REPORT ON

CUSAC'S TABLE MOUNTAIN AREA GOLD CLAIMS

(CORDOBA, TARA, PETE GROUPS)

PART I

PERIOD: SEPT. - NOV. 1979
TRENCH AND OUTCROP MAPPING
SAMPLING, DRILL HOLES, PROJECT
SUMMARY

PART II

DINO VEIN BULK TEST, DEC. 1979

FOR: CUSAC INDUSTRIES LTD.

BY: J. Poloni, P.Eng.
W.D. Groves, PhD., P. Eng.

January 28, 1980

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Bondar Clegg #A29-1640 Dec. 20, 1979

Delta Refining #00104 Jan. 2, 1980

General Testing Labs #7912-2761 Jan. 7, 1980

List of Assay Sheet Numbers - Geology

Bonder Clegg Assay Report No.	Date of Report
A29-521	July 24, 1979
A29-534	July 18, 1979
A29-653	August 3, 1979
A29-696	August 14, 1979
A29-868	August 31, 1979
A29-989	September 11, 1979
A29-1009	September 21, 1979
A29-1036	September 27, 1979
A29-1117	October 5, 1979
A29-1282	October 18, 1979
A29-1282A	October 24, 1979
A29-1316	October 26, 1979
A29-1335	October 26,1979
A29-1388	November 14, 1979
A29-1533	November 30, 1979
A29-1522	November 28, 1979
29-1801(Geochem)	September 17, 1979

New Energy Assay	Dated
	August 15, 1979
	August 16, 1979
	August 22, 1979
	August 23, 1979
	August 27, 1979
	September 5, 1979
	September 25, 1979
	September 13, 1979

SUMMARY OF MAP NOTATION

Mn	Manganese
Qtz.	Quartz
Fe	Iron
W.	Weathering
Brecc.	Breccia
Cht.	Chert
Chty.	Cherty
ϕ	Transition Phase ($\uparrow$) direction of injection
Frax.	Fractures
$\measuredangle = 40^\circ$	40° angle between axial direction and foliation measurement
Dk.	Dark
Arg.	Argillite
$\Delta = 6'$	Vertical trench wall height = 6 ft.
Blk.	Black
Volc.	Volcanic
Irreg.	Irregular
Xline	Crystalline
F.G.	Fine Grained
Poss.	Possible
Sphal.	Spalerite
Sil.	Silicious
A	Andesite
AT	Andesite Tuff

Eight holes, totalling 2,000 feet of drilling were completed. Three of the 5 holes drilled on the Cordoba claim intersected gold-quartz veins. Unfortunately, none of the three holes drilled into Presunka's Fault, on the Pete claim, found by geophysics earlier in the season, intersected significant gold-silver mineralization, though the structure seems favourable.

Results of geophysical and geochemical surveys and most of the surface assays from trenching appeared in J. Poloni's report of September 12, 1979. The present Report is a joint report by both geologists summarizing the season's findings, and including and discussing maps, drill and assay results from the latter part of the season.

On the basis of the 1979 results, an expanded program on the property, totalling $1,300,000, is recommended for the 1980 season.

Recommendations include installing a 30-ton per day package mill on the property to start generating cash flow from the highgrade veins, more detailed geophysical and geochemical surveys on other claim units, more exploratory drilling on gold-silver anomalies (since the highgrade veins so far discovered are associated with gold-silver anomalies), and close spaced drilling on known bearing veins.

Results of a bulk assay of one of the highgrade veins is included as Part II of the Report. It indicates that a standard gravity-flotation circuit should be able to process the ore efficiently.

1.0 SUMMARY

During the 1979 field season, CUSAC Industries Ltd. conducted a $150,000 program on a 5-unit area of their Cordoba and Pete claims in the Table Mountain gold camp area of Northern British Columbia, on the property adjoining the Nu Energy mine property (CUSAC property lies to the South). CUSAC's property is on the south flank of Table Mountain and upper Pooley Creek valley.

Efforts concentrated on a 4-unit area on the Cordoba claim (on Claim Units 5, 6, 7 and 8) and a 1-unit area on the Pete Claim (on units 4 and 5). Unit and Grid numbering is given in the report.

Geophysical surveys on both areas were carried out by S. Presunka. Geochemical survey for gold, silver, zinc and lead on the 4-unit grid were carried out under the supervision of F. Brett. Geological work was supervised by J. Poloni and W.D. Groves.

Backhoe and bulldozer trenching on the Cordoba grid area was carried out in August-September 1979. The equipment was removed from the property on September 17, 1979. A diamond drill was on the property from September 18 to November 9, 1979, when freezeup stopped further drilling. A bulldozer road was constructed to the Pete claims to assist in moving the drill to the Presunka's Fault area.

Results were most encouraging. Three new highgrade gold-quartz veins were uncovered, which, together with the already-known Pete vein, constitute a sizeable reserve of potentially mineable ore. Several other large, lowgrade veins were further surface-sampled and mapped. Indications of additional veins, some mineralized and some not, were obtained.

2.0 LOCATION AND ACCESS

The Pete mineral claim is located approximately 10 miles south east of the town of Cassiar, B.C., two miles east of Needlepoint Mountain near the headwaters of Pooley Creek, with its northern boundary 1000 meters south of the Cordoba claim. The Cordoba claim north boundary adjoins the Sky mineral claim of Nu Energy Development Corporation Ltd. See Claim Map 3. The Tara claim is a 12 unit claim between Pete and Cordoba claims.

Access to the Pete and Tara claims is by a 2.5 mile road extension from the Erickson Gold Mines (Nu-Energy) mine road off the Cassiar-Stuart road. This 2.5 miles was negotiated by 4-wheel drive vehicles in 1979. The road was extended south as a bull-dozer road to the Pete claims, and a diamond drill was skidded 3 miles in to the Presunka Fault area to drill DDH 3, 4 and 5 in October 1979, but the last mile could not be negotiated by 4-wheel drive.

Assistance has been received from the B.C. Government to build the road in from the Cassiar-Stuart road from Vines Lake through Vines Pass to the 1979 base camp for next season . (Vines Pass is at about 3500' elevation vs. 5500' for the pass over the west end of Table Mountain).

The Pete claim is located at 59° 19' N latitude, 129° 40' W longitude; and the Cordoba claim at 59° 12' N latitude, 129° 42' W longitude, NTS 104 P/4E.

3.0 CLAIM INFORMATION

The claim map Plan No. 3 shows the location and association of the Pete, Cordoba and Tara claims. Claims data is as follows:

Claim Name	Units	Record No.	Expiry Date
Pete	(18)	365	June 5
Tara	(12)	360	June 5
Cordoba	(12)	367	June 5

Cordoba, Tara and Pete claims are recorded as shown on B.C. Claim Map 104P/4E (Map 3). This claim map is updated to November 1, 1979. One claim, the Tara, has lately been marked "ALSO DOE" . Ownership ("G") forms for Cordoba, Tara, and Pete claims are included in this report (Map pocket). The claims are shown as in good standing as marked on these forms. Staker was G. Brett.

The veins and mineralization of economic interest reported to the end of the 1979 season have been those found on the Cordoba and Pete claims. No mineralization of note has yet been found on the Tara claim, though essentially no geological or prospecting work has been done on the Tara claim to date, except to cut a cat and 4-wheel drive road through the Tara claims to the Pete claims to the south.

A letter (record no. 79656), dated January 16, 1980 by Company lawyer J.P. Lee Edwards of Edwards, Martin, states CUSAC's up-to-date legal position re Plaza Resources Ltd.'s staking of the DOE claim over the territory marked on the claim sheet as the Tara claim, and the status of a joint agreement between Plaza and CUSAC. As Edwards states: "CUSAC is asking for a court order confirming the termination of this Joint Venture Agreement." A copy of Edwards' letter forms part of the Company's latest Statement of Material Facts.

4.0 ECONOMIC GEOLOGY

4.1 History:

Interest in the Table Mountain area was initiated by efforts to locate the source lode of the immensely rich gold placer of McDame Creek discovered in the 1860's. The north slope of Table Mountain forms the south wall of the McDame Creek Valley for 2 miles and contains the gold-quartz vein currently being mined by Erickson Gold Mines (Nu-Energy) Limited. On the crest of Table Mountain is the strong gold-bearing Velog quartz vein which originally attracted attention to the mountain. The vein runs approximately E-W for 1.5 miles.

Present efforts at structural analysis have been concentrated on the central portion of the Cordoba claims where a 4-claim area was set off on a 100 m. grid to facilitate trenching, drilling geophysical and geochemistry studies (the latter two already reported by J. Poloni (refill)at the north end of the claim area. On the Pete claims' in the area of Presunka's Fault some work was done in the vicinity of this large steeply dipping E-W fault some 800 m. north of Pete Hamlin's cabin (Photo # 8). The "Pete" claims contain the "Pete Vein", a gold-quartz vein, and lie in the south part of the claim area. (See Map 5 (b), and Plan 14).

4.2 Geomorphology:

The north slope of Table Mountain is steep - 30-45°, and contains the Nu-Energy gold-quartz veins in slate and greenstone. The crest of Table Mountain is a broken E-W anticlinal structure with a "core" or line of Sylvester age greenstone intrusions marking the break. Another line of small Sylvester intrusions crosses the north end of Table Mountain - from the west edge of the Cordoba claims, across the Sky claims to the north, and over the north end of the top of Table Mountain and into McDame Creek basin on about a N.30 E. line.

The south slope of Table Mountain is a large, gently sloping alpine tableland which gradually merges into the upper shallow central bowl of Pooley Creek Valley. It drains by a number of small streams just beginning to dissect the tableland. Lower Pooley Creek Valley is a broad glacial U-valley with grass and beaver swamps to a point 1/2 mile south of the south boundary of the Pete claims. The Pete claims are on the low western side of this valley and are largely covered with spruce swamp over up to 50' of glacial blue clay containing some rounded glacial boulders of greenstone or diorite. To the south of the E-W line of Presunka's Fault, a low massive carbonate E-W ridge marks a pressure ridge on the south side of the fault. A small quartz vein, containing tetrahedrite, with a greenstained margin was found on the ridge (Map : Plan 12). The west side of the valley rises into Needle Point Mountain, and the map area of Panteleyev.

At about the upper north edge of the Pete claim block, Pooley Creek forks. One fork comes down the glacial valley on the S.W. flank of Table Mountain; the other comes from the east down a rock-bottom recent gorge downcutting into the glacial pass between Table Mountain and Hunter Group Mountain to the southeast. Hunter Group Mountain forms the east flank of Pooley Creek Valley.

4.3 Regional Geology and Major Structural Features:

The major rock unit on the claims is the Sylvester Volcanics Unit of Gabrielse (see Map 2). Descriptive notes from his 4 mile map I(Appendix 1) summarize regional geology and section members.

The south flank of Table Mountain is a gentle dip slope in the slates overlying a volcanoclastic sequence, both of which are Sylvester. Early in the season, the nature of the slate-volcanics contact was not known, but drill holes 1, 2 and 6, 7, and 8 cut section in the contact zone and show that at least some of the Sylvester volcanics are crystal tuffs, with which the overlaying (and interbedded) slates are conformable

The land surface "shaves" down-section rather gradually, in the down-slope direction, going southerly, so that the slate mantle is largely missing by about the bottom (S. Edge) of the cordoba claims. Below the slate, in the DDH 6, 7 and 8 section for 300' is mainly massive andesitic tuffs plus sills, dykes and other intrusive phases of the andesite interbedded with grey chert. The chert is mostly massive, but with conformable brecciated zones on depositional interfaces, overlain by a thin carbonaceous tuff and/or quartz-carbonate "sill" or sills just under the slate. The slate just above the chert contact is carbonaceous to graphitic paper slate or phyllite. Higher up-section it merges into more of an argillite, such as that on the Sky claims. Each member contains more or less interbeds of the other. This whole sequence is invaded by various small Sylvester "mushroom" shaped intrusions and cut by siliceous volcanic dykes ("chert" in composition) of the same age. Two notable such greenstone "mushrooms" lie on each side of the base camp - one to the west and one to the east. The extent of these is not yet mapped although each forms a low knoll. Around the lower drill site around DDH 1 and 2, on the Cordoba 4-claim "grid area", the slate is locally present only as remnants. The surface is the thin bed of soft talcy tuff or quartz carbonate with the underlying cherts in evidence. Around the upper part of the Cordoba grid area, the slate-chert contact area is in evidence with the slates establishing cover on the upper edge of the Cordoba claims uphill from the drill site. Slate is the upper unit.

Regional tectonics suggest the possibility of a Cauldera type of andesitic volcanic event with upper McDame Creek Valley as a down-faulted collapse block, Hunter Group Mountains as largely pyroclastic, and explosion faults now marked by siliceous volcanic breccia and quartz veins.

4.4 Chert Breccia Zones:

One 'stratigraphic' control on the gold and silver mineralization in the area seems to be brecciated horizons in the chert, and also above this on the chert-carbonacious slate contact and for a short distance up into the slate. The surface silver-manganese-rich zone in chert breccia at DDH1 and the massive sulphide stringers (carrying low gold assays) in chert breccia zones in DDH 6, 7 and 8, illustrate this type of mineralization.

4.5 Origin of Gold Mineralization:

It's a matter of interest that the andesitic Sylvester magma had to traverse several carbonates buried at considerable depths enroute to the surface - the Good Hope and Atan and Lower Devonian for example, which would have the effect of adding carbonate, under pressure, to the melt. Possible consequences are exclusion of silica, production of siderite from mafics, and later, generation of the first explosive pressures on the roof of the magma chamber due to exsolution of CO_2. Evidence of this would be the fine grained siderite-containing carbonate, "iron dykes" in fissures - later to be rebrecciated by H_2O (steam) drive after the cracked magma chamber roof had begun to admit sea water. Pillows (evidence of submarine extrusion) in the Sylvester are rare. At least, much of the Sylvester encountered in the drill holes was tuff and could have been subaerial. (Emergent volcanic surface = island). The later chert and overlying slate were subaqueous. (Island volcano collapses below sea level). There is much sharp-edged to rounded cherty volcanic debris in the quartz veins in explosion faults. This suggests that the transition to chert in the section also follows the point at which sea water had gained access to the magma chamber. This access would result in extraction of gold from sea water and violent explosion faulting and tephra ejection. This scenario is worth holding in mind in regard to mineralization in quartz veins containing chert and in fracture zones in the chert itself.

The Presunka Fault is of interest on a regional scale since it is a major E-W one with a steep dip, which has slipped on and mylonized a carbonaceous to graphic horizon in the section. (Photo # 11). It is the first E-W fault south of the crest of Table Mountain, 3 miles to the north. Faults radiate out of the Cassiar stock mapsheet area adjacent to the west(Pantelayev) into the Table Mountain area, some with appreciable strike slip components as shown on his map (Map 2(B)). There are also graphitic slickensides in the 50° - north dipping carbonaceous slates in the Erickson Gold Mine alongside the vein. Presunka's Fault is thus another major structural focus for possible mineralization, though assays from drilling to date (DDH 3, 4, 5) have not given more than trace values in gold-silver. It nonetheless does contain quartz veins, some sulphides and felsite dykes in the fault plane region.

4.6 Quartz Vein Mineralization:

A considerable amount of information on the nature of the mineralized quartz veins in the area has now been accumulated. The moderately steep to steeply dipping ones mark various types of faults on fissures. One type marks fault slips between beds in the carbonaceous horizons at the base of the slates. These may be of major proportions. Quartz veins in Presunka's Fault, the Jenny Vein, and possibly also the Voloug Vein, are examples of this type. Wherever the tectonic situation produced a shear, the graphitic slate faulted if it was anywhere close to the plane of maximum shear stress, yielded - slipped, graphitized and/or mylonitized. Quartz veins, felsite dykes and quartz-carbonate "iron dykes" all used the same openings. The three are closely related in time. The "iron dykes" must contain considerable fine grained siderite because while the fresh material is creamy white, it weathers and alters on its margins rapidly into brown limonite.

A suggested sequence which tends to localize gold values is typically as follows. An explosion fissure or fault fills with a quartz-carbonate "iron dyke". Subsequent explosion or block faulting shatters the dyke and quartz (SiO_2 and H_2O liquid) fills the opening. In the large E-W vein on the Cordoba claims, the west end of

the fissure is occupied by an "iron dyke". To the west, a small quartz vein shows in the fissure which then rapidly widens to about 20'. Engulfed fragments of "iron dyke" (or slightly later siliceous volcanics) are then rafted eastward by the viscous quartz-H_2O fluid. Fragments tend to be more rounded towards the vein margins. Replacement of the siliceous fragments by iron sulphide is evident as well as network replacement of quartz along the vein margins (Photo #16). As a result, the tenure of gold mineralization in the veins is variable but tends to enrich towards the more fragmental portion of the veins towards the ends. Vein paths in the andesite are arcuate : the major E-W vein turns S.E. at its east end; in the "Cominco Vein" on the greenstone knoll above and to the west of camp, the south end turns S.W. These veins terminate by gradually pinching off. (See Map 5 (a)).

The "Dino Vein" (Photo #21) strikes about N. 25° W. has its discovery point about 100 m. east of base camp on the W flank of the low greenstone knoll marking one of the small andesite intrusions alluded to earlier in the text. (See maps 5 (a) and Plan 9).

The Dino vein is about 2-1/2 ft. wide at the surface. The east contact dips about 70° W, and the west contact dips at 55° W, indicating a widening to depth, at least locally. About 150' of bearing vein is exposed. Its southern extremity on the surface is tenuous - it appears to continue beneath a quartz-carbonate metasediment bed. bed. 100' further south, a small piece of quartz with tetrahedrite and chalcopyrite mineralization was found in a bulldozer trench. The vein - in the andesite - lies in a well-developed "iron dyke" - the breccia zone which is hematite stained. The vein is faulted by a cross-shatter on a plane lying around W. 20° N., dipping steeply north. Its continuation is offset some 80' to the west. This cross fault plane has a narrow limonitic zone in it in hematitic breccia.
The vein continues north for about 50', until it is cross-cut by an andesite dyke. Another ten feet to the north it is cut off by a much larger moderately north dipping siliceous dyke at least 15' thick, and then obscrued by drift. 150' further northward along the hillside, the locus of the trace of the vein is again marked by a quartz vein which gives low gold assays in a sulphide and fragment-containing zone towards its south

end. This vein then arcs into a more northerly and slightly easterly strike, widens to 15' wide, splits and becomes bull quartz. This section is called the Fred Vein. Its northern extent has not yet been stripped. See Map (Plan 9).

Assays on the grab samples from the Dino Vein have been obtained in the 2 oz. - 80 oz./ton range. (A 500 lbs. sample submitted for mill test assayed 3.60 oz./T Au, .985 oz/T Ag). In places abundant coarse free gold is seen (Photo #13). Photo #14 shows iron sulphide, v.g. and tetrahedrite. As Photo #13 shows, gold is in ex-solution relations on the margins of the iron sulphide so that it becomes more easily visible in "boxwork" where the iron sulphide has oxidized at the ground surface. This gold is actually an alloy also containing about 10% silver. Free gold is not found associated directly with the tetrahedrite also present intermittently in the vein - this latter is the main silver-bearing mineral. Gold-pyrite and tetrahedrite mineralogical zoning in the quartz veins (Dino, Pete) is to some extent locally mutually exclusive.

Galena has also been noted in the vicinity of v.g. in the top of the flat vein, (Vein 7). A third habit for quartz veins is illustrated by this large - over 11' thick - flat lying quartz vein exposed in the DDH 6, 7, 8 area in backhoe trenches and the top section of the 3 drill holes themselves. This vein lies on the contact between the carbonaceous slate and the chert. (Maps : Plan 6, Sections 7 and 8). It carries a little galena on its upper surface, and although v.g. was only seen in it in one place, gold values are in the order of 0. - .36 oz/ton. Gold grade increases towards its meeting with steeper dipping veins 5 and 6.

The shape of veins in andesite and slate are different : in the slate, veins either follow bedding planes (vein 7) or planar steep tectonic cleavages (vein 10, Map 5 (a)). In the andesite, they follow arcuate explosion fault or fissure lines (veins 1, 2, 3). Drilling in the Line 9 (DDH 6,7,8) area has shown that a geometry change can occur as a vein goes from slate into chert or volcanics. It is believed that all these veins are closely of the same age and closely related to later stages of the volcanic events which formed the host rock. Deeper in drill holes in the massive grey chert and andesitic tuffs, wandering stringers of massive grey iron sulphide up to 2" wide are found in breccia zones. (Drill logs : DDH 1, 2, 6,7, 8). The massive sulphide gives

low (.002-.07 oz./ton range) gold values. While the grey sulphide may be a carrier phase for gold, it is not uniformly so,or at least assays do not reflect this. There seems to be a further enrichment by later corrosive solution activity on the sulphide phase, where oxidation products such as limonite or manganese dioxide become evident in the breccia zones (L4 area) or where sulphide is replacing siliceous fragments in quartz veins. (Vein 1, E. end). Massive sulphide stringers from the Presunka Fault area do not so far assay. However, a massive sulphide stringer from the top of Pooley Creek, near the Cordoba legal post, gave a .07 oz./ton gold assay in a sample which was about 25% by weight sulphide.

It is evident that not all the gold mineralization is purely in the quartz vein phase. Wallrock alongside veins is marked by green stains of a mariposite-type mineral which gives low (.2 lb./ton range) assays for nickel and/or chrome. Siderite, calcite and limonite in both competent wallrock and shattered hematitic, siliceous or sideritic dyke rubble are also observed. This is also, in places, associated with iron sulphidesplus a little high-temperature quartz which gives high gold values in the DDH 6, 7, 8 area. (Square trench Map : Plan 6, Section 7). The wall rock alteration zones vary from zero width to a fair percentage of the width of a vein on either side of it. It is evident from small amounts of old drill core, and the shape of old trenches on the property dating from the 1930's,that the green (mariposite) alteration was regarded with interest by previous prospectors of the property. It is also quite possible that in some cases the greenish "margins" were an earlier mineralization of fissures later used (or not) by quartz veins and finally by hydrothermal solutions. In these early sulphide injections, iron was reacted to siderite, sulphide sulphur, perhaps to gypsum, and Cr, Ni, etc. to green hydrous silicates. Later Ni and Cr stains in the siliceous component of Ni, Cr, Mn, Zn, Ag (Au), etc. mineralizations in the L 4 area are in evidence.

Late hydrothermal solutions of the hotspring type have also been a carrier of gold and silver. Gold and silver values (usually predominately one or the other) - silver with Mn in the DDH 1, 2 area,and gold with limonite in the DDH 6,7,8 area yield

precious metal values in breccia zones in the chert and in limonite sections in the upper portions of the sections in DDH 6, 7.

The iron (and zinc) sulphide phase seen deeper in DDH 6, 7, 8 as massive sulphide stringers may have been the first extractant phase of gold from sea water, but later oxidation of sulphides, to acid sulphate solutions, with manganese and iron present, were responsible for enriching and remobilizing this first concentration by corroding away most of the carrier sulphide. A certain amount of very finely disseminated gold is present in the hematitic and siliceous and sideritic rubble in faults alongside quartz veins. While probably not economic, it makes for a useful dispersed gold phase as a source of fine gold particles for geochemical anomalies, hence facilitating prospecting for mineralized faults and, thus, for veins.

5.0 COMMENTS ON GEOCHEMISTRY & GEOPHYSICS TO DATE

5.1 Geochemistry:

The geochemistry for gold gave indications of several local anomalies in the high PPB range. Following these up, lead to discovery of the Dino vein, and another short vein fragment 40 m. on to the east of this, in which an assay of 2.54 oz./T gold was obtained (Sample B.C. 17454). Assay of red breccia zones on vein margins give assays such as .008 oz./T gold - low, (B.C. A29-1388 WDGJP 400) but showing some very finely dispersed gold along shatter fault zones and loci for veins. More, very detailed gold geochemical testing is thus recommended in areas where soil cover is mostly over bedrock, to avoid any alluvial concentrate effects from glacial overburden. The gold and silver geochemical anomaly contour map for the Cordoba Grid area (Poloni Report, Sept. 12, 1979 : Plans 6 (Silver), 7 (Gold)), are re-included in the Summary Report (pocket) for reference. Major gold and silver anomaly outlines are shown on Map 5 (A). The fact that veins now known to contain gold and silver coincided with gold-silver anomalies encourages detailed examination and test drilling on other of these anomalies not yet probed in detail.

5.2 Geophysics:

Interpretation of VLF geophysical anomalies to date has been somewhat complicated by the fact that shallowly dipping carbonaceous slates, which are locally graphitic, have been found in areas near the slate-volcanics contact in the upper part of the Cordoba claim . The bottom slate unit is highly carbonaceous, and locally graphitic, so that its conductivity may obscure sulphide reactions. In the Pete claim, the Presunka Fault line, corresponding to a very large VLF anomaly, was graphitic. Nevertheless, VLF reconnaissance found this major structure, which does have veins, felsite dykes and some sulphides in it, besides carbonaceous mylonite and local graphitic slips, all of which are found in other fault-vein systems such as that at Nu-Energy.

Geophysical prospecting is thus worth continuing but should be interpreted carefully. A low magnetic anomaly was found in 1979 on the Cordoba claims, possibly indicating pyrrhotite in the andesite, has not yet been investigated in detail. It lies between two parallel gold anomalies on Line 8 West, just west of gold anomaly 5 on the Cordoba claim, Unit 8 (See Plan 5 (a)), which will be drilled in the next season's program.

6.0 GEOLOGY INFERRED RESERVES

Table I lists reserves inferred by work on the Cordoba and Pete claim areas to date, resulting from surface mapping of the quartz veins, with surface sampling and/or samples from stripping and trenching by hand, backhoe and bulldozer. Detailed mapping of showing areas (Maps 6 - 14) was undertaken to arrive at estimates of vein surface areas. In some cases veins terminated by pinching or fingering out into dykes also using the same fissures, faults or breccia zones, and these lengths are marked without annotations on Table I. Where veins passed under the drift without signs of pinching out, length used in Table I is marked*. In other cases, only part of the vein's length is quoted and also marked*, due to lack of sample information as to grade further along the structure.

Depth estimates used for the particular vein tonnage estimates on Table I are obtained by the rigorous application of the formula D=1/2L, though in some cases there is additional structural inference (diverging dips, strong possibility that veins could extend further downward). This is done to be conservative. Vein's average width is estimated by averaging surface widths over the exposed length. In the case of veins 5, 6, 7 information from drill hole intersections at about 30-40 ft. below surface was also included to form the figure.

Grade is estimated by surface assays, supplemented by drill hole assays and bulk sampling (basis of grade estimates is noted in the Table), where available. Grade of estimates of tonnages and grade is currently considered to be at the "Geologically Inferred" stage. In the 1980 program, work to find more veins, extend present ones, drill known targets at increased depth, and intensive sampling will be used to upgrade the present estimates to proven ore wherever possible, as well as following strike and dip extensions on bearing veins.

In Table I, reserves are separated into 3 categories : "Lowgrade Type Veins"; "High Grade Type Veins"; "Silver-Manganese Chert Breccia plus Gold-Limonite Vein-

Associated" types. The arbitrary grade figure of 0.2 oz./T gold was used to separate the first two cetagories. At gold prices in the $500.00 - $1,000.00 ounce range, material down to 0.2 oz./Ton would be profitable to process in an inexpensive 30 T/D gravity/flotation package mill. Economics of processing the much larger tonnage of materials below 0.2 oz./T in the lowgrade veins would be sensitive to gold price and require a much larger scale of processing plant, with correspondingly larger "front end" capital cost. The "Highgrade" reserves thus offer an immediately highly economic return on investment, and the lowgrade reserves require a much more careful evaluation and a much lower percentage return on investment.

The third category is represented in Table I by the intermittent rich surface showings now crosstrenched over a 150' N 15° E length associated with a brecciated zone in the chert, plus quartz veins,in the line 4 + 50 m E) area of Unit 5 of the Cordoba claim. This is not yet assigned a tonnage estimate,despite surface samples of limonite ochre and quartz vein mineralization carrying up to 3 oz./T gold, and silver assays in black manganese-zinc-copper breccia fillings and replacements yielding up to 21 oz./T silver and .03 oz./T gold. DDH 1 and 2 cut into the most manganiferous zone,and showed about 30' of mineralization of manganeferous-limonite plus small quartz veins. Visually, the intensity of mineralization and the intensity of brecciation both attenuate gradually downward, and the holes bottomed in massive chert and/or andesite. Very low core assays were obtained, including low manganese, which acts as a visual parameter for intensity of mineralization. Some core grinding occurred of the soft manganiferous breccia fillings despite careful drilling, so reassay and an attempt to recover hole sludge now needs to be made. The limonite-gold association closer to a solution conduit, surrounded by silica-manganese silver mineralization further out in fractures off the main solution conduit is a characteristic late hydrothermal type precious metal mineralogical zoning phenomenon. About 600 m. North 15 E of the L4 showing, a highgrade gold-limonite intersection (DDH 7 "Hot 2") is evident in the L9 area. Late hydrothermal activity will "use" the same zones of weakness often also marked by quartz veins, but also tend to "spread" into fracture porosity. Geometry of the breccia zones in the chert may be "tabular" in that shrinkage can cause crackle-brecciation on the margins of chert units, raising the possibility of flat lying mineralized zones in the chert near conduits.

More very detailed geology and some more drilling is obviously necessary to understand the L4 0+50 E phenomenon. In any case such a mineral assemblage may require a different type of processing to recover precious metal values, since values can be very finely divided and require special flotation or leaching.

Numbering of veins and showings in Table I correspond to locations on Maps 5(2) and 5(A)(for the Pete Vein). Note that at 30 T/day, 15,000 T could be milled in about 2 years time.

TABLE I

CURRENTLY GEOLOGICALLY INFERRED VEIN GOLD-QUARTZ POTENTIAL

CUSAC'S CORDOBA & PETE CLAIMS

Category	Map - this Report	No.	Dimensions L x Est. D* x Av. W(ft.)	Inferred Tons (12cf/T)	Inferred Grade Oz./T Au	Basis of Grade Est. (see Table II	Inferred Oz. Gold
I. Lowgrade Type							
E-W	5 (a)	1	675 x 337 x 6.5	127,000	.10	Surface	12,700
Cominco	5 (a)	2	290 x 145 x 10.5	36,800	.10	Surface	3,680
Line 3+50E	5 (a)	4	200 x 100 x 3	5,000	.05	Surface	250
Line 9, Flat	5 (a)	7	150* x 75* x 11	10,330	.11	Surface + 3 DDH's	1,140
				178,330			18,000
II. Highgrade Type							
Dino	5 (a)	3	150 x 75 x 2.5	1,110	3.60	Bulk Test	4,000
Hot	5 (a)	5	230 x 100* x 3.5	6,680	2.2	2 DDH's Surface	14,700
Hot-2	5 (a)	6	80* x 40* x 1.5	400	2.	2 DDH's	800
Pete	5 (b)	20	200* x 100* x 4	6,670	.5	Surface + 2 shafts	?
				14,860			19,500
III. Silver-manganese Chert Breccia + Gold-limonite, Vein Conduit Associated							
L4 + 50E	5 (a)	8	150 x ? x ?	?	0-20. Ag 0-4. Au	Surface	

Notes:

Silver values associated with vein-gold expected to be at least ½ oz. per oz. of gold.

L = Length D = Depth W = Average Width (all in ft.)

*Depth rigorously estimated as D=½L unless specifically noted. ** Part of Vein

cf = Cubic Feet T = Short Tons oz. = Ounces Troy

William D. Gunning

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA John K. Folen

TABLE 2

ASSAYS SUPPORTING GRADE ESTIMATES IN TABLE 1

		Assay No.	Gold oz/ton	Silver oz/ton
DINO VEIN (3)		17459	5.50	1.30
		17460	25.05	5.31
		17461	.94	.32
		17458 (CS-25)	80.64	11.50
	Bulk Sample		3.60	.985
	AVERAGE		23.14	3.88
	EXPECTATION TABLE 1		⟨3.60⟩	⟨ - ⟩
"HOT VEIN" (5)		CS-18 (KK870)	.894	.80
		CS7	3.083	1.25
		KK863	1.0	-
		864	.91	.25
		865	.43	.20
		867	7.33	5.73
		872	1.26	.3
	CORE	DDH6 (17379)	1.98	.38
		DDH7 (17385)	2.47	.67
	AVERAGE		2.24	1.06
	EXPECTATION TABLE 1		⟨2.2⟩	⟨ - ⟩
'HOT' -2 (6)		DDH6 (17380)	.56	.48
		DDH7 (17386)	7.28	5.63
	AVERAGE		3.92	3.05
	EXPECTATION TABLE 1		⟨2.0⟩	⟨ - ⟩

PETE VEIN (20)

1978 Data Report, John Poloni *

WDG

TABLE 2 (con't)

PETE VEIN (20)	Assay No.	Gold oz/ton	Silver oz/ton
	2209	.748	2.56
	2214	.12	.12
	2220	.158	3.14
	18926	.016	5.20
	18927	.03	2.66
	18928	.044	.01
	18929	1.45	4.31
	18933	1.094	2.94
-	-	.30	5.24
	#3	1.465	1.98
	#4	.262	2.6
AVERAGE		.517	2.79
EXPECTATION TABLE 1		<.5>	<->

FOOTNOTE

* J. Poloni. "Report on the Pete and Corboa Mineral Claims. Cassiar Area, Liard Mining Division, for Cusac Industries Ltd. Sept. 6, 1978. Att. S.M.F. Filed June 15, 1979.

FLAT VEIN (7)	DDH6 (17377)	.36	.28
	DDH7 (17384)	.11	.14
	DDH8 (17393)	<.002	-
SURF (leached top)	17403	<.002	.04
" "	CS-17(KK8(9)	.020	TR
(x cut long trench			
	CS-2	.215	.31
AVERAGE		.117	.13
EXPECTATION TABLE 1		<.11>	<->

E-W (7)	CS-19(KK873)	.312	.3
	" 20 "874)	.01	.27
	" 21 "875)	.008	.19
	" 22(17453)	TR	TR
	" 23(17454)	.008	.04
1978	401	.05	.13
	403	.26	.22
	2214	.12	.12
	17454	1.27	.49
AVERAGE		.226	.19
EXPECTATION TABLE 1		<.1>	<->

WD4

TABLE 2 (con't)

"COMINCO" (2)	Assay No.	Gold oz/ton	Silver oz/ton
	762	.002	.02
	763	.023	.04
	765	.023	-
	34412	.390	.22
	2216	.072	.03
	2217	.024	.02
	2219	.098	.26
AVERAGE		.0903	.084
EXPECTATION TABLE 1		<.1>	< - >
L3+30E (4)	758	.003	.04
	759	.002	.02
	760	.10	.04
	2244	.05	.05
AVERAGE		.044	.04
EXPECTATION TABLE 1		<.05>	< - >

J. POLONI JUNE 15/79. S.M.F. PP. 11 & 12.

8.2 Quartz Veins

The Pete Vein has been traced for approximately 300 feet in an east-west direction with widths ranging from 3 to 6 feet. It is generally well mineralized with finely disseminated to blebby tetrahedrite, less frequent inclusion of chalcopyrite, secondary azurite and malachite. To date, free gold has been seen in the area of the two shallow shafts but not elsewhere in the surface exposures. Plan No. 4 assay data suggests the presence of an ore shoot in the vicinity of the two shallow shafts where free gold is found and three samples assayed:

No	Au oz/ton	Ag oz/ton
#3	1.465	1.98
2209	0.748	2.56
18929	1.457	4.31
18933	1.094	2.94
AVERAGE	1.191	2.92 WDG

To the east along the vein, assays indicate that the tenor of the gold decreases but the silver content is appreciably higher. This would tend to indicate that most of the gold is present as free gold and not tied to silver as a natural amalgam.

A program of diamond drilling (section 10) is recommended to further test the extent and tenor of the free gold in the region of the shallow shafts.

WDG

TABLE 3

L4, 0+50E, 150' Length of silver rich area

LINE 4 Area (8)	Assay No.	Gold oz/ton	Silver oz/ton
	34410	4.12	8.81
	17405	.008	.03
	17406	.030	7.52
	17407	3.29	.70
	17408	.012	.08
	17409	.78	.60
	17452	.01	9.15
	CS-15	.048	21.1
	CS-6	4.709	1.79
AVERAGE		1.44	5.52
EXPECTATION TABLE 1		<?>	<->

Although structurally not yet fully understood, area offers interesting potential.

WJG

TABLE 5

Other Quartz Veins

I Low Assays

INDIAN VEIN (15)	ASSAY NO.	Gold oz/ton	Silver oz/ton
	17410	.083	.85
FRED (9)	2241	.17	.11
(16) EAST OF L9 Pits			
	17401	<.002	.03
	17402	.002	.02
	(CS-5) Float	.029	.07
(17) BULL QUARTZ VEIN W side of L9 trenches			
	17404	<.002	.002

II Highgrade Type Mineralization

a) 34415 .45 6.93 (tet) GB
Just E of DDH 6, 7, 8 site

b) 3" vein Quartz Au-tetrahedrite, Presunka Fault Area
7451 1.71 .84

c)
Short vein segment (vein (12), L6, 140E+20N)
7462 2.69 .69

WDH

TABLE 6

Miscellaneous Assays - "Listvenite Alteration"
17465 - Presunka baseline 'Listvenite'
Cu <.01%, Ni = .12%, Cr= .25%
(green color is nickel - chrome silicate)

TABLE 7

Spot Assays - Other Elements

Assay No.	
34406	.03%W
34407	.04%@ W
34410	4.12 oz/t Au, 8.81 oz/t Ag., .19% Cu, 19.8% Zn, .18%Pb
34409	.005 oz/t Au, .10 oz/t Ag, <.01%Cu, .54% Zn, .14% Ni
752	.93 oz/t Au, 4.55 oz/t Ag, 2.60%Zn, .12%N, <.001% Sn
753	.003 oz/t Au, -Ag, .03%Zn, W=.03% (alteration zone carries tungsten)
846KK	<.002 oz/ton Au, .13 oz/t Ag, <.01Zn, .02%W
2229	(property to west) Au -, .05 oz/t Ag, 4.20% Zn, .06% Cd, (zinc carries some cadmium)
17456	Au = .002 oz/t, Ag= .31oz/t Cr=.20%, Sb=.22% (tetrahedrite: argentiferous copper sulfantimonide)
2232	Au = .01oz/t, Ag=.49oz/t, Cu=.06% Zn=.03%, Mn=1.3% (Manganese-silver correlation)
2239(DDH3)	300' W=.01% Mo=.002% specular iron oxide with low W, Mo content (mineral not W/Mo S_2 series)

W96

7.0 PROPOSED PROGRAM

7.1 Post Mortem, 1979 Season Field Program:

Approximate Costs - Cordoba and Pete Claims

Notes: Number of claim units worked on - 5.
Number of claim units "gridded" on 20 meter grid - 4
Feet of Diamond Drilling - 2,000

Costs are allocated by category of effort segregated on a sequence, Phase I through Phase IV. One or more phases can be implemented on a given area in any one season.

Phase I - prospecting, geological mapping, thin section or microscope work, establishment of 20 meter grid on area, geophysics, geochemistry, close-up airphoto mosaic and air photo base map, initial trenching, sampling, assaying, bulk assaying by test mill, etc.

Phase II - Exploratory and test diamond drilling for geology and initial indications of subsurface mineralization grade. Establishment of camp. Building roads.

Phase III - Close-spaced drilling to block out ore.

Phase IV - Purchase of heavy trenching, mine excavation, mine production start-up costs, milling equipment. 6 month costs of mining-milling operation.

Note: Cost of professional services - geological, ore testing, mill design, mine design, photogrammety, etc. is shown here as a separate item.

Approximate 1979 costs

Phase I (Includes consulting)

Camp supplies, costs, establishment of semi-permanent camp, Cordoba grid area	$ 15,000	
Construction of 4-unit 20 meter grid	2,000	
Geochemistry of 4-unit grid	6,000	
Geophysics (magnetometer, EM)	6,000	
Transportation - Cassiar - Camp 3, 3/4 ton vehicles, 2 4WD, 1 2WD	10,000	
Airfares @ 20 man trips, at $300/trip	6,000	
Consulting and related fees	25,000	
Backhoe rental 15 days @ $80/hr.	10,000	
Bulldozer rental, 15 days @ $80/hr. (includes costs of moving on and off property)	10,000	$ 90,000

Phase II

8 DDH's, total 2,000 ft. of core, site NX, skid mounted drill, costs include two 3-mile moves and one short move, plus turning drill on pad	60,000
DIRECT TOTAL FIELD RELATED COSTS, 5 UNITS	$150,000

1979 costs per unit of Phase I and associated consulting
= 90,000/5 = $18,000 per claim unit.

7.2 1980 Projected Program Budget:

Phase I

Another 10 claim units on Cordoba and Pete claims, similar coverage as 1979	$ 220,000	
Additional Phase I activities on original 5 units (mainly backhoe and bulldozer stripping)	30,000	250,000

Phase II

Exploratory and Test DDH's - 1979 Grid area

targets: See Au and Ag anomalies number on Plan 5 (a)
Number of projected holes on given target : 3 H = 3 holes; Plan 5(a).

GEOCHEM ANOMALIES

No. 1	Dino Vein area. Strong anomaly over vein, and extends to south. 3 holes @ 300'.
No. 2	Strong superimposed Au, Ag anomalies just to E of Dino vein. Vein fragment, breccia zone. 3 holes @ 300
No. 3	Strong superimposed Ag, Au anomalies over DDH 1, 2 gold-limonite, 2 silver-manganese surface showings, L3-4, 50E area: 3 holes @ 300'.
No. 4	Strong Au anomaly, L7-8 on baseline - no work yet. 3 holes @ 300'.
No. 5	Au anomaly L8 + 350W - no work done yet 3 holes @ 300'
No. 6	Au anomaly, L3 + 400W. 2 holes @ 300'.
No. 7	Au anomaly, L8 + 400W. 2 holes @ 300'.

Discretionary		
2 holes @ 300'		
CORDOBA 21 holes at 300', loaded cost $30/ft.		
6,300 ft. @ $30/ft.	189,000	
PETE claims - Pete vein area		
3 holes @ 300'		
900 ft. @ $30/ft.	27,000	
PHASE II type drilling		$216,000
Permanent Camp		50,000
Roads (includes one from Cordoba camp to Vines Lake)		40,000
(50% govt. subsidy eventually recovered in road building)		
TOTAL PHASE II		$306,000

PHASE III

Blocking out ore by close-spaced diamond drilling		
(L9 area "Hot" and "Hot - 2" veins)		
5 setups: 8 holes @ 150' & 45° and 60°		
1200 ft. @ 30/ft.	36,000	
If 60° holes hit, 3 @ 60°, 200' depth, from back-off stations		
600 ft. @ 30/ft.	18,000	
200' discretionary, @ 30/ft.	6,000	60,000
Dino Vein, 6 holes @ 250', thus		
1,500 ft. @ 30/ft.		45,000
Pete Vein, 6 holes @ 250', thus		
1,500 ft. @ 30/ft.		45,000
TOTAL		$150,000

DRILLING TO PROVE UP RESERVES

PHASE IV

Heavy Equipment Purchase

30 Ton/Day Rodmill - Gravity - Flotation package plant				
Used equipment, built in Vancouver				50,000
$1\frac{1}{2}$ yd., 30'-reach backhoe,				45,000
and D7 cat, used				55,000
Mining Gear				
	Compressor	15,000		
	Jacklegs	5,000		
	Bits	5 000		
	Pump, hose	5,000		
	Hoist	5,000		
	Cable	3,000		
	Small air slusher	10,000	48,000	
	Blasting supplies		10,000	
	Contingency		2,000	
	Subtotal direct Mining Equipment			60,000	
	Ore Truck, used			15,000	75,000
(Bench and backhoe on Dino vein to 30', at same time as lower level access constructed)					
SUBTOTAL HEAVY EQUIPMENT COSTS					225,000
	Butler Mill building (covers package mill plant)				
	40' x 50' - 2,000 sq. ft. @ $20/ft.				40,000
TOTAL INVESTMENT					$265,000

PHASE IV

Mine and Mill Operational personnel and related supplies.		
Mill 2 operators & mill manager - mines and 1 hoistman,		
Mill manager is senior man. 5 men and 1 manager		
6 month @ $3,500/month		
$21,000/month, 6 months	186,000	
Chemicals, supplies	14,000	
SUBTOTAL		200,000
TOTAL PHASE IV		$465,000

TOTALS

PHASE I	$ 250,000
PHASE II	306,000
PHASE III	150,000
PHASE IV	465,000
	$1,171,000
Contingency = 10%	129,000
TOTAL PROGRAM	$1,300,000

(of this, $265,000 is capital investment)

PART II

8.0 BULK MILLING TEST 500 LB. SAMPLE DINO VEIN ORE CORDOBA CLAIMS FOR CUSAC INDUSTRIES LTD.

SUMMARY

A 560 lb. sample of gold quartz ore from CUSAC Industries Ltd. Dino Vein on their Cordoba property, Table Mountain, Cassiar, B.C. was run in a small continuous ballmill - jig - classifier - flotation shaking table setup. 60 pounds of fine crushed feed was kept as a heads sample, and 500 pounds were milled.

Heads grade ran 3.60 oz./Ton in gold and .985 oz./Ton in silver. A total of 10 pounds of sulphides, containing the gold, were recovered, indicating that the portion of the vein sampled ran 2% total sulphides. The richest part of the vein can run over 10% sulphides, so the grade of ore used in the test is felt to be conservative.

The sample was obtained randomly from the surface of the vein, with no attempt to be selective as to grade. 45% of the gold was separated as coarse free-gold in the jig. The doré bar from the amalgamated jig cons was kept for demonstruation with the report (Photo T-11). The test was conducted by Universal Mechanical Seals Ltd. of Port Moody under the supervision of the authors.

9.0 DESCRIPTION OF TEST

A 560 lb. sample of ore was randomly cut from the top of the south portion of the Dino Vein, November, 1979. The ore was sacked and trucked to storage in Vancouver under supervision of W.D. Groves where it remained locked up until the test.

The test was performed by Mr. Peter Chapko and Mr. George Spalding of Universal Mechanical Seals, Inc. who own a test mill facility in Port Moody, B.C. J. Poloni and W.D. Groves saw the test setup and W.D. Groves supervised the actual grinding of the ore. The test was started on Saturday, December 15 and ran the 16th, 17th and 18th. The mill was run a total of 20.5 hours on the ore, giving a milling rate of about 25 lb./hour. Features of the circuit are shown in Figure 1 and Photos T4 and 5. Table T-1 gives the results of the test. The ore was first fine crushed, and a 60 lbs. sample of the fine crush feed was grab sampled at intervals. This 60 lb. sample was then mixed and rolled, and an 8 lb. sample of this was taken to Bondar Clegg Ltd., for assay in quarters. Average heads ran 3.60 oz./Ton Au and .985 oz./Ton Ag, with a 10% deviation of individual quarter assays about the arithmetic mean, which is reasonable variation for a sample containing free gold (see Table T-2). The mill circuit had various notable features. The grind of the tails is about 100-150 mesh, and that of the small amount of fines caught on the blanket tails water filter is about 500 plus mesh. The grind in the 18" mill, using mostly 1-2" balls, was gentle enough to liberate gold without making appreciable flour or leaf. The jig before the spiral classifier took the coarse gold and sulphides out of the circuit as soon as the lifter discharge removed them from the mill. (Retention of gold in the mill, because of the positive discharge feature, was small). Addition of flotation reagents : Dow froth 250 and xanthate collector, copper sulphate activator into the classifier-mill loop prevented overgrinding sulphides, and also helped float fine, flat gold. The overflow discharge from the spiral classifier helped trap quartz in the grinding loop to promote liberation of fine god. Sulphides were scavenged in 3 forward feed cells, plus 1 accumulator froth cell.

Coarse gold and sulphides from the jig were panned and the coarse quartz and middlings returned to the circuit during the test. The final jig con was then amalgamated by grinding with a small amount of mercury and caustic for 20 minutes. Flotation reagents prevented amalgamation without grinding. Grinding also had the advantage of rending the jig sulphide phase more homogeneous for assay purposes.

Before the jig con was separated, binocular microscopic photographs were taken by Dr. D. Waldron of the mixed jig con, as well as the flotation con and table con. Coarse gold, up to 1/10" was separated into the jig con (Photo T-6). Fine, flat gold of about 150 mesh was visible in the float con under the microscope (Photo T-9), on the "toe" of the pan when the float con was panned. Very small rolled-up shapes of gold were seen - a few specks - in the table con (Photo T-10), which otherwise consisted of fine quartz sand. The final tails water filter fines were not inspected under the microscope, but contained almost no sulphides.

Gold and sulphides in place in the vein quartz are shown in Photos T-1 and T-2. The pasty amalgam from the ground and amalgamated jig con was squeezed through a fine chamois and the resulting gold amalgam was smelted by Delta Refining and Smelting to doré bullion . The doré was weighed, 4 tiny holes drilled into the flattened button and the fineness of the button's drillings assayed by Delta. The flattened button was imprinted with the company name for identification purposes, and retained to be shown with the report (Photo T-11).

Jig sulphide con, float con, float tails, table con and table tails, the blanket filter fines and the mercury left over from the amalgamation were assayed at General Testing Labs of Vancouver. Assay results are attached from the three assayers.

Apart from giving a useful bulk assay of a fairly large sample of the vein material, the test indicated that no severe problems in milling of the ore are to be expected in a standard gravity-float mill circuit (such as that in use on similar gold-quartz at Nu-Energy). The test circuit flowsheet is thus amenable, with minor changes, to a production scale circuit in which final engineering optimization could take place.

9.1 Miscellaneous Notes - Test:

No upgrading of rough float con was carried out.
Ore was crushed to 3/8" minus.
Circuit-mill, classifier, etc. were cleaned after test - the pannings were added in to the jig con. Some very fine flow gold had settled in the classifier.
Gold balance around the mill-classifier-flotation circuit was 99.46% of feed.

FIGURE 1 — EQUIPMENT

DIAGRAM OF CHAPPA TEST MILL CIRCUIT.

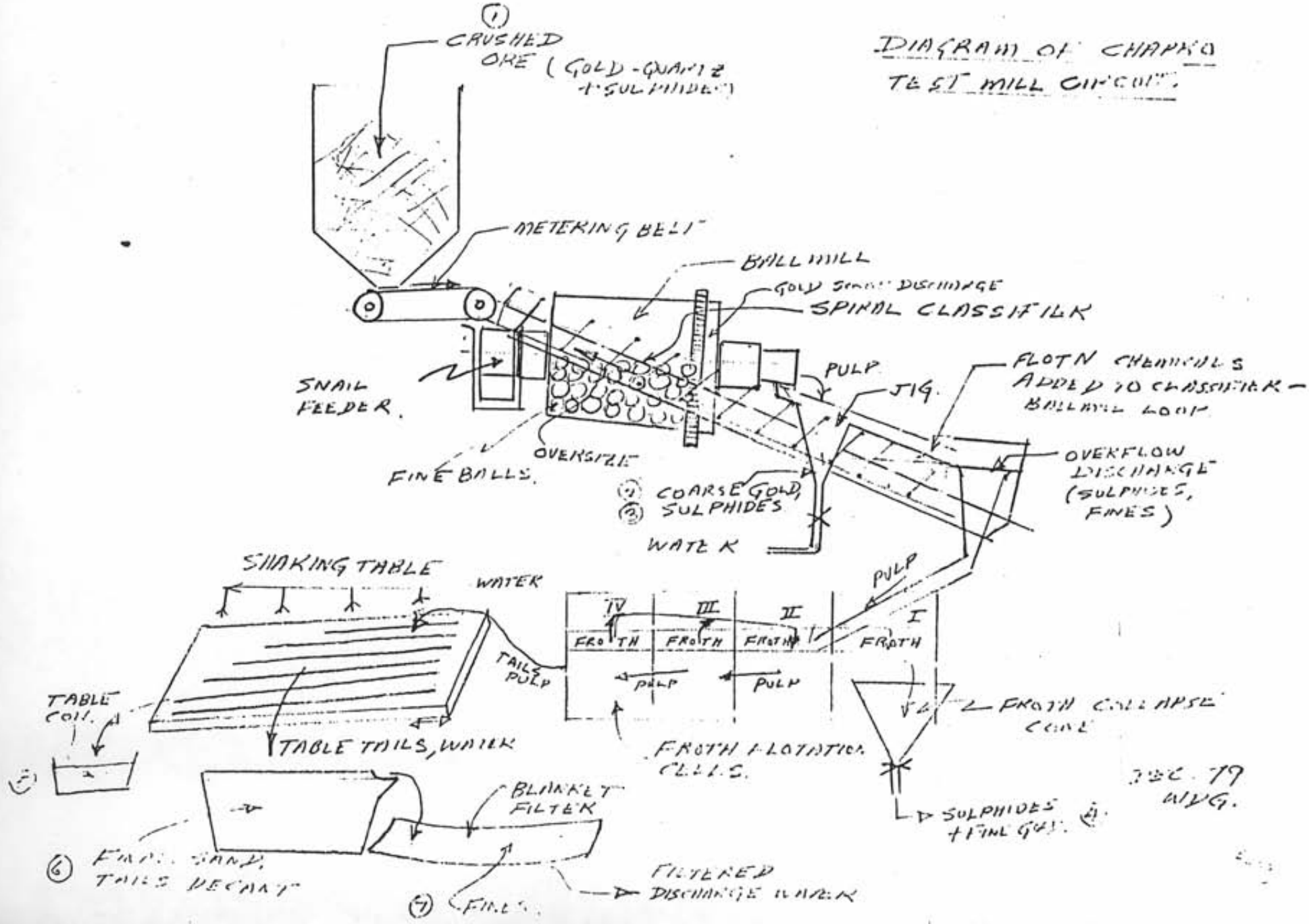


TABLE T-1

GOLD AND SILVER MATERIAL BALANCE

Stream	Dry Wt. (lbs.)	Troy Assay oz./Ton Au	Troy Assay oz./Ton Ag	Troy Total oz. Metal Au	Troy Total oz. Metal Ag
Crushed Feed	500	3.60 (Table T-2)	0.985	0.900	0.246
Jig:	2.15				
a) Gold Amalgam	15.5 gms. (=.455 oz.) 89.24% Au, 9.97% Ag			0.407	0.0455
b) Free Hg		(87.32 mg.	21.7 mg.)	0.00256	0.00064
c) Extracted Sulphides					
Sulphides	2.15	25.22	6.45	0.0272	0.0069
Jig Total					
Flotation Sulphide Con	8.72	85.88	24.58	0.374	0.107
Flotation Sand Tails	489.13*	0.345	0.31	0.0844	0.0759
(Tails, % of feed metal)				(9.38%)	(30.8%)
		oz. accounted for		0.89506	0.2297
		% unaccounted for		0.54%	6.5%
Table Con	10 lbs.*	0.120	0.15	0.006	0.00075
Table Tails	478.13 lbs.*	0.138	0.14	0.033	0.034
Tails Water Filter Mud	1 lb.*	0.381	0.26	0.00038	0.00026
Total Table Outstreams				(.0339)	(.03501)

Jig Total

Flotation Sulphide Con.	8.72	85.88	24.58	0.374	0.107
Flotation Sand Tails (Tails, % of feed metal)	489.13*	0.345	0.31	0.0844 (9.38%)	0.0759 (30.8%)
		oz. accounted for		0.89506	0.2297
		% unaccounted for		0.54%	6.5%
Table Con	10 lb.*	0.120	0.15	0.006	0.00075
Table Tails	478.13 lbs.*	0.138	0.14	0.033	0.034
Tails Water Filter Mud	1 lb.	0.381	0.26	0.00038	0.00026
Total Table Outstreams				(.0339)	(.03501)

Notes:

Balance around feed-grind-settle float circuit - very good closure 99.46%

Balance around table not so good -
perhaps loss of extreme fines in the tails water
(only 40.5% of gold fed to the table accounted for)

34 gms. = 1 troy oz. 1000 mg. = 1 gm. 2000 lb. = 1 ton
Au = Gold Ag= Silver Hg = Mercury

Total Milling Time - 20.5 hours. Rate - 25 lb./hour

Panned mill circuit cleanup cons added to jig con

* By subtraction

TABLE T-2

BONDAR CLEGG

Bondar Clegg Assay Report #A29-1640, December 17, 1979

Crushed Heads Sample #13877 assayed in quarters

Samples (gms.)			Au. oz./Ton	Ag. oz./Ton
No. 1	341		3.87	1.02
No. 2	323		3.52	1.08
No. 3	327		3.61	.95
No. 4	299		3.26	.89
Total	3632	(8 lb.s)	3.60 average	.985 average

= 10% variation about the mean

At $600/oz. Gold, $ 20/oz. Silver

3.60 x 600	2,160
0.985 x 20	19.7

Value of Precious Metals/Ton indicated in feed

$ 2,179.7

TABLE T-I

GOLD & SILVER MATERIAL BALANCE

Stream	Dry Wt. (lbs.)	Troy Assay oz./Ton Au	Troy Assay oz./Ton Ag	Troy Total oz. Metal Au	Troy Total oz. Metal Ag
Crushed Feed	500	3.60 (TABLE T-2)	0.985	.900	.246
Jig:	2.15				
a) Gold Amalgam	15.5 gms. (=.455 oz.) 89.24% Au, 9.97% Ag	—	—	.407	.0455
b) Free Hg		(87.32 mg.	21.7 mg.)	.00256	.00064
c) Extracted Sulphides	2.15	25.22	6.45	.0272	.0069
Jig Total					
Flotation Sulphide Con	8.72	85.88	24.58	.374	.107
Flotation Sand Tails	*489.13	.345	.31	.0844	.0759
(Tails, % of feed metal)				(9.38%)	(30.8%)
		oz. accounted for		.89506	.2297
		% unaccounted for		0.54%	6.5%
Table Con	*10 lbs.	.120	.15	.006	.00075
Table Tails	*478.13 lbs.	.138	.14	.033	.034
Tails Water Filter Mud	1 lb.	.381	.26	.00038	.00026
Total Table Outstreams				(.0339)	(.03501)

Notes:

Balance around feed-grind-settle float circuit - very good closure 99.46%

Balance around table not so good - perhaps loss of extreme fines in the tails water (only 40.5% of gold fed to the table accounted for)

34 gms.=1 troy oz. 1000 mg.=1 gm. 2000 lb.=1 Ton
Au=Gold Ag=Silver Hg=Mercury

Total Milling Time=20.5 hours. Rate = 25 lb./hour

Panned mill circuit cleanup cons added to jig con.

* By Subtraction

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8654
NO.

William D. Groves.

CERTIFICATE

I, William D. Groves, do hereby certify that:

1. I, William D. Groves, am a consulting geological engineer, residing at #425-1915 Haro Street, Vancouver, British Columbia.

2. I am a graduate of the University of British Columbia, (B.A.Sc., Geological Engineering, 1960). I am a graduate of the University of Alberta, B.Sc., in Chemical Engineering in 1962, and of the University of British Columbia with a Ph.D. in Chemical Engineering in 1971.

3. I am a Registered Professional Engineer of the Province of British Columbia (#8082).

4. I have practiced my profession since 1960.

5. I have worked on CUSAC's Table Mountain properties in the periods of July 19-22, Sept.1-Oct. 20, and Nov. 5-12, 1979; in conjunction with Mr. S. Presunka (Geophysicist) and Mr. J. Poloni, P. Eng., geologist, G. and F. Brett and others, doing geology and sampling, jointly supervising 1979 drilling with J. Poloni, escorted a bulk sample from the property to Vancouver, November 12-14, 1979, and supervised the milling of the bulk sample December 15-17, and subsequently analyzing the results.

   I have worked closely with Mr. J. Poloni, P.Eng., professional engineer, who supervised the program on the property particularly in the earlier part of the Summer, and with whom this report is jointly written.

6. I have not received, directly or indirectly, nor do I expect to receive any interest, direct or indirect, in the property of CUSAC Industries Ltd., or of any affiliates thereof, nor do I beneficially own, directly or indirectly, any securities of CUSAC Industries Ltd., or any affliate thereof.

7. I hereby consent to the use of this report in a Prospectus or Statement of Material Facts to be filed with the Vancouver Stock Exchange and Superintendent of Brokers for British Columbia.

Respectfully submitted,

William D. Groves

Dr. W.D. Groves, P.Eng.

DATE: February 4, 1980

SUMMARY OF NOTATION

Mn	Manganese
Qtz.	Quartz
Fe	Iron
W.	Weathering
Brecc.	Breccia
Cht.	Chert
Chty.	Cherty
⌀	Transition Phase (↾) direction of injection
Frax.	Fractures
∠ = 40°	40° angle between axial direction and foliation measurement
Dk.	Dark
Arg.	Argillite
Δ = 6'	Vertical trench wall height = 6 ft.
Blk.	Black
Volc.	Volcanic
Irreg.	Irregular
Xline	Crystalline
F.G.	Fine Grained
Poss.	Possible
Sphal.	Spalerite
Sil.	Silicious
A	Andesite
AT	Andesite Tuff

CERTIFICATE

I, John R. Poloni, of 5502 - 8B Avenue, in Delta, in the Province of British Columbia,

DO HEREBY CERTIFY THAT:

1. I am a Consulting Geologist.

2. I am a graduate of McGill University of Montreal, Quebec, where I obtained a B.Sc. degree in Geology, in 1964.

3. I am a registered Professional Engineer in the Geological Section of the Association of Professional Engineers of the Province of British Columbia.

4. I have practiced my profession since 1964.

5. I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.

6. I have personally visited the Pete and Cordoba mineral claims during the Summer and Fall of 1979 and assisted in the preparation of this report.

7. I have no interest in the properties and securities of CUSAC Industries Ltd., nor do I expect to receive or acquire any.

8. I hereby consent to the use of this report in a Prospectus or Statement of Material Facts to be filed with the Vancouver Stock Exchange and Superintendent of Brokers for British Columbia.

Dated this Feb 4/80

Respectfully submitted,

John R. Poloni

John R. Poloni, P. Eng.

PROFESSIONAL ENGINEER OF BRITISH COLUMBIA

MINERAL ACT - PROVINCE OF BRITISH COLUMBIA

Record of Mineral Claim

FORM G

MAP NO. 104 P/4E g

RECORD NO. 365

G RECEIPT NO. 111899 E RECORDED AT Victoria B.C. THIS 7th DAY OF June 19 77

DO NOT WRITE IN SHADED AREAS

MINING RECORDER

LIARD MINING DIVISION

Affidavit for Mineral Claim

I, Guibud Erell (NAME) AGENT FOR _____ (NAME)

890 - W. Pender #205 (ADDRESS) _____ (ADDRESS)

VALID SUBSISTING F.M.C. NO. 153785 VALID SUBSISTING F.M.C. NO. _____

MAKE OATH AND SAY:- I COMMENCED LOCATING THE Pete MINERAL CLAIM

ON THE 5 DAY OF June 19 77 AT 9:00 A.M. (TIME - INDICATE A.M. OR P.M.) AND COMPLETED THE LOCATION

ON THE 5 DAY OF June 19 77 AT 10: A.M. (TIME - INDICATE A.M. OR P.M.) CONSISTING OF

3 (NUMBER) UNIT LENGTHS West (DIRECTION) AND 6 (NUMBER) UNIT LENGTHS North (DIRECTION) AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METAL TAGS NO. 11407. WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS.

IDENTIFICATION POST(S) NOT PLACED WERE N1, N2, N3, N4, N5; W1, W2, W3 N, W3 N2, W3 N1, W3 S, NW1 W1, N1 W2.

CHECK "X" APPLICABLE SQUARE

[X] THE LEGAL CORNER POST

† [ ] THE WITNESS POST FOR THE LEGAL CORNER POST

} IS SITUATED: Near

Cassiar B.C. South of Cassiar LK. in Poley Pass. The located Sky Claim is Approx. 1 Mile North of the North Boundary of Pete Claim. L.C. is Approx. 800' West of Poley Cug and Approx 6,000 Metres North of the Zenith or drop off point of Poley Pass. LCP of Pete is 6,100 Metres South of CG-6536.

(SPECIFICALLY DESCRIBE POSITION OF POST RELATIVE TO KNOWN TOPOGRAPHICAL OR SURVEYED FEATURES THAT RELATE TO FEATURES ON MAP)

† BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST _____ °

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST _____ °

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN, ACCEPTABLE TO THE MINING RECORDER, OF THE LOCATION.

SWORN AND SUBSCRIBED TO AT _____

THIS _____ DAY OF _____ 19 ____ BEFORE ME

* _____ (SIGNATURE)

* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPOWERED TO TAKE AFFIDAVITS BY THE EVIDENCE ACT OF BRITISH COLUMBIA.

111899 E 210 00

MR OR SMR STAMP

NO. OF UNITS 18

WORK NUMBERS	CLAIMS	MINING RECEIPT AND DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CREDIT (PER YEAR) WORK UNIT(S)	CREDIT (PER YEAR) RENTAL IN $'S	TRANSFERS (B/S'S, ASSIGNMENTS, CONVEYANCES)
21900/917		June 2/78	P	1979			June 1, 1979 #2301 B/S all interest to Cusac Industries Ltd.
30045-62		Apr 23/79	P	1980			

CENTRAL RECORDS

					CREDIT		TRANSFERS

OPTIONS, AGREEMENTS, ETC.

GROUPING NOTICES, INCLUDING NAMES OF CLAIMS

-y 9/78 #2250 AGREEMENT between GUILFORD H. RETT and CUSAC INDUSTRIES LTD.

INSPECTOR'S REPORT

SECTION OF LEGAL CORNER POST AS INDICATED ON SKETCH VERIFIED _____ AMENDED _____

DO NOT WRITE IN THIS SHADED AREA

REPORT NUMBER _____

MINERAL ACT - PROVINCE OF BRITISH COLUMBIA

Record of Mineral Claim
FORM G

MAP NO. 104 P/4E g — RECORD NO. 367

MINING RECEIPT NO. 111899 E — RECORDED AT Victoria, B.C. THIS 7th DAY OF June, 19 77

DO NOT WRITE IN SHADED AREAS

MINING RECORDER — LIARD MINING DIVISION

Affidavit for Mineral Claim

I, Gerhard Pratt (NAME) AGENT FOR _____ (NAME)

890 W. Pender #205 (ADDRESS) _____ (ADDRESS)

VALID SUBSISTING F.M.C. NO. 153785 VALID SUBSISTING F.M.C. NO. _____

MAKE OATH AND SAY:- I COMMENCED LOCATING THE Cordoba MINERAL CLAIM

ON THE 5 DAY OF June, 19 77 AT 10:00 A.M. (TIME - INDICATE A.M. OR P.M.) AND COMPLETED THE LOCATION

ON THE 5 DAY OF June, 19 77 AT 10:30 (TIME - INDICATE A.M. OR P.M.) CONSISTING OF

2 (NUMBER) UNIT LENGTHS N (DIRECTION) AND 6 (NUMBER) UNIT LENGTHS W (DIRECTION) AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METAL TAGS NO. 11408, WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS.

IDENTIFICATION POST(S) NOT PLACED WERE N_1, N_2, N_2W_1, N_2W_2, N_2W_3, N_2W_4, N_2W_5, N_2W_6, W_1, W_2, W_3, W_4, W_5, W_6, W_6N_1, N_1N_2.

CHECK "✓" APPLICABLE SQUARE

[✓] THE LEGAL CORNER POST

† [ ] THE WITNESS POST FOR THE LEGAL CORNER POST

IS SITUATED: in the Cassiar District, South of Callison Lk. and Due South of the Sky (IF SKELETON DESCRIBE POSITION OF POST RELATIVE TO KNOWN TOPOGRAPHICAL OR SURVEYED FEATURES THAT RELATE TO FEATURES ON A MAP)

Claim. The Cordoba Claim joins due South of the Sky Claim. I.C 900 Metres South East of Callison Lk. I.C is 2000 metres South of L.6531 G.G.

† BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST _____ ° _____

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST _____ ° _____

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN, ACCEPTABLE TO THE MINING RECORDER, OF THE LOCATION.

SWORN AND SUBSCRIBED TO AT _____

THIS _____ DAY OF _____ 19 ____ BEFORE ME

* _____

* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPOWERED TO TAKE AFFIDAVITS BY THE EVIDENCE ACT OF BRITISH COLUMBIA.

SIGNATURE

111899F 210 00

MR OR SMR STAMP

NO. OF UNITS 12 — WORK TO BE DONE PER YEAR

WORK NUMBERS	C/L IN $	MINING RECEIPT AND DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CREDIT: WORK UNIT(S)	CREDIT: RENTAL IN $'S	TRANSFERS (B/S'S, ASSIGNMENTS, CONVEYANCES)
21930/941		June 2/78	P	1979			June 1,1979 #2301 B/S all interest to Cusac Industries Ltd.
30075-86		Apr 23/79	P	1980			

CENTRAL RECORDS

					CREDIT		TRANSFERS

OPTIONS, AGREEMENTS, ETC.

GROUPING NOTICES, INCLUDING NAMES OF CLAIMS

INSPECTOR'S REPORT

Oct 15/79

DO NOT WRITE IN THIS SHADED AREA

REPORT NUMBER 4/122 (L/I 1793/79)

MINERAL ACT - PROVINCE OF BRITISH COLUMBIA

Record of Mineral Claim

FORM G

MAP NO. 104 P/4E g

RECORD NO. 366

MINING RECEIPT NO. 111899 E RECORDED AT Victoria B.C. THIS 7th DAY OF June 19 77

DO NOT WRITE IN SHADED AREAS

MINING RECORDER

LIARD
MINING DIVISION

Affidavit for Mineral Claim

I, Guilford Brett (NAME) AGENT FOR _____ (NAME)

890 W. Pender #205 (ADDRESS) _____ (ADDRESS)

VALID SUBSISTING F.M.C. NO. 153785 VALID SUBSISTING F.M.C. NO. _____

MAKE OATH AND SAY:- I COMMENCED LOCATING THE Tara MINERAL CLAIM

ON THE 5 DAY OF June 1977 AT 10:00 (TIME - INDICATE A.M. OR P.M.) AND COMPLETED THE LOCATION

ON THE 5 DAY OF June 1977 AT 10:30 (TIME - INDICATE A.M. OR P.M.) CONSISTING OF

2 (NUMBER) UNIT LENGTHS S (DIRECTION) AND 6 (NUMBER) UNIT LENGTHS W (DIRECTION) AND I HAVE IMPRESSED ALL THE REQUIRED INFORMATION

ON METAL TAGS NO. 33686 WHICH HAS BEEN SECURELY FASTENED TO THE POSTS AS REQUIRED UNDER THE REGULATIONS.

IDENTIFICATION POST(S) NOT PLACED WERE ~~No~~, S1, S2, S2W1, S2W2, S2W3, S2W4, S2W5, S2W6, W1, W2, W3, W4, W5, W6, S1, ~~No~~ No.

CHECK "✓" APPLICABLE SQUARE

[✓] THE LEGAL CORNER POST

† [ ] THE WITNESS POST FOR THE LEGAL CORNER POST

IS SITUATED: Near

Cassiar B.C. South of Callison Lk. Tara Claim joins Cadoba to the North, and Pete to the South. (900 Metres West From Callison Lk.) Said Post Tara is 2,000 Metres South of C.G. 6531 to Legal Corner Post.

ACCURATELY DESCRIBE POSITION OF POST RELATIVE TO KNOWN TOPOGRAPHICAL OR SURVEYED FEATURES THAT RELATE TO FEATURES ON THE MAP

† BEARING AND DISTANCE TO TRUE POSITION OF LEGAL CORNER POST FROM THE WITNESS POST _____ ° _____

BEARING AND DISTANCE FROM IDENTIFICATION POST TO WITNESS POST _____ ° _____

I HAVE COMPLIED WITH ALL THE TERMS OF THE MINERAL ACT AND REGULATIONS PERTAINING TO THE STAKING OF MINERAL CLAIMS AND HAVE ATTACHED A PLAN, ACCEPTABLE TO THE MINING RECORDER, OF THE LOCATION.

SWORN AND SUBSCRIBED TO AT _____

THIS _____ DAY OF _____ 19 ____ BEFORE ME

* _____

SIGNATURE

* THIS AFFIDAVIT MAY BE TAKEN BY A PERSON EMPOWERED TO TAKE AFFIDAVITS BY THE EVIDENCE ACT OF BRITISH COLUMBIA.

111899F 210

MR OR SMR STAMP

NO. OF UNITS 12 WORK REQUIREMENT $ RENTAL REQUIREMENT $ PER YEAR

WORK NUMBERS	C/L IN $	MINING RECEIPT AND DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CREDIT: WORK UNIT(S)	CREDIT: RENTAL IN $'S	TRANSFERS (B/S'S, ASSIGNMENTS, CONVEYANCES)
21918/929		June 2/78	P	1979			
30063-74		Apr 23/79	P	1980			

CENTRAL RECORDS

WORK REQUIREMENTS — RENTAL REQUIREMENT $10.00 PER $200.00 ACRE $20.00 PER $200.00 C/L

WORK NUMBERS	CLAIMS	MINING RECEIPT AND DATE RECORDED	TYPE OF WORK	YEAR OF EXPIRY	CREDIT		TRANSFERS (B.S'S, ASSIGNMENTS, CONVEYANCES)
					WORK UNITS	RENTAL UNITS	

OPTIONS, AGREEMENTS, ETC.

GROUPING NOTICES, INCLUDING NAMES OF CLAIMS

INSPECTOR'S REPORT

... OF LEGAL CORNER POST AS INDICATED ON SKETCH VERIFIED Oct 15/79 AMENDED

REPORT NUMBER 4/123 (I/T 1792/79)

DO NOT WRITE IN THIS SHADED AREA

List of References - Geology

1. Progress Report on the Pete and Cordoba Mineral Claims, Cassiar Area, Liard M.D.
for Cusac Industries Ltd.
by John R. Poloni, B.Sc., P. Eng.
September 12, 1979
(Includes and summarizes 1979 Geophysical Surveys & Maps of S. Presunka, Geophysicist)

2. G.S.C. Memoir 319 by H. Gabrielse, 1954
incl. Map 1110A. McDame Area, Cassiar District, B.C. 4 mi = 1 in Map & its Notes included.

3. Cassiar Map Area (104/P) A. Panteleyev 1978
(Map 2 (B) included
B.C. Dept. of Mines. Cassiar Stock Area.

4. J. Poloni. "Report on the Pete and Cordoba Mineral Claims. Cassiar Area, Liard Mining Division for Cusac Industries Ltd. September -, 1978,
Att. S.M.F. Filed June 15, 1979.

Plan 1 ↑N Area Map, Cassiar Area Road Map, Showing Claim Area 1" 50 mi.


6a
7c
McDame
Plan 2 (a)
N
G.S.C. McDame Area.
Area structures, Rock
Units, Gabrielse, 1954
1" = 4 mi.
MAP 110A
MEMOIR 319.

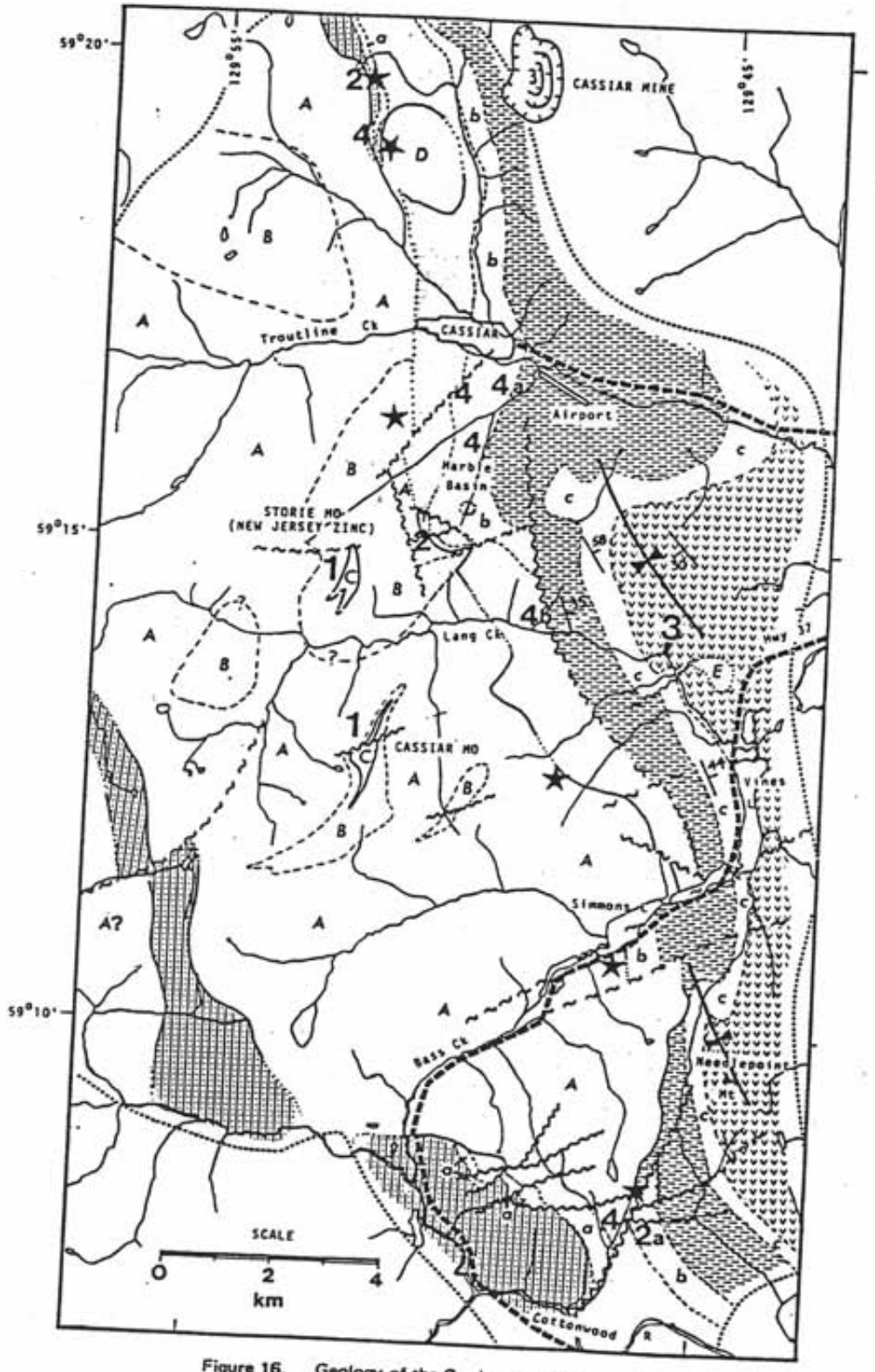
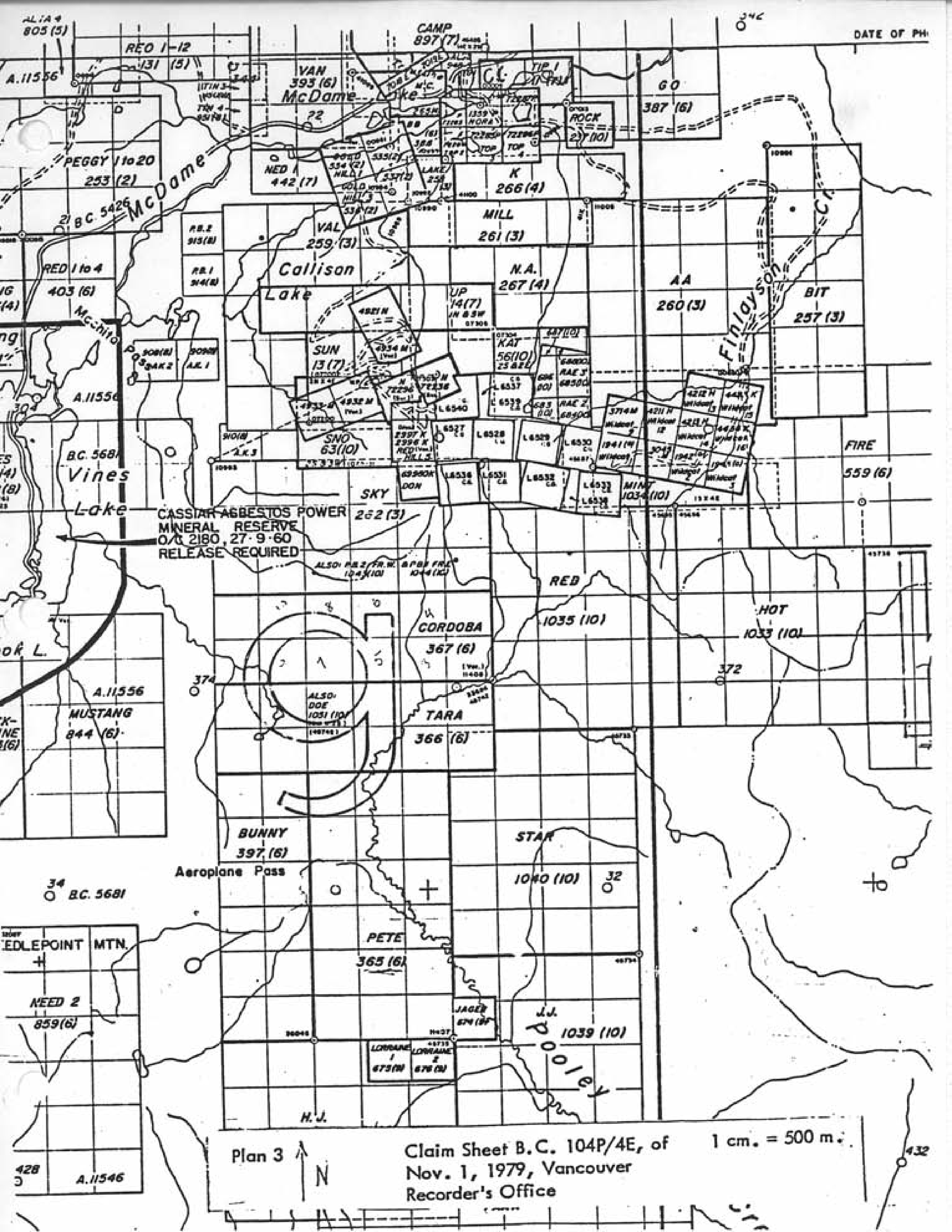


Figure 16. Geology of the Cassiar map-area.

Plan 2 (b)

Cassiar Stock Map Adjoining to West Panteleyev, 1978

1" = 2 mi.



Plan 3 N

Claim Sheet B.C. 104P/4E, of Nov. 1, 1979, Vancouver Recorder's Office

1 cm. = 500 m.

Plan 4

N

Topography Map, Upper Pooley Creek Area, with Table Mountain Claims Shown

1 cm. = 500 m.

DESCRIPTIVE NOTES

— GABRIELSE, 1954

ame map-area is accessible by motor vehicle via the Alaska Highway he Cassiar Road; the latter runs from mile 648.5 to Cassiar, a distance out 87 miles. The Cassiar-Stewart Road, under construction, leaves Road 1 mile east of McDame Lake and runs southerly along , Bass Creek, Cottonwood River and Dease River, to Dease tuous branch road, usable only by trucks and four-wheel-drive ies, follows McDame Creek to the old post of McDame on Dease r. Dease River is navigable throughout its course, but near its mouth Mile and Four Mile Rapids require careful navigation. Pack-horse afford access to most of the map-area and horse feed is generally inable. Timber-line is about 4,500 feet above sea-level. Many well ibuted lakes can be used by aircraft available at Watson Lake.

The map-area includes parts of two main physiographic units—Liard and Cassiar Mountains—and a number of subdivisions of these . Liard Plain, to the northeast, is relatively flat and heavily covered drift. The western border of the Rocky Mountain Trench forms a nct straight escarpment where it enters the area from the southeast, t merges with the Liard Plain north of Red River. Dease Plateau, west e Liard Plain, is characterized by northwesterly trending ridges of low oderate relief. Horseranch Range, bordered to the east by Dease eau and to the west by the valleys of Dease and Rapid Rivers, extends herly from Looncry Lake as a high, unbroken ridge for almost 30 miles. ms an outlying part of the Cassiar Mountains to the southwest. The est point in the range is 7,300 feet in elevation and about 5,000 feet e Dease River, the maximum relief in the map-area. The southwestern southern parts of the area are occupied by the Cassiar Mountains, gged region with a maximum relief of about 4,000 feet.

During Pleistocene time, ice moving northeasterly and easterly, ered the entire area except possibly a few of the highest peaks.

The Horseranch group (A), a regionally metamorphosed and locally altered assemblage of Cambrian and/or Precambrian sedimentary , as much as 7,500 feet thick, underlies Horseranch Range. These s, exposed in a doubly plunging anticline, are bounded by faults and so that their relations to other rocks are unknown.

A conformable sequence of Precambrian and Lower Cambrian lime- , quartzite, and shale, the Good Hope (1, 2) and Atan (3, 4) ps respectively, occupy mainly a northwesterly trending, complex cl um on the northeast flank of the Cassiar Mountains. Precambrian be as much as 4,000 feet thick but the base is not exposed. ssiliferous Lower Cambrian strata are at least 3,000 feet thick.

Highly contorted Cambro-Ordovician rocks of the Kechika group (5) ormably overlie the Atan group (3, 4). In the southwestern and southern s of the area Cambro-Ordovician strata are mainly dark grey argil- ous rocks as much as 1,000 feet thick, whereas in the northeastern eastern parts they are mainly light buff and grey calcareous and llaceous rocks more than 2,500 feet thick. Bodies of greenstone, aps mainly or entirely intrusive, are common in the Kechika group (5).

Northeast and east of the major synclinorium in the southwest part e map-area, the Walker group (5) is overlain disconformably (7) by iliferous cherty dolomites and generally non-fossiliferous sandy dolo- s and dolomitic sandstones of the Ordovician and Silurian Sandpile p (6a, 6b). On the limbs of the synclinorium and in several places of it, however, strata probably equivalent to the Sandpile group 6b), but lacking fossiliferous cherty dolomite, rest directly on Lower ovician rocks. Highly altered dykes and sills of greenstone have in- ed the dolomitic rocks.

Laminated dolomite of Silurian and/or Devonian age (6c) conform- overlies Silurian strata on the limbs of the synclinorium. Dolomite ccia (6d) of Silurian and/or Devonian age occurs in a few places.

he McDame group (7a, 7b) comprises a lower member of fossiliferous, k, fetid dolomite from 350 to 550 feet thick, and an upper member of platy limestone from 175 to 275 feet thick. This group unconformably rlies rocks ranging in age from Cambro-Ordovician to Silurian and/or onian.

An assemblage of Upper Devonian and Lower Mississippian volcanic ... rocks more than 15,000 feet thick—the Sylvester group -conformably (?) overlies the McDame group (7a, 7b) on the limbs of synclinorium in the southwest part of the map-area.

Lenses, sills, and stocks of ultramafic rocks (9) cut the Sylvester up and are believed to be of Lower Mississippian age.

A marked unconformity indicates the base of the Middle Mississippian (10). In the south-central part of the map-area, carbonate rocks oup, as much as 1,000 feet thick, overlie the Sylvester group (8); Sheila Lake they overlie rocks of the Kechika group (5).

Granitic rocks of the Cassiar intrusions (11), probably emplaced in sozoic time, underlie the rugged region in the southwest part of the a

The youngest consolidated sedimentary rocks in the area (12), of tiary and earlier age, are coal-bearing along Rapid River. Basaltic rusive rocks of Tertiary or Pleistocene age (13) form a few small out- s along Rapid River

A ... drift of glacial, glacio-fluvial, and fluvial origin (14)

Rocks underlying the Liard Plain and Dease Plateau are highly fold and faulted. In particular, thin-bedded, incompetent Cambro-Ordovici strata have been intensely deformed and cleavage has been develop to a high degree. The Horseranch group (A) is exposed in a relative simple, doubly plunging anticline bounded on the west and southeast major faults. The Cassiar Mountains in the southwestern and southe parts of the area embrace mainly two anticlinal areas and an interveni synclinal area. Within the anticlinorium west of Dease and Rapid Rive the strata are complexly folded and faulted. The Cassiar batholith h been emplaced into an anticlinal area bordering the synclinorium to t southwest. The structure within the southeasterly plunging synclinoriu is not well known, but the outline of the major structure is symmetric and well defined.

Several major longitudinal faults have been recognized, along whi some movement has taken place in Tertiary or post-Tertiary time. addition to these faults, numerous northerly and northeasterly trendi faults cut strata in the anticlinorium west of Dease and Rapid Rivers a in the structurally complex area southeast of Deadwood Lake.

Placer gold was discovered on McDame Creek in 1874 and on Walk Creek in 1877, but since 1887 only McDame Creek has yielded importa amounts of gold. Gold has also been panned on Rosella and Spr Creeks and on Dease River. The gold originated in quartz veins in volcanic rocks of the Sylvester group (8), which carry free gold, pyr and tetrahedrite. These veins are particularly abundant in the area betwe Pooley Creek and the mouth of Quartzrock Creek.

Minor chalcopyrite was noted in five places in a narrow zone calcareous phyllites extending for at least 12 miles northwesterly fr Hidden Valley Creek. A showing containing specular hematite, chalco rite, and minor galena occurs 1½ miles south of the mouth of Nizi Cre Silver-lead-zinc minerals have replaced dolomitized limestone and, t lesser degree, quartzite of the Atan group (3, 4) in a zone extending fr Mt. Haskin to south of Dease River beyond Atan Lake. Near Atan La galena occurs with barite. Silver-lead-zinc replacement bodies, conta ing much manganiferous magnetite, occur 3 miles northwest, and 2 mi south, of Cassiar. Quartz veins 3 miles northwest of Cassiar cont significant amounts of bismuth. Pyrrhotite and magnetite replaceme bodies carrying minor molybdenite and scheelite occur along the conta of the Cassiar intrusions (11) with the Good Hope (1, 2) and Atan (3, groups. Beryl is found in pegmatites in the central and northern parts Horseranch Range, and helvite occurs in tactite 2 miles northeast of mouth of Bass Creek.

High-grade chrysotile asbestos is being mined from a serpentin body 3 miles north of Cassiar, and non-commercial bodies of asbes were noted in most of the ultrabasic bodies in the map-area. Small lens of chromite occur in dunite bodies, and from 0.1 to 0.3 per cent nickel w obtained from samples of several of the ultrabasic bodies.

Thin, much-contorted seams of lignitic and sub-bituminous co occur in Tertiary rocks (12) along Rapid River.

NOTES ACCOM...
MAP 110 A
GEOLOGY.
McDAME
CASSIAR DISTRICT
BRITISH COLUMBIA
IN
GSC MEMOIR 319 BY
H. GABRIELSE.

APPENDIX 1

MARKED	GOLD		SILVER		Cu	Zn	Mn					
	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
2230	0.005		0.12		0.01	0.02	0.21					
2231	0.002		0.02		<0.01	0.01	0.10					
2232	0.010		0.49		0.06	0.03	1.30					
2234	0.008		0.28		0.17	0.07	0.54					
2235	0.010		0.31		0.01	0.05	0.19					
2236	0.004		0.18		<0.01	0.10	0.25					
2237	0.040		0.97		0.11	0.24	0.55					
2238	0.010		2.84		0.05	0.76	0.26					
2239	-		-		-	-	-					
2240	20.65		3.02		-	-	-					

cc Mr. J. Poloni

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.

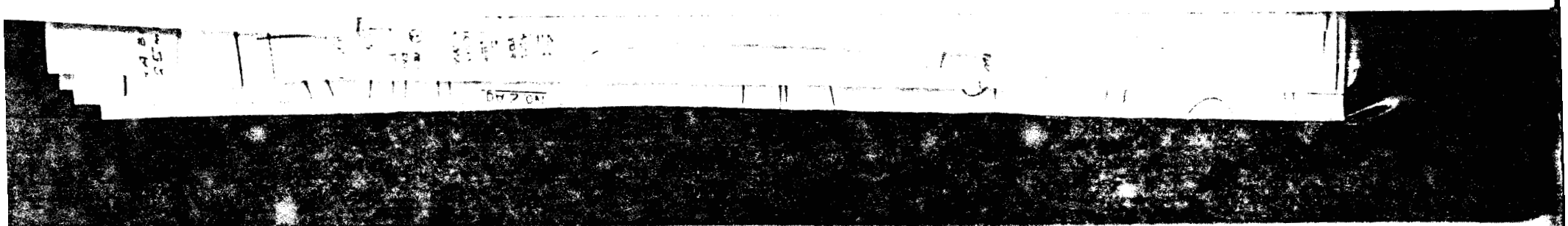
Registered Assayer, Province of British Columbia

		Metric Ton		Metric Ton			Percent	Percent	Percent	Percent	Percent	Percent
2239					0.01	0.002						

cc Mr. J. Poloni

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.

Registered Assayer, Province of British Columbia

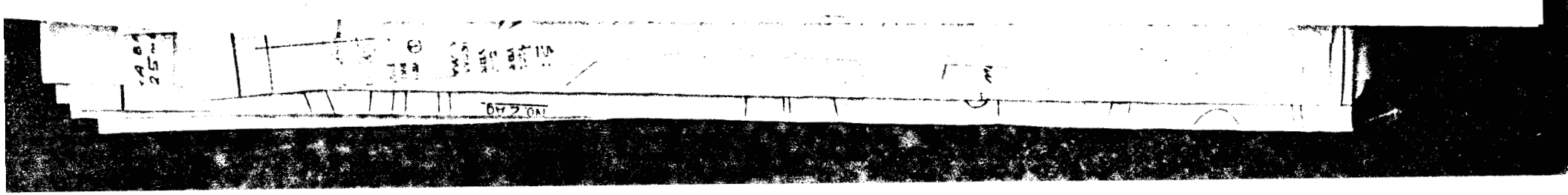


described core & ore samples.

MARKED	GOLD		SILVER									
	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
2242	0.002		0.11									
2243	0.080		1.40									
2244	0.050		0.05									
2246	0.005		0.18									
2247	0.002		0.36									
2248	<0.002		0.06									
2249	<0.002		0.04									
2250	<0.002		0.04									
2251	<0.002		<0.02									
2252	<0.002		0.02									
WPGJP# 400	0.008		0.05									
401	0.050		0.13									
403	0.26		0.22									
17451	1.71		0.84									

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.

Registered Assayer, Province of British Columbia



29 SAMPLES	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
BOX 1												
DDH 6 QTZ V. 15.5'-32' - 17377	0.36		0.28	16.5'								
AUSTY MARGIN 32'-36' 17378	0.094		0.06	4'								
2ND QTZ V. 37'-41' - 17379	1.98		0.38	4'								
DDH 6 AUSTY QTZ BRECC BOX 2 49-52 - 17380	0.56		0.48	3'								
DDH 6 BOX 10. 9" V. MASSIVE SULPHIDE 178' - 17381	0.042		0.02	1/3'								
DDH 6 BOX 15. 272'. 1/8 FILLING - 17382	0.030		0.08	~1/10								
DDH 7 BOX 1 15'-23' - 17383	0.038		0.61	8'								
DDH 7 BOX 1-2 23'-42' - 17384 FLAT VEIN	0.11		0.14	19'								
DDH 7 BOX 2. 46'-55' CNT BRECC - 17385	2.47		0.67	9'								
DDH 7. BOX 3. 57-58' BRECC. - 17386	7.28		5.63	1'								
ZONE BUFF AND												

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.

Registered Assayer, Province of British Columbia

		Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
DDH6, Box 9 SULFIDE STRINGER	17387												
DDH6. Box 9, 147'	17388 SULPHIDES.	<0.002		0.03		-							
" Box 12 215-216'	17389 SULPHIDES.	<0.002		0.02		-							
DDH 7. Box 9. 171'	17390 white sulfide	0.012		0.06		-							
		0.002		0.04		-							
DDH7. Box 10. 186'	17391 "	<0.002		<0.02		-							
DDH 7 Box 11 201'	17392 Cube iron	0.002		0.02		-							
DDH 8. FLAT VEIN. Box 1	17393 FLAT VEIN.	<0.002		0.05		-							
DDH 8. Box 12 27-35'	17394 Rusty Zone.	<0.002		0.03		-							
DDH 8. Box 3 61-63.5'	17395 QTZ VEIN SULPHIDE	<0.002		0.02		-							
DDH 8. Box 3. 64'	17396 VEIN + SULPHIDE	0.002		0.02		-							
DDH 8. Box N. 198' 198-200' 203'-204'	17397 Sulfide stringers	<0.002		<0.02		<0.01							
DDH 8. Box 16. 293-295'	17398 "	<0.002		0.02		<0.01							
DDH 8 Box 18 329'	17399 - sulphide	<0.002		0.03		<0.01							
DDH 8. Box 20 356-363'	17400 sulfide stringers	<0.002		0.02		<0.01							
DDH 8. Box 21. 379-380'	17401 Sulfide stringers	<0.002		<0.02		<0.01							

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.

Registered Assayer, Province of British Columbia

ROOM & BOARD $6,000

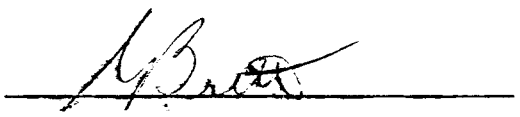
RE: DIAMOND DRILL HOLES 1, 2, 6, 7 & 8 (Cordoba)

September 16 to 27 (12 days)
October 21 to Nov. 8, 1979 (18 days)

30 days total

4 men @ $50 per day per man = $200 per day

times 30 days = $6,000



RE: DIAMOND DRILL HOLES 3, 4 & 5

September 28, 1979 to

October 20, 1979

Room & Board $4,600

4 men at $50 per day per man = $200 per day

23 days x $200 = $4,600

E Britt

1978 Assays — V. J. POLONI JUNE 15 / 1979

FRI MAR 14/1980 COSAC 1979 FIELD PROGRAM. (THIS IS 1978 'PETE' & 'COMINCO' VEIN DATA.

PAGE A.

GRID LOCATION COORDINATES	VEIN NUMBER OR DDH NUMBER + FOOTAGE	ASSAY LAB TAG NO.	Au oz/T	Ag oz/T	Cu %	Pb %	Mn %	W, Ni, Cr, Cd, Sb, Sn ETC.	ASSAY REPORT ~~PAGE~~ NO.	ASSAY REPORT DATE	FIELD TAG NO. IF DIFFERENT	FIELD SAMPLING DATE	SAMPLER(S)	FIELD BOOK REF/DATE	NOTE BOOK DATE	LENGTH / WIDTH (Ft)	SAMPLING TECHNIQUE	DESCRIPTION OF LOCATION	DESCRIPTION OF GEOLOGY
'78	PETE VEIN (10)	2209	.748	2.56								JUL 15/78	DAN BRETT				GRAB.	SHAFT & PILE	VEIN MATL.
'78	PETE VEIN (20)	2210	.076	4.85	1.49%							JUL 15/78	"				GRAB.	TRENCH 1 E of shaft.	Vein matl, near porphyry dyke.
'78	E-W (1)	2214	.12	.12								JUL 15/78	G. BRETT			3'-4'	GRAB.	E and E-W vein.	Vein strikes NE dips SE. E of Road #1.
'78	COMINCO (3)	2216	.072	.03								JUL 17/78	G. BRETT			3-4.5	CHIP.	Cominco.	Old road #2
'78	COMINCO (4)	2217	.024	.07								JUL 17/78	G. BRETT			20'	CHIP.	Cominco.	
'78	COMINCO (2)	2219	.098	.26								JUL 17/78	G. BRETT			15-20'	CHIP	Cominco Pit #3	
'78	PETE (20)	2220	.158	3.14								JUL 17/78	G BRETT			3'	CHIP.	3' VEIN.	
'78	PETE (20)	18926	.016	15.20								AUG 24/78	J. POLONI						
'78	PETE (20)	18927	.03	2.66									J. P						
'78	PETE (20)	18928	.044	.01									J. P						
'78	PETE (20)	18929	1.45	4.31									J. P						
'78	PETE (20)	18933	1.094	2.94									J. P						
'78	ORE PILE PETES CABIN (20)	—	.30	5.24 (TET)															
'78	PETE (20)	#3	1.465	1.98															
'78	PETE (20)	#4	.262	2.6															

1978 POLONI REPORT. JUNE 15/79 S.M.F.

PAGE 3.

FRIDAY MARCH 14/80 CUSAC 1980 SUMMER PROG. PETE/CORDOBA ASSAYS.

GRID. LOCATION COORDINATES.	VEIN NUMBER OR DDH NUMBER + FOOTAGE.	ASSAY LAB TAG. NO.	Au oz/T	Ag oz/T	Cu %	Zn %	Pb %	Mn %	W, Ni, Cr, Mo, Sb, Cd, Sn, etc.	ASSAY REPORT NO.	ASSAY REPORT DATE	FIELD TAG. NO. IF DIFFERENT	FIELD SAMPLING DATE	SAMPLER(S)	FIELD BOOK REF/DATE	NOTEBOOK DATE	LENGTH/WIDTH (FT)	SAMPLING TECHNIQUE	DESCRIPTION OF LOCATION	DESCRIPTION OF GEOLOGY.
CONT? CORE	DDH7 (BOX 1) 15-23'	17383	·038	(·61)					comp.	A29-1533	NOV 30/79						Δ=8'			
	→ DDH7 23-42' FLAT V. (7)	17384	(·11)	(·14)													Δ=19' FLAT			
BOX 2	DDH7 41-55' HOT (5)	17385	2·47	·67													Δ=9' HOT			
	DDH7 57-58' HOT-2 (6)	17386	7·28	5·63													Δ=1' HOT-2			
CORE	DDH6, Box 9 SULPH STRING.	17387	<·002	·03					Assays? ALL ZIP.	(A29-1522	NOV 28/79) ?	LOG.	NOV 8/79	WDG.					DDH6 167'	1FT SAMPLE ZONE/MASSIVE grey sulphide.
	DDH6 BOX 12 215-216'	17388	<·002	·02								LOG	NOV 10/79	WDG.					DDH6 215-216'.	Massive sulphide blebs/filling etc. brecc. andesite
SULPHIDE STRINGERS	DDH6 Box 17 305-307'	17389	·012	·06								LOG.	NOV 10/79	WDG.					DDH6 BOX 17 305'-307'	Qtz-filled breccia zone in andesite.
	DDH6 Box 9 171'	17390	·002	·04								LOG.	NOV 10/79	WDG.						
	DDH7 Box 10 186'	17391	<·002	<·02								LOG	NOV 10/79	WDG.						
	DDH7 Box 11 201'	17392	·002	·02								LOG	NOV 10/79	WDG.						10% cube iron in grey sil cht/tuff. GQ specimen.
FLAT V.	DDH 8 Box 1 17'-28' (7)	17393	<·002	·05								LOG	NOV 11/79	WDG.						FLAT V. (7) +1' of margin.
	DDH8 Box 1 x2 27'-35'	17394	<·002	·03								LOG.	NOV 11/79	WDG						Rusty (tuff?) zone beneath Flat vein.
	DDH8 Box 3 51'-63·5'	17395	<·002	·02								LOG.	NOV 11/79	WDG.						Rusty tuff breccia.
	DDH8 Box 3 64'	17396	·002	·02								LOG.	NOV 11/79	WDG.						3" qtz vein breccia + massive sulphide
	DDH8 196', *198-200', 203-204'	17397	<·002	<·02	<·01							LOG.	NOV 11/79	WDG.			196', 198-200', +203-204'	CORE, SPLIT		FeZn, qtz in chert frax.
	DDH8 Box 16 293-295'	17398	<·002	·02	<·01								NOV 11/79	WDG.			293-295'			1/2' sulphide stringers, α=10', qtz + sulph fill. cht zone and tuff
	DDH8 Box 18 327·5' & 329'	17399	<·002	·03	<·01								NOV 11/79	WDG.			327·5, 329'	CORE, SPLIT		Sulphide & cht-tuff contact, cht both sides.
SULPHIDE STRINGERS	DDH8 Box 20 356' & 363'	17400	<·002	·02	<·01								NOV 11/79	WDG			358' + 363'			Sulphide stringers in tuff breccia.
	DDH8 Box 21 (LAST) 379-380'	17401	<·002	<·02	<·01								NOV 11/79	WDG			379-380'			Sulf str. in coarse xl tuff or and.
(7)	L9 AREA, OCHRE TOP FLAT V.	CS-17	·020	TRACE						NU EN.	SEPT 5/79	KK 869		G.B + WDG.	J.P NOTES		± 20'	SKIM OCHRE FLAT V. UPPER SURF.		JP SEPT 12/79. L9 [illegible] WDG + GB SKIM SAMPLE; WDG BROWN Fe OR OCHRE, VERT VEIN/FLAT VEIN AREA.
(5)	L9 HOT/FLAT △ → HOT □	CS-18	(·894	·80								KK 870		WDG.	J.P NOTES	Sep/3/79	1·5'	GRAB/CHIP		
		CS-16	·006	0·0	(·31)-[illegible]					NU EN	SEPT 26/79	KK 848								
	>	CS-15	·048	21·1						NU EN	AUG 23/79									
		CS-9	·008	3·38						NU EN	AUG 22/79	2222								
	(8)	CS-10	·072	(12·64								2223								
		CS 11	TRACE	TRACE								2224								
		CS 12	·137	·30								2225								
		CS 13	·023	·14								2226								
GAS [illegible] VEIN >	L9 AREA (14)	CS 14	(·634)	·75								2227		G.B.			1'	GRAB/CHIP		GB SAMPLE: THIN QTZ VEIN, STRETCH L9.
	(8) >	CS 15	·018	16·20								KK 775								
		CS 3	TRACE	TRACE						NU EN	AUG 16/79	BIG BAG.								
		CS 4	TRACE	TRACE								KK 767								
FLOAT (16)	L9, FLOAT IN CREEK.	CS 5	·029	·07							"	KK768	JUL 23/79	GB + WDG.	JP NOTES.		—	FLOAT	WHITE BULL QTZ - CREEK - L9	FLOAT IN CR, JUST E OF 'HOT VEIN' - SEE 5(A)
	(8)	CS 6	4·709	1·79							"	KK769			JP NOTES.		1·5-2'	GRAB.		JP. SEPT 12/79 PLAN II.
(5)	L9, HOT V. W MARGIN	CS 7	3·083	1·25							"	KK771		G.B. + J.P.	JP NOTES.		1' WIDTH	CHIP/GRAB.		HEAVY PYRITE, VERT. VEIN (HOT)
	(16)	CS-1	TRACE	TRACE						NU EN.	AUG. 15/79								X-ZONE, E. TRENCH	
(9)	L9. [illegible] V [illegible]	CS-2	·215	·31										WDG + GB.	JP NOTES.		6'		X-ZONE W. TRENCH.	QTZ VEIN IN PLACE (VG AREA/FLAT VEIN)
(3)	DINO V. DISCOV. PIT →	CS-25	80·6441	11·50	vg					NU EN	SEPT 25/79	17458	D.V. #1 SEPT 23/79	WDG.	WDG NOTES.	(OCT 1/79)	VEIN 2·5'	CHIP/GRAB	DINO VEIN DISCOVERY PIT. COARSE V.G.	REP SAMPLE ALONG 12", MID VEIN
[illegible] (5)	L9 (HOT)	KK 863	1 (35 ppm)	·2 ppm	7 ppm		23 ppm			→ B.C. 79-1801 SEPT 17/79 -- geochem								(HOT)	North West High Trench Lost Bay Vein Exposed	Iron, Qtz, Green Alt.
(4)	L9 □ PIT. GALENA SAMPLE	KK 866		20 ppm	122 ppm		9100 ppm	Au+Ag 680 ppb		BC 79-1801				WDG.					□ Trench L9 180E GALENA SAMPLE	SURF FLOAT / HOT △.
EW pits (1)	E-W (1)	CS-19	·312	·3						NU EN.	SEPT 13/79	KK 873	SEPT 11/79	WDG + GB.					17' WIDE E-W, BRETT VEIN	SELECT-RANDOM SULFIDE RICH SIDE.
(1)	EW (1) STRIKE EXT. W	CS-20	·010	·27							"	KK 874	SEPT 4/79	WDG + GB					Long Trench past end of E-W. VEIN	21 WIDE. VEIN ON. STRIKE.
(1)	EW (1) STRIKE EXT. W.	CS-21	·008	·19							"	KK 875	SEPT 11/79	WDG + GB.					Lat long Trench E-W Vein 21	VEIN ON STRIKE.
(1)	E cont (→SE) cont EW	CS 22	TRACE	TRACE							"	17453	SEPT 12/79	WDG.	WDG OCT 1/79				N wall cont. EW vein, L3 area rd E of B.L.	Mariposite stained malt N wall of 35' W20N vein.
(1)	E cont (→SE) of EW (E of [illegible])	CS 23	·008	·04							"	17454								Sample from vein. Emphasis on grey pyrite on margin.
	L6+1D, 140E. (12)	CS 24	TRACE	·32							"	17455	SEPT 11/79	WDG.	WDG SEPT 30		2·5' QTZ V.	CHIP/GRAB	Qtz vein st. NA station	900ppb gold anomaly area qtz vein + red sil. rusty f.g. V/C. breccia around vein.

MINERAL RESOURCES BRANCH ASSESSMENT REPORT NO. 8634

PAGE 1

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45
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137

FRI. MARCH 14/1980. CUSAC 1979 FIELD PROGRAM. WDG. TOTAL OF 137 SAMPLE ASSAYS LOGGED.

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 8234

GRID	LOCATION COORDINATES	VEIN NUMBER OR DDH NUMBER + FOOTAGE	SAMPLE NO.	Au oz/T	Ag oz/T	Cu% Zn% Pb% Mo%	W, Ni, Cr etc. %	ASSAY REPORT NO.	ASSAY REPORT DATE	FIELD TAG NO. IF DIFFERENT	FIELD SAMPLING DATE	SAMPLER(S)	FIELD NOTEBOOK REF / PAGE / DATE	LENGTH/WIDTH (FT.)	SAMPLING TECHNIQUE	DESCRIPTION OF LOCATION	DESCRIPTION OF GEOLOGY
35.			34406				.03% W	A29-521	JULY 24 1979.								
			34407				.04% W.	"									
56.	ORE:	(8)	34409	.005	.10	<.01% .54 —	.14 Ni	A29-534.	JULY 18/79								
	→ INITIAL SEARCH FOR VALUES CORDUROY CK.	AREA (8) {1979 1st GOLD (8) →	34410	4.12	8.81	.19 (1980) .18	—	"				GB.	JP NOTES SEPT 12/79 (TABLE 1)	1.5-2'	GRAB.	Manganiferous ore, rebuilt part of	DDH #1 site. (JA SEPT 12 ASSAY PLAN)
			34411	.005	.06	— — —	—	"									
		COMINCO VEIN (1)	34412	.39	.22							GB.		1-1.5'	CHIP.	Foot wall	FOOTWALL COMINCO VEIN, EARLY IN SEASON
		[illegible]	34413	.014	.04												
			34414	.13	.19	<.01 .09 .29	—										
		LINE 9 JUST E OF → DAILY SITE.	34415	.45	6.93	.20 TETRAHEDRITE.						GB.			MASS WASTED.	—	
			34416	.02	.15	— —											
57.	ORE.		751	<.002	.02		— Pt	A29-653.	AUG 3/79								
		L9. "HOT" (S.P.) (5) →	752	(.93)	4.55	2.60	.12 Ni, <.001 Sn	"								HK 752 "Float" From Old Timers trench. "Green" L9. Sample.	Continuation of G.L.'s gold.
			753	.003	—	.03	Sn <.001, Ni —, W <.03				~JUL 23/79	WDG + JP.	J.P. NOTES. 'JUL 23/79'				
		"LISTVENITE" (PETE AREA) GRAB	754	—	—		Sn <.001, Pt —, W <.01				"	WDG.	JP. NOTES. (JUL 23/79)			Listvenite, Green sample, Pete Area (Boundary fault area).	Character sample.
	[illegible] →	"INDIAN" V. (15) →	755	.087	.25												
			757	.008	.02		Sn <.001										
		L3, 0+20E (SP) (4)	758	.003	.04						~JUL 23/79	WDG + JP.	JP NOTES. (JUL 23/79				
		L3 +20E. (JP) (4)	759	.002	.02						~JUL 23/79	WDG + JP	JP NOTES. (JUL 23/79.				
	→	L3 +20E (S.P.) (4) →	760	.10	.04	.13	Sn <.001				~JUL 23/79	WDG + JP	JP NOTES. ~JUL 23/79	3' APPROX		High Grade Type (MAR. QTZ carb) Similar to L4 high grade	
		L4+60E (SR) OLD PIT (5)	761	.006	.02	.10					~JUL 23/79	WDG + JP	JP NOTES. ~JUL 23/79	OLD PIT		"OLD PIT" L4 + 60E	
	ABOVE COMINCO VEIN	L9 +200W (2)	762	.002	.02	.01					~JUL 23/79	JP.	JP NOTES. ~JUL 23/79	L9 TRENCH SAMPLE (TRENCH EW) OF AREA ABOVE LAST COMINCO PIT (OFF N EXT OF VEIN)			
	COMINCO VEIN	" AREA. (2)	763	.023	.04						~JUL 23/79	JP.	JP NOTES. "	COMINCO VEIN AREA.		QTZ VEIN IN WEST END OF COMINCO TRENCH.	
	ARG. WALL	L9 +180E — (16)	764	<.002	.02	.01					~JUL 23/79	JP	JP NOTES. "	L9 +180 E. BANDED		ARGILLITE WALL + QTZ.	
	COMINCO VEIN.	L8½ +180W (21-5 WD) (2)	765	.023	—	<.01		ALSO WDG "JULY 31 P" JULY 20/79			~JUL 23/79	JP	JP NOTES. "	L8½ +180 W. (21-5) B.C.			
			766	.009	.03		Pt <.002										
58.	ORE.	L2, 40-80E (3 OF (8) AP)	830 KK	.005	—			A29-696	AUG. 14/79.		JUL 29/79	? DAV?					SED. (ARGILLITE - CALCITE) PIECE OF QUARTZ.
		L11W, NEAR ST (COMM?)	841 KK	.005	—						JUL 29/79.	?					VOLCANIC MATERIAL.
		L5E, 140-200, 20 m N (5 OF (2))	846 KK	<.002	.13	<.01	W = .02										GOOD ROCK, ANOMALY AREA QTZ-CARBONATE SOME SULPHIDE.
59	ORE	L4, DDH 1 SURF TRAVERSE (8)	C-45	.070	21.60	.40 1.09		A29-868.	AUG 31/79			GB.		23' TRAVERSE			DDH #1 SURF E-W SURF TRAV. SILVER-Mn area.
510								A29-989	SEPT 11/79								
		JACKPINE #1	2229	—	.05	4.20	Cu = .06	A29-1009	SEPT 21/79								
512	ORE VEIN {	L9. 5' BARRON VEIN (14)	17401	<.002	.03			A29-1036	SEPT 27/79		SEPT 5/79	JP + WDG.	JP NOTES.	5' VEIN			VERT. VEIN, BULL QUARTZ, OCHRE.
		L9 5' BARRON VEIN (14)	17402	.002	.04						SEPT 5/79	JP + WD.G.	JP. NOTES				
		L9 SURF FLAT VEIN (7)	17403	<.002	.04							JP + WDG.	JP NOTES	6'			QTZ-CARB 95% QTZ, MARIPOSITE, 1-3% SULF. FLAT BED.
		(17) L9. (JP PLAN 10) MARIPOSITE G.S.	17404	<.002	.02							JP + WDG.	JP NOTES	5'			"QTZ VEIN N70E" MARIPOSITE GOUGE?
	Mn AREA	L4 (PLAN 11 JP) (8)	17405	.008	.03	<.01						JP + WDG.	JP NOTES REPT SEPT 12/79	20' TRAVERSE.	GRAB/CHIP.		"QTZ VEIN, MARIPOSITE, OCHRE."
	Mn Area.	L4 (PLAN 11, JP) (8)	17406	.030	(7.52)	.39						JP + WDG.	JP NOTES "	24' TRAVERSE	GRAB/CHIP	—DDH 1 Area Central x trench, surf.	"QTZ-CARB. CHERT, 10% SULF.
	VEIN, NMA 8	L4 (PLAN 11) (QTZ VEIN (8)	17407	3.29	(.70)	.01 } — QTZ VEIN 7'						JP.	JP NOTES "	7'	GRAB/CHIP.	QTZ CORE. N. END AREA 8.	"QTZ VEIN, MINOR OCHRE, THIN SLATY INCL., PY-MARIPOSITE.
		L4 (PLAN 11) MANGAN. (8)	17408	.012	.08	— } — MANGANIFEROUS.						JP.	JP NOTES "	13'	GRAB/CHIP		CHERTY SILKENS UNIT, 1-3% SULF MARIPOSITE.
		L4 (PLAN 11) - JP Sept 12/79 (8)	17409	.78	.60	—					SEPT 6/79	WDG.	JP NOTES.	25'	GRAB/CHIP	-S. END PATCH (8) SIDERITE,	QTZ VEIN + RUSTY SIL. CHTY UNIT. NEXT X CUT S. DDH #1 SITE.
	[illegible]	L4, JP PLAN 11. (15)	17410	.083	.85	— QTZ VEIN - OLD TRENCH					SEPT 6/79	WDG.	JP NOTES. SEPT 12/79 REPT.	9' (D: ~4')	CHIP/GRAB.	OLD TRENCH L4 + 60W AREA (PLAN)	"QTZ VEIN BLOWOUT" OLD BLAST TRENCH. QTZ BOXWORKS 5% SULFIDES. VEIN DIPS 30W
	JP + WDG. L5 TROUE Ag ANOMALY AREA.	STEEP { L5, 320E (SLATE TRENCH) (10)	17411	.004	.04			SEPT 6/79	ABOUT JULY 23/79 Ag. ANOMALY AREA.			WDG + JP.	JP NOTES "	—	GRAB. AR TRENCH	1979 BACKHOE TR - L5+320E. HIGHLY STEEP	SPECKLED CLEAVED BK GENTLY DIPPING SLATES. VEINLETS STEEP CLEAVAGE
		VEINLETS FROM 17411 (10)	17412	.002	.03			SEPT 6/79				WDG + JP.	JP NOTES "	—	SEL. FROM CL. VEINLETS		SELECTIVE SAMPLE QTZ-CALCITE VEINLETS. TRENCH.
		" L5+10N, 350E (10)	17413	<.002	.02												
		L5+10N, 350E (10)	17414	<.002	.02							WDG + JP	JP NOTES. "	—			— ANOTHER TEST OF THE L5 SLATE.
46		L5+00N. THIN LT. VEIN (10)	17415	.003	(.58) ← Ag SIL. CONC VEINS (SOURCE) ^ SURF LEACHING V. THIN VEINS A PROBLEM.											THIN VEIN, TRENCH	THIN VEIN. LT. QTZ - SEE IF SILVER MINERALIZATION VEIN-CONC OR SYNGENETIC IN SLATE.

FRI. MARCH 14/80. CUSAC 1979 SUMMER PROG. ASSAYS. CORDOBA/PETE CL.

PAGE 2.

GRID LOCATION COORDINATES.	VEIN NUMBER OR DDH NUMBER & FOOTAGE	ASSAY LAB TAG. NO.	Au° oz/T	Ag° oz/T	Cu%	Zn %	Pb %	Mn %	W, Ni, Cr, Pt, Cd, etc. %	ASSAY REPORT NUMBER	ASSAY REPORT DATE	FIELD TAG. NO. IF DIFFERENT	FIELD SAMPLING DATE	SAMPLER(S)	FIELD NOTEBOOK PAGE / DATE	FT. LENGTH/ WIDTH	SAMPLING TECHNIQUE	DESCRIPTION OF LOCATION	DESCRIPTION OF GEOLOGY.
S12 cont'd. ORE CONT'D.		17452	·01	9.15						A29-1036.	SEPT 27/79.								
	① EW SESTRIKE, E END	17454	1.17	·49						NU EN.			SEPT 12/79	WDG.		4' WIDTH	CHIP.	BEND IN EW VEIN E CONT → SE, HEAVY PYRITE.	Heavy pyrite N40°W · QTZ VEIN.
S13. ORE.		17456	·002	·31	·20				Antimony → ·2256	A29-1117	OCT 5/79								
		17457	·010	·04	—				—	"									
	③	17459	5.50	1.30						"								DINO V. 30' TO N of 17460	2½' STRONG QTZ VEIN. BRECCIA
	③ MAIN DINO VEIN ③	17460	25.05	5.31						"								DINO V. AT DISCOVERY PT AREA.	ZONES EACH SIDE. QTZ-V.g.-tet. pyrite.
	③	174 61	·94	·32						"								DINO V. 30' TO S OF 17460	
SHORT VEIN, 50' N ...		17462	2.69	·69						"	"	—	SEPT 23/79	WDG.	WDG. 'OCT 7/79', + 'OCT 21/79'	2½'	CHIP/GRAB.	L6, 140 W (+50 N) #2, 900 Bph ... Wedge small gulley 50' N ...	Short section of 2.5' N20W/45° NW dipping vn. Grey sulphide. brecciated on margins,
		17463.	0.070	·05.															
S14. CORE ⑧	DDH1, Box1 9'-20'	2230	·005	·12	·01	·02		Mn ·21		A29-1282	OCT 18/79		OCT 6/79	WDG.					
S15 ⑧	DDH1, Box1, 20-27'	2231	·002	·02	<·01	·01		Mn ·10											
⑧	DDH1, Box2, 27'-34'	2232	·019	·49	·06	·03		Mn 1.30											
⑧	DDH1, Box2, 34'-42'	2234	·008	·28	·17	·07		Mn ·54.											
⑧	DDH2, Box1, TOP 15'-28'	2235	·010	·31	·01	·05		Mn 0.19					OCT 7/79.						
⑧	DDH2,	2236	·004	·18	<·01	·10		Mn ·25											
⑧		2237	·040	·97	·11	·24		Mn ·55											
⑧		2238	·010	2.84	·05	·76		Mn ·26											
	DDH3, 1' @ 300' (PRES FLT)	2239	—	—	—	—	W=·01, Mo=·002		—	A29-1282A	OCT 24/79		OCT 8/79	W.D.G.	WDG.	1' @ 300'	DDH3 CORE SAMPLE @ 300'		Suspected WS_2, near dyke cutting DDH3 CARB.
②	DINO V. EXT.	2240	20.65	3.02									OCT 8/79	N.DG.	WDG. 'OCT 21/79' MAP.	@ 2½'	CHIP GRAB. ACROSS VEIN.		Sample log book. N end of Dino V 50' N of fault.
S16 ORE ⑨	FRED V. S, End.	2241	·17	·11						A29-1316	OCT 26/79		OCT 9/79	WDG + GB.	WDG. 'OCT 22/79'.	W margin 1'	CHAR. W 1' OF VEIN.		Fred V. 110' S of Discovery pt (the blind outcrop).
	LISTV, PRESUNKA B.L.	17465	—	—	<·01				Ni = ·12, Cr =	25			OCT 4/79		WDG 'NOV 2/79'.		CHARACTER.	JUST S of Presunka Baseline DDH3 area. PETE	"GREEN CARB" TRY FOR CR, Cu, Ni TO GET COLOR ELEMENT.
S17 PULP ⑤	L9 180E □ PIT. (HOT)	864	·91 (35 in)	(8 ppm)	66 ppm		790 ppm			A29-1335	OCT 26/79		SEPT 3/79	WDG. (TAS ...)		SAMPLED 2' WIDTH	□ PIT (HOT V.)	□ PIT.	HIGH TEMP QTZ
⑤	L9 180E □ PIT (HOT MARGIN)	865	·43	6.4 ppm	156 ppm		840 ppm						SEPT 3/79.	WDG.				□ PIT	OCHRE ALONGSIDE HIGHGRADE VEIN (W EDGE OF HOT)
GALENA IN SAMPLE ⑤	L9 180E LONG TRENCH (HOT).	867	7.33	5.73	1080 ppm		895 ppm	v.g. in sample.				WDG (3-7)	SEPT 3/79	WDG.	WDG.			Long Trench (HOT ^ long trench	High Grade Gold Discovery.
⑤	□ PIT (HOT)	872	1.26	10 ppm	49 ppm		6,800 ppm						SEPT 7/79	WDG.				□ PIT in trench.	High Grade Galena-Gold.
S18 CORE + ORE	CORDOBA/TARA, IW. CREEK	2242	·002	·11						A29-1385	NOV 14/79		OCT 13/79	WDG.	NDG. 'NOV 11/79'.	Character.	Picked pod out of slate.	Posley Cr. 1-W, Cordoba/Tara Lby, Lens in slate	Small massive sulphide lens in contorted slate
(E of ⑮)	L4, 0+100m E NS vein	2243	·080	1.40									OCT 15/79	WDG.	" 'NOV 12/79'.	15' (Δ=4' VEIN)		Indian vein – Broken edge E side on Bulldozer track.	Qtz-mel + grey sulphide. (Sample 8k)
	L4, 0+20E ④	2244	·050	·05									OCT 15/79	WDG.	WDG 'DEC 7/79'	4'	Chip – replaced fragments.	4' vein NS, 30' W of backhoe	4' vein N15°W str, silicic frags being repl. pyrite. just above bedrock
	DDH5, sulphide pebble.	2246	·005	·18									OCT 19/79	WDG.	WDG 'DEC 4/79' P.	Character.	pebble stumbled o/b from core.	DDH5 CORE – PRES. FLT.	30% grey coarse massive py. in L.T. qtz, preglacial stream bed pebble
	DDH5 BOX2 97-105' (BK)	2247	·002	·36								TSL 2247	OCT 20/79	NDG.	WDG. 'DEC 3/79' P.		CORE, Black, ⅓ of core	DDH 5 CORE "	DDH5 – black contorted carbonaceous L.S. (pitic) – minor sulphide interfoliations.
	DDH5 BOX 3(+4) 105'-127' (BK)	2248	<·002	·06									OCT 20/79	WDG.		22'	CORE, BK, ⅓ CORE	DDH5 – CORE – PRES. FLT	DDH5 ·105-127- Bk carb (pitic) LS.
	DDH5 Box4. 125-141 (BK)	2249	<·002	·04									OCT 20/79	WDG			CORE, BK (TO CONTACT)		
	DDH5 Box5+6. 141-192 GREY CARB	2250	<·002	·04									OCT 20/79	WDG.		141-192	CORE, GREY CARB.	DDH5 – CORE – PRES. FLT	DDH5 – Core chip grey carbonate.
	DDH 3&4 BKEST QTIL	2251	<·002	<·02									OCT 20/79	WDG.	WDG. 'DEC 6/79'		CORE – RANDOM CHIP.	DDH 3+4 BKEST QTIC LS.	– BK LS – QTIC MYLONITIZED, F.G. FINE SULPH, QTZ CLOR – CONTORTED BANDS
	DDH 3+4 GREY CARB	2252	<·002	·02								JPWG 2252						GREY XLINE CARB	– GREY CARB. (FUSILINIDS 1 SECT NR CONTACT)
⑮	RED BRECCIA, INDIAN VEIN MARGIN.	WDGSP 400	·008	·05									OCT 20/79	WDG.	WDG 'DEC 7/79'.	TRENCH	1979 WDG + HW GRAB – HAND TRENCH	HANDE – W TRENCH L4+05E, INDIAN VEIN	– Red hematitic loose breccia on N side (TOP) zone over 4' VEIN.
①	EW VEIN, E of B.L. L3 AREA	401	·05	·13									OCT 20/79	WDG.	WDG 'DEC 8/79'	BLOCKS FROM V	CHIP/GRAB	Blocks from N cut EWV, E of B.L.	– Grey sulphide on margin of vein, Blocks E side, Sulphide.
①	EW VEIN "	403	·26	·22	← NEW SMALL GOLD-QTZ-TET. VEIN								OCT 29/79	WDG	WDG 'DEC 8/79'	—	CHARACTER.	QTZ-CARB VEIN MARGIN	
! PETE AREA,	3" VEIN JUST S. PRES. B/L	1745	1.71	0.84	(MISNAMED: REALLY 17415, AS IN NOTES)							17415	SEPT 7/79	WDG	SEPT 22 P'	3", ALT MARGIN	CHIP	Small vein Pete blast pit 100' S of Presunka Baseline	3" QTZ VEIN Tetrahedrite, lemon yellow (V.g.?) NE 0° W/70N. MARIPOSITE STAIN
S19 CORE FLAT	DDH6. Box1 15.5'-32' VEIN ⑦	17377	·36	·28						A29-1533	NOV 30/79		NOV 7/79	WDG.		15.5-32 Δ=16.5' FLAT			FLAT VEIN ON SNAF VEIN 7
	DDH6 32'-36'	17378	·094	·06												Δ=4'			Rusty margin.
⑤	DDH6 37'-41' 'HOT'	17379	1.98	·38												Δ= 4' HOT			HOT.
⑥	DDH6 49-52 (HOT-2)	17380	·56	·48												Δ= 3' HOT 2			HOT-2 Rusty qtz breccia.
SULPH. STRINGER	DDH6 178' MASSIVES.	17381	·042	·02												Δ=⅓ FT			
" "	DDH6 272' "	17382	·03	·08															

CONT'D.

J.L. Diamond Drilling Ltd.,
#3 - 7811 Steveston Hwy.,
Richmond, B.C.

October 22nd, 1979.

INVOICE TO:

Cusac Industries Ltd.,
Ste. 152 - 890 W. Pender St.,
Vancouver, B.C. V6C 1J9. Attention: G. Brett

Re: Contract dated Sept. 10/79 - 10 miles south of Cassiar, B.C.

Footage @ $19 p.f.

Hole No. 1	176'	$ 3,344.00
Hole No. 2	110'	2,090.00
Hole No. 3	374'	7,106.00
Hole No. 4	132' to Oct. 10/79	2,508.00

Transportation and move of drill and personnel from Vancouver to drill site -

Drill move	2,000.00
Air fare - 2 men	258.00

Sept. 16/79

Move and set-up - Field Cost

16 hrs - 2 men - @ $20 p.h.	320.00
8 hrs - Drill machine rental at $15 p.h.	120.00

Sept 17/79

Work on sloop to transport equipment - Field Cost .

16 hrs. - 2 men - @ $20 p.h.	320.00
8 hrs. - Drill machine rental @ $15 p.h.	120.00

Sept. 18/79

Field Cost - Move - set up - 2 men - 16 hrs.
Waiting time for
Transportation -2 men - 4/20 hrs. @ $20.ph. 400.00
8 hrs. - Drill machine rental @ $15.ph. 120.00

Sept. 19/79

Lay water line and haul pump to water supply-Field Cost

2 men - 16 hrs. @ $20. ph.	320.00
2 men - Travelling time 4 hrs. @ $12. ph.	48.00
8 hrs. - Drill machine rental @ $15.ph.	120.00

19,194.00

(Continued)

October 22/79

To:
Cusac Industries Ltd.

Sept. 20/79	$19,194.00
Complete set-up - Field Cost	
2 men - 22 hrs. @ $20 p.h.	440.00
2 men - 4 hrs. travelling time @ $12. ph.	48.00
8 hrs. Drill Machine rental @ $15.00 p.h.	120.00
Sept. 21/79	
Casing - Hole No. 1 - 14' @ $19. p.f.	266.00
Sept. 22/79 to Sept.23/79 - no extra charges for client's a/c	
Sept. 24/79	
Completion of Hole No. 1 @ 176'	
Move and set-up to Hole No. 2	
Cost of not reaching depth of 400'	
7 hrs. @ $55. p.h.	385.00
Sept. 25/79	
Completion of move to Hole #2	
5 hrs. @ $55. p.h.	275.00
Hole No. 2 - Casing - 20' @ $19. p.f.	380.00
Sept. 26/79	
No Water - Field Cost	
2 men - 2 hrs. @ $20.ph.	40.00
2 hrs. Drill machine rental @ $15. ph.	30.00
Sept. 27/79	
Hole No. 2 completed at 110'	
Cost of not reaching depth of 400'	
Dismantling, etc. - 6 hrs. @ $55. p.h.	330.00
Sept.28/79	
Field Cost - Move, set-up and work on the road	
2 men - 24 hrs. @ $20 p.h.	480.00
8 hrs. Drill machine Rental @ $15. p.h.	120.00
Sept. 29/79	
Road Work - Field Cost	
2 men - 24 hrs. @ $20. p.h.	480.00
Drill machine rental - 8 hrs. @ $15. p.h.	120.00
Sept. 30/79	
Field Cost - Set-up for Hole #3	
Set-up - water supply pump	
2 men - 22 hrs. @ $20. p.h.	440.00
8 hrs. Drill machine rental @ $15. p.h.	120.00
Core Boxes	
100 @ $7.00 per box	700.00
	23,968.00

	23,968.00
October 1/79	
Road Work and set-up - Field Cost	
20 hrs. - 2 men - @ $20. p.h.	400.00
8 hrs. Drill machine rental @ $15. p.h.	120.00
October 2/79	
Travel Time - 4 hrs. - 2 men @ $12.00 p.h.	48.00
Casing - 30' @ $19. p.f.	570.00
October 3/79	
Travel time - 4 hrs. - 2 men @ $12. p.h.	48.00
Casing - 14' @ $19. p.f.	266.00
October 4/79	
Travel time - 4 hrs. - 2 men - @ $12. p.h.	48.00
Casing - 16' @ $19. p.f.	304.00
October 5/79	
Travel time - 4 hrs. - 2 men - @ $12. p.h.	48.00
October 6/79	
Travel time - 4 hrs. - 2 men - @ $12. p.h.	48.00
October 7/79	
Travel time - 4 hrs. - 2 men @ $12. p.h.	48.00
October 8/79	
Travel time - 4 hrs. - 2 men @ $12. p.h.	48.00
Hole No. 4 - Field Cost - move, set-up	
4 hrs. - 2 men @ $20 p.h.	80.00
4 hrs. - Drill machine rental @ $15. p.h.	60.00
Casing - 20' @ $19 p.f.	380.00
October 9/79	
Travel time - 4 hrs. @ $12. p.h.	48.00
Casing - 22' @ $19 p.f.	418.00
October 10/79	
Travel time - 4 hrs. @ $12. p.h.	48.00
	26,998.00

(Continued)

26,998.00

Cost in excess of $3.00 p.f. - Cost of Bit $741.78

		Cost	
Sept. 22/79			
Bit #1 - Footage drilled - 45'		$ 16.48 p.f.	
Less 30% Recovery	$4.94		
$3.00 p.f.	3.00	7.94 "	
		8.54 "	
45' @ $8.54 p.f.			384.30
Sept. 23/79			
Bit #2 - Footage drilled - 45'		16.48 p.f.	
Less 30% Recovery	$4.94		
$3.00 p.f.	3.00	7.94 "	
		8.54 "	
45' @ $8.54 p.f.			384.30
Sept.24/79			
Bit #3 - Footage drilled - 65'		11.41 p.f.	
Less 30% Recovery	$3.42		
$3.00 p.f.	3.00	6.42 "	
		4.99	
65' @ $4.99 p.f.			324.35
Oct. 3/79			
Bit #4 - Footage Drilled - 50'		14.84 p.f.	
Less 30% Recovery	$4.44		
$3.00 p.f.	3.00	7.44 "	
		7.40 "	
50' @ $7.40 p.f.			370.00
Oct. 5/79			
Bit #5 - Footage Drilled - 116'		6.39 "	
Less 30% Recovery	$1.91		
$3.00 p.f.	3.00	4.91 "	
		1.48 "	
116' @ $1.48 p.f.			171.68

N.B. 30% Recovery on bits
Bit cost in excess of $3.00 p.f.
to be adjusted on final billing,
pending our credit recovery of bits.

	28,632.63
Less: Paid	19,000.00
Due	$ 9,632.63

J.L. Diamond Drilling Ltd.,
#3 - 7811 Steveston Hwy.,
Richmond, B.C.

November 1st, 1979.

INVOICE - # 2

Cusac Industries Ltd.,
Ste. 152 - 890 W. Pender St.,
Vancouver, B.C.
V6C 1J9

Re: Contract Sept.10/79 - Cassiar

Footage @ $19 p.f.

Oct. 14 - 20/79

Hole #(5) - 218'	$ 4,142.00
Move of drill & equipment from job site to Vancouver, B.C.	2,000.00
	$ 6,142.00

J.L. DIAMOND DRILLING LTD.

Marge Breen.

O.K.

J.L. Diamond Drilling Ltd.
#3 - 7811 Steveston Hwy.,
Richmond, B.C.

November 26th, 1979.

INVOICE - 3

Cusac Industries Ltd.,
Ste. 152 - 890 W. Pender St.,
Vancouver, B.C.
V6C 1J9

Re: Contract Sept.10/79

Oct. 23-Nov.7			
	Hole No. 6	363	
	" 7	319	
	" 8	366	
		1048 @ $19 p.f.	$19,912.00
	Airfare - Move of personnel Cassiar - Vancouver		258.00
Oct. 11	Move-set up for Hole #5		
	2 men - 6 hrs. @ $20. p.h.		120.00
	Drill machine rental - 6 hrs. @ $15 p.h.		90.00
	Travel Time - 2 men - 4 hrs @ $12 p.h.		48.00
Oct. 12	Road Building & Drill move		
	2 men - 19 hrs. @ $20 p.h.		380.00
	Drill machine rental - 8 hrs. @ $15 p.h.		120.00
	Travel time - 2 men - 4 hrs. @ $12 p.h.		48.00
Oct. 13	Move-set up		
	2 men - 22 hrs. @ $20 p.h.		440.00
	Drill machine rental - 8 hrs. @ $15. p.h.		120.00
Oct. 14	Travel time - 2 men - 4 hrs. @ $12. p.h.		48.00
	Casing - 40' @ $19 p.f.		760.00
Oct. 15	Travel time - 2 men - 4 hrs. @ $12. p.h.		48.00
	Casing - 22' @ $19 p.f.		418.00
Oct. 16	Travel time - 2 men - 4 hrs. @ $12. p.h.		48.00
	Road work		
	2 men - 5 hrs. @ $20 p.h.		100.00
	Drill machine rental - 5 hrs. @ $15. p.h.		75.00
Oct. 17	Cat driving		
	1 man - 8 hrs. @ $20 p.h.		160.00
	Drill machine rental - 8 hrs. @ $15. p.h.		120.00
Oct. 18	Travel time - 2 men - 4 hrs. @ $12. p.h.		48.00
	Casing - 28' @ $19. p.f.		532.00
Oct. 19	Travel time - 2 men - 4 hrs. @ $12. p.h.		48.00

To: Cusac Industries Ltd. - 2 -

J.L. Diamond Drilling Ltd.,
#3 - 7811 Steveston Hwy.,
Richmond, B.C.

Invoice - 3

November 26th, 1979.

Oct. 20	Travel time - 2 men - 4 hrs. @ $12. p.h.	$ 48.00
	Move-set up 2 men - 19 hrs. @ $20. p.h.	380.00
	Drill machine rental - 8 hrs. @ $15. p.h.	120.00
Oct. 21,22 23	Move-set up - 10,560' excess move 33 hrs., less 11 hrs. for contractor's a/c 22 hrs. @ $55. p.h. (30/hr.)	1,210.00
Oct. 23	Casing 5' @ $19 p.f.	95.00
Oct. 24	Casing 10' @ $19. p.f.	190.00
Oct. 26	Reaming - (Charged at Field Cost as no details given on shift report)	
	2 men - 4 hrs. @ $20. p.h.	80.00
	Drill machine rental - 4 hrs. @ $15. p.h.	60.00
Oct. 29	Reaming	
	2 men - 2 hrs. @ $20. p.h.	40.00
	Drill machine rental - 2 hrs. @ $15. p.h.	30.00
Oct. 30	Move-Set up	
	3 men - 18 hrs. @ $20 p.h.	360.00
	Drill machine rental - 8 hrs. @ $15.p.h.	120.00
Oct. 31	Casing 27' @ $19. p.f.	513.00
Nov. 2	No Water 3 men - 6 hrs. @ $20. p.h.	180.00
	Drill machine rental - 6 hrs. @ $15. p.h.	90.00
Nov. 4	Move-Set up 3 men - 25 hrs. @ $20. p.h.	500.00
	Drill machine rental - 8 hrs. @ $15. p.h.	120.00
Nov. 5	Casing	
	19' @ $19. p.f.	361.00
		28,438.00
	Less: Bit Cost as per Invoice #1	1,634.63
	Track Rental, etc. as per your invoice Nov. 20/79	2,201.50
		24,601.87
	Quik Gel, Quik Trol - as per agreement to purchase - copy of invoice enclosed	630.00
		$ 25,231.87

CUSAC INDUSTRIES LTD.
#152 - 890 W. Pender
Vancouver, B.C.
V6C 1J9

IN ACCOUNT WITH

RICHMOND DRILLING, Attention: M. Breen
#124 - 11673 - 7th Ave.
Richmond, B.C.
V7E 3B7

1.

Truck rental, 4 x 4.
September 22nd to November 9th incl.
@ $625 per month, plus $40 per month insurance

$1,109.50

2.
Repairs

Yoke	$ 30	
Wheal & Brake Adjustments	180	
Labour (5hrs @ $20)	100	310.00

3.
Dispatching, telephone calls re parts & supplies
(8 hrs. per week for 7 weeks - 56 hrs. @ $12 per hours 662.00

4. W.D. Groves - labourer
Move out - Nov. 8th
(10 hrs. @ $12) 120.00

TOTAL $2,201.50

G.H. Brett, President

November 20, 1979

CUSAC INDUSTRIES LTD.
#152 - 890 West Pender
Vancouver, B.C.

V6C 1J9

RICHMOND DRILLING
#124 - 11673 7th Ave
Richmond, B.C.
V7E 3B7

PURCHASED FROM NU-ENERGY

5 barrels diesel @ $49.50 per barrel

Total $247.50

G.M. Brett

THIESSEN EQUIPMENT LTD.

CLOVERDALE INDUSTRIAL ESTATE
17910 ROAN PLACE, SURREY, B.C. V3S 5K1
TELEPHONE 576-9491 TELEX 04-365565

DATE: September 13, 1979

INVOICE TO: J & L Diamond Drilling
205 515 Cottonwood Drive
Coquitlam, B.C.

CONSIGNED TO:
7551 Ash St.
Richmond, B.C. Job - 124

INVOICE No 6038

SHIPPED VIA	PREPAID	COLLECT	SHIPPING ORDER No.
Valley Bus		X	D 20044

SHIPPING DATE	FEDERAL SALES TAX	PROVINCIAL SALES TAX	CUSTOMER'S ORDER No.
Sept. 11/79	Exempt	4% Extra	

Quantity	Unit	Description	Unit Price	Amount
50	25 Kg	Quik Gel	$4.80/ea	$240.00
5	Cases	Quik Trol (50 X 1 Kg)	$78.00/case	$390.00
				$630.00
			4% SS Tax	25.20
				$655.20

2360 Dlw

Paid
Sept. 19/79
Chq. #141
J. L. Diamond Drilling Ltd.
re: Job-# 124
Cassiar

After 60 days, Interest of 1½% will be charged on Declining Account Balance

ALL INVOICES NET 30 DAYS
REMIT FROM THIS INVOICE — NO STATEMENTS ISSUED

INVOICE

CASSIAR ASBESTOS CORPORATION LIMITED

Cassiar, B C. V0C 1E0
Phone:778-7435 Telex: 036-88533

C 52[illegible]

RICHMOND DIAMOND DRILLING
7551 Ash Street
Richmond, B.C.

September, 1979

Accomodations	$384.00	
Cafeteria Charges	84.00	
		$468.00

Paid

RE: DRILLING REPORTS

ITEM 8 (e)

The core for Diamond Drill Holes 1, 2, 6,7 & 8 is stored in the core shed located at the Cusac Camp on the Cordoba Claims

Re: Item 8 (d)

We have supplied the logs, Dr. Groves qualifications and all assay data

RE: DRILLING REPORTS

ITEM 8 (e)

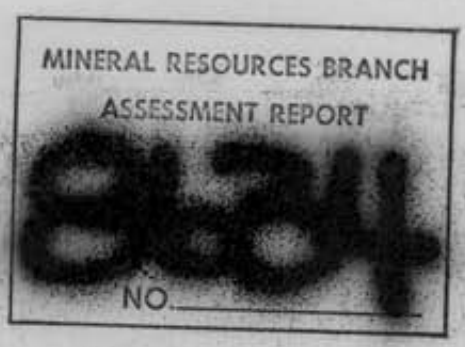
The core for Diamond Drill Holes 3, 4 & 5 is stored in the core shed located at the Cusac Camp on the Cordoba Claims.

RE: ITEM 8 (d)

We have supplied a statement from Dr. W.D. Groves, a statement of his qualifications and all assay data.

CUSAC INDUSTRIES LIMITED

SUITE 550 - 890 WEST PENDER STREET
VANCOUVER, B.C. V6C 1J9 CANADA
(604) 682-2421 OR 669-0216



Ministry of Mines
and Petroleum Resources
Province of B.C.
Parliament Bldgs.
Victoria, B.C.
V8V 1X4

Attention: Mr. Kalnins

November 25, 1980

Dear Mr. Kalnins:

Re: PETE, BUNNY, JAGER, LORRAINE, CORDOBA Mineral Claims - Drilling Report '80 #326

With reference to our telephone conversation of last week, I am now returning the reports with the amendments as suggested by you.

As mentioned over the phone, the total acct. from J.L. Drilling Ltd. is $62,839.50, and a copy of the itemized bill is in the front pocket of each report. The costs for room and board are also itemized and are enclosed in the front pocket.

The 1979 diamond drill holes are marked on two maps which are in the back pocket. The scale of these maps is 1 cm to 25 m, and have been prepared by John Poloni, P.Eng.

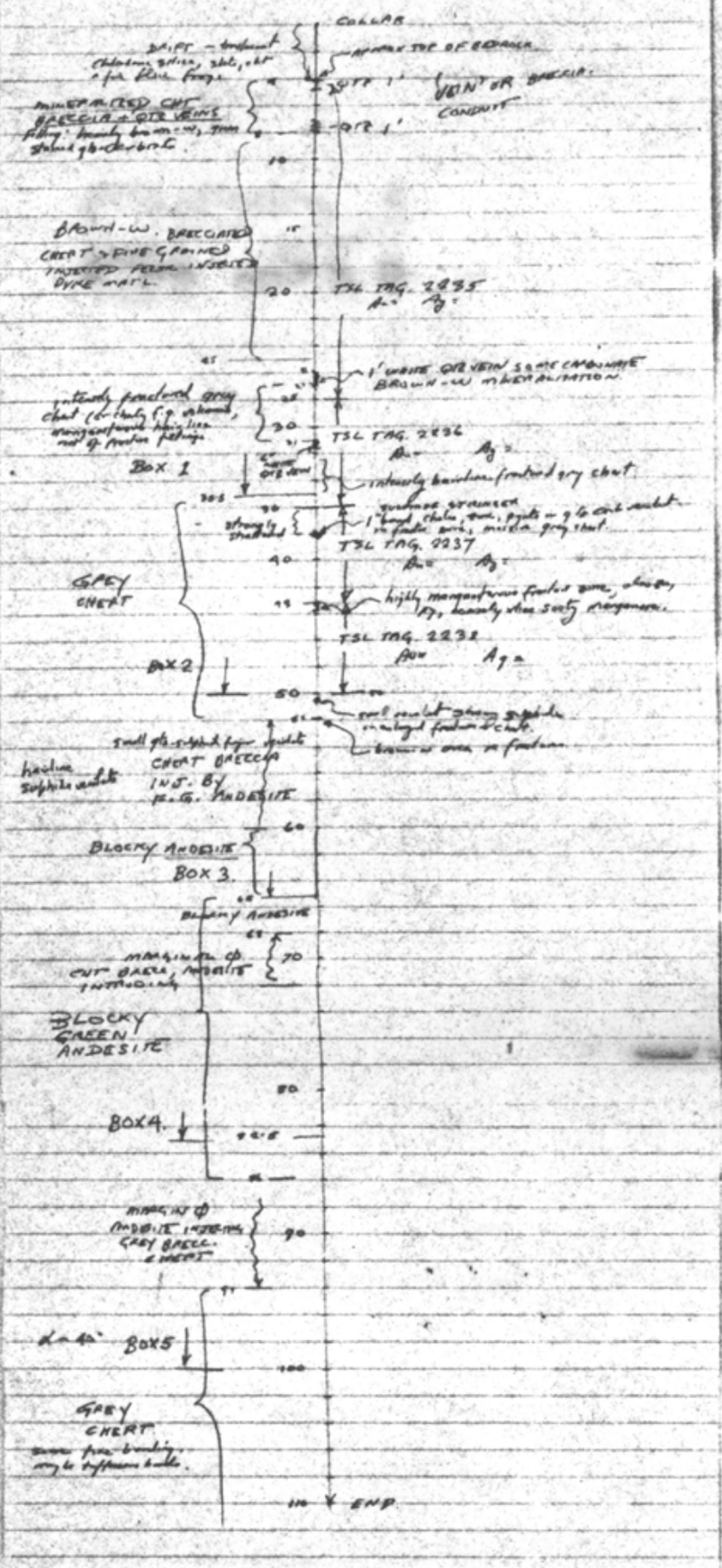
I believe the drill core logs and correlated assays as included in the report were satisfactory to you, and that the above information is sufficient to have the report approved.

Yours truly

Guilford H. Brett
President

GHB/lm

DDH 82 LINE 3 S AREA CLEAR. COORDOBA CLAIMS. CASSIAR.
AZIMUTH 322°E, -45°, 110' LENGTH. APR. 1984.



per Brian D. Groves

LINE 9 AREA. CORDOBA CLAIMS CUSAC. CASSIAR 1979

DDH 6. FORESIGHT S 8°W, -45°, 363'

DISTANCES MEAS. ALONG HOLE FROM COLLAR.

LOG: Aug. 1979

Scale 1 in = 2'

0 — COLLAR

OB

Pebbles
overburden: white qtz
minor f.g. bk basalt
granitic stream
pebbles

TOP OF BEDROCK 15.5 — 15.5

20 — TAG. 17377
Au = ·36 Ag = ·38
D = 16.5'

FLAT QTZ VEIN.
v. minor qtz-carbonate
minor siliceous vole inclusions.
v. little visible mineralization.

30
31 — 32

brownish 'qtz-carbonate'
altered & somewhat brecciated
f.g. volcanics

TAG. 17378
Au = ·094 Ag = ·06
36 D = 4'

37.6 — 37

white qtz vein (flat vein)

TAG. 17379 RIGHT DEPTH TO BE INTERSECTION WITH LAST VEIN
40 Au = 1.98 Ag = ·38 "HVY"
41.5 — 41 D = 4'

Box 1 — 45

mostly andesite

rusty breccia zone ± qtz vein + qtz vein breccia. 50 — 49 TAG. 17380
52 Au = ·56 Ag = ·48 "HVY-2" FOUND OF SIGHT ...
D = 3'

3" qtz vein

Box 2 — 60 — 61

∠ ≈ 70° brown alteration

blocky andesite

70

crumbly zone

Box 3 — 78

80 — 6" brown healed fracture
v. little mineralization.

blocky andesite
few frax ∠ = 40-70°

90

Box 4. — 94

andesite altered to soft,
swelling core but little
discoloration some ∠65°
fine feldspathic veinlets

100

sulphide stringer
minor ZnS

Box 5 — 111 — 110

ANDESITE TUFF
andesite (tuff?)
increasing alteration
net of hairline frax filled
with brown limonite, gypsum (Mn). 120 — 119
core soft, feldspathic looking.

∠ ≈ 45°.
BLACK SLATE INTERBED.
FEW grey tuff interbands, sl. siliceous

121.5 — BLUE GREY SILICEOUS TUFF OR CHERT
COLOR BANDED

Box 6. — 129 — 130

V. SILICEOUS GREY CHERT
core very broken up light greeny-
grey, translucent. subconchoidal
wandering net of hairline
limonite/manganiferous partings 140
∠ 0 - 45°.

Box 7. — 145

CHERT continues 150
massive, indiv. core up to 2'
long. ∠ = 45° ± 15°
in one section, network of small
solution channels eroded from
calcareous? oriented frac. filling

Box 8. — 160

— SULPHIDE CEMENTED 167'
chert breccia. TAG 17387. (A79-1538)
D = 1'. Au ·002, Ag ·03.

PHOTO.
(compare this grey sulphide
to DINO V. sulphide) 170

ANDESITE (TUFF)
feldspathic grey green
andesite

ASSAY SHEET A79-1533

Box 9 — 177

sulphide stringer — TAG. 17381
1' 4" vein almost massive iron sulphide
Au = ·042 Ag = ·02

180

ANDESITE (TUFF)
grey green fine grained
∠ 40-50° some gypsum
swelling

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8634
NO. ______

187

CHERTY ANDESITE 190

Box 10. — 193

200

∠ ≈ 60° 1½" quartz vein

209 — ∠ = 60°
Box 11 210 SOFT TUFF soft, soapy very fine
211 grained

220

230

NOTE: — AT 272' BOX 15
1/8" SULPHIDE STRINGER. in siliceous tuff.
TAG 17382. Au = ·03 Ag = ·06

William D. Groves.

CHERT &
CHERTY ANDESITE
TO END AT 363' (BOX 20)

LINE 9 AREA CORDOBA CLAIMS CUMC. CASSIAR

DDH 7. Same stn as DDH 6.

FORESIGHT S 71° E, -45° (319')

LOG. WDG 1979.

SCALE 1 LINE = 2 FT.

COLLAR

0.8

10

QTZ VEIN FLAT milky, low temp. — 15 – 15'

18 — TAG. 17383 Au = .038 Ag = .61 Δ = 8'

BLACK SLATE α = 45° somewhat bleached at bottom — 20

23.5 — 23

FLAT QUARTZ VEIN — 30 — TAG 17384 Au = .11 Ag = .19 Δ = 19'

BOX 1 — 36'

qz slate interbed or inclusion α = 45° few sutures with manganese, sericitic, introduced in quartz — 38.5'

40

42

SILICIFIED SLATE OR ANDESITE

46

QUARTZ VEIN

1 FT QUARTZ VEIN + CHERT BRECCIA — 50 — TAG. 17385 Au = 2.47 Ag = .67 Δ = 9 FT "HOT" — N.B.

buff-weathering 6" breccia zone limonite, manganiferous fill — 55

2 cm rotated frags, BRECCIA ZONE IN fill. bk manganese FINE GRAINED BUFF qtz, euhedral FELDSPATHIC ANDESITE — 60 — TAG. 17386 Au = 7.28 Ag = 5.63 Δ = 1 FT. "HOT-2" — N.B. A29-1533

63' - 3" zone, containing sulfides.

MOSTLY GREY-BUFF WEATHERING ANDESITE (TUFF)

68'. 6" QUARTZ VEIN filling breccia zone, soaking in/around breccia margins. α = 20-40°

70

BOX 3 — 77.5

pale-buff grey-green andesite

ANDESITE

brown discoloration, limonite & some manganiferous ochre or fine. altered zone. — 78 — 80 — 81

N.B.

4" black qtz vein, welded margin, penetrating into andesite

2" QTZ VEIN LITTLE VISIBLE MINERALIZATION

BOX 4 — 88.5

90

91' inclusion of prev. flow: solution-rounded some fine sulfide impregnation on boundaries.

ANDESITE

97.5 — α = 40°-60° 1" QTZ VEIN

100

BOX 5 — 106 — α = 40-60° 1" QTZ VEIN

110

ANDESITE - GREENY GREY α = 35°-50° blocky

120

122 – 123 — rotten zone small shear. fine. chlorite, brown limonite

BOX 6 — 127

130

ANDESITE

BOX 7. — 140

GREEN ANDESITE — α = 35-45°

150

fine grained, grey, v. little mineralization. — α = 60° of sharp upper contact

BOX 8 — 157 — v. fine grained feldspathic volcanic (tuff)

160

161'

165' — gradational contact into bk. slate

BLACK SLATE α = 30° → 20° — SAMPLE. TAG. 17390. BANDS CONTAIN PYRITE A29-1533 Au = .002 Ag = .09.

170 — α = 20°

171 — pale grey tuff (siliceous)

PHOTO + color banding in seds + sulfide

BOX 9. — 175 — transition into grey chert

177 — color banding α = 90°

depositional / gradational slate/chert/tuff blackest slate starts depositional cycle

180

GREY CHERT

α = 10° 1/4" sulfide stringer in chert. SAMPLE TAG. 17391 A29 1533 Au = .002 Ag < .02

189 – 190 – 191 — tufferaceous horizon, gradational contact grey chert

BOX 10 — 199

PALE GREY CHERT OR CHERTY TUFF — 200

201' — SAMPLE. 5-10% cubic iron 4" sample of whole core. TAG. 17398 A29-1533 Au .002 Ag .02

between conchoidal massive pale grey chert, 1/2" [illegible] white vein.

BOX 11 — 210

214

220

230

HOLE ENDS 319'

William D. Groves

LINE 9 AREA, CORDOBA CLAIMS CUSH. OMSWAR
DDH 8. Same station as DDH 6,7
FORESIGHT W 33°N, -45°, 326'
1 Link = 2 FT.
WIN. 1979

0 — collar.

OVERBURDEN

10

STATIC CASE — } overburden. Tuff or andesite pebbles, 6" block vesicular basalt boulder.

17

FLAT QUARTZ VEIN.
mostly milky white pale buff quartz. Inclusions of slate & tuff. Rounded outlines v. small out of marginals grain around margins. v. little mineralization.

20 — TAG 17393 129 1523. Au ∠.002 Ag .05

27 — " " galena mineralization.

BOX 1

30 — TAG 17394 A 29-1523 Au = ∠.002 Ag = .03

Altered zone: pale buff cherty tuff & rather massive cherty tuff

35

CHERT. ? cherty feldspathic tuff. ∠ = 45°

40

BOX 2 — 50

51

ASHY TUFF & TUFF BRECCIA. Some rotation (or random orientation) of fragments 51' - 57'. 57'-60' more feldspathic, rather grey-green, & some fresh cubic pyrite.

TAG 17395 A29-1523 Au = ∠.002 Ag = .02

60

TUFF, more massive. Pyrite & other sulfides. Medium grey green.

61.5 — 3" QTZ vein, ∠ = 35° — VEIN: A 29-1523 SAMPLE TAG 17396

BRECCIA CEMENTED WITH MASSIVE SULPHIDES, some interbedded pyrite — Au = ∠.002 Ag = .02

BOX 3 — 69

70

ANDESITE - OR ANDESITIC TUFF. Greenish-grey.

80

BOX 4 — 87

90

TUFF TO CHERTY TUFF grey green.

97-99' chert breccia, cemented by tuff. ∠ = 45 - 55°

100

BOX 5 — 109.2

MASSIVE GREY CHERT OR CHERTY TUFF — 110

112-113': breccia zone ∠ = 30° pale grey rotated fragments in chert matrix.

120

BOX 6

MASSIVE FINE GRAINED GREEN ANDESITE OR ANDESITIC TUFF — 130

127' 1" QTZ VEIN ∠ = 25° below this is pale chert or quartz filling of fragmental & crush looking outline.

140

BOX 7

150

191

CHERT TO CHERTY ANDESITIC TUFF

PYRITE

A29-1522 SAMPLE MASSIVE SULPHIDE STRINGERS TAG. 17397. Au = ∠.002 Ag = ∠.02 Zn ∠.01%.

198 — 200 — 201

BOX 11

considerable mineralization in core in wandering fine veins (1/16") to stringers & following random set of 1/8"-1/16" clear quartz fillings ∠ = 45°

203-204

212

MASSIVE FINE GRAINED ANDESITE

220

BOX 16

223 — 225 — A29-1522 SAMPLE TAG 17398 Au = ∠.002 Ag = .02 Zn = ∠.01% — 1/2" SULPHIDE STRINGER

243-245' mineralized zone in dot ∠ = 5-10° 3" QTZ breccia & vein & sulphide patch fill.

245

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8634

250

FINE GRAINED GREY - GREEN CHERTY ANDESITE

254

BOX 18

NO 1522 1" SULPHIDE STRINGER

SAMPLE TAG 17399 Au ∠.002 Ag = .03 Zn = ∠.01%

270

SULPHIDE STRINGERS A29-1522 SAMPLE TAG. 17400 Au = ∠.002 Ag = .02 Zn = ∠.01%

BOX 20

MASSIVE TUFF & ANDESITE.

William D. Groves

304

320

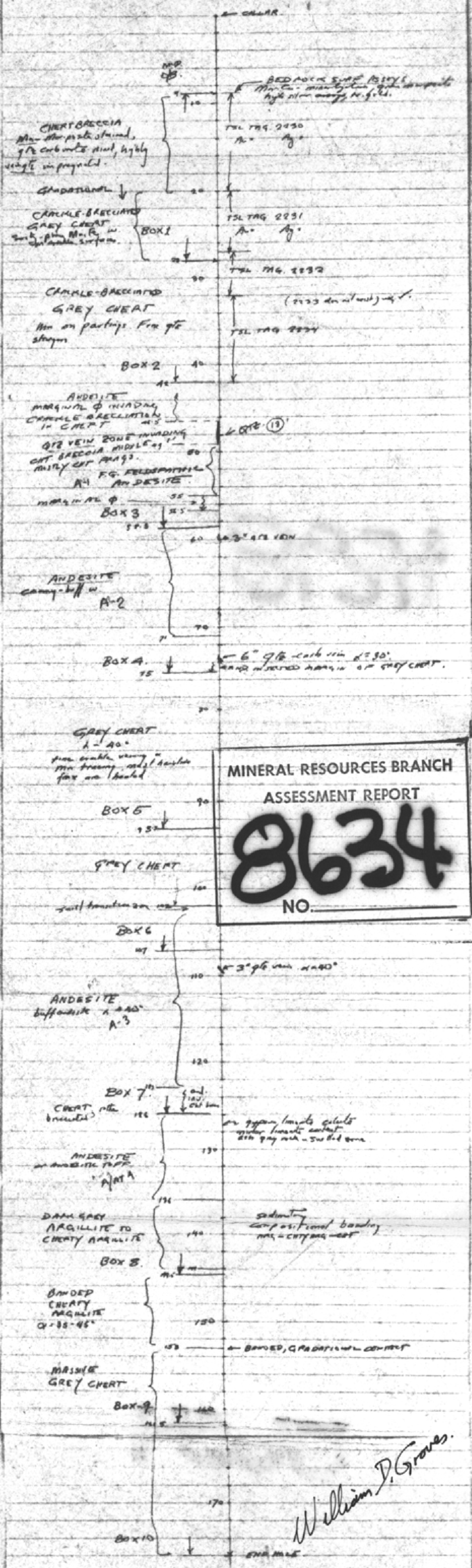
379-380' ∠ = 25° 1/2" SULPHIDE STRINGERS TAG. 17401 A. 29-1522 (LAST) Au = ∠.002 Ag = ∠.01 Zn = ∠.01%

BOX 21.

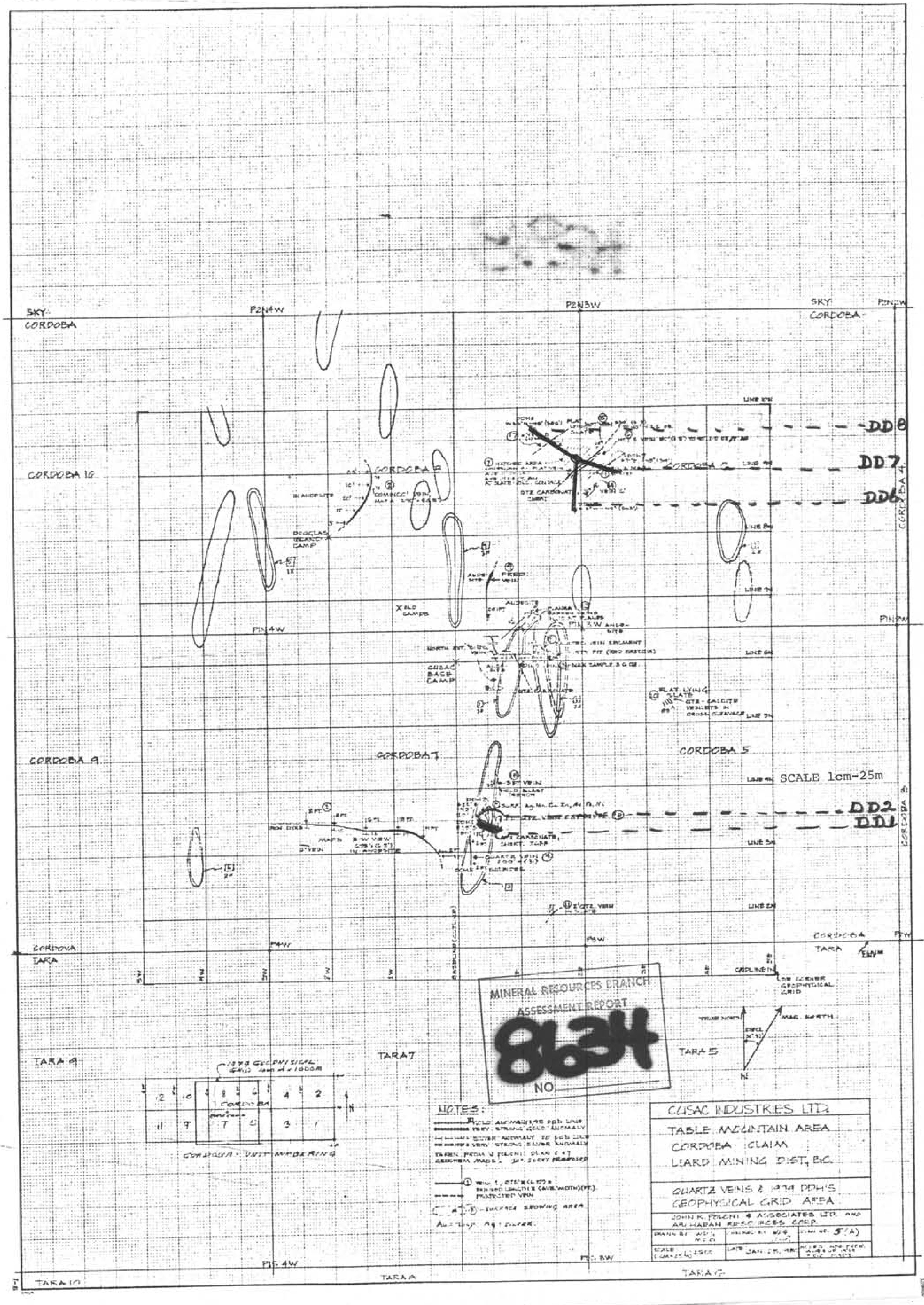
MASSIVE ANDESITE.

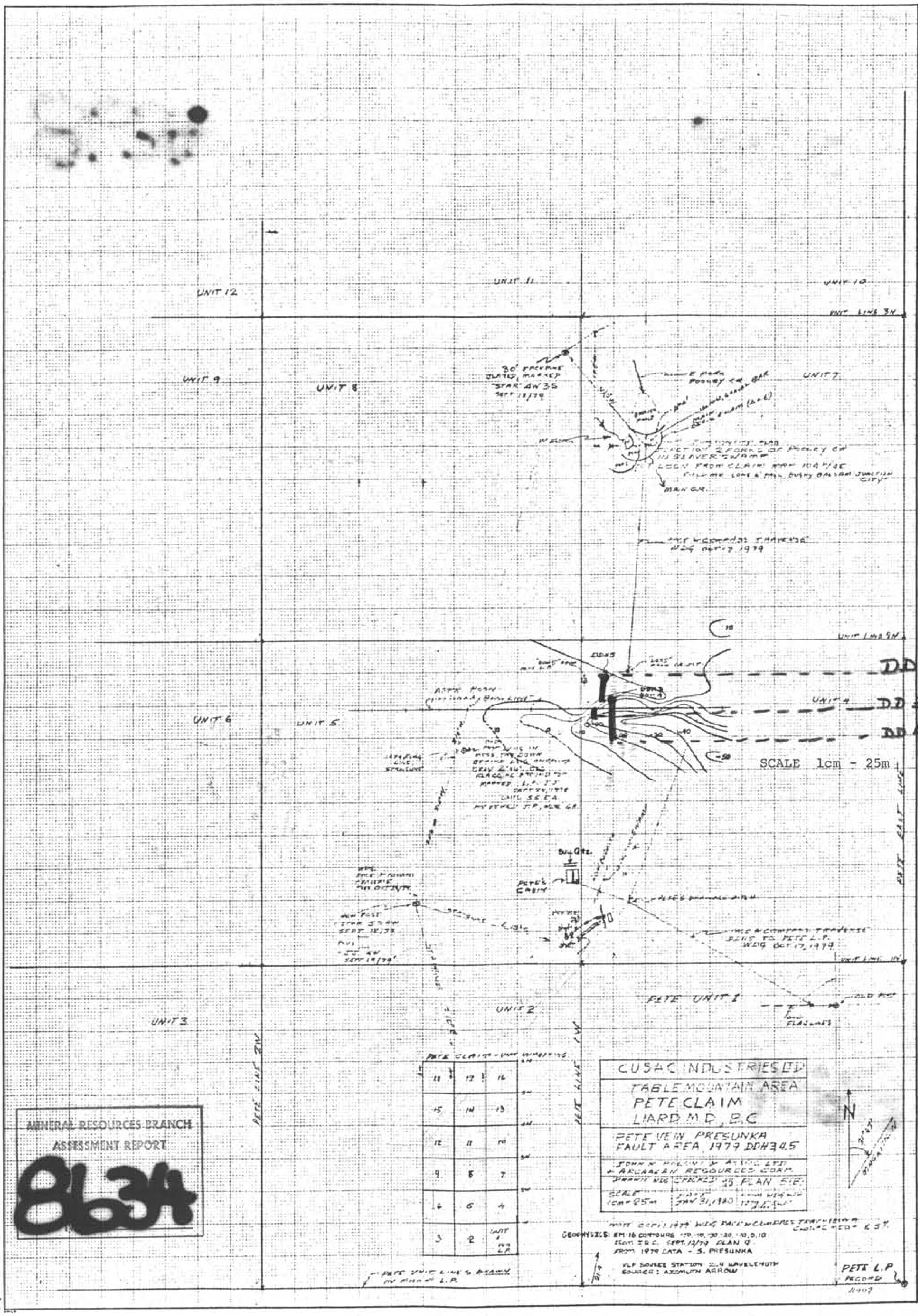
END HOLE 326'.

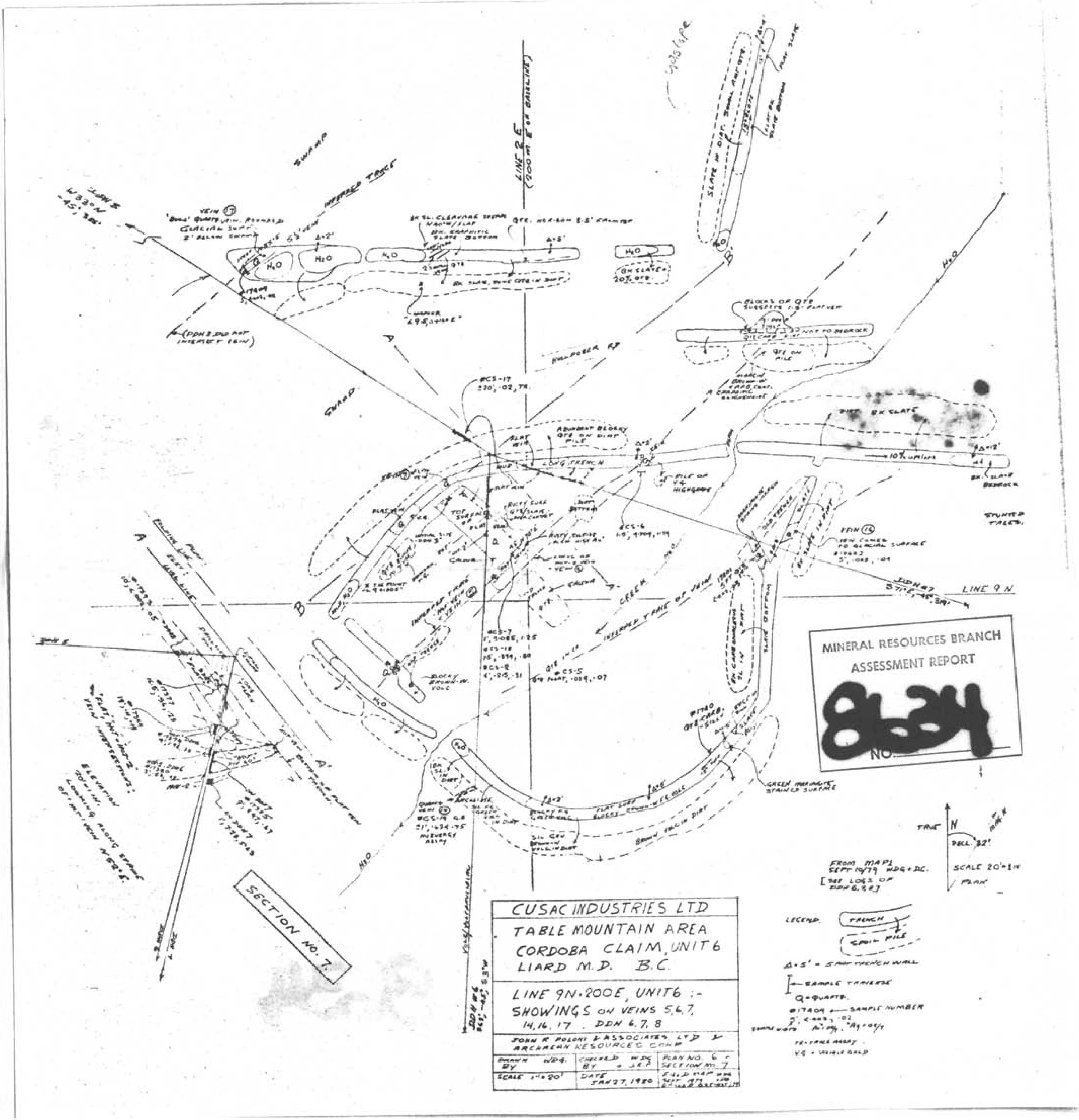
LINE 3·5 AREA CORDOBA CLAIMS CWAC CASSIAR
DDH#1. FORESIGHT E95°S, -50°, 176' LENGTH.



William D. Groves.




UNIT 12
UNIT 11
UNIT 10
UNIT LINE 3N
UNIT 9
UNIT 8
UNIT 7
30' SPRUCE PINE BLAZED, MARKED "STAR" 4W 3S SEPT 18/79
MAN CR.
W.W. HOWARD
UNIT 6
UNIT 5
UNIT 4
DDH5
DDS
DD 3
DD 4
SCALE 1cm - 25m
PETE EAST LINE
PETE'S CABIN
PETE UNIT 1
UNIT 2
UNIT 3
OLD POST
PETE LINE 2W
PETE LINE 1W
PETE CLAIM - UNIT NUMBERING
12 | 17 | 16
15 | 14 | 13
12 | 11 | 10
9 | 8 | 7
6 | 6 | 4
3 | 2 | UNIT 1
PETE UNIT LINES DRAWN FROM L.P.
CUSAC INDUSTRIES LTD
TABLE MOUNTAIN AREA
PETE CLAIM
LIARD M.D., B.C
PETE VEIN PRESUNKA FAULT AREA 1979 DDH3,4,5
JOHN R. POLONY & ASSOC LTD & ARCADIAN RESOURCES CORP.
DRAWN W.D.G. | CHECKED | PLAN 5(E)
SCALE 1cm = 25m | DATE JAN 31, 1980
GEOPHYSICS: EM-16 CONTOURS
FROM 1979 DATA - S. PRESUNKA
VLF SOURCE STATION WAVELENGTH
SOURCE: AZIMUTH ARROW
N
PETE L.P. RECORD 11407
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8634



CUSAC INDUSTRIES LTD
TABLE MOUNTAIN AREA
CORDOBA CLAIM, UNIT 6
LIARD M.D. B.C.
LINE 9N+200E, UNIT 6 :-
SHOWINGS ON VEINS 5, 6, 7, 14, 16, 17 . DDH 6, 7, 8
JOHN R POLONI & ASSOCIATES LTD & ARCHAEAN RESOURCES CORP
DRAWN BY WDG
CHECKED BY WDG + JEP
PLAN NO. 6 + SECTION NO. 7
SCALE 1"=20'
DATE JAN 27, 1980
SECTION NO. 7
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 8034
LINE 2E (200 m E of BASELINE)
LINE 9 N
SWAMP
INFERRED TRACE
LONG TRENCH
CREEK
INFERRED TRACE OF VEIN
STUNTED TREES
SCALE 20'=1 IN
PLAN
DECL. 32°
TRUE N
FROM MAP 1 SEPT 19/79 WDG + DC.
[SEE LOGS OF DDH 6, 7, 8]
LEGEND
TRENCH
SPOIL PILE
Δ=5' = 5 FOOT TRENCH WALL
SAMPLE TRAVERSE
Q = QUARTZ
#17404 ← SAMPLE NUMBER
FE = FIRE ASSAY
VG = VISIBLE GOLD

DRIFT

"MAR" OF SILICEOUS VOLCANICS

DISCOVERY OUTCROP: GLACIAL SURFACE ROUNDED OUTCROP OF "BULL" QUARTZ.

(9) FRED VEIN

DIPS MODERATELY STEEP.

GULLEY

40° WEST

12' PLANAR BLIND QUARTZ VEIN

GULLEY

HAND TRENCHES.

SAMPLE FIL 9341 PPM. NIL

40° WEST

3' BLIND QTZ VEIN, PLANAR, 1 FOOT DIPS.

EDGE OF KNOLL

ANDESITE KNOLL

SAMPLE SMALL AMOUNT OF SULPHIDES BEGINNING TO APPEAR. SOME FIL VOLC FRAGS.

45°

15' SILICEOUS VOLCANIC DYKE

DYKE FORMS RESISTANT RIB DOES INTO SWAMP.

CORDOBA UNIT 8

CORDOBA UNIT 6

CORDOBA 8W LINE

CORDOBA 1N LINE

PIN 3W POSITION

CORDOBA UNIT 5

CORDOBA UNIT 7

ROCK

ROCK + TREES

GRID LINE 100 E

DRIFT

HAND TRENCH

RED BRECCIA

VEIN

3 FT GREENSTONE DYKE, NO APPRE. ACROSS DYKE

VG. IN QTZ OFFSET TO W 2' IN BRECCIA ZONE

DISCOVERY PIT. V.G

DINO VEIN, N EXTENSION (3)

2.5' DIPS MOD STEEP W STR N20°W

V.G., PYRITE, TETRAHEDRITE

SAMPLE FEL 2340

DRIFT

DIP 6'

BLOCKY ANDESITE

BULLDOZER CUT

FAULT CUTS VEIN OFF CRESTLY

DIRT + TREES RUN PILE

FAULT

3' RED BRECCIA

2" YELLOW LIMONITE ON FRACT.

LL MOOSE MARKER

600 PPB GOLD ANOMALY

DISCOVERY PIT

2" YELLOW LIMONITE ON SLIP W SIDE OF VEIN

V.G.

1' RED BRECCIA

600 lb BULK SAMPLE (TEST REEF PART I)

(3) DINO VEIN: QUARTZ, V.G., + PYRITE, TETRAHEDRITE & MINOR CHALCO 1.5 - 10% SULPHIDES

- 2½' AVE WIDTH AT SURFACE

TOP OF BEDROCK RED = YELLOW OXIDE + HEAVY FE. VEIN.

900 PPB GOLD ANOMALY AT MARKER

DRIFT FILLED DRAIN

BLOCKY GREEN ANDESITE KNOLL

HAND TRENCH DID NOT FIND VEIN

SAMPLE GC. 17434 Au - 0.03 OZ/T Ag -

QUARTZ VEIN (9) LIMONITE-CLAY SLIP ON W. SIDE.

HEMATITIC BRECCIA IN BANK. VOLCANICS

1979 BULLDOZER TRENCH OR PIT

Δ = 4'

Δ = 2-4'

DIRT PILE

DECL. 31°E

MAG. N

BASECAMP AT LINE 6, 10E.

LINE 6 N GRID

CAMP POND

ANDESITE

CONTACT DIPS 40° A S.

OFF-CARBONATE

EDGE OF GREENSTONE KNOLL

GRASSY, TIMBERED FLAT

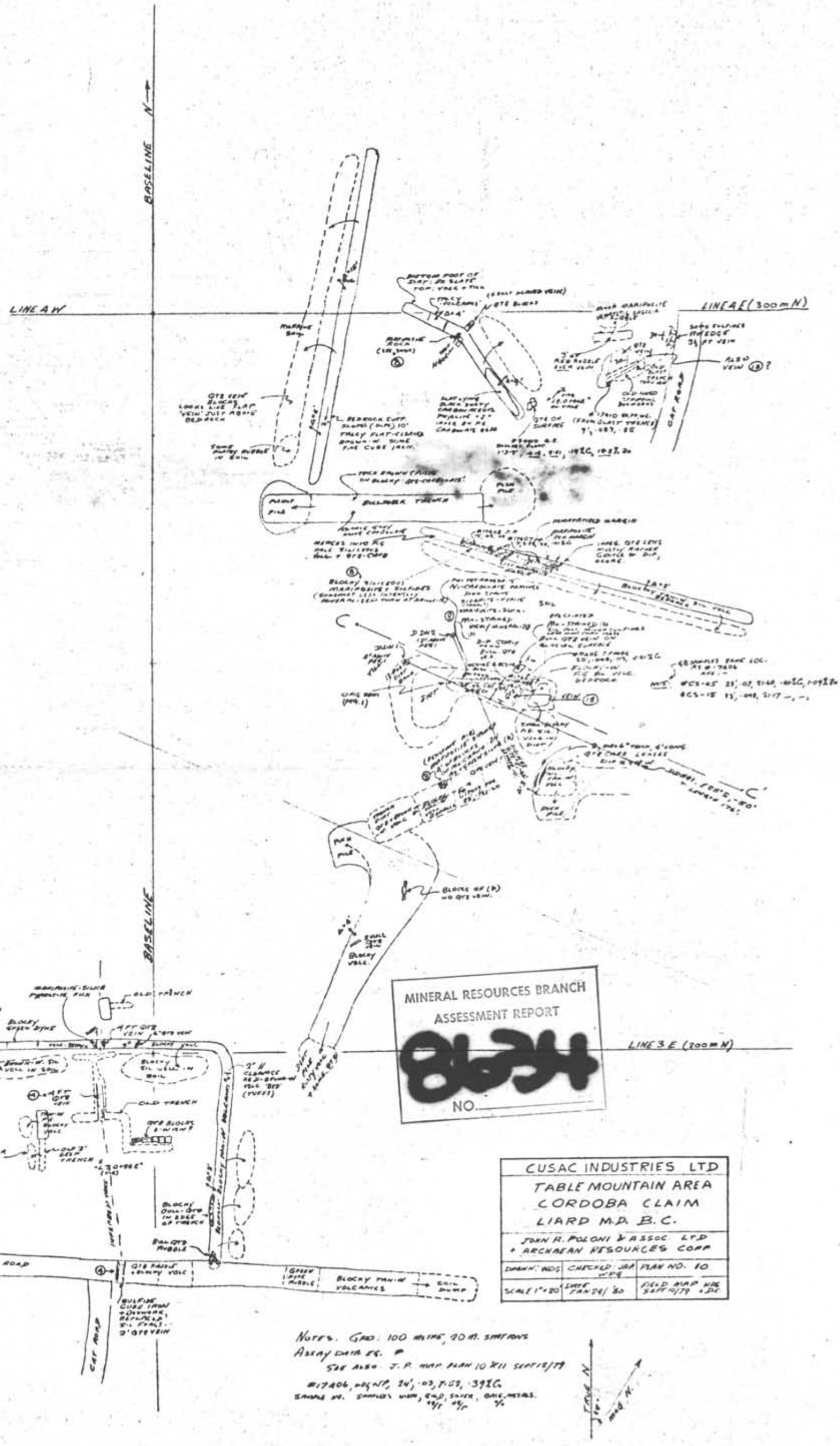
QTZ, PINK FELT, CHLO. FROM STRINGERS FULL SULPHIDE STRIP

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8634
NO.

CUSAC INDUSTRIES LTD.
TABLE MOUNTAIN AREA
CORDOBA CLAIM-UNIT 7
LIARD M.D. B.C.
DINO VEIN, FRED VEIN
GRID L6, 0+00E AREA
JOHN A. POLONI & ASSOC. LTD.
& ARCHAEAN RESOURCES CORP.

DRAWN BNR + WDS	CHECKED WDS JAP	PLAN 9
SCALE 1" = 20'	DATE JAN. 31E/80	FROM FIELD NOTES WDS + VB

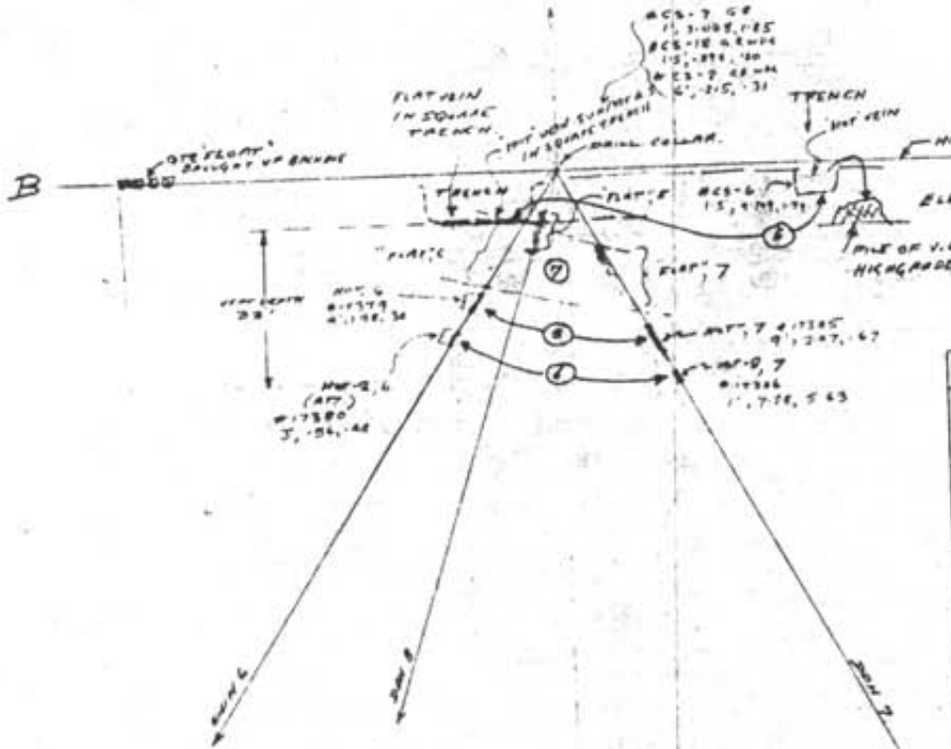
VEINS (3), (9), (9)



CUSAC INDUSTRIES LTD		
TABLE MOUNTAIN AREA CORDOBA CLAIM LIARD M.D. B.C.		
JOHN R. POLONI & ASSOC LTD + ARCHAEAN RESOURCES CORP		
DRAWN: WDG	CHECKED: JRA WDG	PLAN NO. 10
SCALE 1"=20'	DATE JAN 24/80	FIELD MAP NDE SEPT 10/79 + JDC

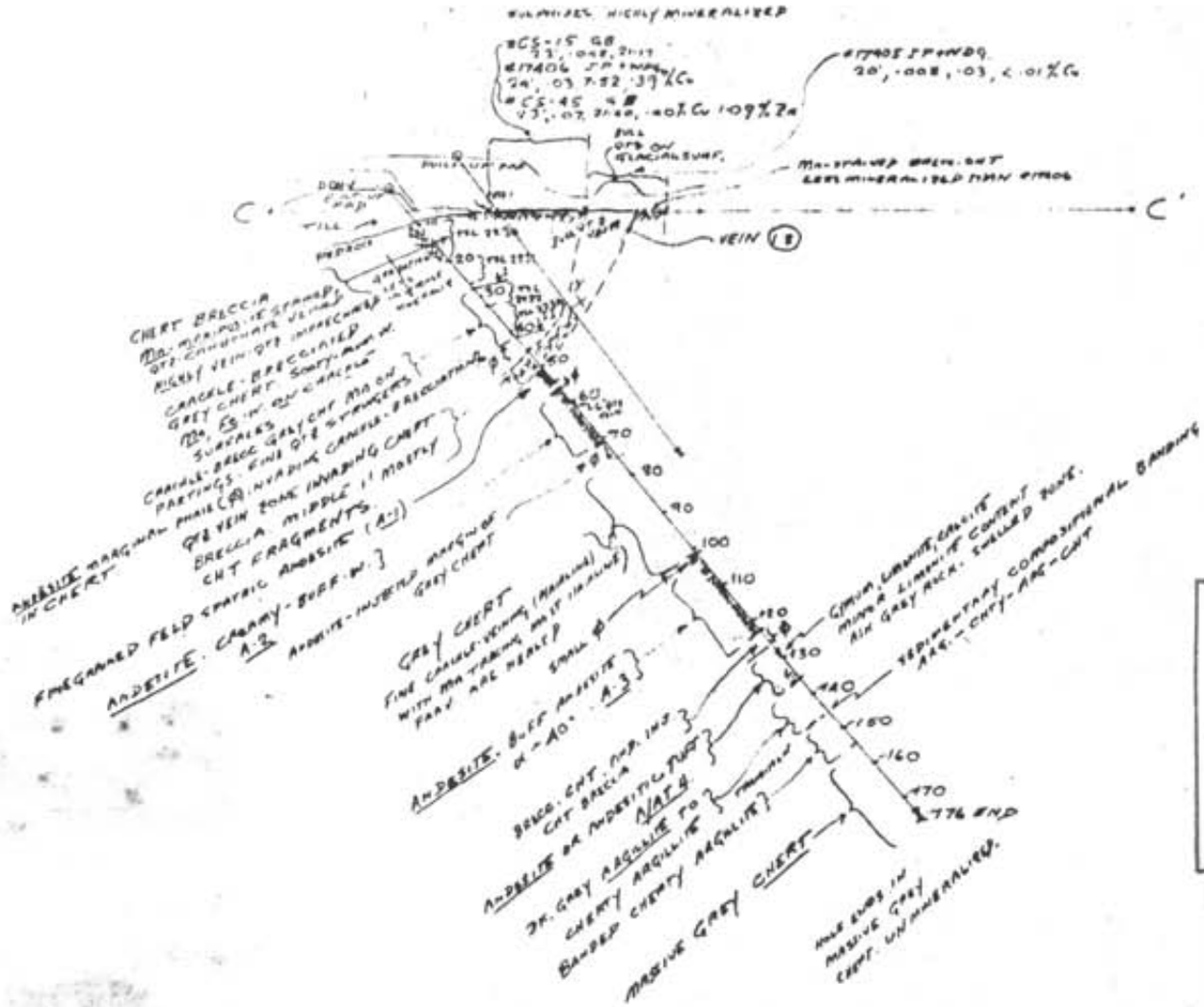
NOTES. GRID: 100 METRE, 90 M. STATIONS
ASSAY DATA SEE #
SEE ALSO J.P. MAP PLAN 10 XII SEPT 12/79

#17406, HCl-HNO3, 24', .03, 7.59, .39%Cu
SAMPLE NO. SAMPLE'S WIDTH, Cu%, SILVER, GOLD, METRES
oz/t oz/t %



Note See Plan 6 for reference section A-A'

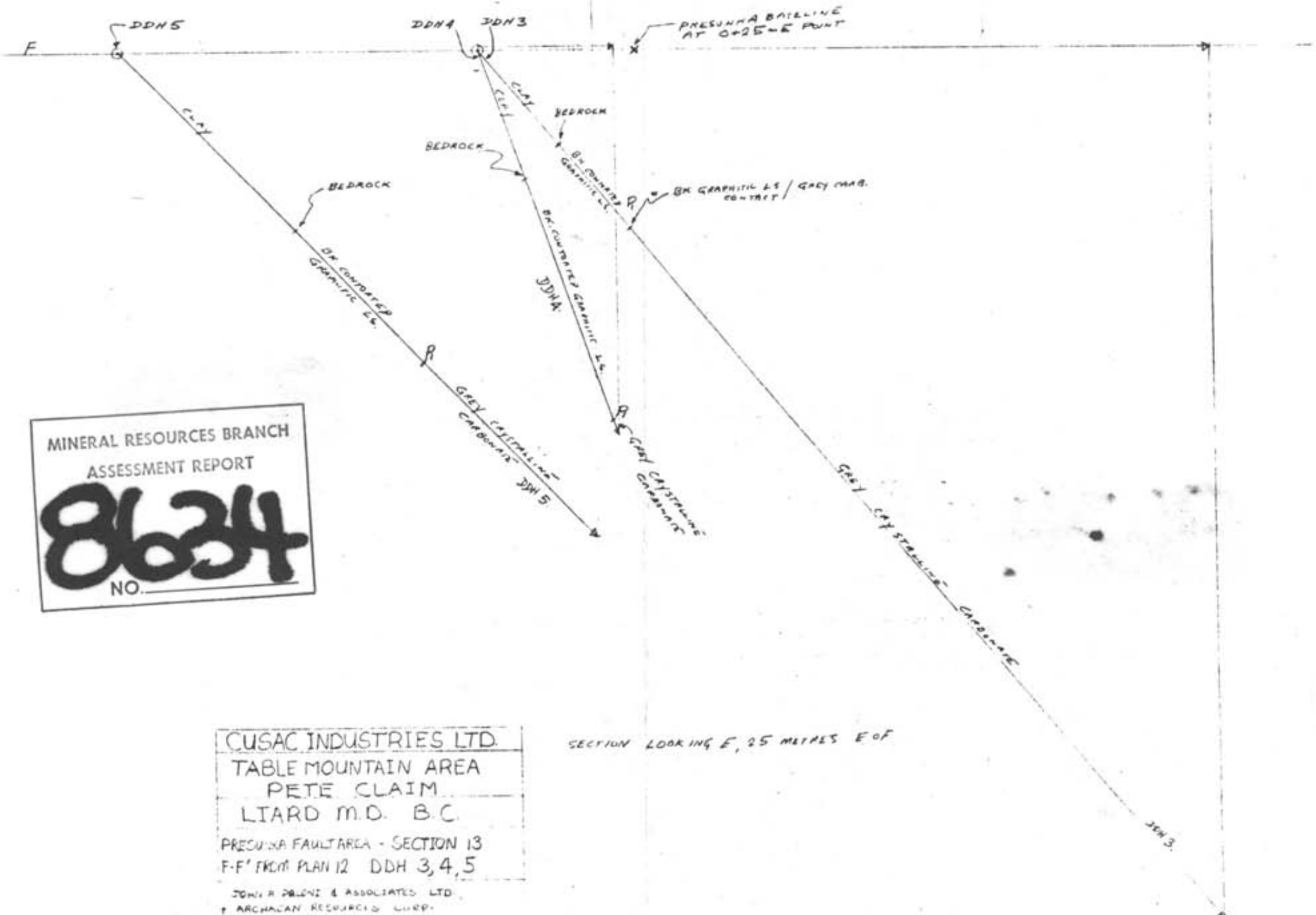
CUSAC INDUSTRIES LTD.		
TABLE MOUNTAIN AREA CORDOBA CLAIM LIARD M.D. B.C		
SECTION B-B' VEINS ⑤ ⑥ & ⑦ LOOKING N 38° W.		
JOHN R. POLON & ASSOC. LTD + ARCHAEAN RESOURCES CORP		
DRAWN WPG	CHECKED BY JRP WPG	SECTION B
SCALE 1"=20'	DATE JAN 29/80	FIELD MAPPING SEPT 10/79 DC/MK



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8634
NO.

Note
See Plan 10 for reference C-C'

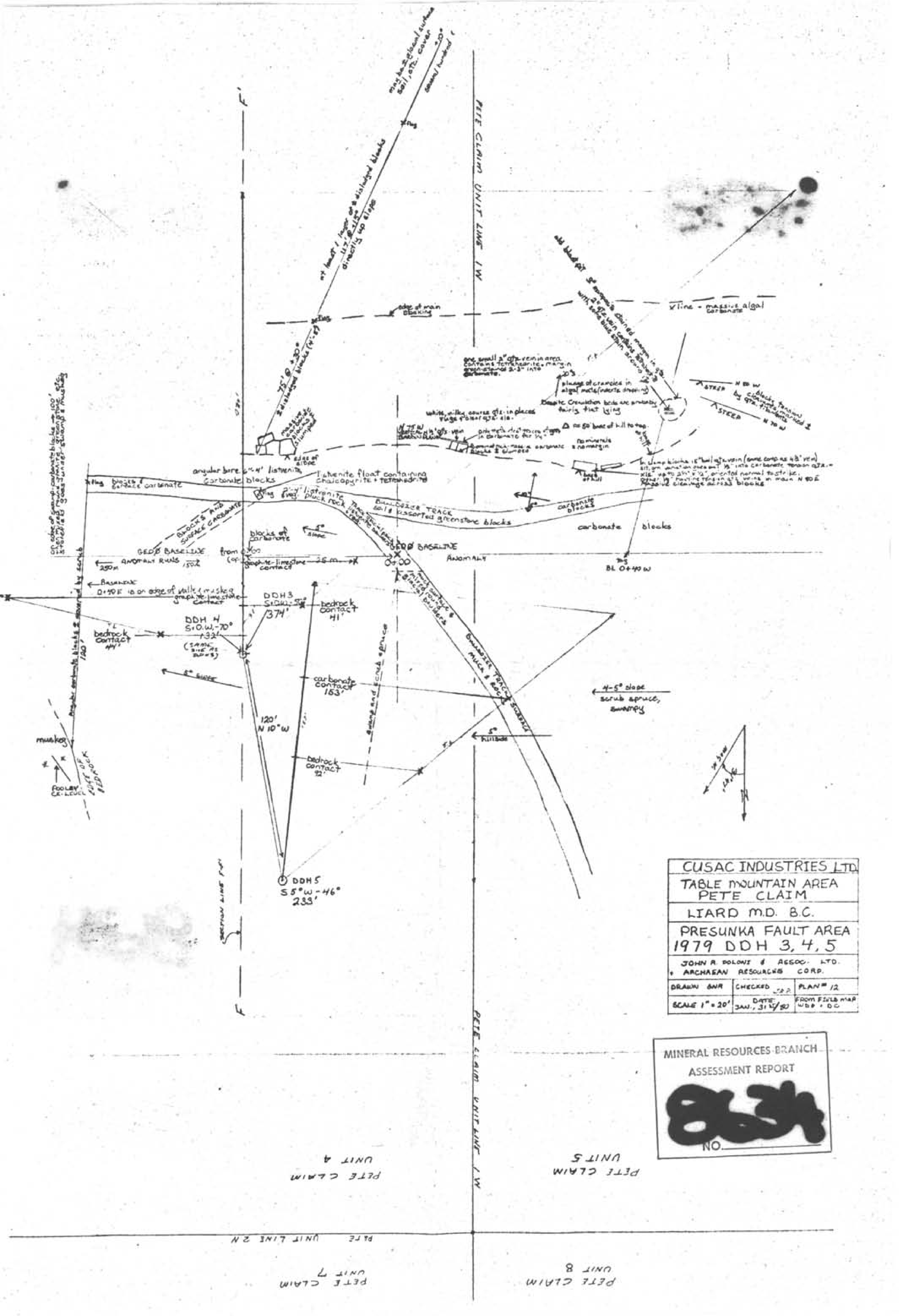
CUSAC INDUSTRIES LTD		
TABLE MOUNTAIN AREA CORDOBA CLAIM LIARD M.D. B.C.		
SECTION C-C' PARALLEL TO DDH #1. SILVER SHOWING L 4 + 50 E, GRID AREA		
JOHN R POLONI & ASSOC LTD & ARCHAEAN RESOURCES CORP		
DRAWN WDG	CHECKED NDG	SECTION # 11
SCALE 1" = 20'	DATE JAN 24 80	

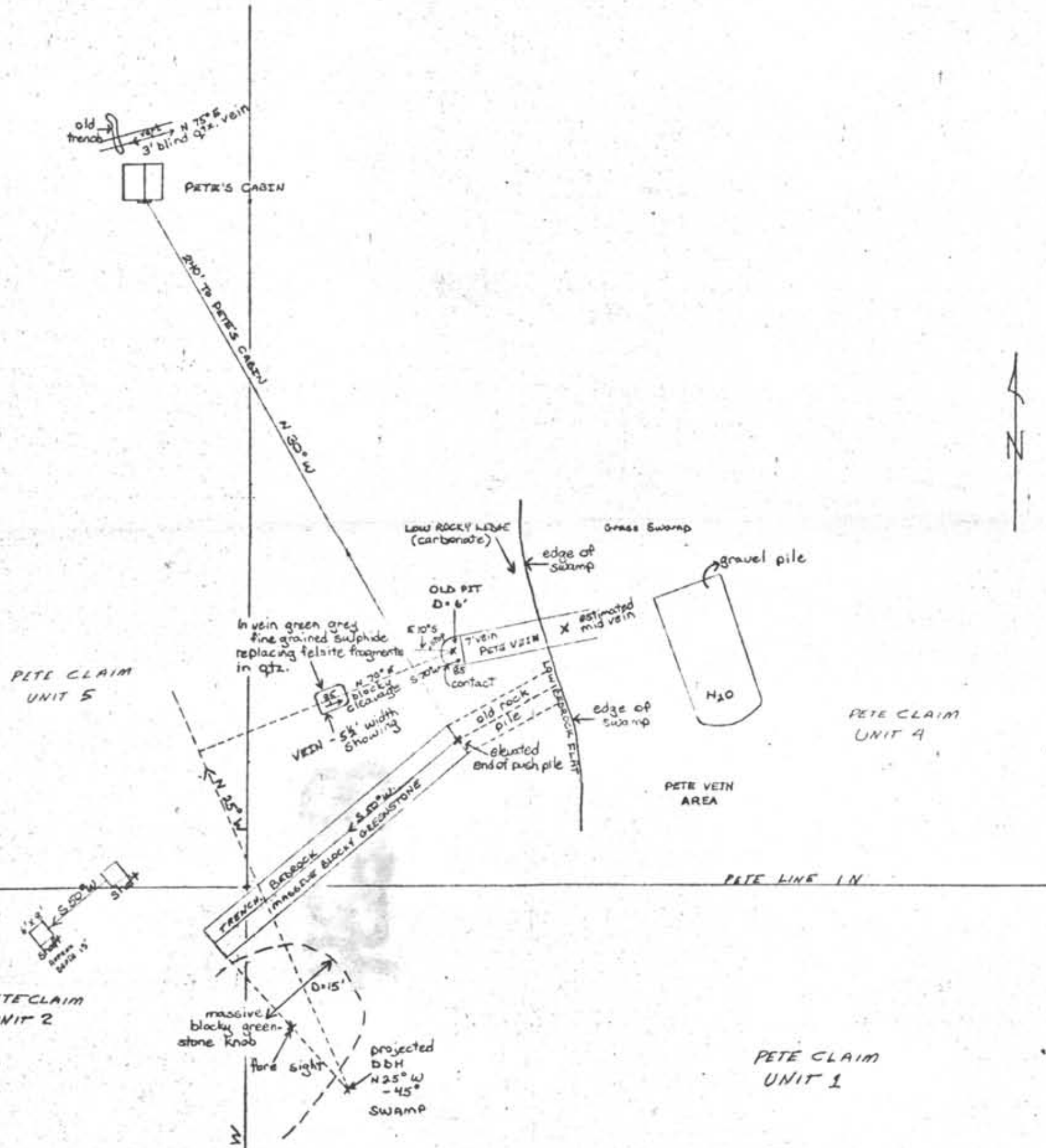


MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8634
NO.

CUSAC INDUSTRIES LTD.
TABLE MOUNTAIN AREA
PETE CLAIM
LIARD M.D. B.C.
PRESUNKA FAULT AREA - SECTION 13
F-F' FROM PLAN 12 DDH 3, 4, 5
JOHN A. PELENI & ASSOCIATES LTD.
& ARCHAEAN RESOURCES CORP.
DRAWN SWR | CHECKED [illegible] | SECTION 13

SECTION LOOKING E, 25 METRES E OF





MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8634
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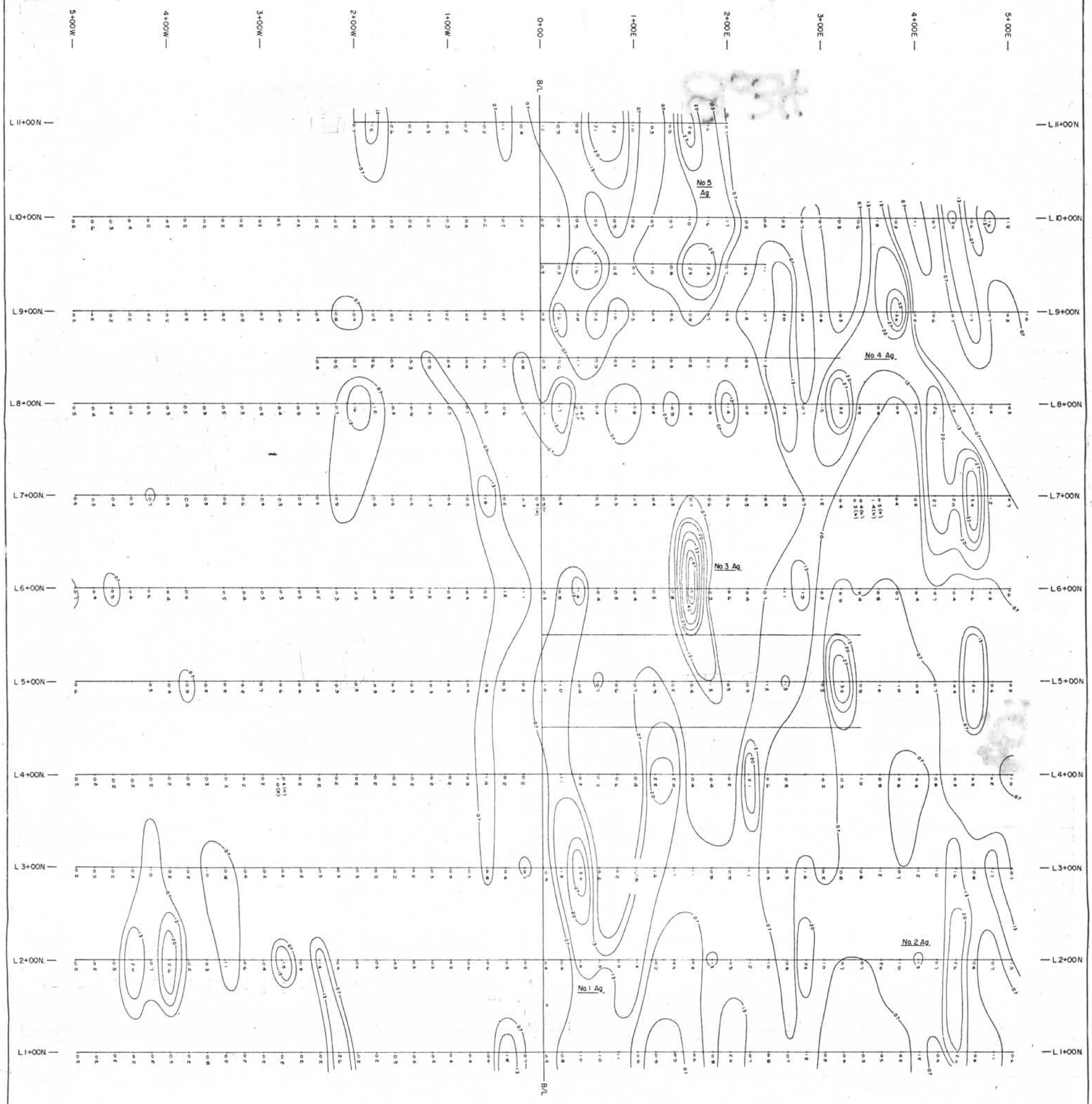
CUSAC INDUSTRIES LTD		
TABLE MOUNTAIN AREA PETE CLAIM, LIARD MD, B.C.		
PETE VEIN AREA		
SHAFTS, TRENCHES, CABIN CLAIM LINES		
JOHN R. POLONI & ASSOC. LTD + ARCHAEAN RESOURCES CORP		
DRAWN E.H.E	CHECKED N.V.S J.R.P	PLAN NO. 14
SCALE 1"=25'	DATE JAN 31 1980	FROM FIELD MAPS AND PLANS OF



LEGEND

SAMPLE LOCATION & ASSAY IN PPM
INSUFFICIENT SAMPLE
B/L BASE LINE

SAMPLE DATA PPM Ag

MEAN 0.67
ANOMALOUS WEAK >1.3 PPM
ANOMALOUS MODERATE >2.0 PPM
ANOMALOUS STRONG >2.7 PPM

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 8634

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA

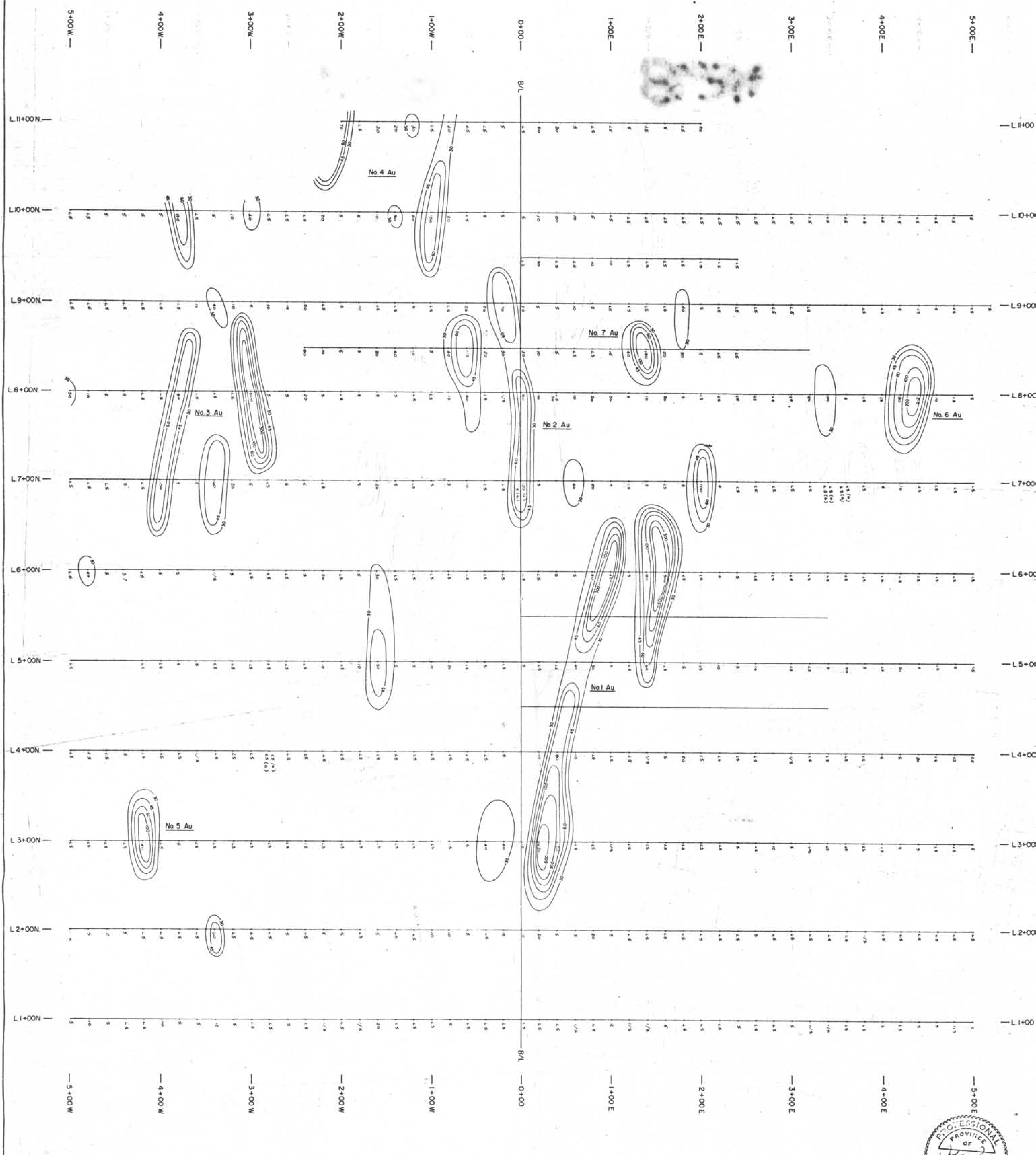
CUSAC INDUSTRIES LTD.

PETE & CORDOBA MINERAL CLAIMS
CASSIAR AREA, LIARD M.D.

GEOCHEMICAL SOIL SURVEY
SILVER (P.P.M.)

JOHN R. POLONI & ASSOCIATES LTD.

DRAWN J.R.P.	CHECKED J.R.P.	PLAN No.
SCALE 1:2000	DATE SEPT 12, 1979	6



LEGEND

- SAMPLE LOCATION & ASSAY IN PPB
- INSUFFICIENT SAMPLE
- <5 LESS THAN
- B/L BASE LINE

SAMPLE DATA PPB Au

MEAN 14.66 PPB
ANOMALOUS WEAK >30 PPB
ANOMALOUS MODERATE >45 PPB
ANOMALOUS STRONG >60 PPB

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 8624

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — J. R. POLONI

CUSAC INDUSTRIES LTD.

PETE & CORDOBA MINERAL CLAIMS
CASSIAR AREA, LIARD M.D.

GEOCHEMICAL SOIL SURVEY
GOLD (P.P.M.)

JOHN R. POLONI & ASSOCIATES LTD.

DRAWN J.R.P.	CHECKED J.R.P.	PLAN No.
SCALE 1:2000	DATE SEPT. 12, 1979	7