop due to caving ground conditions. Estimated water yield is only 20 gallons per minute to this depth. This hole is located only 12 metres north of the 1916 Level crosscut which intersected water flows of 80 to 100 gallons per minute. The crosscut probably drained off the water-filled fractures which resulted in a low water yield in the drill hole. The third well was drilled to a depth of 363 feet and is roughly estimated to provide a water yield of 100 gallons per minute.

A pumping test was performed by Aqua-Flo Testing and Equipment Ltd. on drill hole No. 3 using drill hole No. 1 to observe the draw down characteristics. Data results indicate a potential yield of 84 U.S. gallons per minute. Aqua-Flo recommends testing the well again in the Spring using a longer pump test observation time. These holes are being monitored through the winter months to observe any changes in water levels.

GEOLOGY PROGRAMME

Geological work in the 1984 field season consisted of geochemical soil sampling, trenching, diamond drilling, 1:500 scale surface mapping and 1:250 scale mapping of the underground workings. Also, each face exposed by drifting or raising was mapped and sampled.

Geochemical Sampling (Please refer to Figures 7 and 8)

A total of 932 soil samples were taken at 10 metre intervals along blazed and picketed lines on the north end of the Frenier grid. The intent of this work was to fill in lines that were not completed in previous sampling programmes and to provide some detail over known showings.

The sampling was carried out under the direction of J. Dawson, P.Eng., who was also responsible for having the samples analysed and for compilation and interpretation of results.

Atomic absorption analyses for gold and silver were done at Acme Analytical Laboratories in Vancouver.

Gold anomalies exist over many of the known structures including the Red Bird, Giant, No. 1, No. 2, Black Shear and Ribbon Veins. Two and possible three new gold anomalies have been found southeast of the No. 1 Vein on lines 134+00N to

137+00N inclusive. Samples of quartz float taken along an anomaly 200 metres east of the North Portal averaged 4.9 gm/tonne Au and 48.7 gm/tonne Ag with other, more selective, samples carrying as much as 78 gm/tonne Au. Visible gold was noted in some of the higher grade samples.

Diamond Drilling (Please refer to Figures 9 to 16 inclusive)

A diamond drill programme was carried out in June and July to more clearly define ore shoots at the south end of the No. 1 Vein and to test the No. 2 Vein. Eight holes, one BQ and seven NQ size, were drilled by P. Whitney Diamond Drilling Ltd. for a total length of 704.85 metres. A summary of the drilling is given below:

Table I - DIAMOND DRILLING SUMMARY

Hole No.	Size	Latitude	Departure	Elev.(m)	Azim.	Dip	Length (m)
DDH-146	BQ	11870.82N	4910.89E	1973.69	130	-45	114.30
DDH-147	NQ	11905.15N	4937.77E	1978.94	130	-45	92.00
DDH-148	NQ	12120.12N	4940.06E	1993.82	130	-45	80.25
DDH-149	NQ	12090.12N	4943.52E	1991.79	130	-45	77.50
DDH-150	NQ	12025.05N	4935.63E	1986.76	130	-45	75.50
DDH-151	NQ	12046.27N	4944.45E	1989.06	130	-49	69.00
DDH-152	NQ	11977.91N	4938.92E	1983.16	130	-45	66.40
DDH-153	NQ	12165.69N	4909.81E	1997.56	130	-45	129.90

Note: The above coordinates are based on the Frenier grid. The azimuths are measured from true north.

All the holes intersected at least one of the veins and in core from four of the holes, ore-grade mineralization was observed. The best of these intersections was obtained from the No. 1 Vein, in DDH-146. Four high-grade samples were returned from this hole, with some containing visible gold.

A table of the best assays is provided below:

Table II - HIGH-GRADE DRILL-HOLE INTERSECTIONS

Hole No.	Down Hole Depth (m)	Apparent Width (m)	Au (gm/t)	Ag (gm/t)
DDH-146	90.58 - 91.08	0.50	23.70	22.9
(#1 Vn)	91.08 - 91.88	0.80	13.40	25.6
	91.88 - 93.23	1.35	28.30	28.3
	94.00 - 95.00	1.00	82.50	137.3
DDH-148	37.95 - 38.75	0.80	16.30	44.9
(#2 Vn)				
DDH-148	64.50 - 65.00	0.50	15.80	30.2
(#1 Vn)				
DDH-149	40.60 - 41.80	1.20	105.60	369.8
(#2 Vn)				
DDH-151	52.00 - 53.00	1.00	29.65	49.0
(#1 Vn)				

Trenching (Please refer to Figures 17 to 21 inclusive)

Trenches were cut on both the No. 1 and No. 2 Veins in order to find the upward extensions of ore shoots found by drilling and drifting and to aid in planning raises. Overburden was removed with a bulldozer for a strike length of 130 metres along the No. 1 Vein and 210 metres along the No. 2 Vein. Since it was impossible to clean the bedrock completely in this manner, an air compressor was used to blow the remaining dirt away in metre-wide swaths across the structures. These cuts were made at 5 to 10 metre intervals along the veins and provided clean rock surfaces to map and sample. The cuts were mapped at 1:50 scale and then sampled.

Three ore zones were defined along the No. 1 Vein between 12040 N and 12140 N. These same three zones were intersected in the drift on the 1960 Level. Another ore shoot, starting at 12083 N and open-ended to the north, was defined on the No. 2 Vein. It, too, was intersected in the 1960 Level drift.

The No. 2 Vein trenching had to be suspended due to frozen ground.

A summary of the trenching follows:

Table III - SUMMARY OF TRENCHING

Location	Strike Length (m)	Avg. Width (m)	Assays (gm/tonne)	
			Au	Ag
#1 Vein 12040N - 12044N	4.5	2.30	27.80	620.30
#1 Vein 12048N - 12066N	18.0	2.36	12.29	21.73
#1 Vein 12075N - 12140N	65.0	2.74	15.65	42.92
#2 Vein 12082N - n/a	n/a	2.19	16.00	183.80

Underground Development

A total of 813.9 metres of drift and 190.2 metres of raise were driven during the 1984 field season (see section entitled Mining Programme). Following each blast, usually four times a day, the geology of the new face was mapped on a scale of 1:50. Chip samples were then taken at chest height across the entire face, over intervals determined by geological characteristics. The features used most often in determining which sample intervals to use were faults, alteration and the amount of quartz-veining. A maximum sample-width of 1.5 metres was maintained (Figures 22 to 29 inclusive).

These samples, along with samples of the broken muck, were analysed for gold and silver using the company's atomic absorption machine. The assay results were usually returned within 36 hours and were used day-by-day to guide the drifting operations. Pulps of each sample were sent to Acme Analytical Laboratories Ltd., in Vancouver, for fire assay.

The two sets of assay results were plotted on 1:250 scale plans and average grades calculated. For the purposes of averaging, samples were weighted using the widths over which they were taken and excessively high samples were cut using a method described by Manning (1982). In this method, samples from the four faces closest to the high sample were averaged and this mean was doubled. The resulting figure was then taken as the cut value. A minimum horizontal mining width of 2.0 metres was used to enable a calculation of ore reserves over a minimum true mining width of 1.5 metres.

Two samples were taken of the broken muck from each round: one from the muck pile in the drift and one of the same muck after it had been trammed to a temporary stockpile area outside. Material assaying 15.0 gm/tonne Au or better was placed on a high-grade stockpile, muck with grades between 5.0 and 15.0 gm/tonne was placed on a low-grade stockpile and anything else was moved to the waste dump. A total of 2201 tonnes of ore averaging 53.13 gm/tonne Au and 172.8 gm/tonne Ag were added to the high-grade stockpile during 1984. Some 1074 tonnes of material grading 8.33 gm/tonne Au and 37.0 gm/tonne Ag were added to the low-grade stockpile. A total stockpiled ore summary follows:

Table IV - SUMMARY OF STOCKPILED ORE

	Year	Tonnage (t)	Grade (gm/t)	
			Au	Ag
High Grade:	1981	3468	27.42	150.8
	1983	192	34.28	24.3
	1984	2201	53.13	172.8
	Total	5861	37.36	154.9
Low Grade:	1981	2880	1.68	12.1
	1983	929	3.50	9.6
	1984	1074	8.33	37.0
	Total	4883	3.50	17.1

The drifting on the 1960 level outlined three ore shoots in the No. 1 Vein and one ore shoot in the No. 2 Vein. The first of these shoots to be intersected was in the South Drift on the No. 1 Vein. The ore begins at latitude 12148 N only 14 metres south of the drift face left in 1981 and continues for 67 metres, averaging 81.06 gm/tonne Au and 216.89 gm/tonne Ag with a horizontal thickness of 2.08 metres.¹ Assays of samples from a raise, driven to surface through this section (12115 N raise), averaged 40.22 gm/tonne Au and 132.46 gm/tonne Ag over a thickness of 1.77 metres. The second ore-shoot was intersected between latitudes 12074 N and 12040 N for a total strike length of 34 metres. Grades through this section averaged 17.81 gm/tonne Au and 124.52 gm/tonne Ag with a thickness of 2.15

¹All grades quoted are the cut averages of the fire assays.

meters. A raise, driven to surface at latitude 12062 N, yielded samples with average assays of 7.12 gm/tonne Au and 26.3 gm/tonne Ag over a thickness of 1.65 metres. At the 1986 sub-level, this ore-shoot diminishes in strike-length and grade to 7.5 metres grading 6.39 gm/tonne Ag and 14.55 gm/tonne Ag. On surface, the grade and strike-length increase again to 18 metres of 12.29 gm/tonne Au and 21.73 gm/tonne Ag.

A third ore-body was encountered between latitudes 12026 N and 12013 N and assayed 43.63 gm/tonne Au and 88.99 gm/tonne Ag over a thickness of 2.45 metres. This shoot is narrow but has good up-dip continuity with ore-grade mineralization in the 1986 sub-level and on surface.

In order to investigate good diamond drillhole assays from the No. 2 Vein, a crosscut was driven northwest from the No. 1 Vein at latitude 12100 N. This crosscut intersected the No. 2 Vein at a distance of 27 metres from the No. 1 Vein and broke into an ore shoot which extended for 1.0 metre north and 27.0 metres south. Samples of vein material in this section yielded assays averaging 60.19 gm/tonne Au and 417.26 gm/tonne Ag over a thickness of 2.27 metres. Samples from a raise driven to surface at 12080 N averaged 11.06 gm/tonne Au and 349.03 gm/tonne Ag, although the values along this raise were very erratic. Assays ranged from almost nil to more than 4000 gm/tonne Au.

A drift driven to the north along the No. 2 Vein was unsuccessful in locating significant gold mineralization. This was unexpected as a good drillhole intersection was obtained from the vein at latitude 12120 N. Only two rounds in

the vicinity of the drillhole contained gold and silver mineralization of any consequence.

Boulders of mineralized quartz up to 0.4 metres in diameter were seen in the No. 2 Vein drift approximately 56 metres north of the crosscut. They had been rounded through fault action and contained disseminations of fine-grained acanthite and pyrite. Special samples taken of these boulders ran as high as 29.5 gm/tonne Au. This indicates that ore-grade mineralization exists nearby, probably up or down-dip from where the boulders were found.

A crosscut was driven on the 1916 level to intersect both veins on or about latitude 12100 N, directly underneath the largest of the ore-shoots defined on the 1960 level. Drifts were driven to the north and south on the No. 1 Vein and to the south on the No. 2 Vein. To the south of the crosscut, the two fault structures intersect. This was anticipated by Blackdome personnel from the strike of the veins observed on surface and on the 1960 level.

On the 1916 level, in the No. 1 Vein, there is much quartz-veining over as much as 3 metres width. Nevertheless, the only significant gold and silver mineralization was in the last five rounds of the South Drift. This mineralization is just south of the intersection of the No. 1 and No. 2 Veins.

A short raise was driven along a fault in the No. 1 Vein system from the 1916 level North Drift at latitude 12120 N. No ore was intersected by this raise, although it appears from survey plans of the workings that the wrong fault was followed. A

good drillhole intersection from DDH-148 appears to be on a structure that dips some five degrees steeper than the raise. Better results could be obtained by raising along one of the steeper faults.

Surface Geological Mapping (Please refer to Figures 5 and 6)

Geological mapping on a scale of 1:500 was conducted on surface in the immediate vicinity of the underground workings. This work comprised updating an earlier map (Richardson and Carlyle, 1981) and re-interpreting the geology, taking into account the latest drilling and drifting data. Vein projections were mapped more accurately and particular attention was paid to andesite outcrops and lithologies.

Some of andesites that had been mapped as flows are now considered to be dikes or plugs and there appears to be a spatial relationship between ore zones and andesite bodies. Consequently, an attempt is being made to determine what lithological differences exist between andesite flows and dikes which will enable distinctions to be made between the two rock-types in the field.

Most of the underground workings, excluding those driven by Noranda, were mapped on a scale of 1:250 (Figures 30 to 34 inclusive). This includes the 1960 level drifts in the No. 1 and No. 2 Veins, the 1916 level cross-cut and the 1916 level drift along the No. 1 Vein.

The No. 1 and No. 2 Vein systems are similar to each other in many respects. Both

are situated along fault zones and characterized by much quartz veining, brecciation of the wall rocks and abundant clay alteration. The fault zones, themselves, vary in thickness from a few to 150 centimeters, strike approximately 040 degrees and dip at between 55 and 65 degrees to the northwest. They consist of finely-ground wall-rock and quartz vein material along with 2- to 5-centimetre thick seams of clay gouge. The gouge occurs along slip planes in the fault zones and is readily distinguishable from the surrounding rock flour by the amount of clay minerals it contains. The rock flour crumbles when handled while the gouge can be shaped or molded similar to plasticine.

As was mentioned before, the two vein systems intersect on the 1916 level at latitude 12065 N. The No. 1 Vein fault is truncated by the No. 2 Vein fault, which indicates that the No. 2 postdates the No. 1.

Displacement has occurred across several slip planes and, in some places, has produced a complex jumble of rock-types. Fracturing and brecciation of the wall-rock and quartz stockworks is very intense and can extend for many metres into both walls. Fragments of the wall-rock and quartz are common throughout the rock flour in both fault zones and many fragments are partially to wholly rounded. This indicates that faulting continued after the quartz mineralization had ceased.

Ore grades in the No. 2 Vein are similar to the No. 1 Vein, although, since only one ore shoot has been defined in the No. 2 Vein, it is premature to make a quantitative comparison.

The only difference in the two fault zones is in the width of the zone of milled rock in each. The No. 2 Vein fault seems to have a wider zone of rock flour than the No. 1. This contributes to a higher degree of caving and ground support problems along the No. 2 Vein.

In addition to the mapping, rock specimens were collected from a number of areas on the property and submitted for thin-sectioning. An attempt was made to take at least one specimen for every rock type encountered and to include alteration facies as well as specimens of both auriferous and barren quartz. The intent of this work is to enable a detailed study to be made of the vein and wall-rock mineralogy and to have a suite of representative specimens on hand for future reference.

Ore Reserves Proven in 1984 Programme

Shown in Table V is a calculation of the total tonnage and average grade of the four ore shoots located during the 1984 programme. All assays shown are "cut" averages, no dilution has been added. True mining widths have been calculated by multiplying average horizontal widths by $\text{Sine } 50^\circ (0.766)$.

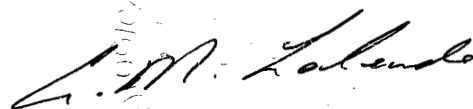
TABLE V

ORE RESERVES LOCATED IN 1984 PROGRAMME

Location	Length	Width	Height	(T.F.-2.6) Tonnes	Gm/te Au	Gm/te Au	Gm Au	Gm Ag
12115 N Zone								
Above 1960 Level	67.0	1.59	29.5	8,171	81.06	216.89	662,341.26	1,772,208.19
No.1 Long Trench	65.0	2.10	29.5	10,470	15.65	42.92	163,855.50	449,372.40
Below 1960 Level	65.0	1.59	12.2	3,379	81.06	216.89	273,901.74	732,871.31
Totals				22,020			1,100,098.50	2,954,451.90
Average Grade					49.96	134.17		
12062 N Zone								
Above 1960 Level	34.0	1.65	14.5	2,115	17.81	124.52	37,668.15	263,359.80
1986 Sub Level	7.5	1.60	22.0	686	6.39	14.55	4,383.54	9,981.30
No.1 Long Trench	18.0	1.81	7.5	635	12.29	21.73	7,804.15	13,798.55
Below 1960 Level	34.0	1.65	12.2	1,779	17.81	124.52	31,683.99	221,521.08
Totals				5,215			81,539.83	508,660.73
Average Grade					15.64	97.54		
12020 N Zone								
Above 1960 Level	12.5	1.88	14.5	886	43.63	88.99	38,656.18	78,845.14
1986 Sub Level	8.5	1.50	22.0	729	14.68	146.88	10,701.72	107,075.52
No.1 Long Trench	4.5	1.76	7.5	154	27.80	620.30	4,281.20	95,526.20
Below 1960 Level	12.5	1.88	12.2	745	43.63	88.99	32,504.35	66,297.55
Totals				2,514			86,143.45	347,744.41
Average Grade					34.27	138.32		
12080 N Zone - No. 2 Vein								
Above 1960 Level	28.0	1.74	21.0	2,660	60.19	417.26	160,105.40	1,109,911.60
No.2 Long Trench	47.0	1.68	21.0	4,311	12.30	161.11	53,025.30	694,545.21
Below 1960 Level	28.0	1.74	12.2	1,545	60.19	417.26	92,993.55	644,666.70
Totals				8,516			306,124.25	2,449,123.51
Average Grade					35.95	287.59		
TOTALS				38,265			1,573,906.03	6,259,980.55
AVERAGE GRADE					41.13	163.60		

CONCLUSIONS

1. An exploration programme consisting of geochemical sampling, trenching, geologic mapping, diamond drilling and underground drifting was carried out on the Blackdome property in 1984.
2. Expenses for the above-mentioned programme totalled \$1,814,968.74.
3. Cut and undiluted ore reserves in all classes at Blackdome now total 184,965 tonnes grading 27.23 gm/t Au and 30.11 gm/t Ag.

A handwritten signature in dark ink, appearing to be 'I.D.D.' with a horizontal line extending to the right.A handwritten signature in dark ink, appearing to be 'L.M. Leland' in a cursive script.

1984 PROGRAMME EXPENDITURES

1.	Salaries and Wages	
(1)	Technical and Professional	\$ 181,265.61
(2)	Contract Labour	40,890.60
(3)	Employee Salaries and Wages	529,025.12
(4)	Employee Benefits	68,028.25
2.	Supplies	
(1)	Mine	150,094.02
(2)	Surface	29,004.43
3.	Explosives	120,527.81
4.	Petroleum Products	150,824.43
5.	Equipment Purchase and Rentals	124,558.26
6.	Bulldozer-grader Work	63,909.65
7.	Assaying and Supplies	43,172.55
8.	Food	47,084.67
9.	Vehicle Rental and Operation	28,955.87
10.	Brown Lake Access Road Improvement	98,468.49
11.	Diamond Drilling	49,941.61
12.	Water Well Drilling and Testing	20,317.41
13.	Tailings Pond Examination	8,118.49
14.	Freight Fee	27,442.69
15.	Office and Administration	11,934.64
16.	Travel	14,887.87
17.	Communications	6,516.27
TOTAL		\$1,814,968.74



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LALONDE GEOLOGICAL CONSULTING LTD.
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CERTIFICATION

I, Carl Michael Lalonde of Richmond Municipality, Province of British Columbia, Canada, hereby certify that:

1. I am a Consulting Geologist residing at 8331 Cullen Crescent, Richmond, B.C., V6Y 2W9.
2. I am a geologist with a Bachelor of Science degree (1962) from Michigan Technical University, Houghton, Michigan and I am a Fellow of the Geological Association of Canada. I have been continuously engaged as a practicing geologist since graduation in 1962 and have held positions as Chief Geologist at East Malartic Mine, Campbell Red Lake mine and Granduc Operating Company, and positions as Exploration Manager at Bethlehem Copper Corporation and Prism Resources before establishing a geological consulting practice in 1982.
3. I am a co-author of this report that describes an exploration and underground development programme conducted in 1984 under my supervision as Project Manager.

March 1, 1985
Vancouver, B.C., Canada



Carl M. Lalonde
B.Sc., F.G.A.C.
Consulting Geologist

CERTIFICATE OF QUALIFICATION

I, David William Rennie, of Port Moody, Province of British Columbia, Canada, do hereby certify that:

1. I am a geological engineer residing at 223 Balmoral Place, Port Moody, B.C., V3H 4B9.
2. I am a graduate of the University of British Columbia, with a Bachelor of Applied Science degree in Geological Engineering (1979).
3. I have practised my profession continuously since graduation.
4. I am a registered member of the Association of Professional Engineers of the Province of British Columbia (1982).
5. I am presently employed as a geologist with Blackdome Exploration Ltd.
6. I am a co-author of this report describing an exploration and development programme conducted in 1984 by Blackdome Exploration Ltd.

March 1, 1985
Vancouver, B.C.



D. W. Rennie
B.A.Sc., P.Eng.

Appendix I

DIAMOND DRILL LOGS

HOLE No. 146

Sheet No. 1 of 8
 Logged by J. Dawson, C. Lalonde
 Date Begun June 25, 1984
 Date Finished June 28
 Core Stored At BD Mtn

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
0-7.3m		Casing						
7.3-40.45m		Rhyolite (massive and porphyritic to banded tuff). Color greyish to buff occasionally porphyritic, locally Breccia tuff cemented by grey quartz with occasionally Vugs (primary quartz). 7.3-14.0m predominantly limonitic staining with occasional finely disseminated pyrite along an oxidized fracture. 10.37-5cm Section of gouge at 40°/CA. 12.9-13.38m Argillite alteration core is fryable. 14.45-14.80m Several stringers & Clasts of primary quartz and Jasper contain finely disseminated pyrite. 14.75-14.80 Gouge zone with heavy limonite occasional disseminated fine grain pyrite cubes through out the section; where they are oxidized, there are small halos of limonite. 22.45-22.65m Gouge zone Section of banding between 23.7-24.15m at 45°/CA. 25.95-40.45 Banded rhyolite with occasional massive section.						

PROPERTY..... BLACKDOME.....

HOLE No. 146.....

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth
0	-45°	130°

Core Size..... BQ
 Angle of Hole -45°
 Claim.....
 Section.....
 Bearing 130°

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 2 of 8
 Logged by J. Dawson
 Date Begun June 25/84
 Date Finished.....
 Core Stored At BD. Mtn.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		31.0-36.0 (Massive section), occasional finely disseminated euhedral pyrite grain max. up 1/2mm in size through out the section.						
		37.0-37.08 Rusty gouge zone						
		38.27-38.31 Gouge zone with limonite and finely disseminated pyrite.						
		Broken core 12.0-12.4, 20.2-20.4, 22.5-22.80						
		36.5-37.0, 37.3-37.6, 38.4-38.7, 38.8-40.0						
40.45-42.56m		Andesite dyke: pale to dark greenish to grey, fine grained to dense with occasionally very fine grain hornblende crystal, occasional altered to chlorite, very fine disseminated py scattered through out this unit. Contact angle with rhyolite at 25°/CA at 40.45m						
2.56-63.45m		Banded rhyolite: buff-redish to greenish, finely disseminated pyrite is common, occasional spherulitic sections, banding varies from 45°-60°/CA.						
		Broken core from 44.35-44.7m, 47-47.3, 48.7-48.8, 56.27-56.38m zone of argillite alteration with gouge.						

HOLE No....146.

Sheet No. 3 of 8
 Logged by J. Dawson
 Date Begun June 25/84
 Date Finished _____
 Core Stored At BD Mtn

[illegible]

BLACKDOME EXPLORATION LTD

— DIAMOND DRILL RECORD

PROPERTY BLACKDOME

HOLE No. 146

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 4 of 8
 Logged by D.M. Lalonde
 Date Begun.....
 Date Finished.....
 Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	A.A. Assays		Core		Recovery
					Au	Ag	Run From To	Rec'd	
71.95-91.88		Andesite dyke: greenish-grey, fine-medium grained							
		generally massive structure (i.e. no foliation) mafic					73.50-75.95	2.45	
		grains prominent in some areas,					-77.90	1.95	
							-80.76	2.96	
		72.30-72.48 volcanic wacke, sharp contact at 33° at					-80.93	0.17	
		72.48					-82.84	1.93	
		72.70-72.77 volcanic wacke					-84.62	1.80	
		72.95 narrow fault: minor gouge, limonite on fracture					-85.13	0.52	
		planes					-85.72	0.58	
		78.28-79.75: 7 quartz veinlets (generally 5mm wide)					-86.12	0.28	
		81.67-82.17: 6 quartz veinlets (2mm wide)					-86.47	0.35	
		84.10-84.35: later dyke? coarser grained sausseritized					-86.78	0.31	
		feldspar grains, few chlorite clots					-88.36	1.41	
							-88.93	0.52	
		86.0-86.12: Lost core					-90.00	1.04	
		86.70-87.48: 3 quartz veinlets (2mm wide)							
		88.18-88.36: Lost core					Fire	Assays	
		87.75-88.55: propylitic alteration-minor					Au	Ag	
		chlorite and dissem fine pyrite (1-2%)	1627	87.75-88.55	0.5	22.10	0.90	29.7	
		89.0-89.30: propylitic alteration, broken core							
		at 89.20-possible narrow fault.							

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY..... BLACKDOME.....

HOLE No. 146.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 5 of 8
 Angle of Hole..... % Recovery..... Logged by.....
 Claim..... Elev. Collar..... Date Begun.....
 Section..... Latitude..... Date Finished.....
 Bearing..... Departure..... Core Stored At.....

Fire Assays

A.A. Assays

Core

Recovery

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	From To	Rec'd
		80-93.2 Drilled with face discharge bit					90.0-90.37	0.37
		-Core highly broken from 90.7-93.2;					-90.60	0.20
		re-inserted standard BQ bit at 93.2	1909	89.0-90.58	0.05 0.5	0.05 0.5	-91.07	0.38
		90.58-91.87 increase in quartz stringer					-91.88	0.75
		content - 5% quartz stringers						
		90.58: fine specks <u>Visible Gold</u> in 1cm wide	1628	90.58-91.08	23.70 21.5	22.9 21.8		
		quartz veinlet						
			1629	91.08-91.88	14.40 14.0	15.6 15.6		
		90.58-91.88 5% white quartz veins - only minor sulphide-						
		pyrite & argentite, some cockscomb texture, generally						
		very little alteration (silicification) in dyke between						
		quartz stringers						
91.88-96.75		Silicified Andesite Breccia: 20-25% white to grey					91.88-92.33	0.07
		quartz veins in light greenish-grey andesite breccia,					-92.68	0.25
		greenish-grey & beige silicified andesite fragments,					-93.23	0.36
		generally 1% dissem. pyrite but local areas	1630	91.88-93.23	28.30 22.0	28.3 26.5	-93.85	0.60
		have 5% dissem. pyrite, minor (1%) chalcopryite, minor	1631	93.23-94.0	1.50 2.5	9.3 5.9	-95.95	1.93
		(1%) black argentite, minor silvery grey sulphide,					-96.66	0.72

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 146.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 6 of 8

Logged by.....
 Date Begun.....
 Date Finished.....

Core Stored At.....
 Fire Assays.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	AA Assays		Core Recovery	
					Au	Ag	Run From To	Rec'd
		some flesh-orange quartz veins have cockscomb texture, limonitic along most fracture planes and quartz veins					96.66-98.05	1.40
		94.43-couple of specks of <u>Visible Gold</u>	1632	94.0-95.0	12.50-12.50	137.3	101.50	2.80
		91.88-92.0 Lost Core	1633	95.0-96.0	0.6	14.4		
		92.0-92.10 Pebbles, mostly quartz	1634	96.0-96.75	1.0	12.2		
		92.10-92.33 Lost Core			0.05	4.6		
		92.90-93.0 Lost Core			< 0.5	3.2		
96.75-98.70		Andesite Dyke: darker green than previous, fine grained, massive - no foliation, 7 quartz veinlets, local areas have slight alteration (silicification?) with mafic (amphibole) grains	1635	96.75-98.0	1.80	4.2		
		96.90-97.10 silicified adjacent to limonitic quartz vienlet at 97.08	1636	98.0-98.70	< 0.15	3.3		
		98.10-98.22 quartz stringer with grey-black argentite needles; limonite on fractures						
98.70-101.16		Silicified Andesite Breccia: 10-20% white & grey quartz veins & veinlets in a silicified breccia, angular beige and light greenish-grey silicified andesite fragments to 1cm diameter, 1% dissem pyrite;	1637	98.70-99.85	0.65	7.2		
			1638	99.85-100.80	0.05	3.8		
			1639	100.80-101.60	< 0.5	9.8		

— DIAMOND DRILL RECORD

PROPERTY...BLACKDOME

HOLE No. 146

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Angle of Hole

Claim.....

Section.....

Bearing

Total Depth.....

% Recovery.....

Elev. Collar.....

Latitude.....

Departure

Sheet No. 7 of 8

Logged by.....

Date Begun.....

Date Finished

Core Stored At

Fire Assays

AA Assays

Core Recover

[illegible]

—DIAMOND DRILL RECORD

PROPERTY...BLACKDOME.

HOLE No. 146

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.

Sheet No. 8 of 8

Angle of Hole

% Recovery

Logged by.....

Claim.....

Elev. Collar.

Date Begun

Section.....

Latitude

Date Finished

Bearing

Departure

Core Stored At

[illegible]

PROPERTY..... BLACKDOME.....

HOLE No. 147.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth
47m	43.5°	130°
72m	45°	130°

Core Size..... NQ.....

Angle of Hole..... -45°.....

Claim.....

Section.....

Bearing..... 129° 52'.....

Total Depth..... 92.0 metres.....

% Recovery..... +90%.....

Elev. Collar..... 1978.94.....

Latitude..... 11905.15N.....

Departure..... 4937.77E.....

Sheet No. 1 of 9.....

Logged by..... DA Leishman.....

Date Begun.....

Date Finished July 4, 1984.....

Core Stored At..... BD Mtn.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	Core		Recovery
							From	To	
0-6.7m		Casing							
6.7		Rhyolite-(Banded through to massive)					6.7-14.0		7.3
20.35		Pale purple grey to bleached white color					-14.0		NIL
		with limonite section, limonite parallel to bandings					-16.5		
		and along fractures, banding generally 40° to C.A. and					-16.5		4.5
		fractures 60-70° to C.A.					-21.0		
		diss. pyrite (very fine crystals 1/2%) through out							
		core have altered to limonite, giving rusty appearance							
		-minor manganese alteration along fractures in top							
		12.0 meters.							
		9.0m down core is very bleached with feldspar entirely							
		altered to clay minerals - original texture has been							
		obliterated.							
		16.7m - 29.35m rhyolite-massive pale grey white-							
		porphyritic in places with small c3mm euhedral white							
		feldspars - alteration decreasing, fractures with							
		limonite and clay 20-60° to C.A., 2/meter-, 1/2-1%							
		diss. pyrite							

PROPERTY BLACKDOME

HOLE No. 147

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size

Total Depth

Sheet No. 2 of 9

Angle of Hole

% Recovery

Logged by

Claim

Elev. Collar

Date Begun

Section

Latitude

Date Finished

Bearing

Departure

Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			From To	Rec'd
20.35		Rhyolite-continues similar to above						
34.75		bleached appearance, buff white colour					21.0 -22.15	1.0
		locally limonite, 1/2-1% diss-pyrite..					-22.15 -22.45	NIL
							-22.45 -22.85	0.30
		20.35-22.75-Grey silicified ground mass with white					22.85 -25.65	2.65
		porphyritic feldspars more limonite than previous					-25.65 -27.55	1.90
		fractures 30-60° to C.A. with limonite, 7/metre,					-27.55 -29.1	1.55
		fractures filled with quartz, jasper, limonite and					-29.1 -31.5	2.4
		manganese, 1-2mm wide.					-31.5 -34.75	3.25
		22.15-22.45 No core						
		22.45-22.75 Porphyritic, broken core						
		22.75-24.0 Limonite but quite massive						
		faint foliation visible 35° to C.A.						
		limonite alteration (oxidation) irregular distribution						
		no relation to foliation of unit						
		1-2 fractures /meter - 65° to C.A. 2mm width jasper						
		and limonite						
		24.0-29.0 massive buff white, faint foliation 50° to						
		C.A. visible, limonite along fractures - 2/metres						
		27.3-27.4 limonite generally the angle of feldspar						
		alteration decreasing down the hole						

BLACKDOME EXPLORATION LTD

— DIAMOND DRILL RECORD

PROPERTY BLACKDOME

HOLE No. 147

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....

Angle of Hole.....

Claim.....

Section.....

Bearing.....

Total Depth.....

% Recovery.....

Elev. Collar.....

Latitude.....

Departure.....

Sheet No. 3 of 9

Logged by.....

Date Begun.....

Date Finished.....

Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			From To	Rec'd
		29.0-32.80-Rhyolite-flow banding more visible					34.75 -38.0	3.05
		20°-50° to C.A. with red hematite alteration along					38.0 -38.9	0.75
		banding, 1/2 - 1% diss. pyrite					38.9 -42.10	3.10
		30.6-30.8 limonite					42.1 -44.6	2.50
		31.3-31.5 soft limonite - feldspar broken to clay						
		31.9-32.0 Brecciated						
		32.0-32.4 highly altered to light grey green clay						
		minerals						
		32.6-34.75 more massive, less alteration						
34.75		Banded Rhyolite Tuff-massive						
45.45		alternating grey-white and hematitic bands giving						
		banded appearance; reddish layers approximately 15%						
		of section, 1/2% diss pyrite, increased fracturing						
		and limonite alteration in places						
		36.3-36.5 breccia stratigraphic						
		36.5-38.6 increased fracturing and alterations						
		20/meter-60° to C.A.						
		38.6-38.8 fault gouge with limonite						

BLACKDOME EXPLORATION LTD () — DIAMOND DRILL RECORD

PROPERTY... BLACKDOME

HOLE No. 147

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 4 of 9
 Logged by.....
 Date Begun.....
 Date Finished.....
 Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			From To	Rec'd
		40.7-41.4 Similar texture but darker grey green					44.6 -47.85	3.15
		colour-probably due to slight increase in mafic					47.85 -50.95	3.10
		content in tuff unit					50.95 -52.6	1.65
		41.4-44.6 Banded rhyolitic tuff-banding 40% to C.A.					52.6 -53.6	1.00
		increased hematite alteration along banding - to 50%					53.6 -56.85	3.10
		lighter coloured bands coarse feldspar in a						
		siliceous groundmass.						
		43.25-5cm limonite fracture 80° to C.A.						
		44.30-44.4 limonite						
		44.8 pale green talc along fracture						
		30° to C.A., but perpendicular to foliation						
45.45		Rhyolite banded tuff - similar to above but core takes						
62.70		on purple greenish tinge lower in the section						
		45.45-47.0 Limonitic-up to 1% voids + formerly pyrite						
		cubes that have undergone alteration - limonite						
		parallel to foliation 45-50° to C.A. and along						
		fractures 70° to C.A. - 5-10/meter.						

HOLE No. 147

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....	Total Depth.....	Sheet No. 5 of 9
Angle of Hole.....	% Recovery.....	Logged by.....
Claim.....	Elev. Collar.....	Date Begun.....
Section.....	Latitude.....	Date Finished.....
Bearing.....	Departure.....	Core Stored At.....

[illegible]

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY... BLACKDOME

HOLE No. 147

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 6 of 9
 Logged by.....
 Date Begun.....
 Date Finished.....
 Core Stored At.....

A.A. Assays

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	From To	Rec'd
							70.35	1.55
62.7		Volcanic Wacke					71.9	.50
68.5		Light to darker grey green with odd shaped felsic (rhyolitic) fragments, - intercalated with grey green rhyolitic flow material					72.45	.75
							73.3	1.35
							74.7	0.85
							75.6	1.00
							76.6	0.15
68.5		Andesite - massive dark to medium green						
77.3		Silicified in places, with diss. pyrite (1-2%) and dark green mafics - altered to chlorite in places, breccia in places						
		68.5-69.6 as above - 4 quartz veins .5cm width with epidote and chlorite alteration - 80° to C.A.					Fire	Assays
							Au	Ag
		69.6-71.7 This section quite bleached-100% pale green, with 10% coarse hornblendes, faint flow texture	1645	68.5	0.5	0.6	0.10	0.1
		observed in groundmass 80° to C.A.	1646	69.6	0.5	0.2	0.10	0.1
		70.9 - 3cm of quartz veining, abundant cubic py possible cpy, with epidote alteration	1647	71.7	0.5	3.4	0.60	2.9
		70.8 3mm quartz vein, poss black Ags-Tr; 8 quartz veins 1-3mm width plus hairline fractures	1648	72.7	0.5	1.3	0.10	0.7
			1649	73.7	0.5	0.8	0.15	0.1
			1650	75.7	0.5	0.5	0.25	0.1
				77.3				

PROPERTY BLACKDOME

HOLE No. 147

Sheet No. 7 of 9

Logged by

Date Begun

Date Finished

Core Stored At

Core Size

Total Depth

Angle of Hole

% Recovery

Claim

Elev. Collar

Section

Latitude

Bearing

Departure

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		epidote and chlorite alteration predominates					-76.95 -77.2	0.45
		71.7-72.7 Quartz vein					-77.2 -77.3	0.10
							-77.3 -77.75	NIL
		71.7-71.8 Bleached white, pale grey breccia fragments					-77.75 -78.3	0.20
							-78.3 -78.5	0.10
		71.8-72.05 Limonite, silicified with Tr grey black					-78.5 -80.0	1.45
		sulphide, 40-50% quartz					-80.0 -81.0	1.00
		72.05-72.45 Quartz vein, limonitic, definite 1/2%					-81.0 -81.5	0.50
		Ags, Py & Tr cpy					-81.5 -81.95	0.40
							-81.95 -82.25	0.15
		72.45-72.7 Silicified Andesite - Py, Tr cpy, Tr Ags,					-82.25 -82.45	0.15
		15% quartz					-82.45 -82.75	0.20
		72.7-73.7 Volcanic breccia-Andesitic-silicified-20% quartz,					-82.75 -83.3	NIL
		Tr cpy, py, possibly Ags within vein material					-83.3 -83.5	0.15
							-83.5 -83.70	0.15
		73.7-75.7 Vol. breccia grading to pale green vol tuff					-83.7 -83.9	0.15
		with diss. pyrite, 5-7% quartz veining					-83.9 -87.2	3.1
		no related sulphides, limonite and epidote with most						
		veins, irregular orientation						

PROPERTY..... BLACKDOME.....

HOLE No. 147.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 8..... of 9
 Angle of Hole..... % Recovery..... Logged by.....
 Claim..... Elev. Collar..... Date Begun.....
 Section..... Latitude..... Date Finished.....
 Bearing..... Departure..... Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au gm/T	Ag gm/T		
		75.7-77.3 Andesite: pale green, brecciated & silicified						
		with several % quartz veining, with associated						
		epidote, Tr only pyrite in groundmass						
		76.5-76.9 Very Limonitic						
77.3		Andesite-similar to above						
84.0		77.3-78.3 water way in bit blocked, face discharge bit						
		no core						
		77.3-79.3 Andesite - grey green, broken core, silicified,						
		limonite along fractures	1651	77.3 -79.3	0.5 0.5	0.1 0.5	87.2 -89.5	2.3
		78.4-Volcanic Wacke, Andesite groundmass	1652	79.3 -81.5	0.5 0.5	21.9 0.6	89.5 -92.0	2.5
		quartz veins 20-30° to C.A., 1.2m-3.5% maximum	1653	81.5 -82.75	0.05 0.5	0.1 0.5		
		Tr Cpy	1654	83.3 -84.0	6.65 6.0	40.0 27.5		
			1655	84.0 -85.5	0.20 0.5	0.1 0.7		
		79.3-81.5 Andesite Wacke - similar to above						
		greater quartz veining near end section (more						
		silicified) 7% quartz, vvgs, no associated sulphides						
		81.5-82.7 Andesite						
		81.5-81.7 - 30% quartz veining, brecciated, no						
		sulphides; 81.7-81.9 limonitic gouge						
		81.9-82.7 Broken cubic, 20% quartz						

PROPERTY..... BLACKDOME.....

HOLE No. 147.....

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.....

Sheet No. 9 of 9

Angle of Hole.....

% Recovery.....

Logged by.....

Claim.....

Elev. Collar.....

Date Begun.....

Section.....

Latitude.....

Date Finished.....

Bearing.....

Departure.....

Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE				
		82.77 - 83.3 No core						
		83.3 - 84.0 Andesite, with quartz fragments very poor recovery broken rubble						
		10% quartz with cpy & Argentite						
84.0		Andesite massive, light to dark grey colour, fractures						
92.0		50° to C.A. with limonite						
		84.0-85.5 Brecciated with limonite in places						
		trace cpy within andesite host rock, veins up to						
		2cm 30° to C.A. with Tr cpy & Ags - 15% quartz in						
		section						
		85.5-89.0 Massive Andesite, few % quartz in top 2 meters						
		with associated epidote						
		89.0-92.0 Broken Core, chlorite & epidote alteration						
		with few % diss. pyrite in places						
		E.O.H.						

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No...148:

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.....

Sheet No. 2 of 12

Angle of Hole

% Recovery.....

Logged by.....

Claim.....

Elev. Collar.....

Date Begun.....

Section.....

Latitude.....

Date Finished

Bearing

Departure.....

Core Stored At

[illegible]



148

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	A.A. Assays		Fire Assays		
					Au	Ag	Au	Ag	Red'd
		32.6-32.7 Andesite dyke 60° to C.A.							
		32.7-33.9 Fault breccia with clay supported fragments pale yellow limonitic clay							
		33.9-34.7 Partially silicified andesite? faint outlines of fragments visible							
		35.25-35.35 Fault gouge	1656	37.95 -38.75	14.5	35.5	16.30	44.9	
		34.6-36.0 - Volcanic Wacke upper contact with dyke 60° to C.A. yellow brown groundmass fragments (felsics) totally absorbed and altered to soft clays, limonite and manganese along fractures, up to 1% eroded & corroded diss. pyrite	1692	34.6 -36.0	< 0.5	2.8	0.05 3.2	1.3	
		36.0-37.0 similar to above	1693	36.0 -37.0	< 0.5	4.9	0.05 6.1	0.9	
		36.65-36.70 Mafic dyke - totally altered, high manganese element							

PROPERTY BLACKDOME

HOLE No. 148

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 5 of 12
 Logged by.....
 Date Begun.....
 Date Finished.....
 Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			From To	Rec'd
		38.75-39.0 - No recovery - fault						
		39.0-40.5 - Broken core, very limonitic siliceous fragments, very siliceous groundmass some of which could be quartz stockworks, (up to 30° to core)						
		Tr only pyrite, section could be a Fault Breccia						
		40.5-41.2 - Very limonitic, broken as above						
		Fault Breccia						
		41.2-41.5 - Greenish grey fault gouge						
		41.5-43.5 - Volcanic Wacke					41.45 -44.60	3.15
		- change from upper part					44.6 -45.7	1.05
		of hole where groundmass here is pale red colour					48.7 -49.25	0.50
		(alteration) with most fragments light coloured felsics					49.25 -52.5	3.15
		(rhyolites)					52.5 -55.7	3.10
		Last .5 meter is silicified						

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 148.

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth

Sheet No. 6 of 12

Angle of Hole

% Recovery

Logged by.....

Claim.....

Elev. Collar.

Date Begun.

Section

Latitude.

Date Finished

Bearing

Departure.

Core Stored At

[illegible]

BLACKDOME EXPLORATION LTD

— DIAMOND DRILL RECORD

PROPERTY..... BLACKDOME.....

HOLE No. 148

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size.....

Angle of Hole

Claim

Section

Bearing

Total Depth.....

% Recovery.....

Elev. Collar.....

Latitude.....

Departure

Sheet No. 7 of 12

Logged by.....

Date Begun.....

Date Finished

Core Stored At

Fire Assays
A.A. Assays

[illegible]

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 148

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.

Sheet No. 8 of 12

Angle of Hole

% Recovery

Logged by

Claim

Elev. Collar..

Date Begun

Section.....

Latitude.

Date Finished

Bearing

Departure

Core Stored At

[illegible]

HOLE No. 148

Core Size.....	Total Depth.....	Sheet No. 9 of 12
Angle of Hole.....	% Recovery.....	Logged by.....
Claim.....	Elev. Collar.....	Date Begun.....
Section.....	Latitude.....	Date Finished.....
Bearing.....	Departure.....	Core Stored At.....

[illegible]

HOLE No. 148

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....
Angle of Hole.....
Clalm.....
Section.....
Bearing.....

Total Depth
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 10 of 12
 Logged by
 Date Begun
 Date Finished
 Core Stored At

[illegible]

BLACKDOME EXPLORATION LTD () — DIAMOND DRILL RECORD

PROPERTY..... BLACKDOME

HOLE No. 148

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....	Total Depth.....	Sheet No. 11 of 12
Angle of Hole.....	% Recovery.....	Logged by.....
Claim.....	Elev. Collar.....	Date Begun.....
Section.....	Latitude.....	Date Finished.....
Bearing.....	Departure.....	Core Stored At.....

A.A. Assays Fire Assays

[illegible]

BLACKDOME EXPLORATION LTD () — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No. 148

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.

Sheet No. 12 of 12

Angle of Hole

% Recovery

Logged by

Claim.....

Elev. Collar.,

Date Begun

Section

Latitude.

Date Finished

Bearing

Departure

Core Stored At

[illegible]

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth
0	45°	130°
40m	45°	130°
77.0m	45°	130°

Core Size NQ.....

Angle of Hole -45°

Claim.....

Section.....

Bearing 1.30° 02'

Total Depth.....77.5m

% Recovery.....

Elev. Collar.....1991.79.....

Latitude.....12090.31N

Departure.....4943.52E.....

Sheet No. 1 of 12

Logged by....DA Leishman

Date Begun... July 7, 1984 ...

Date Finished July 8, 1984

Core Stored At

[illegible]

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. . . . 149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.

Sheet No. 2 of 12

Angle of Hole

% Recovery

Logged by...

Claim.....

Elev. Collar.

Date Begun...

Section.....

Latitude.

Date Finished

Bearing

Departure

Core Stored At

A.A. Assays

Fire

Assay

[illegible]

—DIAMOND DRILL RECORD

PROPERTY... BLACKDOME

HOLE No. 149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Angle of Hole

Claim.....

Section

Bearing

Total Depth.....

% Recovery.....

Elev. Collar.....

Latitude.....

Departure

Sheet No. 3 of 12

Logged by

Date Begun.....

Date Finished

Core Stored At :

[illegible]

BLACKDOME EXPLORATION LTD

—DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No. 149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.....

Sheet No. 4 of 12

Angle of Hole

% Recovery.....

Logged by.....

Claim.....

Elev. Collar.....

Date Begun.....

Section.....

Latitude.....

Date Finished

Bearing

Departure.....

Core Stored At **xxxx**

[illegible]

— DIAMOND DRILL RECORD

BLACKDOME

HOLE No. 149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....	Total Depth.....	Sheet No. 5..... of 12.....
Angle of Hole.....	% Recovery.....	Logged by.....
Claim.....	Elev. Collar.....	Date Begun.....
Section.....	Latitude.....	Date Finished.....
Bearing.....	Departure.....	Core Stored At.....

Fire Assays
A.A. Assays

[illegible]

—DIAMOND DRILL RECORD

PROPERTY.

BLACKDOME

HOLE No....149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....	Total Depth.....	Sheet No..... 6..... of 12
Angle of Hole.....	% Recovery.....	Logged by.....
Claim.....	Elev. Collar.....	Date Begun.....
Section.....	Latitude.....	Date Finished.....
Bearing.....	Departure.....	Core Stored At.....

[illegible]

—DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No. 149.

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.....

Sheet No. 7 of 12

Angle of Hole

% Recovery.....

Logged by.....

Claim.....

Elev. Collar.....

Date Begun.....

Section.....

Latitude.....

Date Finished

Bearing

Departure.....

Core Stored At

[illegible]

BLACKDOME EXPLORATION LTD

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No. 149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Angle of Hole

Claim.....

Section.....

Bearing

Total Depth.

% Recovery

Elev. Collar..

Latitude.

Departure ...

Sheet No. 8 of 12

Logged by.....

Date Begun.....

Date Finished

Core Stored At

[illegible]

—DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Angle of Hole

Claim.....

Section

Bearing

Total Depth.....

% Recovery.....

Elev. Collar.....

Latitude.....

Departure.....

Sheet No. 9 of 12

Logged by.....

Date Begun.....

Date Finished

Core Stored At

[illegible]

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 149

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Angle of Hole

Claim.....

Section.....

Bearing

Total Depth

% Recovery.....

Elev. Collar.....

Latitude.....

Departure

Sheet No. 10 of 12

Logged by.....

Date Begun.....

Date Finished

Core Stored At

[illegible]

—DIAMOND DRILL RECORD

PROPERTY...BLACKDOME

HOLE No. 149

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size.....

Total Depth.....

Sheet No. 11.....of 12 .

Angle of Hole

% Recovery.....

Logged by.....

Claim.....

Elev. Collar:.....

Date Begun.....

Section.....

Latitude.....

Date Finished

Bearing

Departure.....

Core Stored At

[illegible]

—DIAMOND DRILL RECORD

HOLE No. 149

Core Size.....
Angle of Hole.....
Claim.....
Section.....
Bearing.....

Total Depth.....
% Recovery.....
Elev. Collar.....
Latitude.....
Departure.....

Sheet No. 12 of 12
 Logged by
 Date Begun
 Date Finished
 Core Stored At

[illegible]

— DIAMOND DRILL RECORD

HOLE No. 150

Core Size.....NQ
Angle of Hole.....-45°
Claim.....
Section.....
Bearing.....130° 07'

Total Depth 75.5m
% Recovery 94.4
Elev. Collar 1986.76
Latitude 12025.05N
Departure 4935.63E

Sheet No. 1 of 12
 Logged by DA Leishman
 Date Begun July 9, 1984
 Date Finished July 10
 Core Stored At Blackdome

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			From To	Rec'd
0								
2.3m		Casing						
							2.3 -4.0	1.7
							4.0 -5.6	1.6
2.3		Rhyolite - tuff					5.6 -7.3	1.65
6.0m		olive tan groundmass, quite altered with minerals					7.3 -9.1	1.70
		altered to tan yellow (iron rich mafics) and					9.1 -10.45	1.30
		remainder yellow brown colours, approx 10-15%					10.45 -11.7	1.20
		grey quartz grains 2-3mm phenocrysts, Tr-1%					11.7 -13.1	1.40
		oxidized pyrite cubes,					13.1 -17.1	400
		faint flow texture visible in upper part of					17.1 -17.5	0.4
		section, more distinct banding visible lower					17.5 -18.2	NO CORE
		in section (20-40° to C.A.)					18.2 -21.7	3.5
							21.7 -24.88	3.1
							24.88 -25.5	55
		- Unit is quite massive, fractures 20-40° to C.A.					25.5 -27.0	14
		at right angles to flow banding, fractures are					27.0 -28.15	1.15
		smeared with yellow brown clay and manganese stain					28.15 -31.45	3.1
							31.45 -34.6	3.1
							34.6 -36.8	2.2

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 150.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 2 of 12
 Logged by.....
 Date Begun.....
 Date Finished.....
 Core Stored At.....

A.A. Assays Fire Assays

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	Au	Ag
6.0		Andesite Dyke-						
10.1		Upper contact very broken and fractured, actual contact destroyed						
		dark green groundmass with approx. 20% phenocrysts of eroded feldspars and mafic minerals with Tr diss. pyrite - this unit has been silicified and has a porphyritic texture						
		- faint flow banding visible at both upper and lower contacts. Could be rhyolite inclusions or flow texture within the dyke (upper contact 20° to C.A., lower contact the same)						
		5.55-6.60 -	1695	5.58 -6.60	<0.5	0.5	0.05	1.2
		Contact zone - upper rhyolites and lower dyke, totally broken						
		6.00-6.6 - fault gouge, brecciated						

—“DIAMOND” DRILL RECORD

PROPERTY....BLACKDOME.....

HOLE No. 150

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.

Sheet No. 3 of 12

Angle of Hole

% Recovery

Logged by.

Claim.....

Elev. Collar.

Date Begun.

Section.....

Latitude

Date Finished

Bearing

Departure

Core Stored At

[illegible]

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 150.

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.....

Sheet No. 4 of 12

Angle of Hole

% Recovery.....

Logged by.....

Claim.....

Elev. Collar.....

Date Begun.....

Section.....

Latitude.....

Date Finished

Bearing

Departure.....

Core Stored At

[illegible]

—DIAMOND DRILL RECORD

PROPERTY BLACKDOME

HOLE No. 150

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size

Angle of Hole

Claim

Section.....

Bearing

Total Depth..

% Recovery.

Elev. Collar..

Latitude

Departure.....

Sheet No.....5.....of 12

Logged by

Date Begu

Date Finish

Core Store

A.A. Assays

Fire

Assays

[illegible]

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 150

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.

Sheet No. 6 of 12

Angle of Hole

% Recovery

Logged by

Claim.....

Elev. Collar.

Date Begun _____

Section

Latitude.

Date Finished

Bearing

Departure

Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE
30.6		Rhyolite tuff		
35.85		rusty, beige colour, equigranular (or crystalline), massive, poorly fractured groundmass, primarily light coloured feldspars with approx. 20% quartz grains This could be a sedimentary unit - referred to as rhyolite tuff as composition appears similar to previous		
35.85 - 36.0		Fault Gouge, limonitic 70° to C/A		
36.0		Rhyolite - Breccia		
39.9		Coarse felsic fragmentals in a groundmass of similar composition, distinct from volcanic wackes above which consist of foreign and locally derived fragments. 36.0 - 39.1 minor iron oxidation. 39.1 - 39.9 unaltered grey felsic fragments (angular) in a slightly darker grey groundmass.		

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No. 150

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size	Total Depth	Sheet No. 7..... of 12
Angle of Hole	% Recovery	Logged by
Claim	Elev. Collar	Date Begun
Section	Latitude	Date Finished
Bearing	Departure	Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			From To	Rec'd
39.9		Rhyolite - Banded tuff						
41.5		thin bedded (1-2mm) alternating						
		dark grey and white bands of finely crystalline ash-						
		tuff - banding 10-30° to C.A.						
		Tr. diss. pyrite along banding-						
		slightly limonitic along some bedding surfaces						
							39.65	
							-41.65	2.0
							41.65	
							-42.8	1.0
							42.8	
							-48.2	6.05
41.5		Rhyolite - massive flow						
49.01		Siliceous, coarser crystalline than above, 20-30%						
		grey quartz spherulites in a white felsic groundmass-					48.2	
							-50.3	2.0
		feldspars alter to whitish clay minerals, Tr-2%					50.3	
							-51.75	2.40
		diss. pyrite in section, generally quite massive,					51.75	
							-53.3	1.5
		distinct absence of mafic minerals in this section					53.3	
							-56.65	3.1
							56.65	
							-59.7	2.7
							59.7	
		48.75-49.01 - Broken and limonite sand & clay					-61.35	1.50
							61.35	
		- fault zone					-62.9	1.50
							62.9	
							-65.95	3.05

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 150.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 8..... of 12
 Logged by.....
 Date Begun.....
 Date Finished.....
 Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			From To	Rec'd
49.01		Rhyolite - Banded to massive flows						
59.15		feldspars have been altered giving core					65.95	
		bleached appearance, also silicified					-69.05	3.1
		lower in section, individual beds					69.05	
		are very siliceous, millimeter width banding increases					-72.2	3.1
		in thickness lower in the section where siliceous bands					72.2	
		are 1-2 centimeter wide, individual beds are hematitic					-75.5	3.15
		in places. core is broken and brecciated in places						
		with increased limonite alteration lower in						
		section						
		- diss. pyrite throughout section Tr-2%						
		50.1m - brecciated						
		51.2m - banding 40° to C.A.						
		52.5-52.65 Broken core, limonitic gouge						
		53.0-53.35 Fault breccia						
		53.7 - Start of hairline to centimeter size grey						
		quartz veinlets						
		80-90° to C.A. with Tr diss. pyrite along vein edges						

— DIAMOND DRILL RECORD

PROPERTY

BLACKDOME

HOLE No. 150

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.

Sheet No. 9 of 12.

Angle of Hole

% Recovery

Logged by...

Claim

Elev. Collar..

Date Begun

Section.

Latitude

Date Finished

Bearing

Departure.

Core Stored At

[illegible]

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No. .150

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....	Total Depth.....	Sheet No. 10 of 12
Angle of Hole.....	% Recovery.....	Logged by.....
Claim.....	Elev. Collar.....	Date Begun.....
Section.....	Latitude.....	Date Finished.....
Bearing.....	Departure.....	Core Stored At.....

[illegible]

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY BLACKDOME

HOLE No. 150

DIP AND AZIMUTH TEST

Corrected

Footage	Angle	Azimuth

Core Size

Angle of Hole

Claim

Section

Bearing

Total Depth

% Recovery

Elev. Collar

Latitude

Departure

Sheet No. 11 of 12

Logged by

Date Begun

Date Finished

Core Stored At

A.A. Assays

Fire

Assays

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	Au	Ag
		62.0-62.6 Fault breccia	1905	62.0 -62.6	0.5	4.3	0.50	4.6
		veining as above - mafic fragments with diss. pyrite						
		(3-4%) near end of zone. Quartz approx. 60%						
		of unit, minor 1-2% diss. pyrite with possible Ags						
		(Tr) near lower section quartz						
		62.6-63.4 Fault Breccia	1906	62.6 -63.4	<0.5	6.6	1.50	7.2
		mainly mafic fragments (from footwall) with						
		associated pyrite - approx. 20-25% quartz veining						
		Tr sulphides in crosscutting veins, sulphides						
		recognized within stockwork veinlets in breccia						
		Cpy, Bn, AgS (acanthite & Argentite) possibly						
		native Ag, should run high silver						
63.4		Andesite						
75.5		Massive, finely crystalline light grey green						
		groundmass with 3-4% darker mafics (hornblende?),						
		Tr-2% diss. pyrite,						
		minor quartz veining 80° to C.A.						

HOLE No. 150

Core Size.....	Total Depth.....	Sheet No. 12.....of 12
Angle of Hole.....	% Recovery.....	Logged by.....
Claim.....	Elev. Collar.....	Date Begun.....
Section.....	Latitude.....	Date Finished.....
Bearing.....	Departure.....	Core Stored At.....

[illegible]

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 151.....

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....NQ.....
 Angle of Hole.....49°.....
 Claim.....
 Section.....
 Bearing.....129° 57'.....

Total Depth.....69.0.....
 % Recovery.....96.5.....
 Elev. Collar.....1989.06.....
 Latitude.....12046.27N.....
 Departure.....4944.45E.....

Sheet No. 1 of 9
 Logged by D.A. Leichman &
 Date Begun July 11/84 CM Lalonde
 Date Finished July 16
 Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			From To	Reg'd
0								
2.4		Casing					2.4 -3.25	0.75
							-3.25 -3.68	.40
2.4 •		Andesite Dyke					-3.68 -3.98	.80
8.80		Massive olive yellow colour with 5% light grey					-3.98 -4.95	.95
		quartz phenocrysts					-4.95 -5.35	.40
		10-15% hornblende phenocrysts-1-3mm					-5.35 -5.98	.60
		size, giving yellow brown alteration, Tr - 1% oxidized					-5.98 -6.80	.75
		pyrite cubes, poorly fractured					-6.80 -8.20	0.40
		60-70° to C.A. With manganese stain - core is broken					-8.20 -8.55	0.50
		near top and bottom of section					-8.55 -9.75	0.95
							-9.75 -11.37	1.60
							-11.37 -12.5	0.90
		8.1-8.80					-12.5 -13.88	.30
		highly broken, slightly limonitic					-13.88 -13.3	.38
		fault gouge in places 70-80° to C.A.					-13.3 -13.32	.22
							-13.32 -13.52	
							-13.52 -13.95	.40
							-13.95 -17.0	3.00
		This unit is similar to that encountered at the top of DDH 150						

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY BLACKDOME

HOLE No. 151

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size	Total Depth	Sheet No. <u>2</u> of <u>9</u>
Angle of Hole	% Recovery	Logged by
Claim	Elev. Collar	Date Begun
Section	Latitude	Date Finished
Bearing	Departure	Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	From To	Rec'd
8.8-		Jasper - Brick red					17.0 -19.5	2.45
11.50		Massive, very finely grained with faint bedding traces visible 10-30° to C.A.					19.5 -22.0	2.50
		unit is distinct extremely siliceous (hard) with spheroids of pyrite (Tr-5%) up to 3mm size					22.0 -25.25	3.20
		Jasper is 90% of unit but is interbanded with thin 1mm beds of grey quartz - oxidization of pyrite to limonite along fracture planes					25.25 -28.35	3.05
		This unit probably is a chemical precipitate						
		8.8-10.16 - Upper contact approx. 60° to C.A.	1910	8.80 -10.16	0.5 0.5	0.6 0.5		
		-Jasper as above, very limonite new lower dyke contact with some dark grey chart						
		10.16-10.75 Dyke						
		Upper contact 70° to C.A. - as 2.4-8.8	1911	10.16 -10.75	0.05 0.5	0.1		
		olive yellow groundmass highly altered to clay minerals, several narrow quartz veinlets 70° to C.A.						
		with manganese alteration along contacts						

—DIAMOND DRILL RECORD

PROPERTY..... BLACKDOME

HOLE No. 151

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Angle of Hole

Claim.....

Section.....

Bearing

Total Depth

% Recovery

Elev. Collar.

Latitude.

Departur

Sheet No. 3 of 9

Logged by ..

Date Begun..

Date Finished _____

Core Stored At

[illegible]

BLACKDOME EXPLORATION LTD

—DIAMOND DRILL RECORD

PROPERTY.

BLACKDOME

HOLE No.

15

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size

Total Depth

Sheet No

1

0

Angle of Hole

% Recovery

Logged by

Claim

Elev. Collar.

Date Begun

Section

Latitude

Date Finished

Bearing

Departure

Core Stored At

[illegible]

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY..... BLACKDOME.....

HOLE No. 151.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 5 of 9
 Logged by DA Leishman
 Date Begun July 12, 1984
 Date Finished.....
 Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Core Recovery	
					From To	Rec'd
25.1-		Rhyolite-			28.35 -31.6	3.20
29.4		Massive, microcrystalline, pale grey green to white grey colour-			-32.45 -33.90	0.85 1.40
		Tr- 1% fresh disseminated pyrite cubes, some of core is slightly limonitic along fracture planes (70° to C.A.)			-35.5 -38.75	1.60 3.20
		No bedding traces on foreign inclusions (intrusive or xenolith) are observed in this bleached unit, it's composition (felsic) appears to be very uniform except for subtle colour changes			-39.45 -42.72 -45.25	0.65 3.17 2.35
					-48.45 -49.95	3.18 1.55
					-50.85 -53.3	0.90 2.47
29.4-34.2		Rhyolite Breccia: autobreccia has beige to light greenish-yellow angular fragments in a similar matrix, weak foliation at 25° to core axis, limonitic along many fracture planes, many fragments show argillic alteration and some are soft, sparse grey quartz veinlets.			-53.6 -53.9 -56.65 -59.75	0.30 0.30 2.75 3.10
					-62.85 -65.95 -69.0	3.10 3.10 3.10

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 1151

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 6 of 9
 Logged by C.M. Lalonde
 Date Begun.....
 Date Finished.....
 Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	A.A. Assays		Fire	Assays
					Au	Ag	Au	Ag
34.2-50.5		Rhyolite: beige to light grey banded felsic formation, fine grained ash layers interbedded with coarse grained clastic bands, fracturing at obtuse angle to foliation has limonitic coating						
		34.8-Banding at 24°; 38.6-banding at 31°						
		36.8-37.4 rhyolite breccia - autobreccia of surface layer						
		37.4-37.7 well foliated and few spherulites						
		37.7-38.15 rhyolite breccia						
		38.15 - 42.1 spherulitic texture in banded rhyolite						
		39.3-39.4 narrow fault - gouge and broken core						
		40.7-42.1 numerous grey cherty spheroids, most contain disseminated pyrite, generally 1% disseminated pyrite throughout this area.						
		41.7-42.0 increased chlorite and disseminated pyrite, also has maroon hematite veinlets						
		42.1-45.9 local short breccia areas						
		45.9-47.25 2-3% disseminated pyrite cubes						
		47.25-49.3 3-5% narrow grey quartz veinlets	1920	47.25-48.20	<0.5	0.3	0.05	0.20
		cutting rhyolite bedding at high angle	1921	48.20-49.30	<0.5	0.6	0.05	0.6

BLACKDOME EXPLORATION LTD () — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No. 151

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size

Angle of Hole

Claim.....

Section.....

Bearing

Total Depth

% Recovery.....

Elev. Collar

Latitude.

Departure

Sheet No. 7 of 9.

Logged by.. CM Lalonde

Date Begun.....

Date Finished

Core Stored At

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	A.A.	A.A.	Fire	Fire
					Au	Ag	Assay Au	Assay Ag
		bedding is parallel to core axis						
50.5-52.0		Rhyolite breccia: beige angular rhyolite fragments (generally <2cm diameter) in a brown- maroon matrix, mostly broken core	1914	51.2 -52.0	<0.5	3.3	0.30	4.4
		50.53-50.63 Gouge and clay and limonite						
		51.2-51.45 Fault zone: gouge & clay, sugary quartz, minor limonite						
		51.8-52.0 Some grey & white quartz fragments, limonite & some black manganese						
52.0-53.8		Quartz limonite breccia: grey quartz fragments surrounded by limonitic matrix, narrow quartz veinlets in some areas cutting fragments, minor black acanthite in some fragments	1915	52.0 -53.0	28.0	41.5	29.65	49.0
		52.7-53.2 Black manganese staining on fractures						
		53.6-53.8 Fault zone: argillic alteration-clay, gouge & sugary quartz, quartz breccia from 53.75 to 53.80 has dissem. black acanthite	1916	53.0 -53.8	0.5	5.9	3.50	6.9

BLACKDOME EXPLORATION LTD

—DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No... 1151

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Angle of Hole

Claim.....

Section.....

Bearing

Total Depth.....

% Recovery.....

Elev. Collar.....

Latitude.....

Departure.....

Sheet No. 8 of 9

Logged by CM Lalonde

Date Begun

Date Finished

Core Stored At

[illegible]

BLACKDOME EXPLORATION LTD () — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 151

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth.....

Sheet No. 9 of 9

Angle of Hole

% Recovery.....

Logged by: CM Lalonde

Claim.....

Elev. Collar.....

Date Begun.....

Section.....

Latitude.....

Date Finished

Bearing

Departure.....

Core Stored At

[illegible]

BLACKDOME EXPLORATION LTD

— DIAMOND DRILL RECORD

PROPERTY BLACKDOME

HOLE No. 152

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth
66m	44.5°	

Core Size NQ
 Angle of Hole 45°
 Claim
 Section
 Bearing 129° 46'

Total Depth 66.4m
 % Recovery 96.6
 Elev. Collar 1983.16
 Latitude 11977.91 N
 Departure 4938.92 E
 Sheet No. 1 of 4
 Logged by CM Lalonde
 Date Begun July 17, 1984
 Date Finished July 18, 1984
 Core Stored At BD Mtn

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Fire Assays A.A. Assays		Core		Recovery
					Au	Ag	From	To	
0-5.2		Casing through overburden					5.2	8.1	2.75
							-11.2		3.13
5.2-36.5		Rhyolite: light grey to beige foliated formation, areas show wavy flow banding or flow planes which rapidly change angle to core axis, limonitic areas, generally minor (1%) dissem. pyrite					-14.3		3.10
							-17.5		3.10
							-20.55		3.05
							-23.65		3.10
							-25.60		1.92
		6.8-7.9: spherulitic structures					-28.10		2.50
		15.8-16.1: limonitic, broken core, some clay					-28.35		0.22
		- narrow fault zone					-30.40		2.08
		18.8-19.1: limonitic, soft, some clay-					-31.98		1.58
		narrow fault					-33.66		1.95
		28.0-29.3: maroon hematite along wavy flow planes, increased pyrite content (1-2%),	1926	28.0 -29.3	0.05 <0.5	0.3 0.2	-34.23		0.93
		flow planes at 30° to core axis					-34.83		0.60
							-35.90		1.05
		32.0-34.2: Similar to 28.0-29.3					-37.30		1.36
		33.1-33.3: Fault zone - clay, breccia frags., broken					-38.45		1.12
		core					-39.90		1.40
							-41.95		2.00
36.5-43.0		Rhyolite Breccia: light grey angular & sub-rounded rhyolite fragments in a maroon hematitic matrix. 1%	1927	38.0 -39.0	0.05 <0.5	0.1 0.1	-42.35		0.40
							-44.90		2.60

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME.....

HOLE No. 152.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 2..... of 4.....
 Angle of Hole..... % Recovery..... Logged by.....
 Claim..... Elev. Collar..... Date Begun.....
 Section..... Latitude..... Date Finished.....
 Bearing..... Departure..... Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Fire Assays		Core	Recovery
					Au	Ag	From To	Rec'd
		41.5-43.0 Increased clay content, argillic alteration					45.95 -46.6	0.65
		of rhyolite frags					46.6 -47.5	0.30
							-49.0	1.20
43.0-46.6		Rhyolite: highly fractured zone, some brecciation,	1928	43.0 -44.0	< 0.05	0.5	-49.4	0.30
		limonitic along fractures, broken core throughout	1929	44.0 -45.0	< 0.05	0.1	-50.75	1.35
			1930	45.0 -46.6	< 0.05	0.1	-50.85	0.10
		43.6 - Argillic alteration, grey small quartz fragments					-51.0	0.12
		in soft altered rhyolite					-51.7	0.20
							-52.2	0.50
46.6-47.5	0.5m	Fault Zone: grey gouge & soft grey rhyolite, 0.5m Lost	1931	46.6 -47.5	< 0.05	0.3	-53.1	0.82
		Core					-53.45	0.32
							-54.10	0.60
47.5-52.9		Rhyolite: wavy beige and maroon banding at 20°-70° to					-57.3	3.16
		core axis, broken core, limonitic along fractures					-60.5	3.10
							-63.8	3.20
		47.6-47.9 Limonitic fragments & mud					-64.9	1.10
		51.0-51.6 Lost Core					-66.2	1.05
							-66.4	0.15
52.9-54.1		Rhyolite Breccia: grey beige & light grey rhyolite	1917	53.1 -54.1	5.85	16.4		
		and chert fragments in a grey rhyolite matrix, several						
		narrow quartz veins increasing towards 54.1 (only 2-3%						
		overall),						

PROPERTY BLACKDOME

HOLE No. 152

DIP AND AZIMUTH TEST

Footage	Corrected	
	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 3 of 4
 Angle of Hole..... % Recovery..... Logged by.....
 Claim..... Elev. Collar..... Date Begun.....
 Section..... Latitude..... Date Finished.....
 Bearing..... Departure..... Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	A.A. Au	A.A. Ag	Fire	Fire
							Assay Au	Assay Ag
		limonitic along some fractures						
54.1-56.2		Silicified Andesite Breccia: greenish-grey and light grey silicified andesite fragments in a light grey	1918	54.1 -55.0	9.0	20.5	3.95	19.9
		silicified andesite and grey quartz matrix, 5% grey and white quartz veins, some cockscomb quartz with well formed smoky quartz crystals, 2-3% dissem. pyrite, sparse speck of chalcopyrite	1919	55.0 -56.2	<0.5	2.6	0.15	2.0
56.2-66.4		Andesite: fine grained greenish intermediate volcanic rock, several textured changes - some areas have medium grained hornblende - amphibole grains in a fine grained matrix, some areas have epidotized feldspars; 2-3% white quartz veins (60°) with minor calcite, dissem. pyrite (1%) adjacent to quartz veins.						
		56.2-58.2 Autobrecciated - small green andesite fragments in a bleached (possibly siliceous) matrix.						

—DIAMOND DRILL RECORD

PROPERTY..... BLACKDOME

HOLE No. 152

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth

Sheet No. 4 of 4

Angle of Hole

% Recovery.....

Logged by.....

Claim.....

Elev. Collar.....

Date Begun.....

Section.....

Latitude.....

Date Finished

Bearing

Departure

Core Stored At

A.A. Assays Fire Assays

[illegible]

PROPERTY BLACKDOME

HOLE No. 153

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth
60m	45°	
129m	46°	

Core Size NQ
 Angle of Hole 45°
 Claim
 Section
 Bearing 129° 58'

Total Depth 129.9m
 % Recovery 96.6
 Elev. Collar 1997.56
 Latitude 12165.69N
 Departure 4909.81E

Sheet No. 1 of 8
 Logged by C.M. Lalonde
 Date Begun July 19
 Date Finished July 22
 Core Stored At BD Mtn

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Core Recovery	
					From To	Rec'd
0-5.2		Casing through overburden			5.2-6.4	0.11
					-6.95	0.50
5.2-24.9		Rhyolite: beige to grey, generally massive, areas			-7.85	0.93
		have limonite staining hiliting flow planes, dissem.			-9.0	1.15
		limonite spots in some areas, black manganese			-12.2	3.20
		stain along fractures at 8.0m, 10.9m			-13.95	1.75
		11.8 and 12.7m vugs in a few areas			-16.15	2.20
					-17.35	1.15
					-18.55	1.12
					-21.55	2.85
		18.2 m Manganese (pyrolusite) stain in vugs			-24.30	2.70
		22.3-24.0 Manganese stain (some dendritic) along			-27.55	3.20
		fractures			-29.85	2.30
					-31.65	1.72
24.9-50.6		Rhyolite Breccia (Volcanic Wacke):			-34.82	3.15
		angular and sub-rounded fragments in a coarse grit			-35.80	0.95
		matrix, fragments are mostly beige and light brown			-37.20	1.30
		rhyolite, some fragments have flow bandings, also			-39.93	2.73
		some greenish andesite fragments			-42.60	2.60
					-45.83	3.20
		30.35-30.70 Green Andesite Dyke			-47.52	1.70
					-50.67	3.10

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY..... BLACKDOME.....

HOLE No. 153.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 2 of 8
 Angle of Hole..... % Recovery..... Logged by.....
 Claim..... Elev. Collar..... Date Begun.....
 Section..... Latitude..... Date Finished.....
 Bearing..... Departure..... Core Stored At.....

Fire Assays
 A.A. Assays Core Recovery

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	From To	Rec'd
		37.50-38.15 Fault zone: some gouge, grey chert fragments and minor limonite, broken core.	1933	37.50 -38.15	0.15 0.5	0.1 0.8	50.67 -53.81	3.12
		38.15-39.75 Different texture than previously, lighter colour, smaller beige fragments						
50.6-61.68		Rhyolite: beige to light grey, intermixed fine grained and medium grained areas; several short breccia areas e.g. 50.9-51.4, 52.6-52.9, 54.5-55.2, 56.55-57.20						
		53.0-53.2 Soft - fault zone						
		53.8-54.1 Soft fault zone						
		54.35-54.83 Soft fault zone						
		55.05-55.15 Soft argillic alteration						
		55.46-55.52 Soft - fault zone?						
		55.20-56.56 Andesite Dyke					53.81 -56.80	3.05
		57.18-58.00 Andesite dyke - bleached from 57.55-58.00 - very minor quartz stringers over a 10cm width from 57.60	1934	57.54 -58.04	< 0.05 0.5	0.3 0.3		

— DIAMOND DRILL RECORD

PROPERTY.....BLACKDOME

HOLE No. 153

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth

Sheet No. 3 of 8

Angle of Hole

% Recovery

Logged by...

Claim

Elev. Collar.

Date Begun

Section.....

Latitude

Date Finished

Bearing

Departure

Core Stored At

Fire Assays
A.A. Assays

Core Recover

[illegible]

BLACKDOME EXPLORATION LTD () — DIAMOND DRILL RECORD

PROPERTY..... BLACKDOME.....

HOLE No. 153.....

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 4 of 8
 Angle of Hole..... % Recovery..... Logged by.....
 Claim..... Elev. Collar..... Date Begun.....
 Section..... Latitude..... Date Finished.....
 Bearing..... Departure..... Core Stored At.....

Fire Assays
 A.A. Assays Core Recover

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	From To	Rec'd
		62.67-63.0 Broken core with manganese staining; minor quartz vein up to 1cm wide	1936	62.43 -63.0	0.60 0.5	3.6 3.9	62.68 -65.31	2.50
		63.0-63.5 Zone of silicification and weak quartz stockwork; core is broken and manganese stained, estimate 20% quartz	1937	63.0 -63.5	4.50 1.0	27.9 6.4		
		63.3-63.5 Lost Core						
		63.5-64.11 Mostly bleached and friable gouge with only 3 or 4 very narrow (1-2mm) quartz veins	1938	63.5 -64.11	0.35 0.5	1.5 2.1	65.31 -66.57	1.22
		64.11-64.53 Main vein zone; stringer of quartz in brecciated andesite? Estimate 20-25% quartz	1939	64.11 -64.53	1.05 2.0	2.7 3.6		
		64.53-65.75 Brecciated and moderately altered rusty brown andesite with 5 or 6 narrow quartz stringers to 65.28	1940	64.53 -65.28	0.6 0.5	3.9 3.5	66.57-68.59	1.98
65.75-91.85		Grey-green dacite(?) or andesite (lower) or very large andesite dike; flows? with a number of small auto- brecciated zones;						

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY BLACKDOME

HOLE No. 153

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size..... Total Depth..... Sheet No. 5 of 8
 Angle of Hole..... % Recovery..... Logged by JMD
 Claim..... Elev. Collar..... Date Begun.....
 Section..... Latitude..... Date Finished.....
 Bearing..... Departure..... Core Stored At.....

Fire Assays
 A.A. Assays Core Recovery

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Au	Ag	from to	Rec'd
		flows are usually porphyritic - feldspars and of chloritized hornblende; some zones of minor bleaching but rock is usually very massive, and unaltered, minor % of disseminated pyrite cubes.						
		from 75.4 to 77.75: area of red brown hematite staining						
		from 78.10 to 85.22 green grey massive andesite with coarser chloritized phenocrysts (up to 5mm) and scattered pyrite cubes to 2mm					-72.90	2.80
		from 86.22-86.42: zone of chloritic and hematitic alteration					-75.65	2.71
		86.42-91.85 Light grey green porphyritic andesite					-78.87	3.22
		88.3-88.5 Broken Core						
		90.2-91.33 Scattered irregular blob of grey quartz					-81.44	2.50
							-83.83	2.29
		91.19-91.34 Zone of autobrecciation					-86.01	2.19
							-88.54	2.52
91.85-93.46		Zone of moderate to intense bleaching brecciation and some silicification, fine grained pyrite common in healed breccia zones, core broken in this interval	1941	92.64 -93.46	0.40 0.5	1.3	-91.70 -93.46	3.03 1.73

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY...BLACKDOME.....

HOLE No. 153.....

DIP AND AZIMUTH TEST		
Footage	Corrected	
	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 6 of 8
 Logged by JMD
 Date Begun.....
 Date Finished.....
 Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE	Core Recovery	
					From To	Rec'd
					-95.20	1.74
					-95.50	.30
93.46-129.90		Fine grained, blue-green, somewhat porphyritic			-97.36	1.90
		dacite; minor zones of auto brecciation			-99.70	2.38
		94.55-94.60 - Minor stringers of white quartz			-99.79	.09
		cementing breccia			-100.17	.40
		95.28-95.45 Broken Core			-100.50	.23
		95.95-96.51 Broken Core			-100.70	.20
		97.36-97.55 Broken Core			-101.00	0
		97.76-98.34 Broken Core			-101.26	.18
		98.68-98.81 Broken Core with 2cm gouge seam			-101.50	.20
					-101.36	1.85
		99.20-101.45 Very broken core, many small fractures			-104.63	1.25
		and mud seams			-107.63	3.00
		100.7-101 Lost Core			-110.59	2.96
		103.27-104.74 Broken Core and friable zones			-112.60	2.01
		109-109.56 Broken Core				
		111.92-112.39 Agglomerate or sedimentary breccia				
		112.75-112.85 Tuff or breccia				
		112.13-112.27 Broken Core				

BLACKDOME EXPLORATION LTD — DIAMOND DRILL RECORD

PROPERTY BLACKDOME

HOLE No. 153

DIP AND AZIMUTH TEST		
Corrected		
Footage	Angle	Azimuth

Core Size.....
 Angle of Hole.....
 Claim.....
 Section.....
 Bearing.....

Total Depth.....
 % Recovery.....
 Elev. Collar.....
 Latitude.....
 Departure.....

Sheet No. 7 of 8
 Logged by JMD
 Date Begun.....
 Date Finished.....
 Core Stored At.....

DEPTH	CORE LOST	DESCRIPTION	SAMPLE No.	WIDTH OF SAMPLE			Core Recovery	
							From To	Rec'd
		112.50-112.61 Broken Core					-112.60 -114.55	1.95
		113.90-114.15 Thin breccia or agglomerate zone					-116.80	2.25
							-118.57	2.75
		114.62-114.72 Broken Core					-119.33	.75
		116.72-116.80 Broken Core					-119.60	.27
		116.53-116.62 Breccia or agglomerate zone					-119.90	0
		116.97-117.28 Agglomerate or auto brecciation					-120.70	.70
		zone					-120.85	.10
		117.97-122.47 Wide zone of broken core with several					-121.00	.15
		gouge zones-fault zone					-121.50	.10
							-122.00	.45
		122.72 1-2cm veinlet of vuggy quartz @ 30° to core axis					-124.00	2.00
		123.18 2-3cm zone of calcite blebs and stringers - 30°						
		to core axis						
		123.64 1-2cm zone of calcite blebs and stringers @ 45°						
		to core axis						
		123.86-124 Broken and rusty coloured core						
		125.08 1cm stringer of calcite						
		125.64 1cm stringer of calcite						
		126.33 1cm stringer of quartz-calcite-epidote @ 30° to						
		core axis						

BLACKDOME EXPLORATION LTD (INC) — DIAMOND DRILL RECORD

PROPERTY.... BLACKDOME.....

HOLE No. 153

DIP AND AZIMUTH TEST		
	Corrected	
Footage	Angle	Azimuth

Core Size.....

Total Depth

Sheet No. 8 of 8

Angle of Hole

% Recovery.....

Logged by..... JMD . .

Claim.....

Elev. Collar.....

Date Begun.....

Section

Latitude

Date Finished

Bearing

Departure

Core Stored At

[illegible]

Appendix II

GEOCHEMICAL ANALYSIS METHOD



ACME ANALYTICAL LABORATORIES LTD.

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6

Telephone : 253 - 3158

GEOCHEMICAL LABORATORY METHODOLOGY - 1984

Sample Preparation

1. Soil samples are dried at 60°C and sieved to -80 mesh.
2. Rock samples are pulverized to -100 mesh.

Geochemical Analysis (AA and ICP)

0.5 gram samples are digested in hot dilute aqua regia in a boiling water bath and diluted to 10 ml with demineralized water. Extracted metals are determined by :

A. Atomic Absorption (AA)

Ag*, Bi*, Cd*, Co, Cu, Fe, Ga, In, Mn, Mo, Ni, Pb, Sb*, Tl, V, Zn
(* denotes with background correction.)

B. Inductively Coupled Argon Plasma (ICP)

Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cu, Cr, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

Geochemical Analysis for Au*

10.0 gram samples that have been ignited overnite at 600°C are digested with hot dilute aqua regia, and the clear solution obtained is extracted with Methyl Isobutyl Ketone.

Au is determined in the MIBK extract by Atomic Absorption using background correction (Detection Limit = 5 ppb direct AA and 1 ppb graphite AA.)

Geochemical Analysis for Au**, Pd, Pt, Rh

10.0 - 30.0 gram samples are subjected to Fire Assay preconcentration techniques to produce silver beads.

The silver beads are dissolved and Au, Pd, Pt and Rh are determined in the solution by graphite furnace Atomic Absorption.

Geochemical Analysis for As

0.5 gram samples are digested with hot dilute aqua regia and diluted to 10 ml. As is determined in the solution by Graphite Furnace Atomic Absorption (AA) or by Inductively Coupled Argon Plasma (ICP).

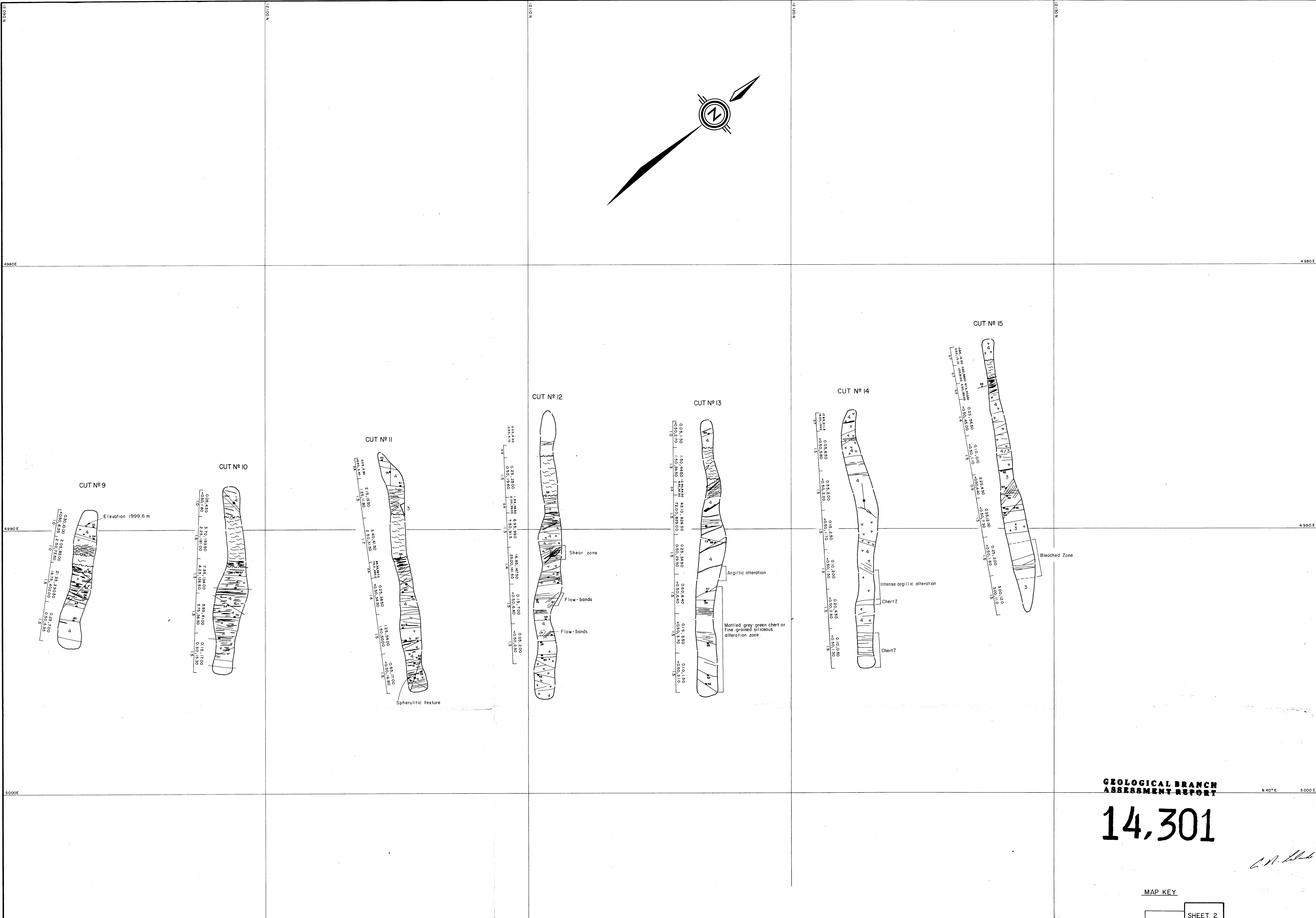
Geochemical Analysis for Barium

0.1 gram samples are digested with hot NaOH and EDTA solution, and diluted to 10 ml.

Ba is determined in the solution by Atomic Absorption or ICP.

Geochemical Analysis for Tungsten

1.0 gram samples are fused with KCl, KNO₃ and Na₂CO₃ flux in a test tube, and the fusions are leached with 20 ml water. W in the solution determined by ICP with a detection of 1 ppm.



LEGEND:

- 4 RHVOLITE: BEIGE TO LIGHT GREY, GENERALLY MODERATE (50-60°) DIPPING FRACTURE PATTERN NORTHWESTWARD, FLOW BANDING IN LOCALIZED AREAS, IRREGULAR LOCAL BRECCIA AREAS.
- 3 ANDESITE DYKE: FINE GRAINED GREEN PORPHYRITIC ANDESITE DYKE. MAFIC PHENOCRYSTS ARE ALTERED TO CHLORITE.
- QUARTZ VEINS AND VEINLETS, LINES INDICATE NUMBER OF VISIBLE VEINS GENERALLY WHITE WITH LIMONITE ON FRACTURES, MANY HAVE COCKS-COMB TEXTURE.
- SHEAR ZONE: GOUGE AND GREY CLAY, SOFT LIMONITIC SHEAR PLANES OFTEN SUBROUNDED GREY QUARTZ FRAGMENTS.
- BRECCIA
- FRACTURE OR BEDDING PATTERN
- JOINT OR FRACTURE PATTERN
- INTENSE FRACTURING OR SHEARING

Ag, Au
1200, 9500
1100, 9500
10
FIRE ASSAYS (VALUES IN GRAMS/TONNE)
WIDTH IN METRES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

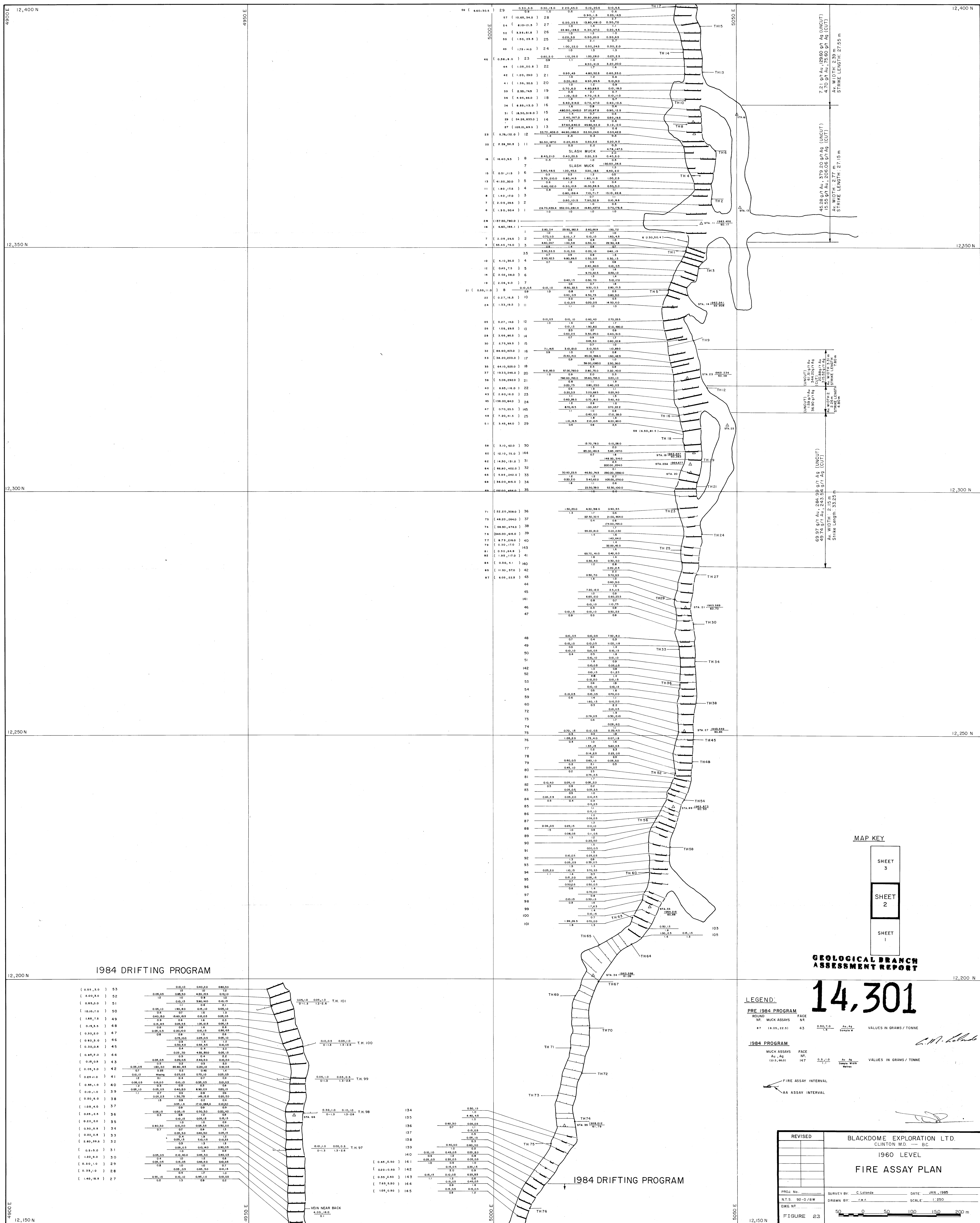
14,301

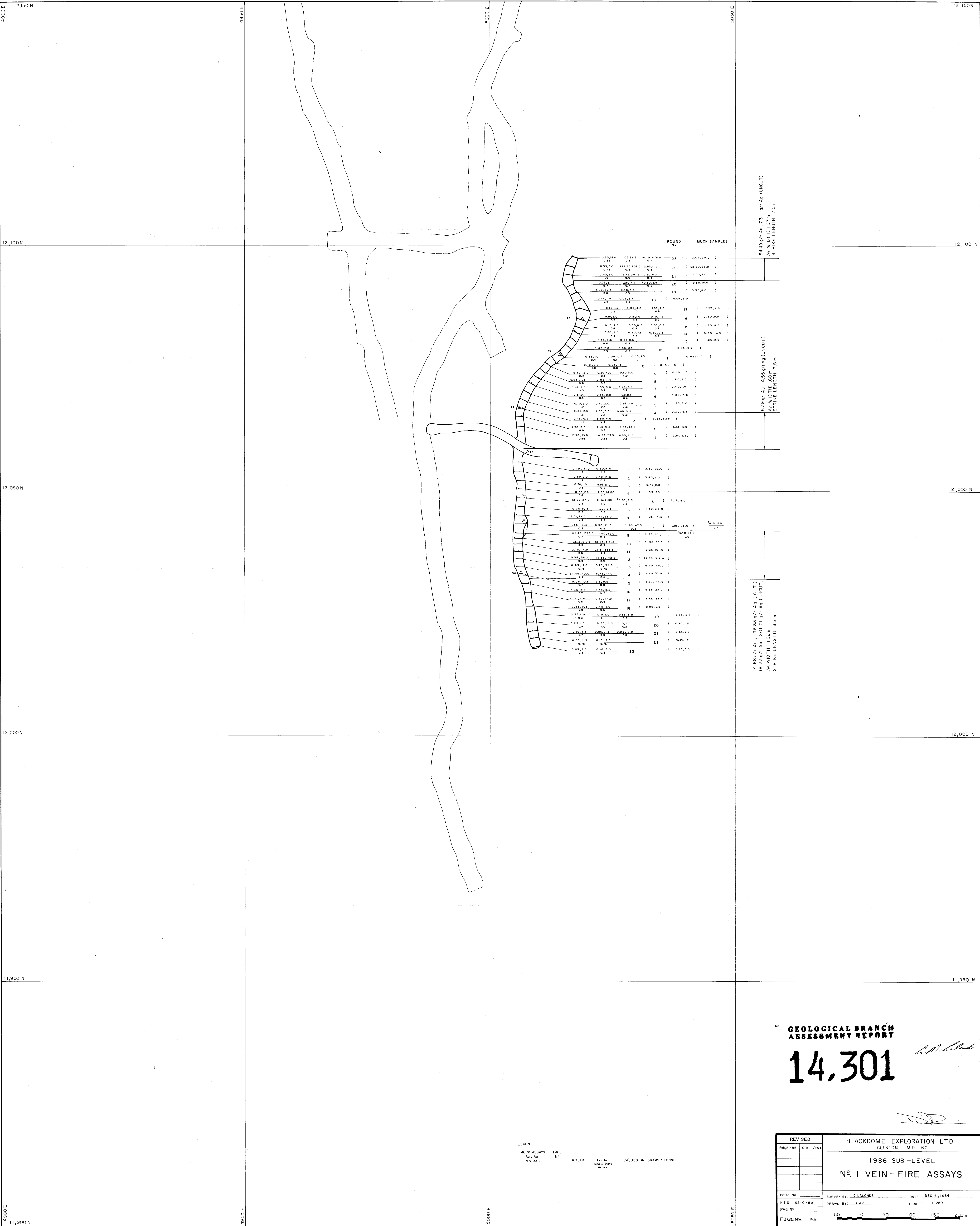
MAP KEY

SHEET 1

SHEET 2

REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - BC.
	Nº. 2 VEIN TRENCH
	GEOLOGY & TRENCH ASSAYS
PROJ. No.	SURVEY BY: D.W. Rennie
N.T.S. 92-0/8W	DATE:
DWS. Nº	DRAWN BY: T.M.T.
FIGURE 21	SCALE 1:50
	0 1 2 3 4 5m





REVISÉ

Feb. 8 / 85

C.M.L./r.w.

PROJ. No.

N.T.S. 92-O/8W

DWG. No.

FIGURE 24

SURVEY BY: C. LALONDE

DATE: DEC. 6, 1984

SCALE: 1:250

BLACKDOME EXPLORATION LTD.

CLINTON MD. SC.

1986 SUB-LEVEL

Nº. 1 VEIN - FIRE ASSAYS

50

0

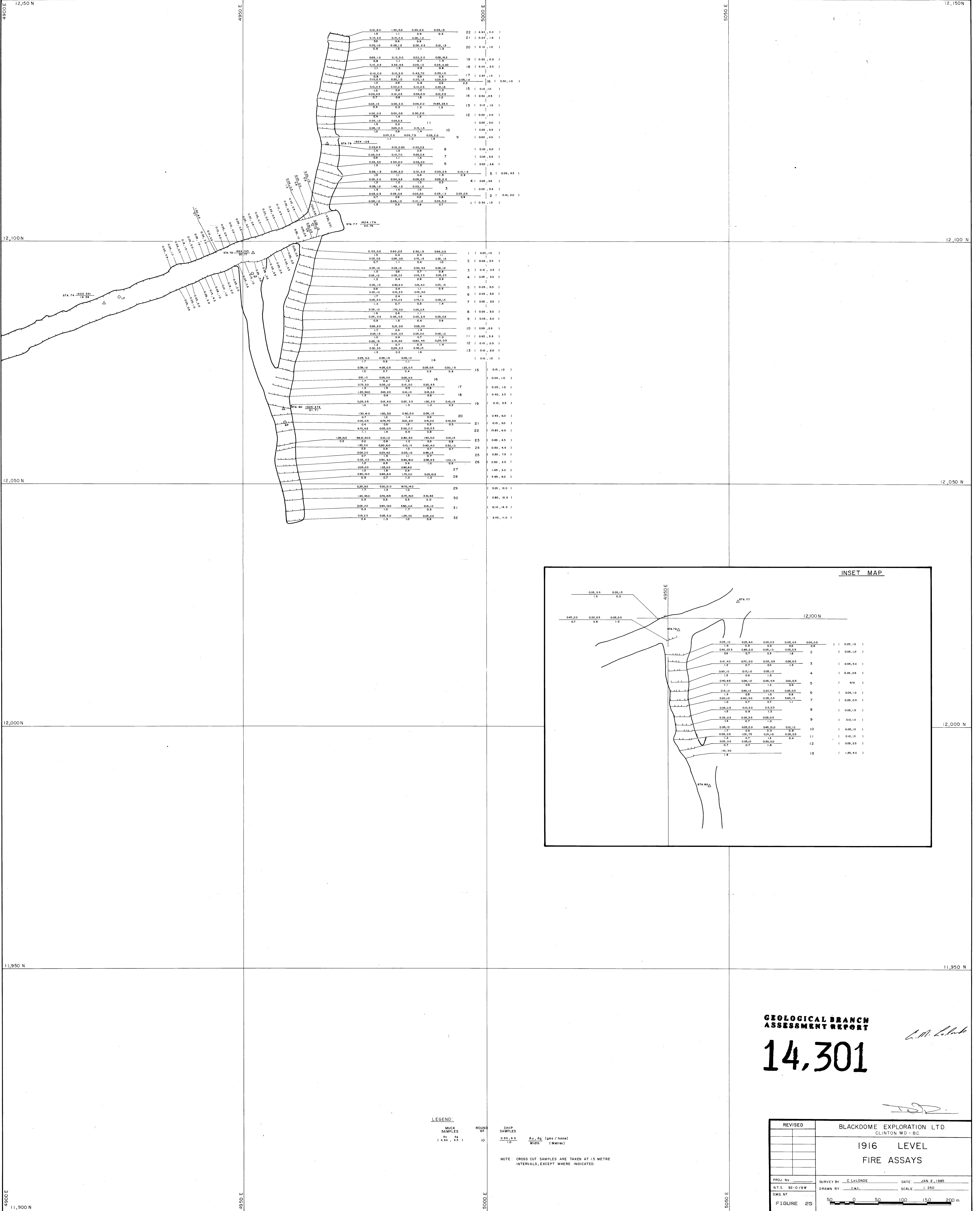
50

100

150

200 m

LEGEND
MUCK ASSAYS FACE
Au, Ag
(12.5, 66)
1
0.5, 1.0
1.1
Au, Ag
Sample Weight
Values in Grams / Tonne



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

C.M. Lalonde

J.D.P.

LEGEND:

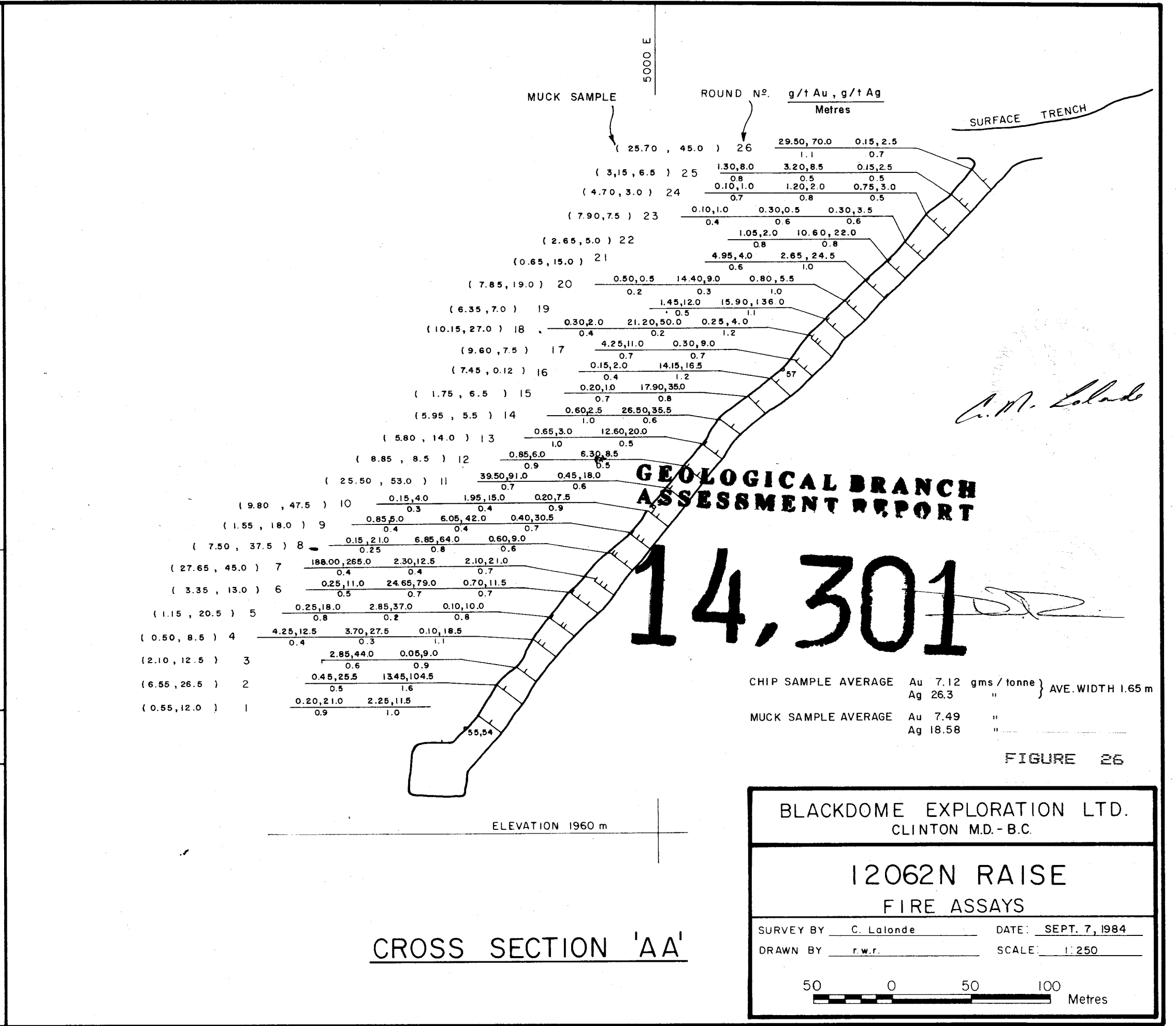
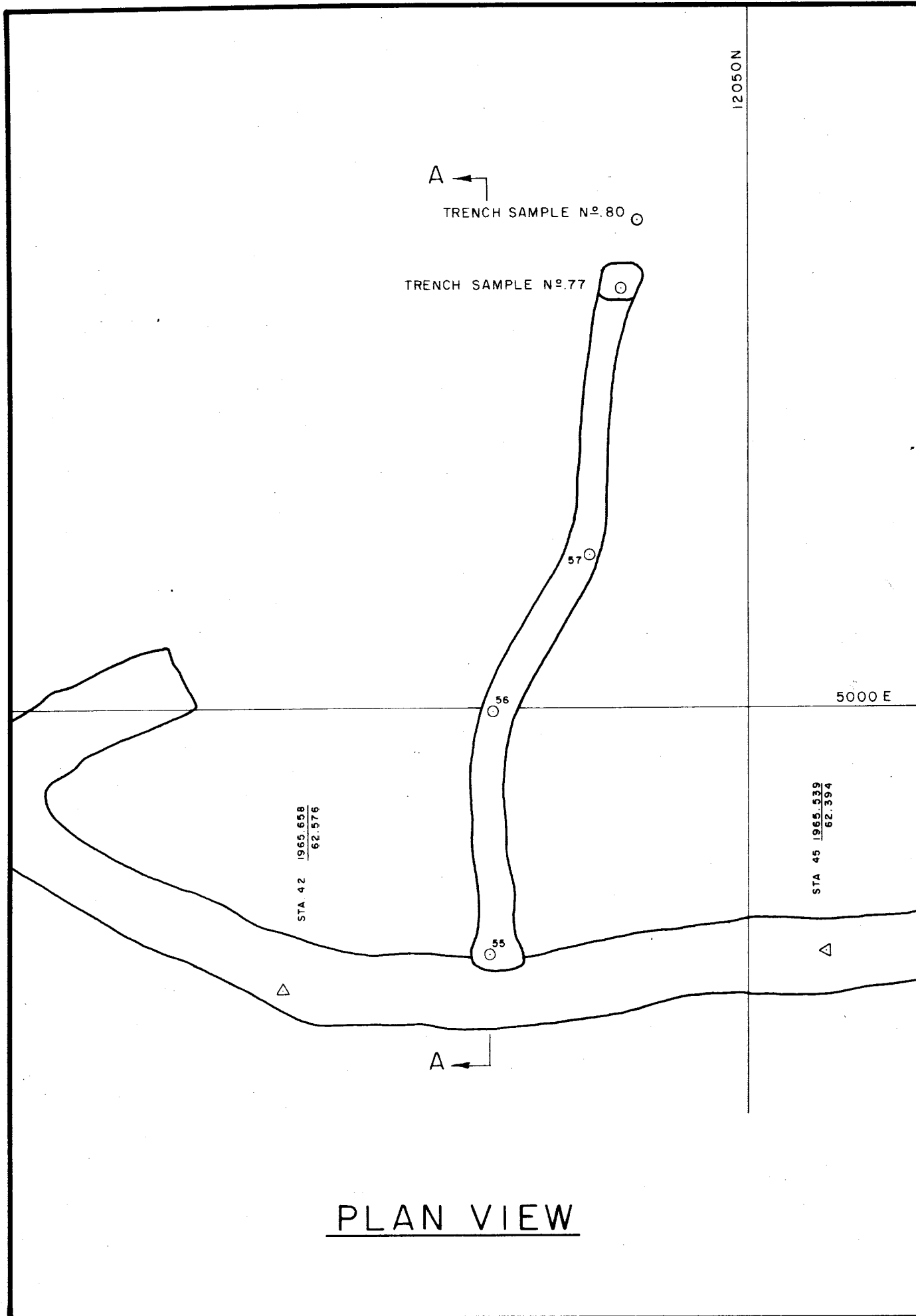
CHIP
SAMPLES
Au, Ag (gms / tonne)
Width (Metres)

ROAD
NO.
10

TRUCK
SAMPLES
Au, Ag (gms / tonne)
Width (Metres)

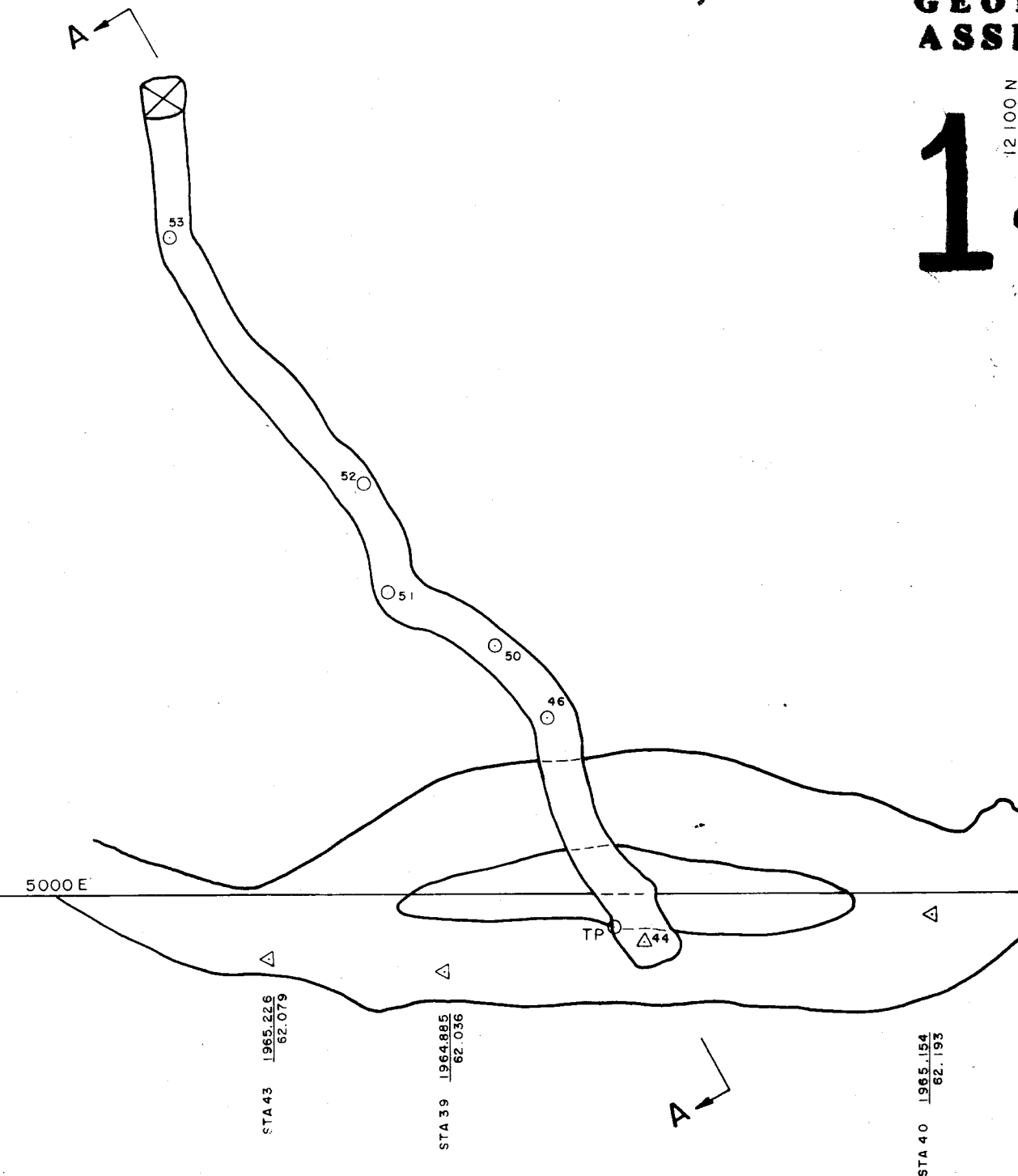
NOTE: CROSS CUT SAMPLES ARE TAKEN AT 15 METRE
INTERVALS, EXCEPT WHERE INDICATED.

REVISED	BLACKDOME EXPLORATION LTD. CLINTON MD - BC
	1916 LEVEL FIRE ASSAYS
PROJ. No.	SURVEY BY: C. LALONDE
N.T.S. 92-078W	DATE: JAN. 2, 1985
DWG. No.	DRAWN BY: J.W.C.
FIGURE 25	SCALE: 1:250
	50 0 50 100 150 200 m

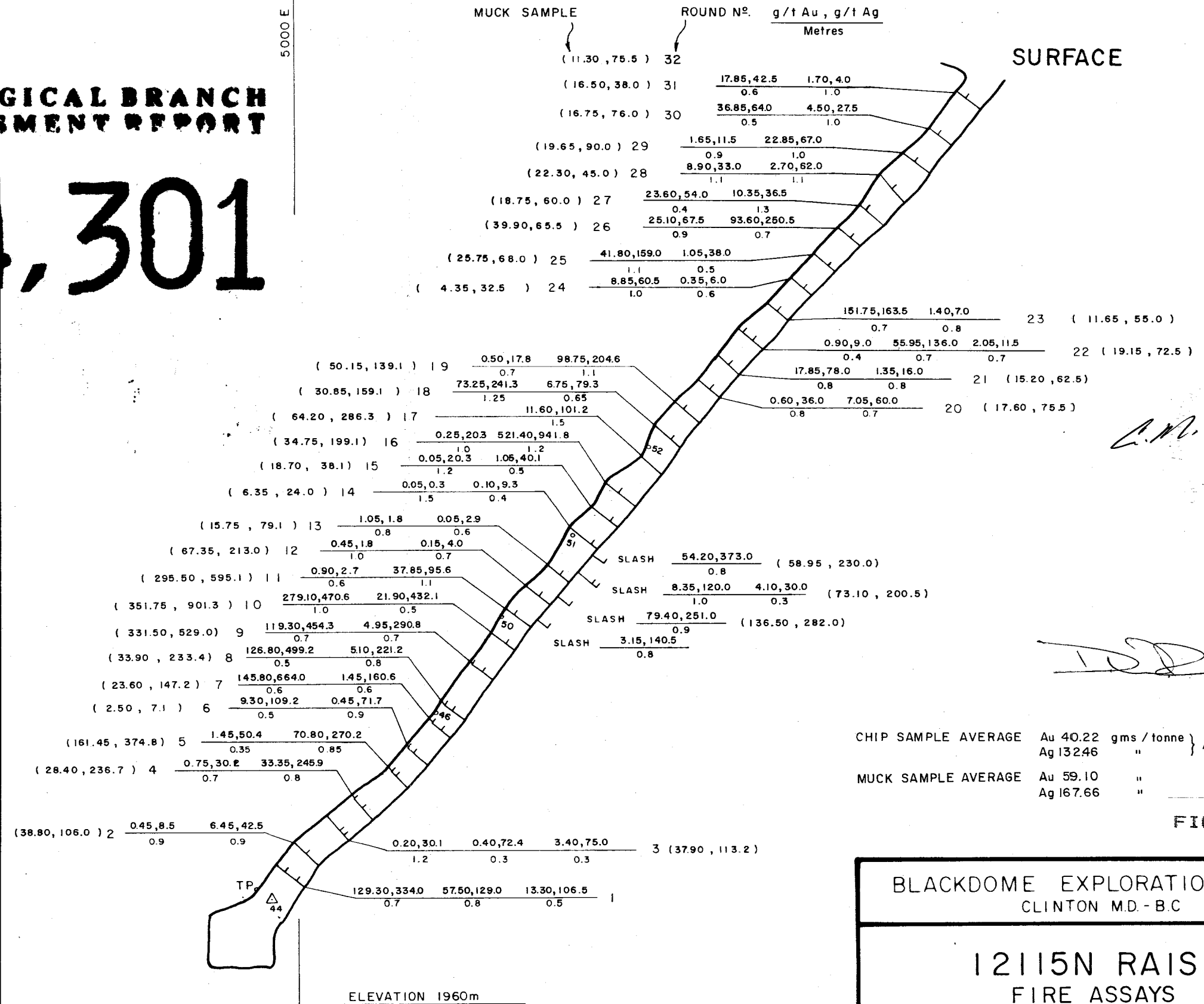


GEOLOGICAL BRANCH ASSESSMENT REPORT

14,301



PLAN VIEW



CROSS SECTION 'AA'

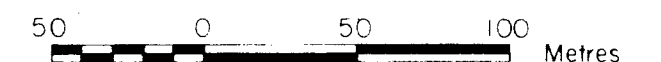
CHIP SAMPLE AVERAGE Au 40.22 gms / tonne } AVE. WIDTH 1.77 m
Ag 132.46 "
MUCK SAMPLE AVERAGE Au 59.10 "
Ag 167.66 "

FIGURE 28

BLACKDOME EXPLORATION LTD.
CLINTON MD.-B.C

12115N RAISE
FIRE ASSAYS

SURVEY BY C. Lalonde DATE SEPT. 7, 1984
DRAWN BY r.w.r. SCALE 1:250



4950 E

1916 LEVEL PLAN

79 1924.129

△ 77 1924.174
20.75

12100 N

SECTION 12120N

LOOKING NORTH

5000 E

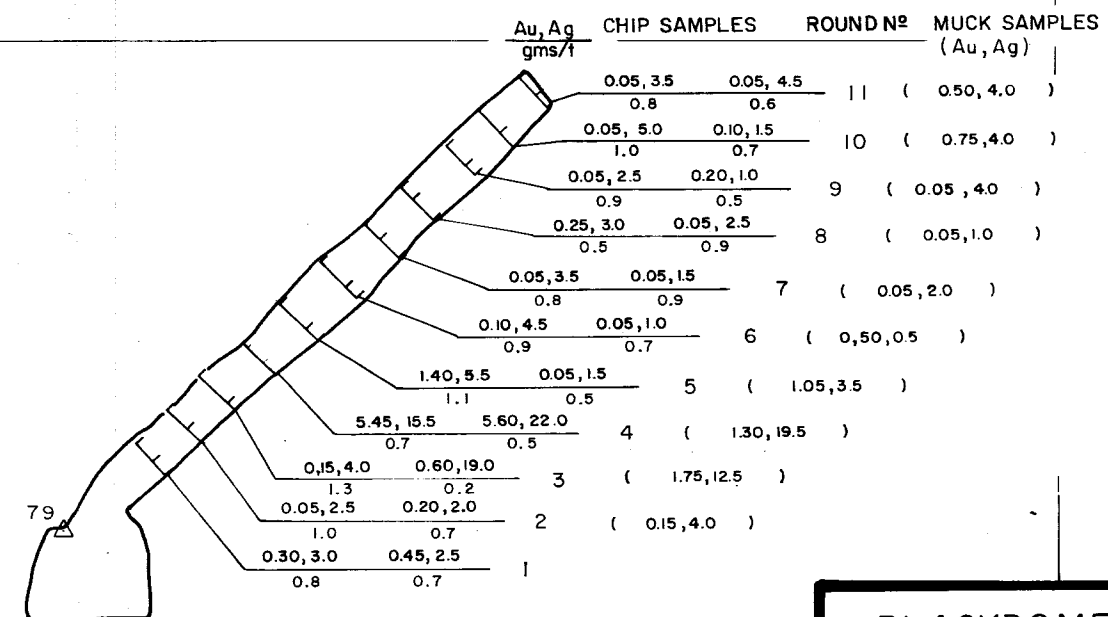
1960 LEVEL

1960 m

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,301

1940 m



1920 m

FIGURE 29

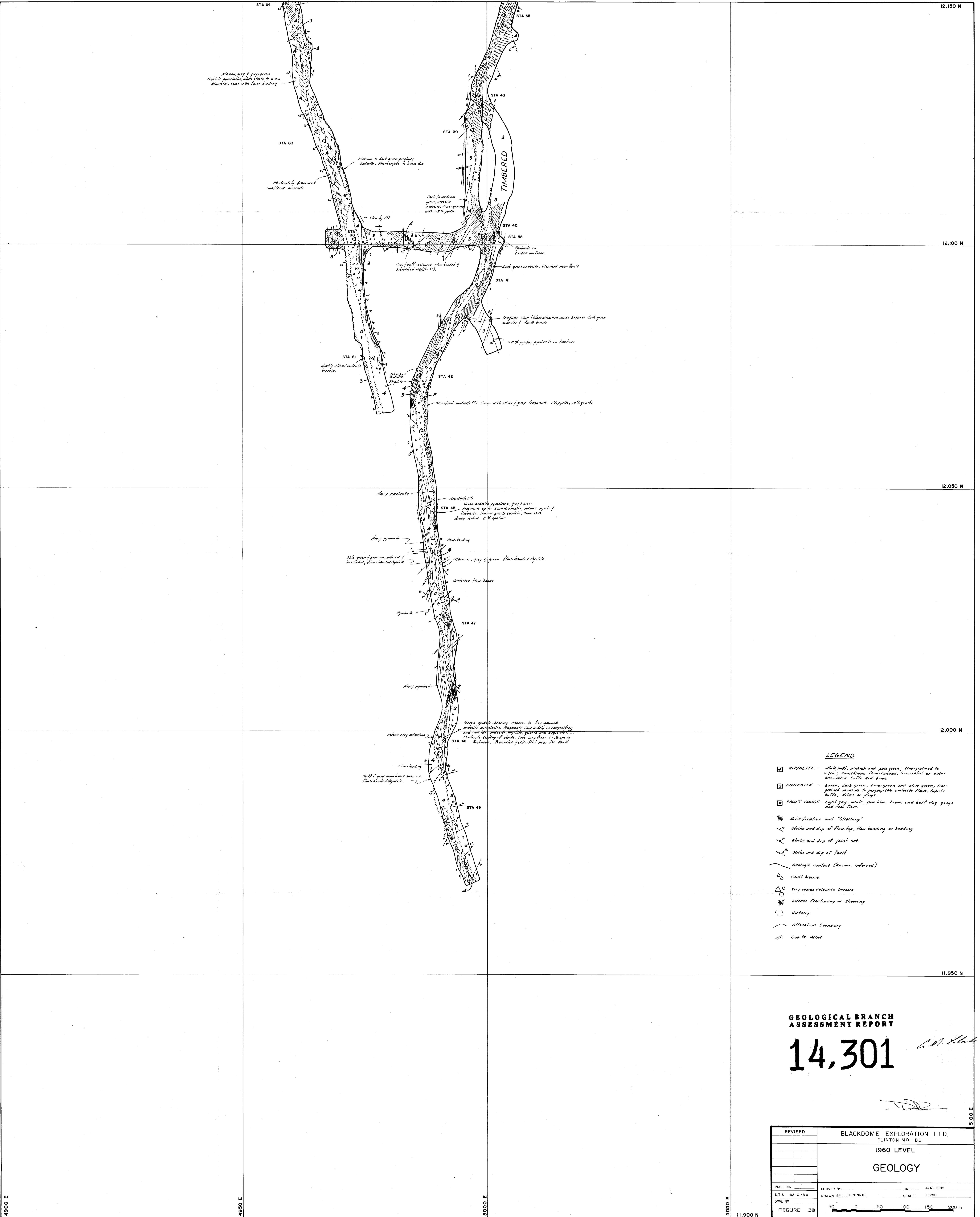
BLACKDOME EXPLORATION LTD.
CLINTON M.D.-B.C.

12120N RAISE FIRE ASSAYS

SURVEY BY C. LaLonde DATE: DEC. 20, 1984
DRAWN BY r.w.r. SCALE: 1:250

5.0 0 5.0 10.0
Metres

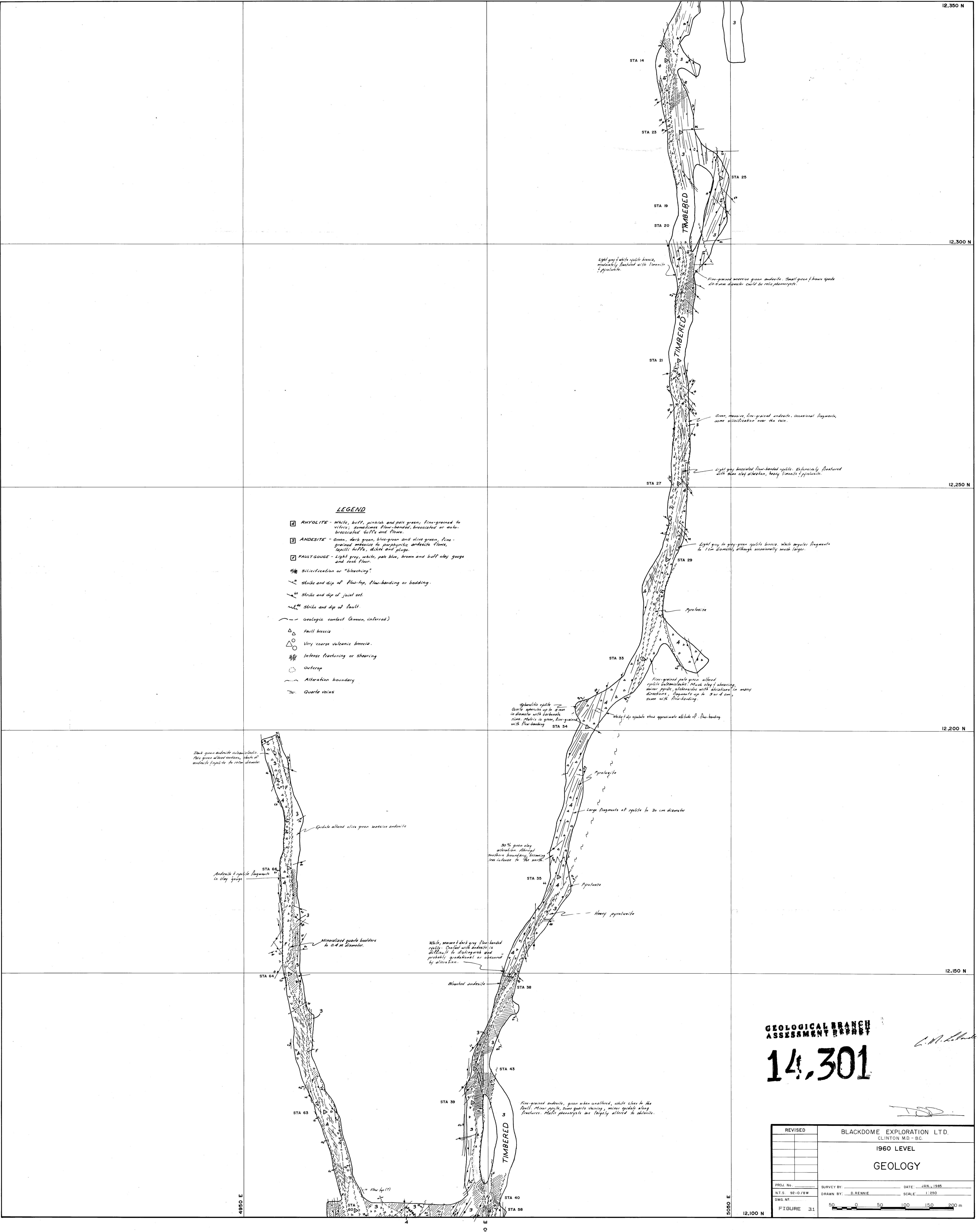
C. M. LaLonde



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - BC
	1960 LEVEL
	GEOLOGY
PROJ. No.	SURVEY BY: DATE: JAN. 1985
NTS. 92-0/8W	DRAWN BY: D. HENNIE SCALE: 1:250
DWG. No.	FIGURE 30



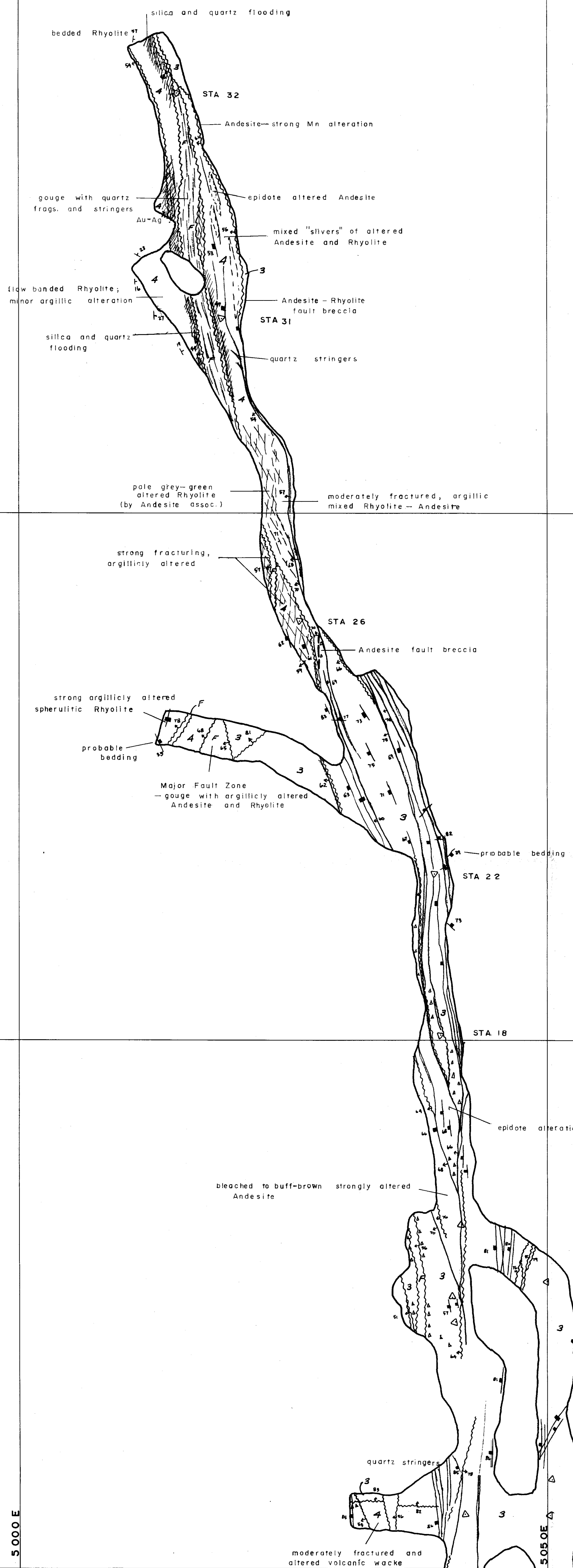
GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - BC		
	1960 LEVEL		
	GEOLOGY		
PROJ. No.	SURVEY BY:	DATE:	JAN., 1985
N.T.S. 92-078W	DRAWN BY: D. RENNIE	SCALE:	1:250
DWG. No.			
FIGURE 31	50 0 50 100 150 200 m		

LEGEND

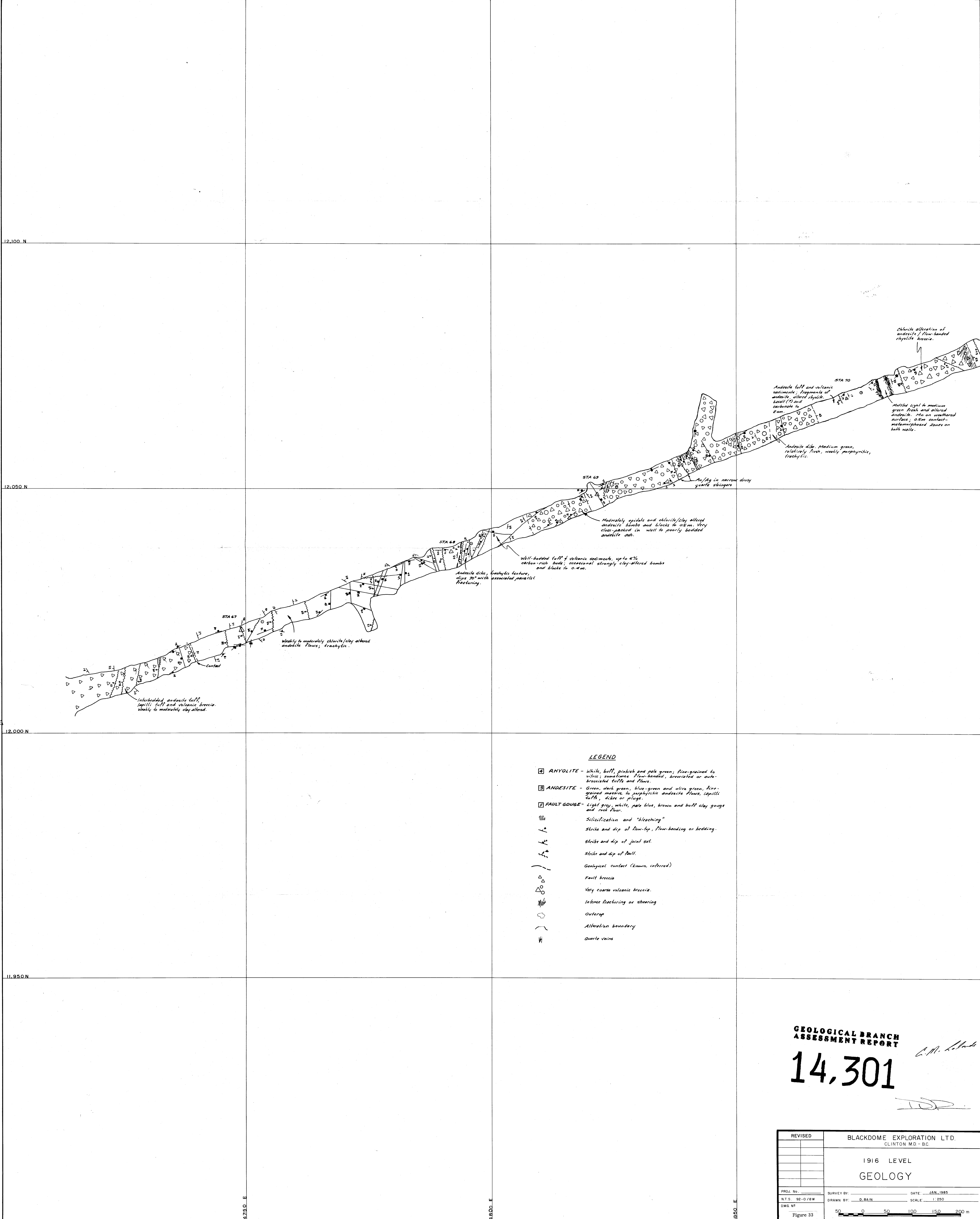
- 1 RHYOLITE - white, buff, pinkish and pale green; fine grained to vitric; sometimes flow-banded, brecciated or auto-brecciated tuff and flows.
- 2 ANDESITE - green, dark green, blue-green and olive green; fine-grained massive to porphyritic andesite flows, lapilli, tuffs, dikes and plugs.
- 3 FAULT GOUGE - light grey, white, pale blue, brown and buff clay gouge and rock flour.
- 4 Silicification or "bleaching"
- 5 Strike and dip of flow-top, flow-bands or bedding
- 6 Strike and dip of joint set.
- 7 Strike and dip of fault.
- 8 Geologic contact (known, inferred)
- 9 Fault brecciation
- 10 Very coarse volcanic breccia
- 11 Intense fracturing or shearing
- 12 Outcrop
- 13 Alteration boundary
- 14 Quartz veins



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

REVISED		BLACKDOME EXPLORATION LTD. CLINTON M.D. - BC	
		1960 LEVEL GEOLOGY	
PROJ. No.	SURVEY BY:	DATE:	JAN., 1985
NTS. 92-0/8W	DRAWN BY: D. BAIN	SCALE:	1:250
DWG. No.			
Figure 32		50 0 50 100 150 200 m	



LEGEND

- 4 RHYOLITE - white, buff, pinkish and pale green; fine-grained to vitric; sometimes flow-banded, brecciated or auto-brecciated tuffs and flows.
- 3 ANDESITE - green, dark green, blue-green and olive green, fine-grained massive to porphyritic andesite flows, lapilli tuffs, dikes or plugs.
- 2 FAULT GOUGE - light grey, white, pale blue, brown and buff clay gouge and red flow.
- 1 Silicification and "bleaching"
- 1/2 Strike and dip of flow-top, flow-banding or bedding.
- 1/2 Strike and dip of joint set.
- 1/2 Strike and dip of fault.
- 1 Geological contact (known, inferred)
- 1 Fault breccia
- 1 Very coarse volcanic breccia.
- 1 Intense fracturing or shearing
- 1 Outcrop
- 1 Alteration boundary
- 1 Quartz veins

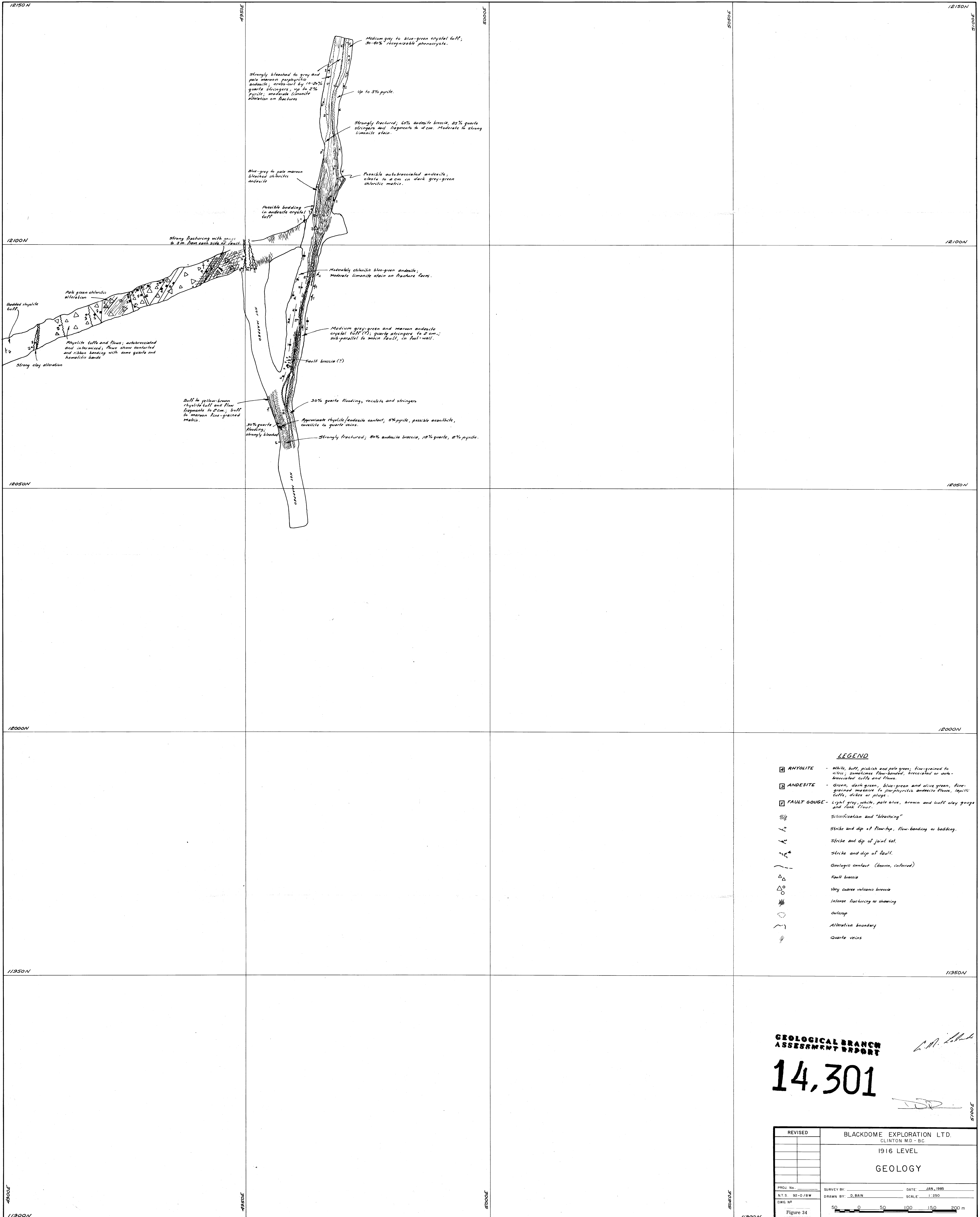
GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

C.M. Roberts

JDR

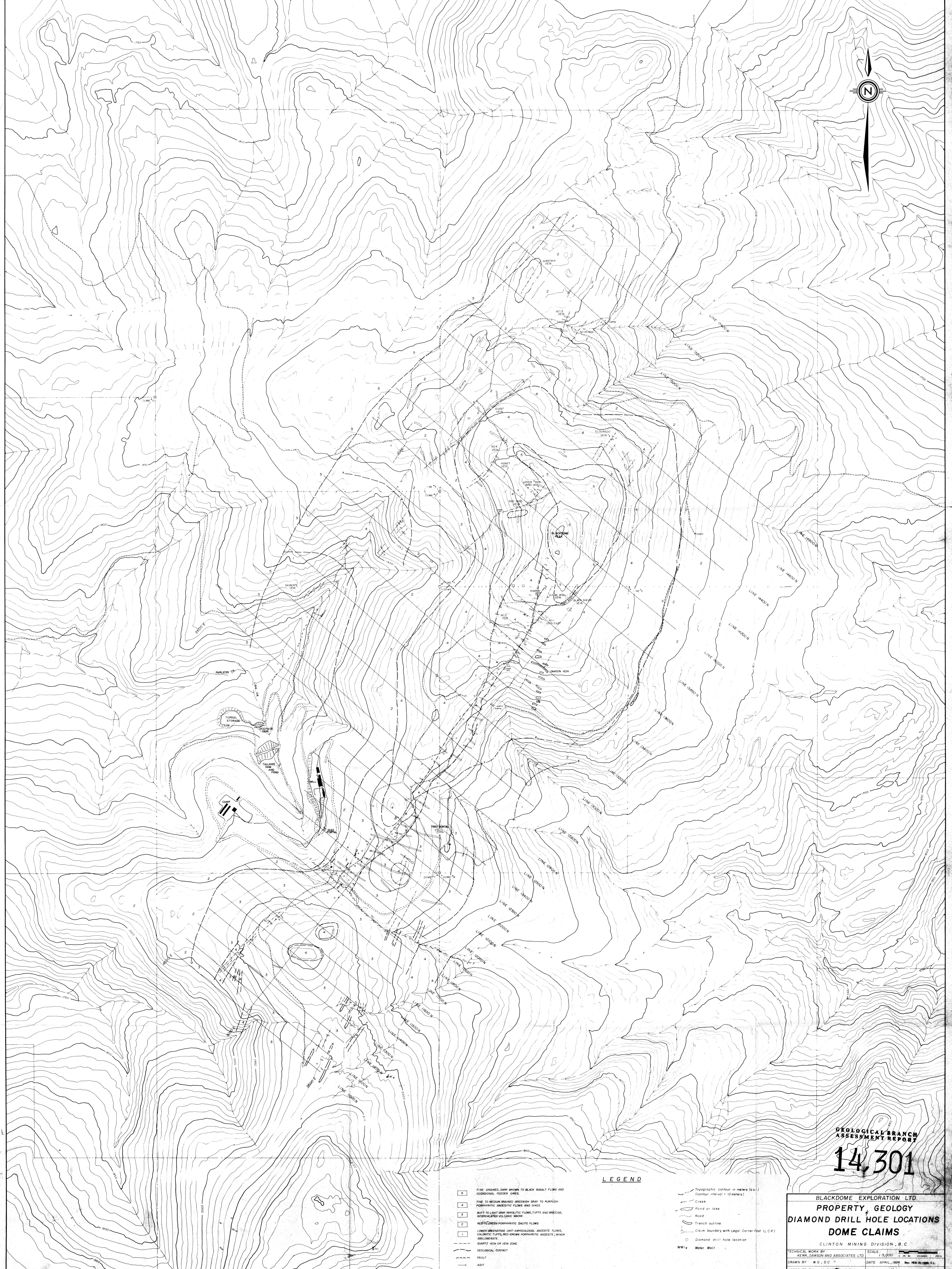
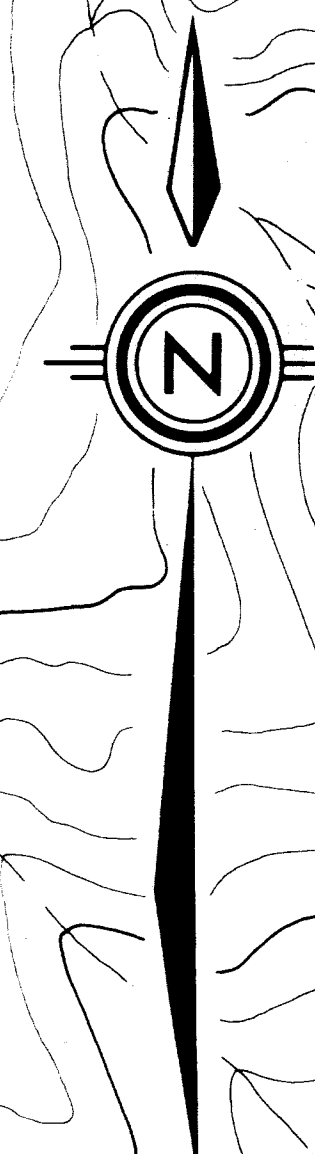
REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - B.C.
	1916 LEVEL
	GEOLOGY
PRJ. No.	SURVEY BY: DATE: JAN. 1985
N.T.S. 92-0/BW	DRAWN BY: D.BAIN SCALE: 1:250
DWG. No.	50 0 50 100 150 200 m
Figure 33	



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - BC
	1916 LEVEL
	GEOLOGY
PROJ. No.	SURVEY BY: DATE: JAN. 1985
N.T.S. 92-0/8W	DRAWN BY: D. BAIN SCALE: 1:250
DWG. No.	Figure 34



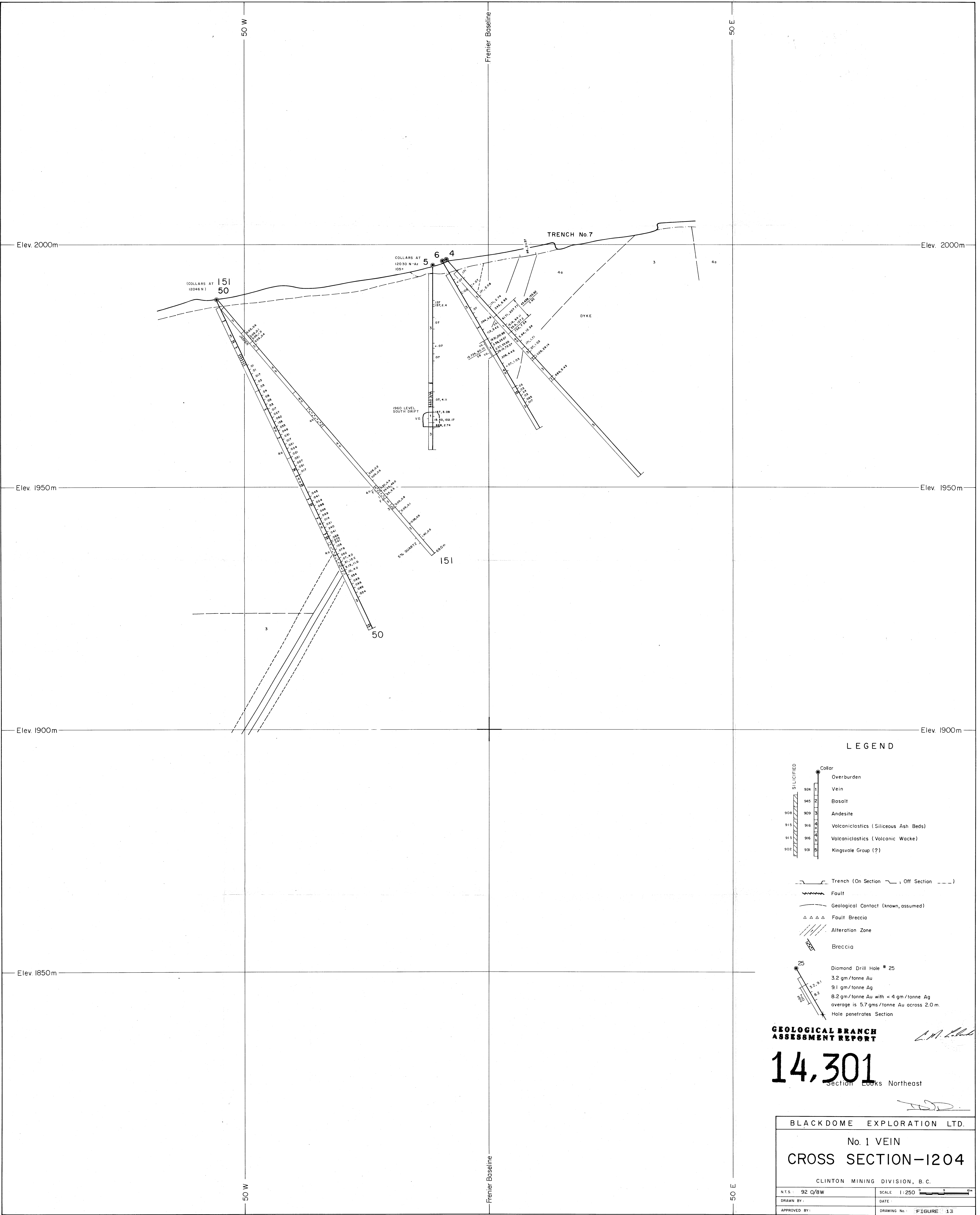
LEGEND

- | | | |
|----|---|--|
| 3 | FINE GRAINED, DARK BROWN TO BLACK BASALT FLOWS AND DOGBOON, FLOOD DUNES | Topographic contour in meters (as is) |
| 4 | FINE TO MEDIUM GRAINED GREENISH GRAY TO PURPLISH PORPHYRYTIC ANDESITIC FLOWS AND DUNES | Contour interval 10 meters |
| 5 | RUFT TO LIGHT GRAY RHOLITHIC FLOWS, TUFFS AND BRECCIAS, HYDROTHERMAL VEINING, MINE | Creek |
| 6 | NEUTRIC GREEN PORPHYRYTIC BASALT FLOWS | Pond or lake |
| 7 | LOWER GREENISH LINT-AMPHIBOLITE, ANDESITE FLOWS, CHLORITIC TUFFS, RED-BROWN PORPHYRYTIC ANDESITE, MINOR ARGILLITE | Road |
| 8 | QUARTZ VEIN OR VEIN ZONE | French outline |
| 9 | GEOLOGICAL CONTACT | Claim boundary with Lega Corner Post (LCP) |
| 10 | ADIT | Diamond drill hole location |
| | | WWI Water Well |

14,301

BLACKDOME EXPLORATION LTD.
PROPERTY, GEOLOGY
DIAMOND DRILL HOLE LOCATIONS
DOME CLAIMS
CLINTON MINING DIVISION, B.C.

TECHNICAL WORK BY NORM, DAWSON AND ASSOCIATES LTD.	SCALE 1:5,000 0 25 50 100 meters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100 1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440
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- LEGEND**
- Collar
 - Overburden
 - Vein
 - Basalt
 - Andesite
 - Volcaniclastics (Siliceous Ash Beds)
 - Volcaniclastics (Volcanic Wacke)
 - Kingsvale Group (?)
 - Trench (On Section —, Off Section - - -)
 - Fault
 - Geological Contact (known, assumed)
 - Fault Breccia
 - Alteration Zone
 - Breccia
 - Diamond Drill Hole # 25
 - 3.2 gm/tonne Au
 - 9.1 gm/tonne Ag
 - 8.2 gm/tonne Au with < 4 gm/tonne Ag
 - average is 5.7 gms/tonne Au across 2.0 m.
 - Hole penetrates Section

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,301

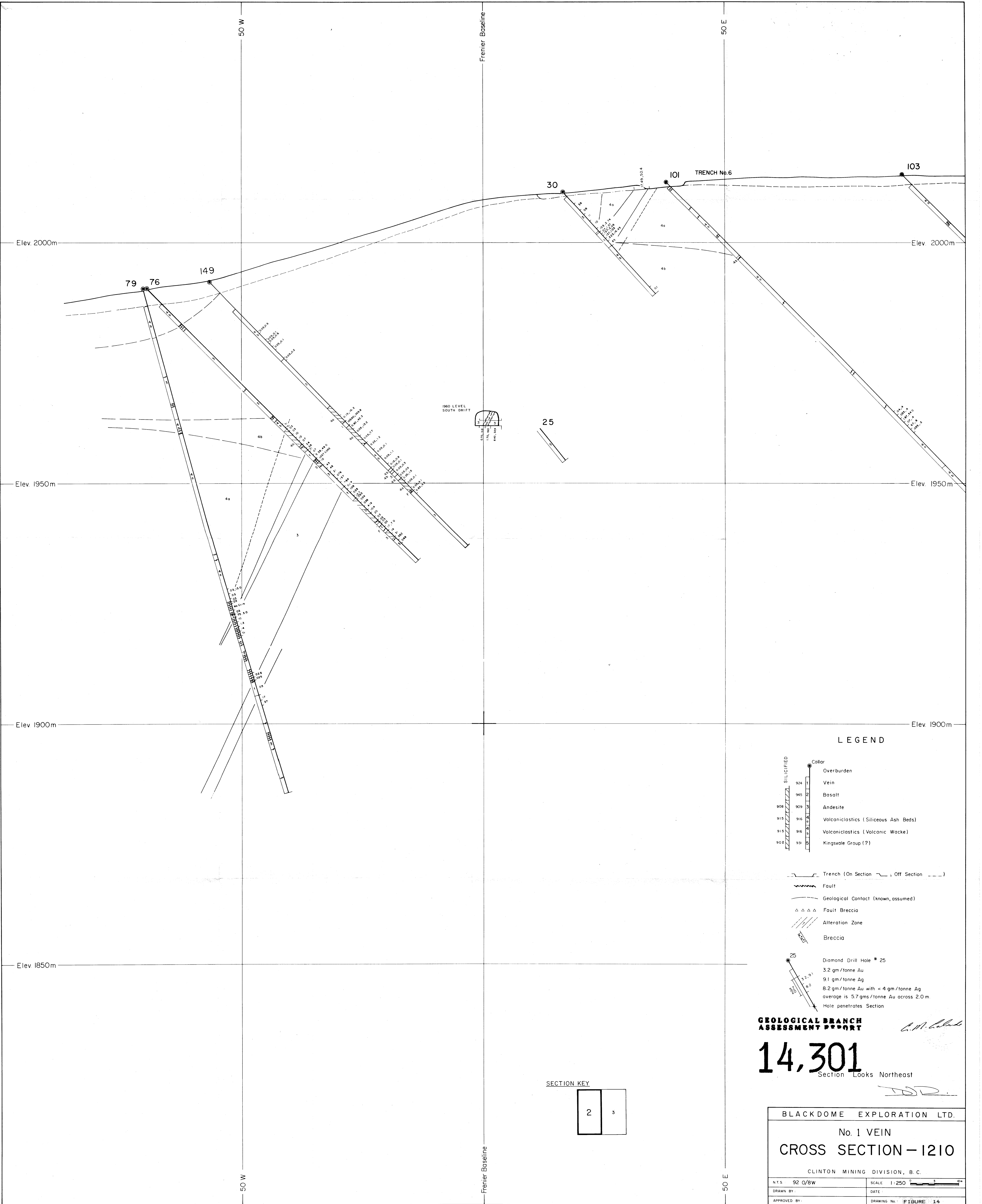
Section Looks Northeast

BLACKDOME EXPLORATION LTD.

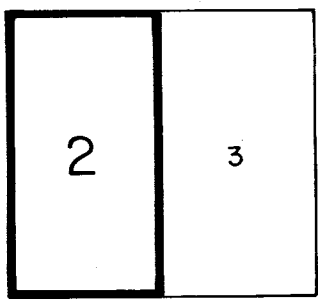
**No. 1 VEIN
CROSS SECTION-1204**

CLINTON MINING DIVISION, B. C.

N.T.S. 92 0/8W	SCALE 1:250
DRAWN BY:	DATE:
APPROVED BY:	DRAWING No.: FIGURE 13



SECTION KEY



LEGEND

- Collar
- Overburden
- Vein
- Basalt
- Andesite
- Volcaniclastics (Siliceous Ash Beds)
- Volcaniclastics (Volcanic Wacke)
- Kingsvale Group (?)
- Trench (On Section, Off Section)
- Fault
- Geological Contact (known, assumed)
- Fault Breccia
- Alteration Zone
- Breccia
- Diamond Drill Hole # 25
- 3.2 gm/tonne Au
- 9.1 gm/tonne Ag
- 8.2 gm/tonne Au with < 4 gm/tonne Ag
- average is 5.7 gms/tonne Au across 2.0 m
- Hole penetrates Section

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

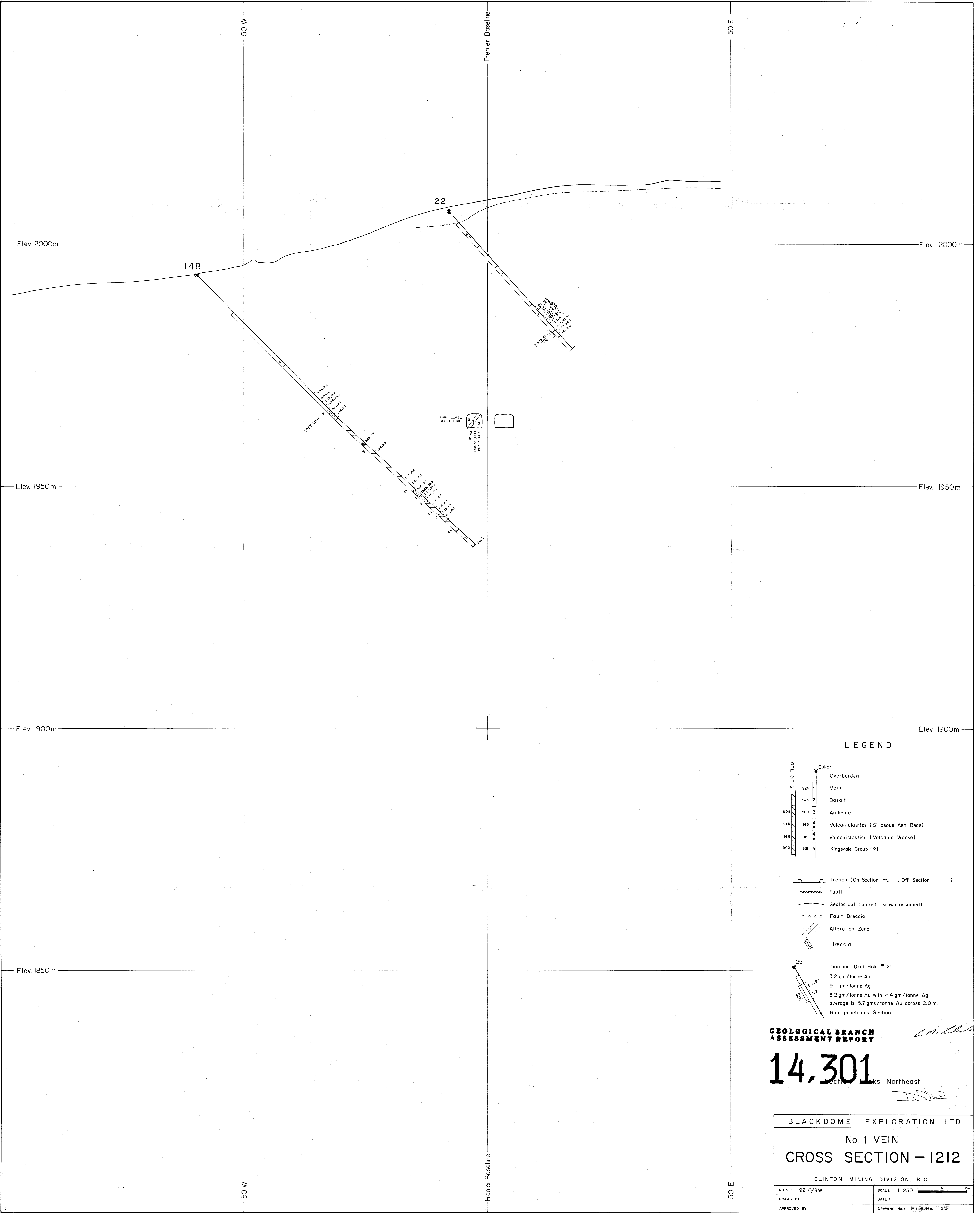
Section Looks Northeast

BLACKDOME EXPLORATION LTD.

No. 1 VEIN
CROSS SECTION - 1210

CLINTON MINING DIVISION, B.C.

N.T.S.	92 0/8W	SCALE	1:250
DRAWN BY:		DATE:	
APPROVED BY:		DRAWING No:	FIGURE 14



LEGEND

Collar
Overburden
Vein
Basalt
Andesite
Volcaniclastics (Siliceous Ash Beds)
Volcaniclastics (Volcanic Wacke)
Kingsvale Group (?)

Trench (On Section, Off Section)
Fault
Geological Contact (known, assumed)
Fault Breccia
Alteration Zone
Breccia

Diamond Drill Hole # 25
3.2 gm/tonne Au
9.1 gm/tonne Ag
8.2 gm/tonne Au with < 4 gm/tonne Ag
average is 5.7 gms/tonne Au across 2.0 m.
Hole penetrates Section

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,301

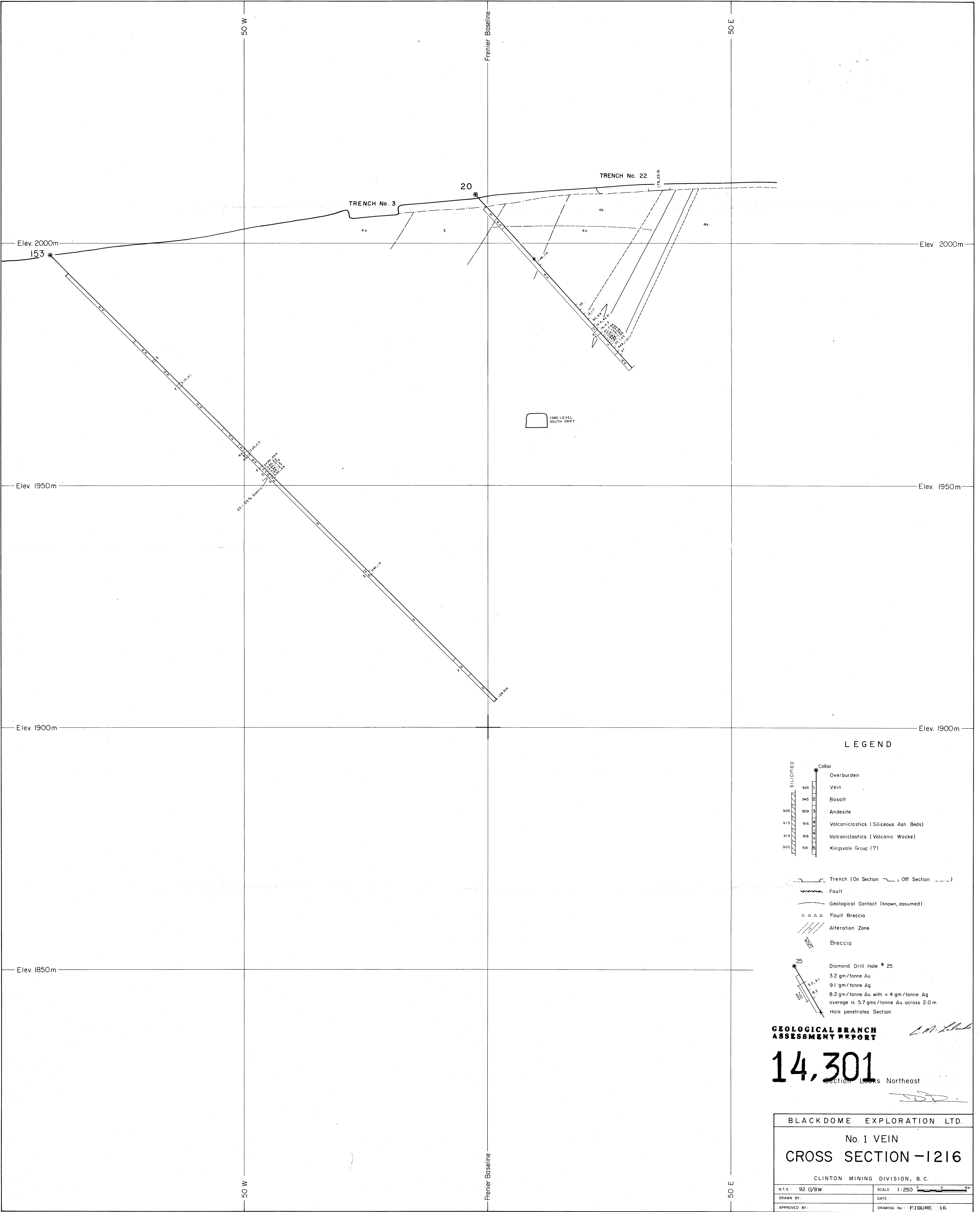
Section 1212, 1/2 mile Northeast

BLACKDOME EXPLORATION LTD.

**No. 1 VEIN
CROSS SECTION - 1212**

CLINTON MINING DIVISION, B.C.

NTS: 92 0/8W	SCALE 1:250
DRAWN BY:	DATE:
APPROVED BY:	DRAWING No. 15



LEGEND

Collar
Overburden
Vein
Basalt
Andesite
Volcaniclastics (Siliceous Ash Beds)
Volcaniclastics (Volcanic Wacke)
Kingsvale Group (?)

Trench (On Section —; Off Section - - -)

Fault
Geological Contact (known, assumed)
Fault Breccia
Alteration Zone
Breccia

Diamond Drill Hole # 25
3.2 gm/tonne Au
9.1 gm/tonne Ag
8.2 gm/tonne Au with < 4 gm/tonne Ag
average is 5.7 gms/tonne Au across 2.0 m.
Hole penetrates Section

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,301

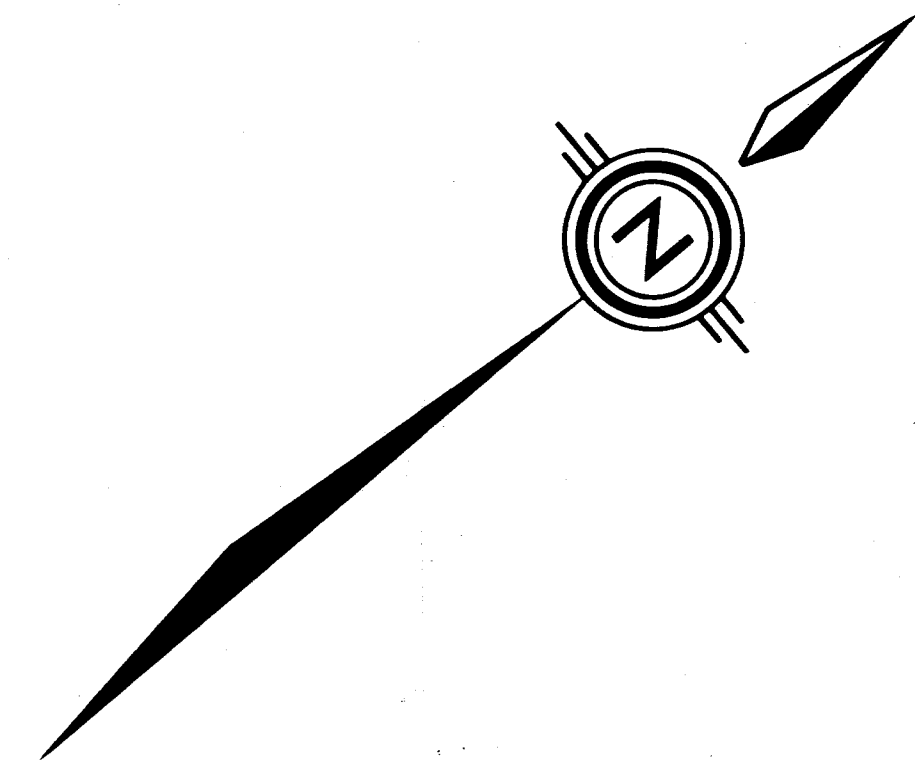
Section Looks Northeast

BLACKDOME EXPLORATION LTD.

**No. 1 VEIN
CROSS SECTION -1216**

CLINTON MINING DIVISION, B.C.

N.T.S. 92 0/8W	SCALE 1:250
DRAWN BY:	DATE:
APPROVED BY:	DRAWING No. 16



N40°E FRENIER GRID 5025E

CUT N° 4

CUT N° 3

CUT N° 2

CUT N° 1

12115 N RAISE

LEGEND:

- 4 RHYOLITE: BEIGE TO LIGHT GREY, GENERALLY MODERATE (50-60°) DIPPING FRACTURE PATTERN NORTHWESTWARD, FLOW BANDING IN LOCALIZED AREAS, IRREGULAR LOCAL BRECCIA AREAS.
- 3 ANDESITE DYKE: FINE GRAINED GREEN PORPHYRITIC ANDESITE DYKE. MAFIC PHENOCRYSTS ARE ALTERED TO CHLORITE.
- QUARTZ VEINS AND VEINLETS, LINES INDICATE NUMBER OF VISIBLE VEINS GENERALLY WHITE WITH LIMONITE ON FRACTURES, MANY HAVE COCKS-COMB TEXTURE.
- SHEAR ZONE: GOUGE AND GREY CLAY, SOFT LIMONITIC SHEAR PLANES OFTEN SUBROUNDED GREY QUARTZ FRAGMENTS.
- BRECCIA
- FRACTURE OR BEDDING PATTERN
- JOINT OR FRACTURE PATTERN
- INTENSE FRACTURING OR SHEARING

As, Ag
(210, 95.00)
(110, 95.00)
1.5 FIRE ASSAYS (VALUES IN GRAMS/TONNE)
AA ASSAYS
WIDTH IN METRES

MAP KEY

SHEET 3 SHEET 2 SHEET 1

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - BC.	
N°1 LONG TRENCH GEOLOGY & TRENCH ASSAYS		
PROJ. No.	SURVEY BY: C. Lalonde	DATE: Jan 21, 1985
N.T.S. 92-0/8W	DRAWN BY: r.w.r.	SCALE: 1:50
DWS. No.	FIGURE 17	



14,301

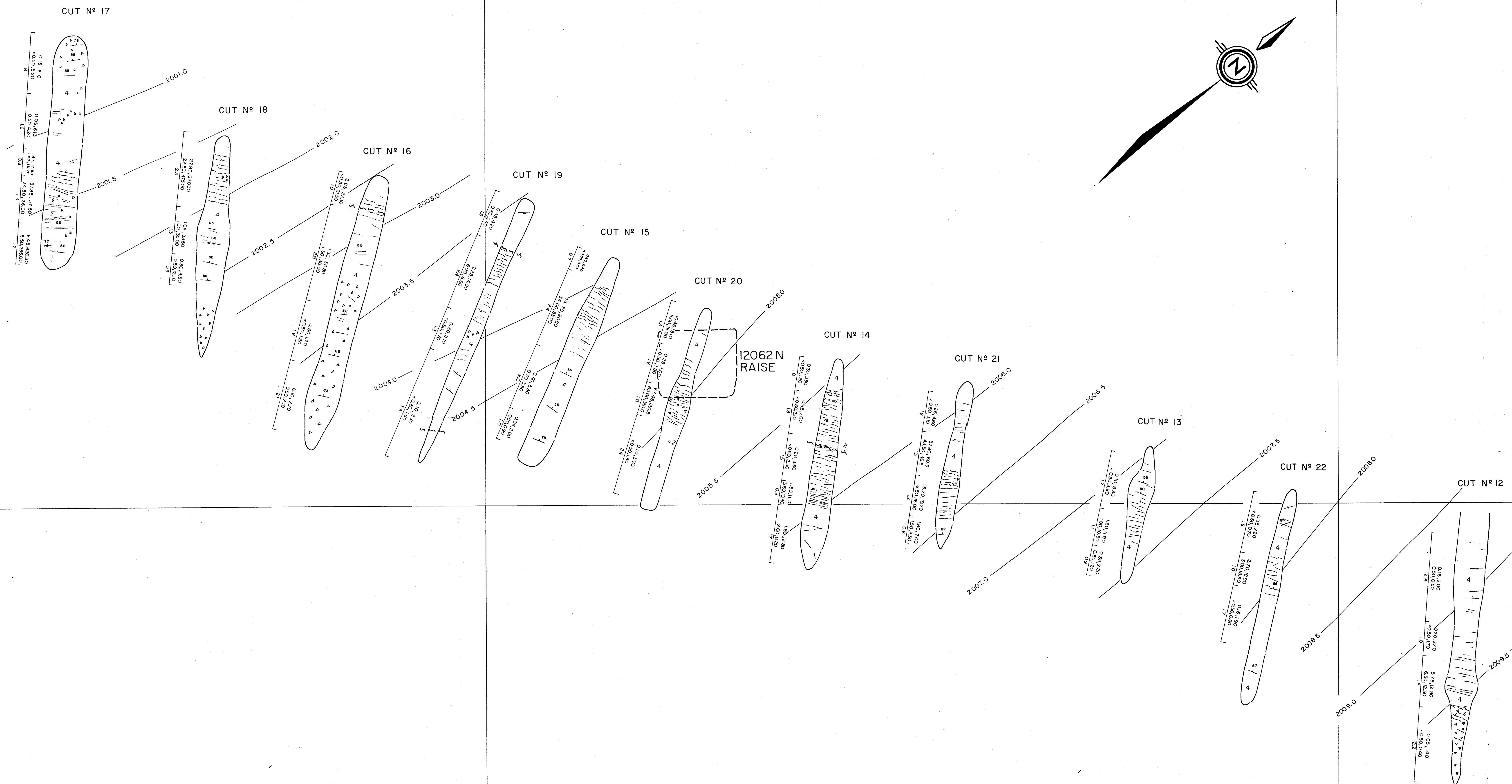
L. M. Land

Au, Ag		
0.40, 1.20	FIRE ASSAYS	(VALUES IN GRAMS/ TONNE)
0.50, 1.40	AA ASSAYS	
1.9	WIDTH IN METRES	

- MAP KEY

SHEET 3	SHEET 2	SHEET 1
---------	---------	---------

REVISED		BLACKDOME EXPLORATION LTD.	
		CLINTON M.D. - BC.	
		Nº 1 LONG TRENCH	
		GEOLOGY & TRENCH ASSAYS	
PROJ. No. _____		SURVEY BY: C. Leclande	
N.T.S. 92-O/BW		DATE: Jan. 21, 1985	
DWG. Nº _____		DRAWN BY: r.w.c.	
FIGURE 16		SCALE: 1" = 50'	



LEGEND:

- 4 RHYOLITE: BEIGE TO LIGHT GREY, GENERALLY MODERATE (50-60°) DIPPING FRACTURE, PATTERN NORTHWESTWARD, FLOW BANDING IN LOCALIZED AREAS, IRREGULAR LOCAL BRECCIA AREAS.
- 3 ANDESITE DYKE: FINE GRAINED GREEN PORPHYRITIC ANDESITE DYKE. MAFIC PHENOCRYSTS ARE ALTERED TO CHLORITE.
- QUARTZ VEINS AND VEINLETS, LINES INDICATE NUMBER OF VISIBLE VEINS GENERALLY WHITE WITH LIMONITE ON FRACTURES, MANY HAVE COCKS-COMB TEXTURE.
- SHEAR ZONE: COARSE AND GREY CLAY, SOFT LIMONITIC SHEAR PLANES OFTEN SURROUNDED GREY QUARTZ FRAGMENTS.
- BRECCIA
- FRACTURE OR BEDDING PATTERN
- JOINT OR FRACTURE PATTERN
- INTENSE FRACTURING OR SHEARING

Au, Ag
1200, 9500
1100, 9500
10
FIRE ASSAYS
A.A. ASSAYS (VALUES IN GRAMS/TONNE)
WIDTH IN METRES

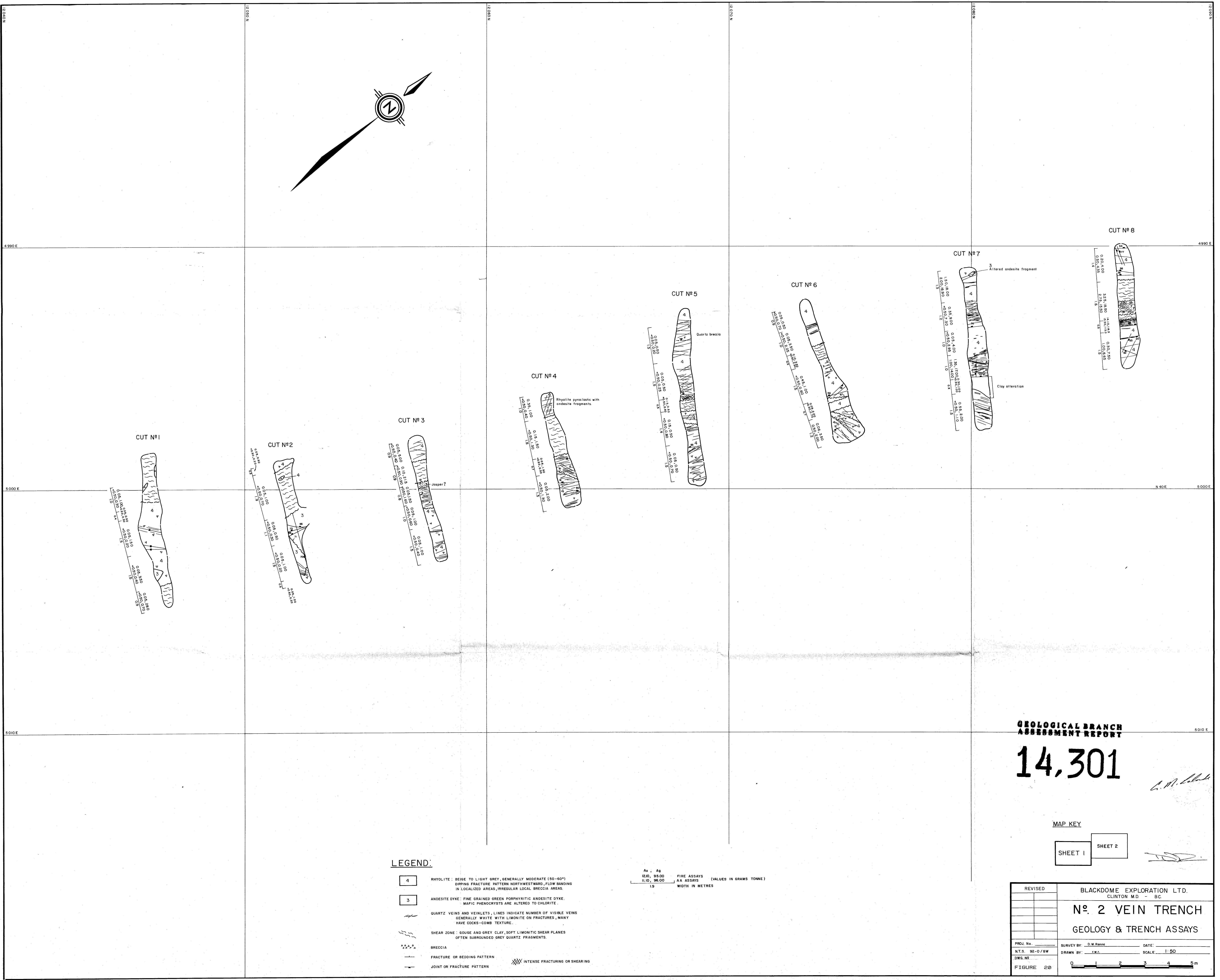
KEY MAP

SHEET 3 SHEET 2 SHEET 1

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - BC.	
	N° 1 LONG TRENCH	
	GEOLOGY & TRENCH ASSAYS	
PRJ. No.	SURVEY BY: C. Leland	DATE: JAN 21 1995
N.T.S. 92-0/8W	DRAWN BY: J.M.	SCALE: 1:50
DWS. No.	FIGURE 19	



GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

MAP KEY

SHEET 1
SHEET 2

LEGEND:

- 4 RHYOLITE: BEIGE TO LIGHT GREY, GENERALLY MODERATE (50-60°) DIPPING FRACTURE PATTERN NORTHWESTWARD, FLOW BANDING IN LOCALIZED AREAS, IRREGULAR LOCAL BRECCIA AREAS.
- 3 ANDESITE DYKE: FINE GRAINED GREEN PORPHYRITIC ANDESITE DYKE. MAFIC PHENOCRYSTS ARE ALTERED TO CHLORITE.
- QUARTZ VEINS AND VEINLETS, LINES INDICATE NUMBER OF VISIBLE VEINS GENERALLY WHITE WITH LIMONITE ON FRACTURES, MANY HAVE COCKS-COMB TEXTURE.
- SHEAR ZONE: ROUGE AND GREY CLAY, SOFT LIMONITIC SHEAR PLANES OFTEN SUBROUNDED GREY QUARTZ FRAGMENTS.
- BRECCIA
- FRACTURE OR BEDDING PATTERN
- JOINT OR FRACTURE PATTERN
- INTENSE FRACTURING OR SHEARING

Au . Ag
1230, 95.00
1110, 96.00
15
FIRE ASSAYS
A.A. ASSAYS (VALUES IN GRAMS TONNE)
WIDTH IN METRES

REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - BC	
N° 2 VEIN TRENCH GEOLOGY & TRENCH ASSAYS		
PROJ. No.	SURVEY BY: D.W. Rennie	DATE:
N.T.S. 92-0/8W	DRAWN BY: K.F.F.	SCALE: 1:50
DWG. No.	FIGURE 20	

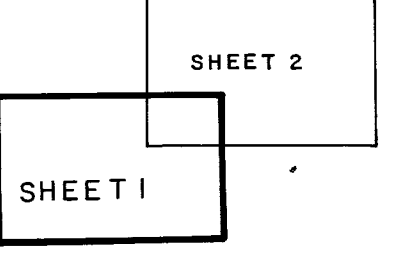
LEGEND

- 40 RHYOLITE - WHITE, BUFF, PINKISH & PALE GREEN, FINE-GRAINED TO VITRIC, SOMETIMES FLOW-BANDED, BRECCIATED OR AUTOBRECCIATED TUFFS & FLOWS.
- 4b VOLCANIC WACKE - POORLY SORTED COARSE-GRAINED VOLCANICLASTIC BRECCIA WITH BROWN OR GREEN FINE-GRAINED MATRIX.
- 3 ANDESITE - GREEN, DARK GREEN, BLUE-GREEN & OLIVE GREEN, FINE-GRAINED MASSIVE TO PORPHYRITIC ANDESITE FLOWS, LAPILLI TUFFS, DIKES OR PLUGS.
- 2 BASALT
- STRIKE & DIP OF FLOW-TOP, FLOW-BANDING OR BEDDING
- STRIKE & DIP OF JOINT SET
- STRIKE & DIP OF FAULT
- GEOLOGICAL CONTACT
- OUTCROP
- FLOAT
- ALTERATION BOUNDARY
- QUARTZ VEINS

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

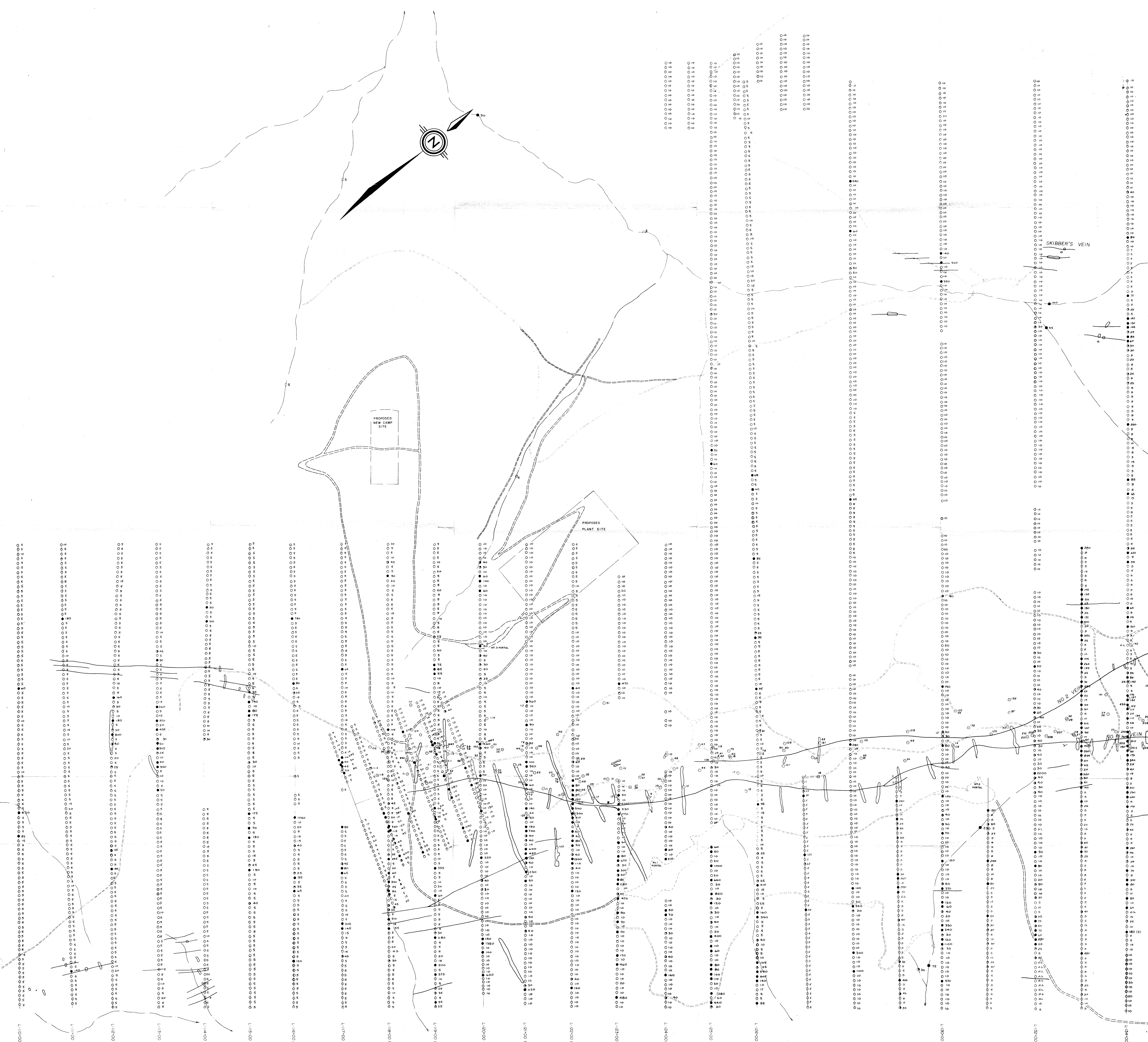
MAP KEY



C. M. Lohr

JDR

REVISED	BLACKDOME EXPLORATION LTD. CLINTON M.D. - B.C.	
SURFACE GEOLOGY		
PRJ. No.	SURVEY BY: D.R.	DATE: JAN. 31, 1985
N.T.S. 92-0/8W	DRAWN BY: J.M.S.	SCALE: 1:500
DWG. No.	FIGURE 5	



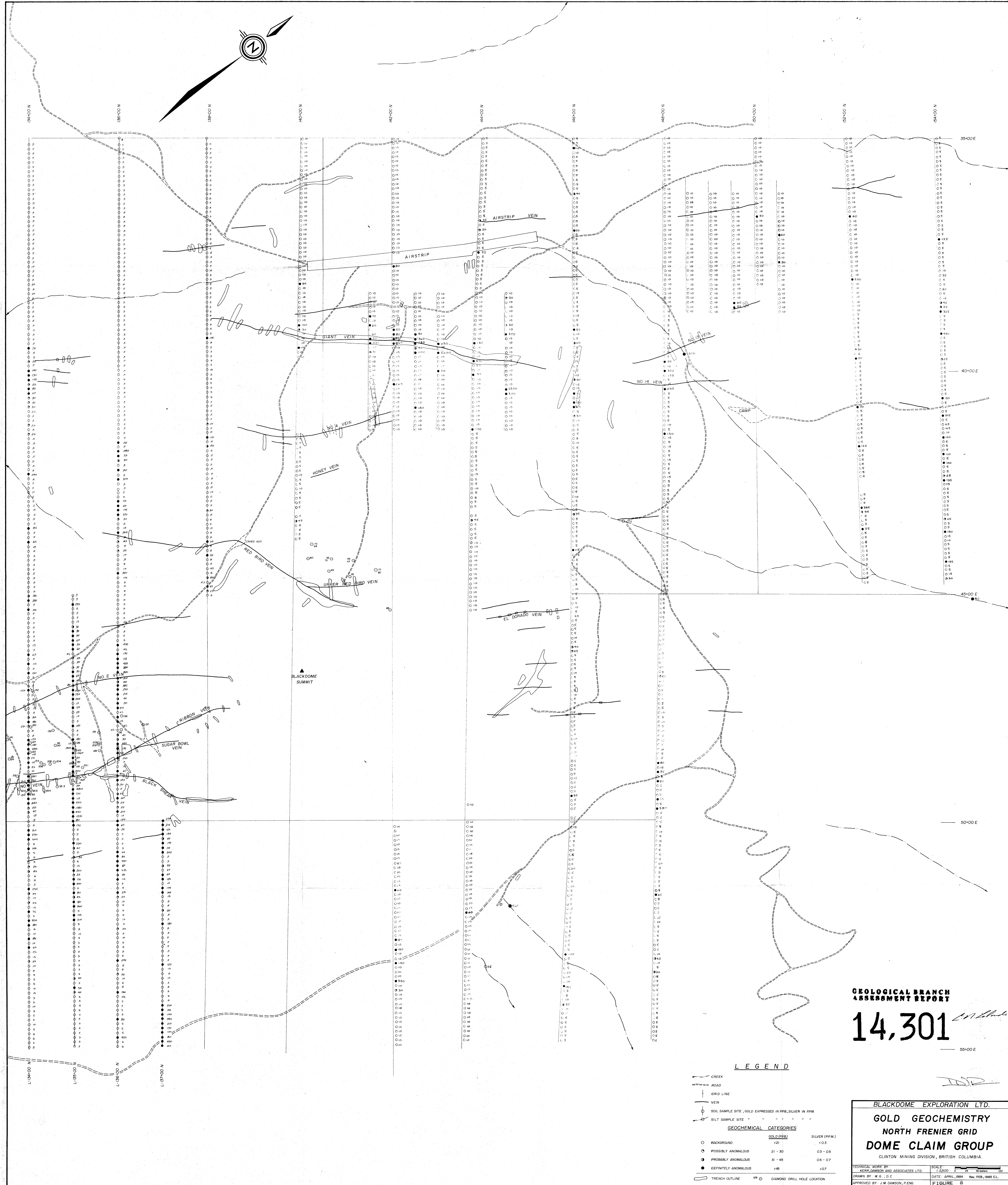
GEOLOGICAL BRANCH
ASSESSMENT REPORT

BLACKDOME EXPLORATION LTD.

1" 30' GOLD GEOCHEMISTRY
SOUTH FRENIER GRID
DOME CLAIM GROUP
CLINTON MINING DIVISION, BRITISH COLUMBIA

NOTE
FOR LEGEND AND GEOCHEMICAL CATEGORIES SEE ADJOINING FIGURES

TECHNICAL WORK BY
KENDRICK ASSOCIATES LTD.
DATE: APRIL, 1984
APPROVED BY: J.M. DAWSON, P. ENG.
SCALE: 1:5000
FIGURE 7



GEOLOGICAL BRANCH
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14,301

LEGEND

- CREEK
 - ROAD
 - GRID LINE
 - VEIN
 - SOIL SAMPLE SITE, GOLD EXPRESSED IN PPM, SILVER IN PPM
 - SILT SAMPLE SITE
 - TRENCH OUTLINE
 - DIAMOND DRILL HOLE LOCATION
- | GEOCHEMICAL CATEGORIES | |
|------------------------|--------------|
| GOLD (PPM) | SILVER (PPM) |
| <21 | <0.3 |
| 21 - 30 | 0.3 - 0.5 |
| 31 - 45 | 0.6 - 0.7 |
| >45 | >0.7 |

BLACKDOME EXPLORATION LTD.

GOLD GEOCHEMISTRY

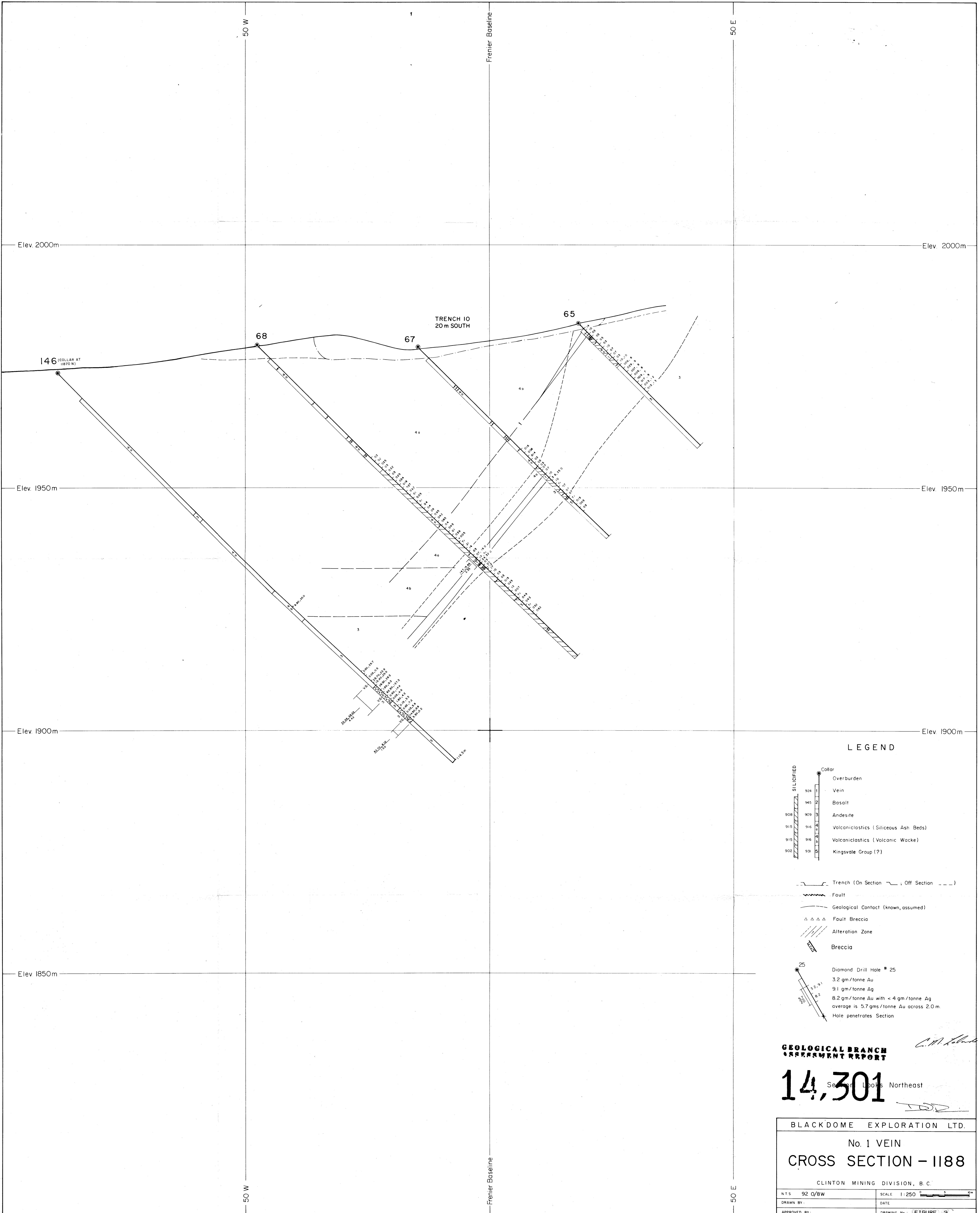
NORTH FRENIER GRID

DOME CLAIM GROUP

CLINTON MINING DIVISION, BRITISH COLUMBIA.

TECHNICAL WORK BY: JAMES DAWSON AND ASSOCIATES LTD.
DRAWN BY: W.D., D.C.
APPROVED BY: J.M. DAWSON, P.ENG.

SCALE: 1:2500
DATE: APRIL, 1984
FIGURE 8

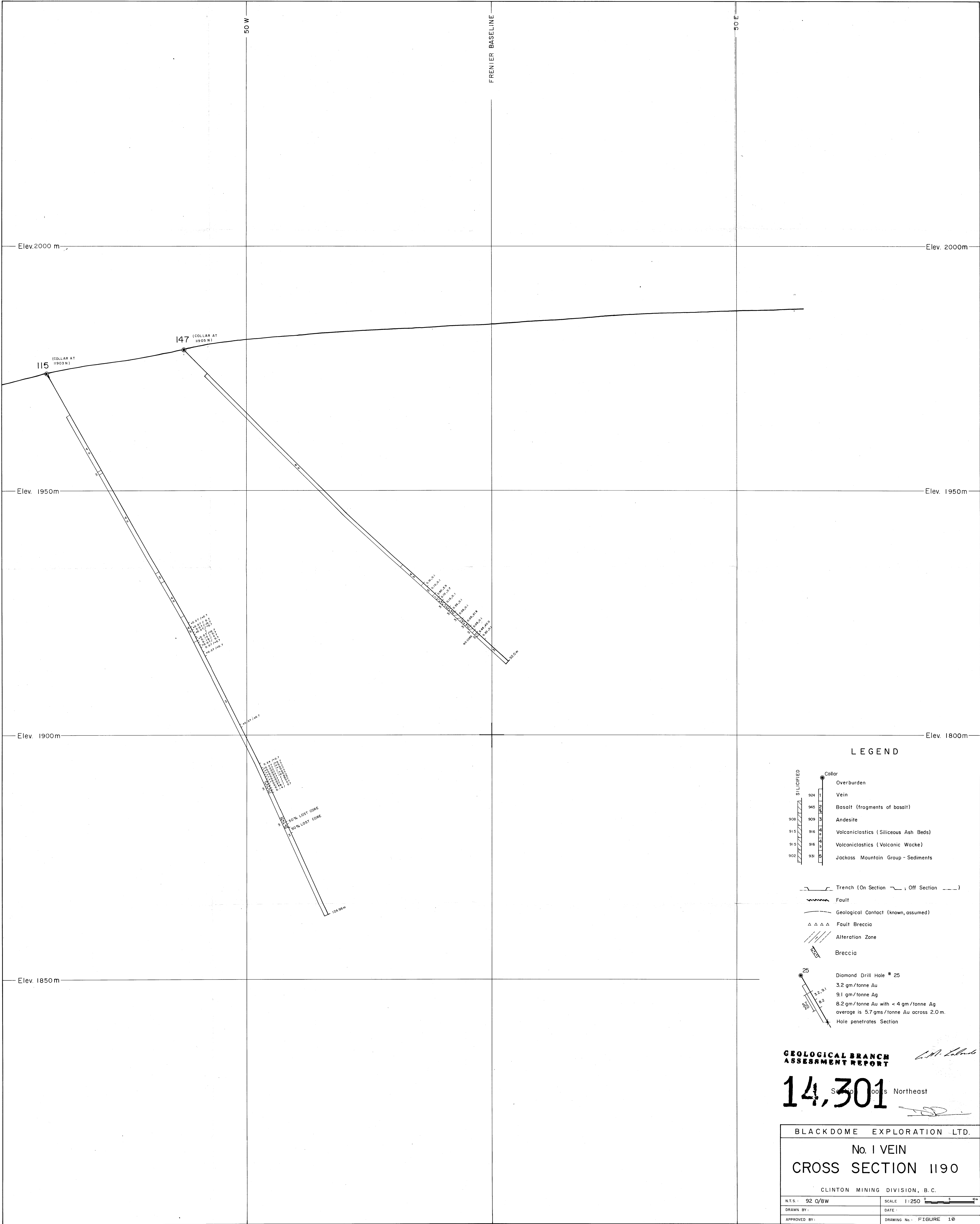


GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,301

Section Looks Northeast

BLACKDOME EXPLORATION LTD.	
No. 1 VEIN	
CROSS SECTION - 1188	
CLINTON MINING DIVISION, B.C.	
NTS 92 0/8W	SCALE 1:250
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APPROVED BY:	DRAWING No. FIGURE 9



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,301 Section 14,301 Northeast

BLACKDOME EXPLORATION LTD.

**No. 1 VEIN
CROSS SECTION 1190**

CLINTON MINING DIVISION, B.C.

N.T.S.: 92 0/8W	SCALE: 1:250
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