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REPORT ON THE
EVALUATION WITH RECOMMENDATIONS
OF THE
DONA AND IRENE CLAIMS
VERNON MINING DIVISION
MONASHEE MOUNTAIN AREA

NTS 82 I/1W
50°08'N:118°24'W
for
Granex Resources Corporation

by
F.M. Smith, P.Eng.

November 28, 1983 **GEOLOGICAL BRANCH
ASSESSMENT REPORT**

10,920

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INTRODUCTION

At the request of Mr. Daniel Small, Secretary/Treasurer of Granex Resources Corporation, the writer examined the DONA-IRENE claimed area on June 6, 1982 and made recommendations to test the potential of a large tonnage low grade gold deposit on the DONA claims.

Additional IRENE claims were located in July to protect the eastern and southern portion of the original claim block.

A preliminary test of the DONA claim area was undertaken in October to attempt to define the grade, thickness, attitude (strike, dip and rake) of the mineralized zones. Detail mapping of fresh trenches utilizing the interpretations of thin sections from the area (see Appendix I) has changed the focus of the evaluation from the altered flows to the complex skarn/tuff/lime sediment on the top of the flows.

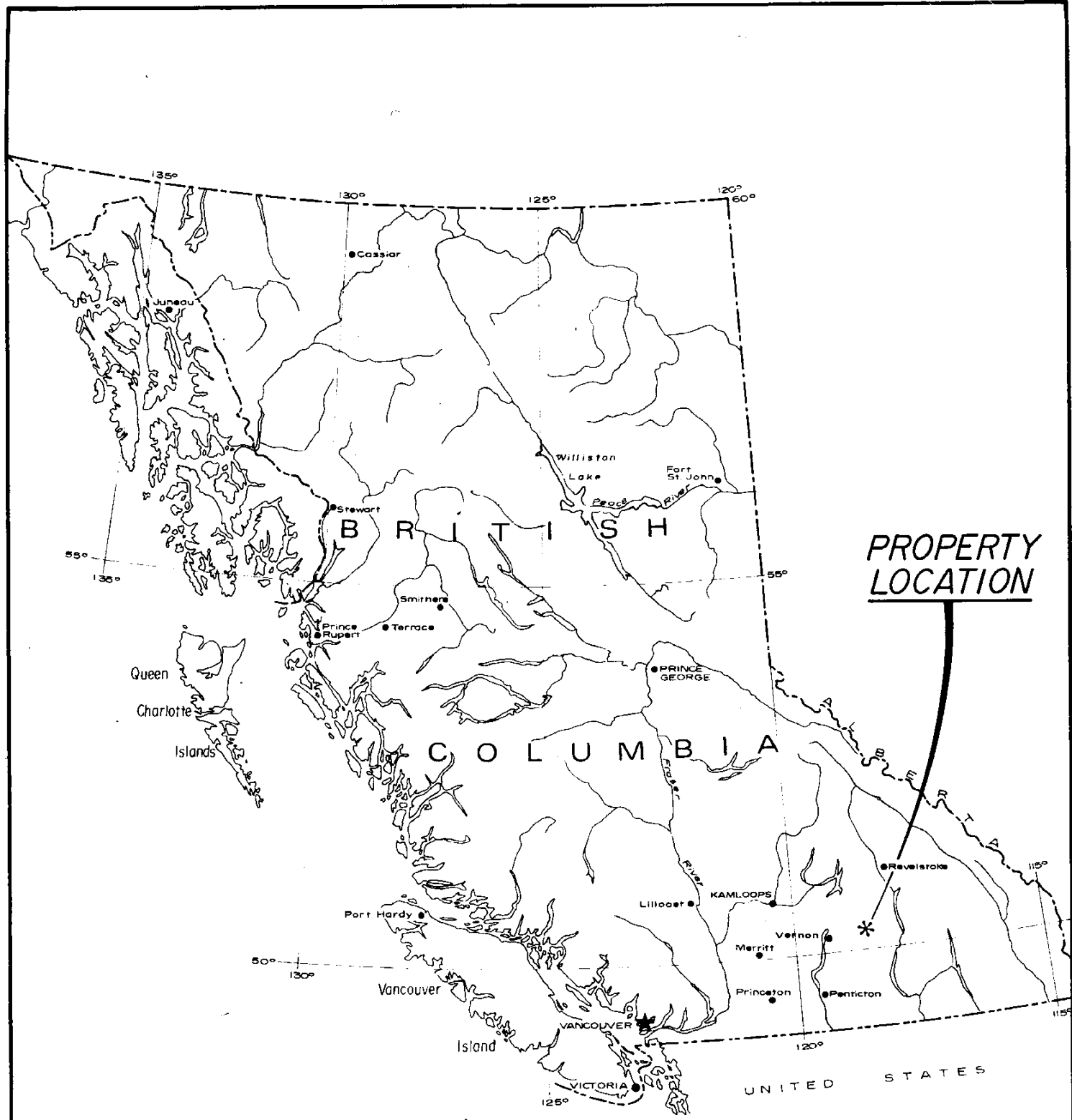
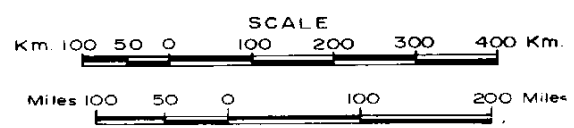


FIGURE G-1
GRANEX RESOURCES CORPORATION
DONA MINERAL CLAIMS
LOCATION MAP



SUMMARY AND RECOMMENDATIONS

The gold and silver bearing horizons on the DONA claims represent an excellent target for the exploration for a large tonnage low grade gold deposit. The optimum area of search for the next stage of work is near the top of the hill between trench No. 4 and 6 with trenching to continuously expose the mineralized horizons and determine the location for diamond drilling to assess the average grade of the deposit.

Sampling of trenches in the area indicates the grade of the deposit within the mineralized horizons is about 0.12 oz/ton gold (4.1 gm/tonne) with minor silver values. The average thickness is at least 6 metres (and ranges up to 12.8 m) and the frequency within the mixed flow and mineralized horizons as yet indeterminate. The mineralized horizons appear to be a skarned limy cracked crystal tuff or debris flow related to the porphyry flows in the area. Current trenching has located 10 mineralized horizons in an area.

A budget of \$85,000 is recommended to carry out a preliminary phase of evaluation of the property with the work expected to locate several zones of gold mineralization in the area of Trench 4. The results of this work may justify more detailed drilling costing about \$200,000, to determine potential tonnage and grade of the most favourable zones located in Phase I. This second phase will, if justified, determine the magnitude of work required to drill off the area of interest to locate sufficient reserves for a preliminary feasibility study.

LOCATION AND ACCESS

The DONA claim group covers a south facing hill from 130 to 1700 m on the immediate north side of Kettle River about 3 km west of Keefer Lake, and about 2 km east of Monashee Mountain. The claims are in the Vernon Mining Division, British Columbia, and Lumby, the nearest town, is about 48 km north west on Highway No. 6 and Vernon a further 26 km west of Lumby.

From Highway No. 6 at the Kettle River (Keefer Lake Road), a gravel logging/access road trends northeasterly to Keefer Lake and follows the south river side for 1 km then the north side of the Kettle River for 8 km. Immediately west of the second bridge over to the south side of the Kettle River is a branch logging/4-wheel drive road that gives access to the central and northwestern portion of the claim group. This latter road is in excellent condition considering that it has had no maintenance since 1974.

The new IRENE 2 to 5 claim block is accessible via the Yeoward Mountain road to the east of the DONA claims and to the south via logging roads through to Keefer Lake.

TOPOGRAPHY AND VEGETATION

The DONA group covers a flat topped saddle and moderate south slope portion of a ridge between Monashee Mountain on the west and Yeoward Mountain on the east of the Whatshan Range of Monashee Mountains.

The top trenches and roads made by El Paso Mining and Milling Company are at about 1650 to 1700 m with the south east corner of the claims at Kettle River at about 1300 meters.

The slopes between the lower road (to Yeoward Mountain) and Trench 1A are relatively gentle (10 to 15° slope) with new immature growth of spruce, hemlock and cedar. From Trench 1A to 100 m above Trench 4 the slope is at about 25 to 30° and covered in scrub bush, birch, poplar, and very young hemlock and spruce. Beyond Trench 4 and on the north facing slopes are good stands of mature cedar, spruce, and hemlock. The area encompassing the claims has been severely burnt over well in excess of 50 years ago. There are a few stumps standing in the open areas.

This burn will have complicated the soil sampling work done by El Paso unless all samples were consistently collected below the buried surface in the old "B" or "C" horizons. In several sites, surface soil creep has completely covered partially burnt logs.

The IRENE 1 claim lies north west of the DONA group and covers the upland plateau portion of the headwaters of Yeoward Creek in an area of thick relatively mature forest cover of fir, balsam and cedar. The new IRENE 2 to 5 and IRENE Fraction cover both sides of Kettle River valley with upper moderate slopes (IRENE 2 and 3) and relatively steep slopes to the central valley floor. Almost all the claimed area is well forested with portions of the south western corner partly logged off. The forest cover on the southern portion of the claim is very thick with much dense underbrush.

CLAIMS

The DONA-IRENE group consist of three owner groups with all claims subject of an option agreement with previous owners. The DONA claims are recorded in the name of G.A. Noel and Associates Ltd., the IRENE 1 is owned by Salmat Resources Corporation (and located by V. Ryback-Hardy P.Eng.) and have recently been acquired by agreement with Granex Resources Ltd. The IRENE 2 through 5 and IRENE Fraction were located by Bema Industries for Granex Resources Ltd.

<u>Claim Name</u>	<u>Type</u>	<u>Record No.</u>	<u>Expiry Date</u>
DONA 1-11	2 post	17281-17291	July 27, 1984
DONA 12-17	2 post	17390-17395	Sept. 9, 1984
IRENE 1 2N 2W	metric	964 (12)	Dec. 16, 1982
IRENE 2 1N x 8E	metric	1231 (8)	July 9, 1983
IRENE 3 3S x 6E	metric	1232 (8)	July 9, 1983
IRENE 4 3S x 6E	metric	1233 (8)	July 9, 1983
IRENE 5 3S x 3W	metric	1234 (8)	July 9, 1983
IRENE Fraction	metric	1235 (8)	July 9, 1983

The DONA and IRENE 1 claims are subject to an option agreement with Granex Resources Corporation having the right to explore and, if warranted, mine the claims.

Post for DONA and IRENE claims were examined in the field in October with all lines and posts located and marked according to current mining regulations.

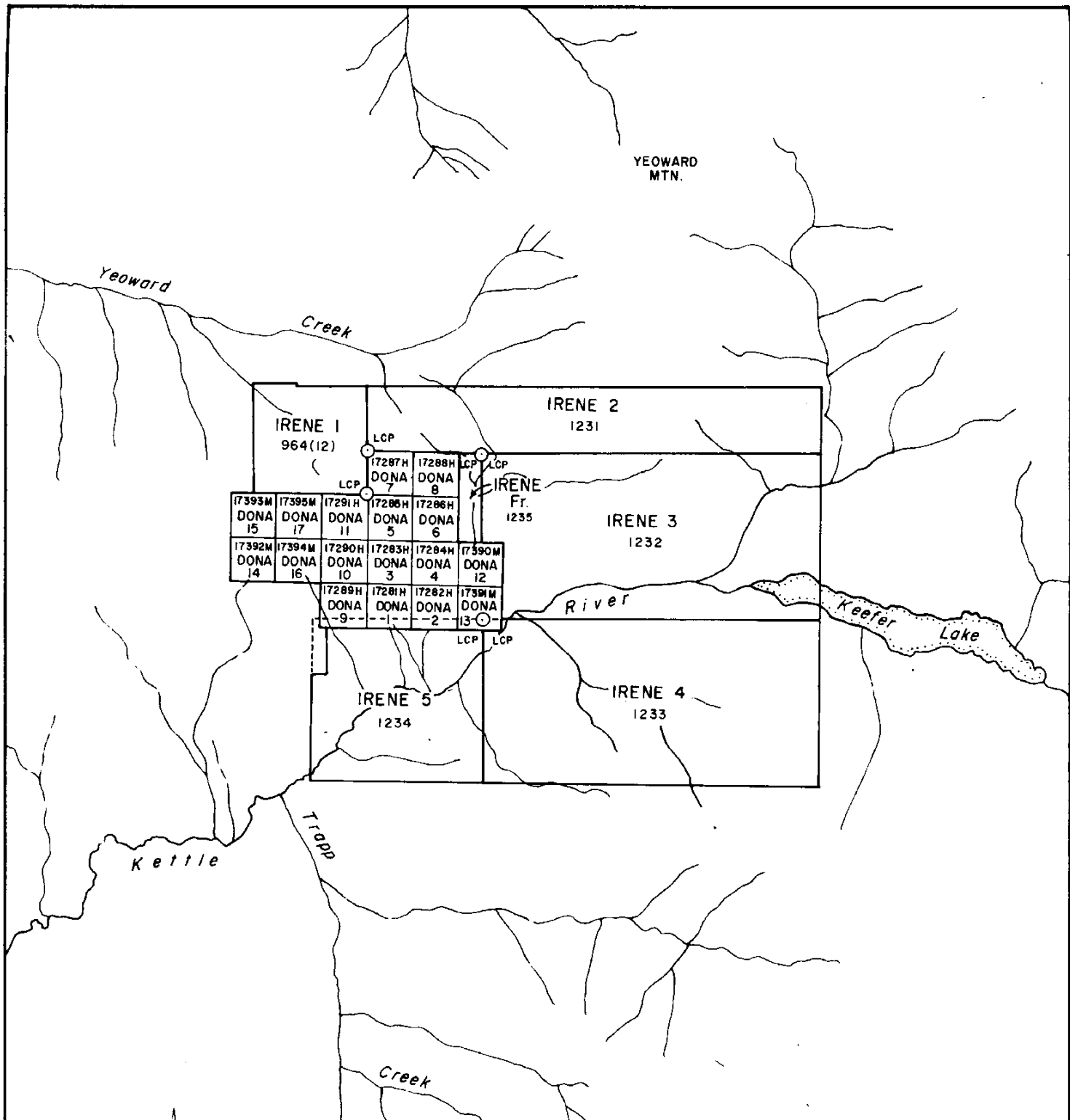


FIGURE G-2

GRANEX RESOURCES CORPORATION	
DONA CLAIMS KETTLE RIVER AREA VERNON MINING DIVISION, B.C.	
CLAIM MAP	
KILOMETERS 0 .5 1 1.5 2	
F. MARSHALL SMITH, P. ENG.	
SCALE : 1 : 50,000	DATE: NOV. 1982

GEOLOGY

Regional

The DONA group lies in a 27 km (North-South) by 16 km (East-West) belt of sedimentary and volcanic rocks mapped as Carboniferous-Permian "Cache-Creek" group (Jones 1959). According to A.V. Okulitch and R.B. Campbell (1980, Open File 637), the DONA claims are in the "Thompson Assemblage" the renamed "Cache-Creek" group.

"The Assemblage is typified by argillaceous sediments, volcanoclastic rocks, and limestone pods". (OF 637)

Fossils have been located with ages from Late Mississippian to upper Triassic from within the same region and most of the massive limestone pods have recently been dated as Triassic.

Immediately south of the Kettle River is outcrop of Jurassic age granodiorite which cuts off the north west trending belt of Thompson Assemblage on the south and south western side.

To the north and north west, the Thompson Assemblage is overlain by Triassic age Nicola group. To the east the rocks merge into the "Shuswap Complex" of highly altered rocks.

The Thompson Assemblage appears to be equivalent to the Slocan Group (and Milford Group) rocks on the east side of Arrow Lake about 75 km (40 m) east in the Tillicum Mountain area. Preliminary evaluation of gold and silver bearing mineralization in the Tillicum-Nakusp district indicates most of the values are located in "skarn" at or immediately above the top (paleo) of lenticular (in section) flows of dacitic composition.

Property

The predominant rock type in the claimed area is a black fissile shale or phyllite with varying percentage of graphitic calcareous pyritic shale interbeds. The limy horizons are intimately related to the gold and silver mineralization. The lime content wanes outward from the outcrop of the intercalated flows in contact with gold mineralization, to the average low lime fissile shale or phyllite.

Interbedded with the calcareous sediments are albitic tuffs, tuffaceous (albitic clasts) limestone and flows of quartz latite to dacite composition. The calcareous sediments are thinly bedded (1 to 2 cm) with oscillations from black graphitic calcareous argillite to blue gray tuffaceous limestone or albitic tuffs. The limy tuffs or tuffaceous limestones thicken over the crests of the quartz latite flows but are severely skarned near the flows. The flows range from dark biotite rich quartz latite to hornblende/pyroxene rich dacite.

The flows have a smooth arcuate disruptive base with irregular ceiling and draped and calcareous sediments over the rubble. The tips thin dramatically into the sediments from the thickest central portion of over 20 m thick (T1A) to 4 cm within a distance of 50 m. The average strike and dip will be about N 30°W and 15 or 20°W dip but the strike varies to N 10°W and N 60° with dips from 30°E to 30°W dip.

All rock types in the district are partly skarned with actinolite and clinozoisite the commonest alteration minerals in the sediments and limy tuffs. The alteration does not appear to be caused solely by the flows as these limy rocks are in themselves altered with epidote, clinozoisite, and some muscovite common. The sediments immediately above each flow tends to be a rubble of tuffaceous material rich in lime with varying amount of sulfides and quartz. The sulfides occur both as finely disseminated grains and in pods or masses parallel to the bedding. The sulfide pods consist of arsenopyrite with minor galena and pyrite with rare sphalerite and chalcopyrite.

The upper portions of the flows have varying amounts of sulfides scattered throughout with late fractures rich in iron carbonate, quartz and pyrite or pyrrhotite. The Quartz "beds" are exclusively restricted to the 'skarned' brecciated zones at the top of mineralized flows. The quartz zone parallels the crest of the flow, twists and rolls as the flow dips, splits and rejoins in areas of bends in the underlying flow, tends to be barren but occasionally contains knots or bunches of sulfide grains scattered in the quartz zone. None of the quartz "veins" cut flows nor the calcareous bedded sediments along strike. The rock unit above the zone hosting the quartz tends to be very well bedded tuffs or calcareous sediments and occasionally another altered flow.

Late faulting (see map of Trench #4) have caused short offsets of rock units without any visible alteration of the rock types.

Mineralization

There are at least 10 "mineralized" sheets (quartz zones) indicated in the El Paso sampling with 4 zones confirmed by the most recent trenching. All the gold mineralized rubble horizons have quartz "beds" associated with the crest of the altered flows. Rubble sediments without significant quartz (Trench 1) have very low gold values.

The soil and weathered rock colours are diagnostic for the location of gold. A total of 882 rock chip samples collected by El Paso personnel ranged from less than 34 gm/tonne silver and 0.34 gm/tonne gold to 2.29 m of 89.4 gm/tonne silver and 29.5 gm/tonne gold. All values greater than 1.0 gm/tonne gold occur only where the rock weathers to a hemititic red-brown colour and none of the hemititic soils with samples ran less than 2.7 gm/tonne gold.

The best sampling versus bedding in the diorite is in trench 4 near the site of drill hole 15. The following are the values and lengths for chip samples are surface (see Figure #1 and #2):

TABLE 2

<u>SILVER</u>		<u>GOLD</u>		<u>LENGTH</u>		
<u>gm /tonne (A)</u>	<u>oz/ton</u>	<u>gm/tonne (B)</u>	<u>oz/ton</u>	<u>inches</u>	<u>meters (C)</u>	
136.36	3.98	3.084	.090	145	3.68	
43.86	1.28	3.015	.088	70	1.78	
13.02	.38	1.096	.032	31	.79	
41.46	1.21	4.557	.133	114	2.90	
17.13	.50	.103	.003	240	6.10	
81.20	2.37	26.519	.774	100	2.54	
9.59	.28	1.713	.050	81	2.06	
25.70	.75	4.454	.130	240	6.10	
30.84	.90	11.992	.350	87	2.21	
60.30	1.76	3.632	.106	108	2.74	
(A x C)	1431.04	gm.m	(B x C)	165.936	gm.m	30.90
M/ C	46.31	gm/tonne	(BxC)/C	5.37	gm/tonne	av C/N 3.09M
	1.35	oz/ton		0.157		10.1 ft.

The grade in PDH #15 which collared in the zone in Table 2 was nil for gold and silver. The grade for PDH #14 was 1.7 gm/tonne silver and gold (each). This drill hole should have penetrated the same horizon as surface sampling about 16.8 m down dip (west) of material grading 46.31 gm/tonne silver and 5.37 gm/tonne gold at surface. The lack of gold recovery with percussion drilling has been noted by the author on several projects in the United States and Canada in particularly one project in California with very similar rock types and gold mineralization.

In general, percussion drilling dry material gives very poor gold recovery and wet ground consistently lowers the values further. Splitting sample size to 2 lb. (approximately 1 Kg.) usually leads to considerable problems if any of the gold is coarse grained (see soil sample results). As the area has known placer gold at least some of the values must be coarse and taking small sub samples from the original cuttings will lead to poor sample assay repeatability.

Samples collected by the writer from trenches 1A, 4 and 5 (see figures 5 to 8) indicate the gold mineralization on the DONA claims is restricted to the rubble-skarn-quartz zones particularly between barren flows. This material appears

to have (typically) extremely variable grade along strike and dip of the sheets. The average grade for samples collected from this material by the writer in October has a value of 1.34 gm/tonne gold and 20.3 gm/tonne silver (0.04 oz/ton gold, 0.59 oz/ton silver). Reassay of eight samples by Chemex Labs resulted in an average gold of .0675 oz/ton versus Min EN of .03925 oz/ton (see Table 3). The thickness ranged up to 2 m in Trench 1A and 6 m in trench 4 with neither top nor base located in trench 5. The best gold values occurred where there was little arsenopyrite and the massive pods of sulfide tend to be barren in gold or silver.

TABLE 3

Comparison of assays MIN-EN Laborators and Chemex Labs.

<u>Sample No.</u>	<u>MINEM (oz/ton)</u>		<u>CHEMEX (oz/ton)</u>	
	<u>Silver</u>	<u>Gold</u>	<u>Silver</u>	<u>Gold</u>
T4-14	.07	.009	.14	.005
T4-16	1.29	.084	1.02	.096
T4-18	.49	.087	.42	.082
T4-20	.33	.040	.84	.066
13631	.50	.033	.45	.028
13632	.94	.014	.84	.010
13633	1.60	.039	1.42	.250
<u>13634</u>	<u>.22</u>	<u>.008</u>	<u>.18</u>	<u>.003</u>
mean	.68	.03925	.66375	.0675
Variance (MINEM-Chemex)		gold .075 oz/ton silver .22 oz/ton		

The outcrop and sub crop of mineralization on the hillside is a series of east to west lenses with the easterly outcrop running up hill. As the trenches cut by El Paso are east-west, the chance of crossing a mineralized zone in a trench is very low. The mineralized lenses appear to have an outcrop strike length of 800 to 1000 ft (244 m to 305 m) but the average thickness cannot be determined until some trenching is attempted in a north-south direction. The total number of mineralized zones and the frequency of occurrence in the hillside is also in doubt but the percussion drilling on Trench #4 by El Paso appears to indicate there are about four zones within 150 ft

(46 m) with an average thickness of 6 m. Within the trenches on the hillside at least 10 mineralized zones have been intersected but of these only one of the zones penetrated in the percussion drilling on Trench #4 is exposed in Trench #4.

The average sample grade over 17.7 m (horizontal) for the 1973 work by El Paso was 2.8 m of 43.1 gm/tonne silver and 5.57 gm/tonne gold over 9.2 m (1.26 oz/ton Ag, 0.163 oz/ton Au over 9.2 ft.). The average grade for current sampling over 8.0 m is 16.7 gm/tonne silver and 1.9 gm/tonne gold over 1.54 m (0.49 oz/ton silver and .056 oz/ton gold over 5 ft.). Check assays by Chemex Labs (see Table 3) indicate that there are problems in repeatability of assay (coarse gold problem) and from the comparison above the grade from sample site to site is very variable.

GEOCHEMICAL SOIL SAMPLING

All soil (788) samples collected by El Paso were sieved to -80 mesh before the analysis of lead arsenic silver and gold.

From samples collected by the writer the variations of gold in different size fractions indicate that all samples should be pulped and analyzed rather than sieved in order to be sure that coarse and fine gold are reasonably dispersed in the sub-sample for analysis. As sample 1086B was taken immediately over the subcrop (30 cm depth) and indicates considerably better gold, arsenic, and silver value than original near surface sample, the depth of all further soil samples should be well into the old "B" horizon. Sample D7 shows the error of omitting the coarse fraction and the very anomalous 1087B is hardly diminished by inclusion of the coarser fraction.

It is clear from the current soil sample map that some of the detail lines must be rechecked for the 'total' gold to better define the shapes of the anomalies. Irrespective of the problems of gold size and dispersion a major soil geochemical anomaly at least 800 m long and 200 m wide has been located by the El Paso work.

The trenching to date has only tested about half of the anomalous sites in the central and southern portion of the anomalous area.

A total of 100 soil samples were collected (see Figure G82-1) over the IRENE 2 through 5 and IRENE Fraction. The soil samples were collected along roads or contour lines as a preliminary test of the claims. A complete evaluation of the claims for gold in soils will require more detail sampling particularly in the east portion of the claim block.

The samples were collected using a grub-hoe from at least 15 cm below surface, placed in kraft wet strength bags and analyzed by MIN-EN labs. The samples were pulped and analyzed for gold. There are no anomalous values in the sampled area.

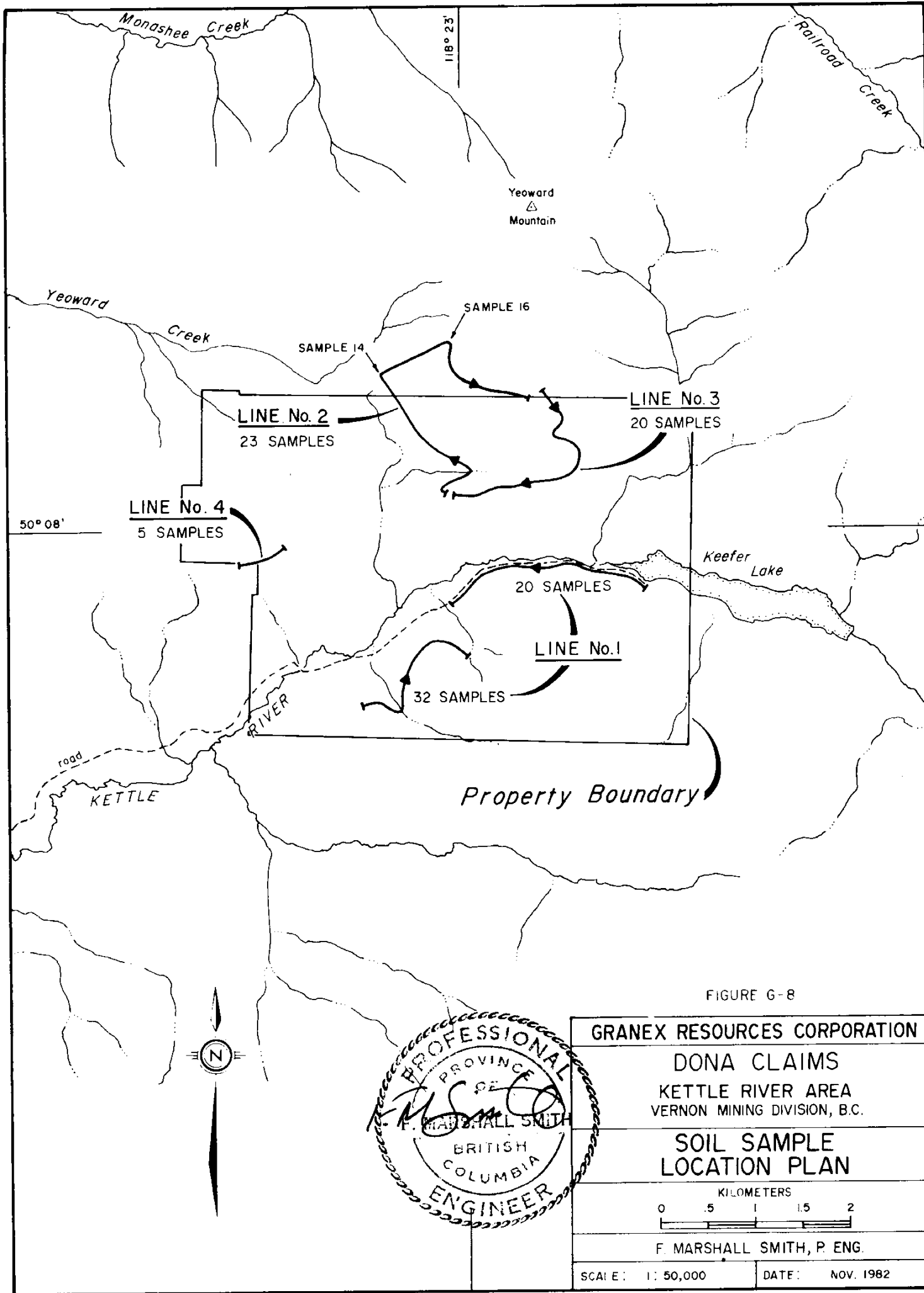
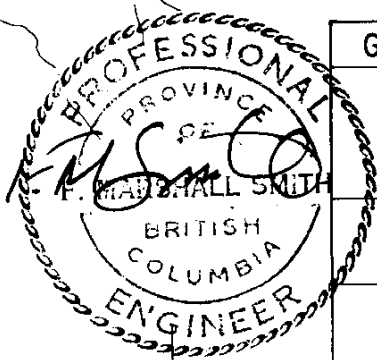


FIGURE G-8

GRANEX RESOURCES CORPORATION DONA CLAIMS KETTLE RIVER AREA VERNON MINING DIVISION, B.C.	
SOIL SAMPLE LOCATION PLAN	
KILOMETERS 0 0.5 1 1.5 2	
F. MARSHALL SMITH, P. ENG.	
SCALE: 1: 50,000	DATE: NOV. 1982



GEOPHYSICS

Neither the Self-Potential nor the VLF-EM survey have assisted in defining mineralized zones. Some success has been demonstrated with the DONA type deposit using electro-resistivity to map the low resistivity diorite zones. This sort of survey may be useful later in the evaluation of the claims to map the down dip extension of mineralized zones but should not be required in the early stages of grade testing near surface.

DRILLING

From the evaluation of percussion drill hole #14 (see section on Mineralization) and surface sampling, the current information from the drilling by El Paso cannot be relied on to give a measure of the grade or thickness of the mineralized diorite sheets.

Core drilling will allow for detail logging of the stratigraphy in unoxidized materials down dip and along strike of the better grade materials.

Only HQ core drilling will give recovery of the dacites sufficient to measure the apparent grade of the mineralized zones. Due to the friable nature of the dacite, the amount of carbonate minerals and the blocky clastic nature of the rock small diameter drilling tends to 'sand' the rock.

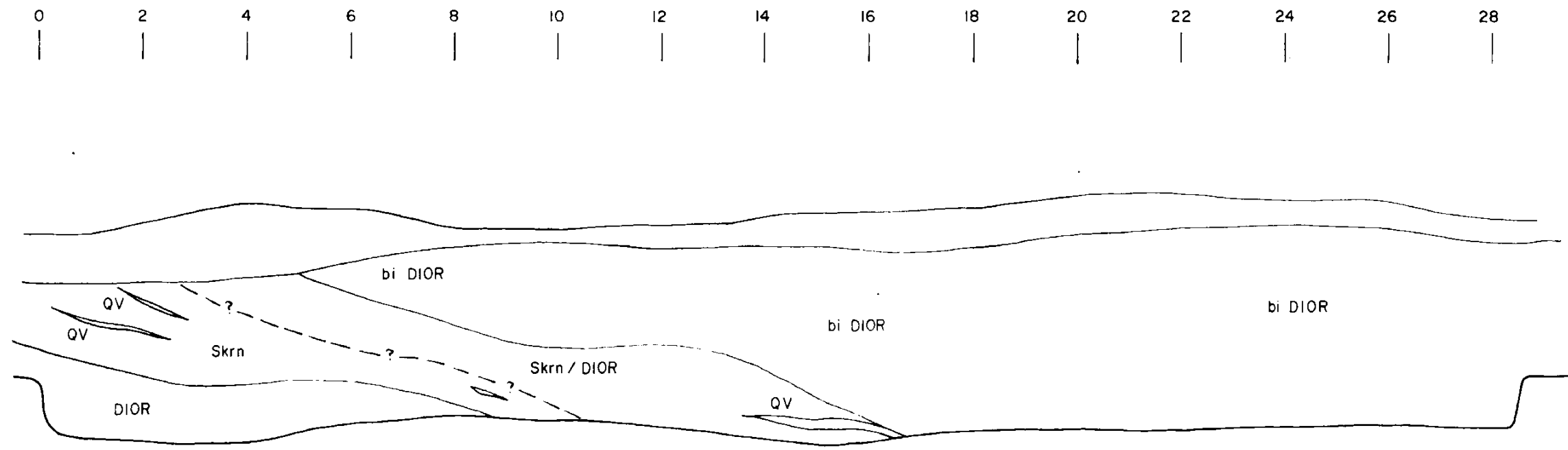
Trenching

The October, 1982 work consisted of reopening four of the trenches originally mapped and sampled in 1973 in order to determine the geological controls for mineralization.

The trenches consist of the following work:

TABLE 4

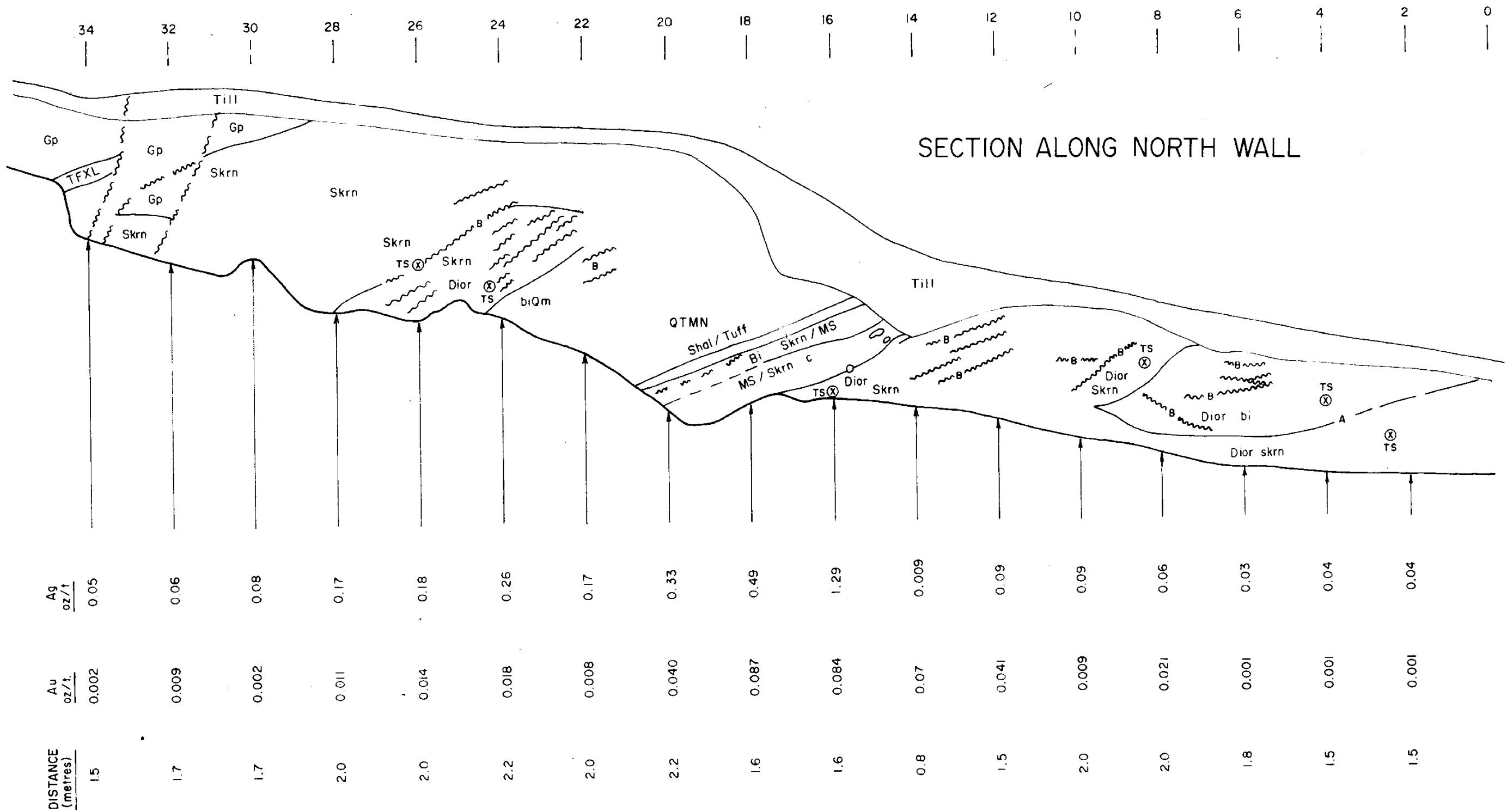
<u>Trench</u>	<u>Length</u> (m)	<u>Width</u> (m)	<u>Depth</u> (m)	<u>Volume</u> (m ³)
1	15	1.2	1.8-2.4	40
1A	45	2.8-1.2	0.7-5.8	198.2
4	36	1.2	1.5-4.7	110.9
5	$\frac{20 + 6}{122}$ m	1.2	0.7-2.8	$\frac{61}{410.1}$ m ³
			Total	



SECTION ALONG NORTH WALL



GRANEX RESOURCES CORPORATION	
DONA CLAIMS KETTLE RIVER AREA VERNON MINING DIVISION, B.C.	
TRENCH T1-82	
<p style="text-align: center;">METRES</p> <p style="text-align: center;">0 1 2 3 4</p>	
F. MARSHALL SMITH, P. ENG.	
SCALE: 1: 100	DATE: NOV. 1982



LEGEND

Dior Andesite flow (Qtz. Diorite composition)
 QTMN Latite flow (Qtz. Monzonite composition)
 TFXL Cracked crystal tuff (brown)
 Skrn Skarn of Dior, QTMN, or Sedimentary rocks.
 Shal Brown shale or Tuff

MS Massive sulfide zone or lense area
 Ab Albitic Dior or equivalent.
 Bi Biotite rich phase of flow (skarn biotite?)
 Hb Hornblende rich phase of flow.
 Gp Graphitic sedimentary rocks.

c ASP/SP/GN/PY
 skrn, cherty white matrix
 A 315/30° W little altn.
 B Sid/Qtz. veinlets in bi
 c 305/25° W

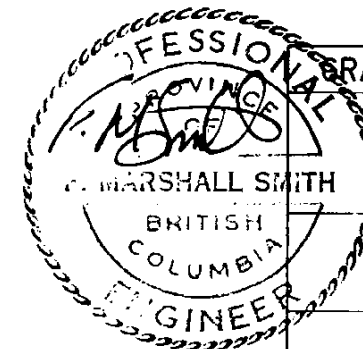


FIGURE G-6

GRANEX RESOURCES CORPORATION
 DONA CLAIMS
 KETTLE RIVER AREA
 VERNON MINING DIVISION, B.C.
TRENCH T4-82

METRES
 0 1 2 3 4

F. MARSHALL SMITH, P. ENG.
 SCALE: 1:100 DATE: NOV. 1982

All trenches were mapped, sampled (except T1), and refilled with grass seed scattered on all new soil and slough covered areas. The samples consisted of a horizontal (3 samples) or vertical (54 samples) channel cut with hammer and blade for about 10 kg/m of cut.

The whole sample was shipped to MIN-EN Labs where all the material was dried, crushed to 10 mesh, rolled, split and assayed for gold and silver. The rejects from eight samples were re-run by Chemex Labs for a check of assay reproducibility.

CONCLUSIONS

A series of gold bearing horizons occur throughout a zone at least 300 m thick (stratigraphically) over a strike length of at least 600 m. At least one sheet is in excess of 13 m thick, grades in excess of 3.4 gm/tonne gold (+ 0.10 oz/ton Au) and outcrops for at least 20 m of strike length.

The variability of gold assays between samples and within each sample is a cause for concern as to what the actual average grade is for the deposit. As all the old roads and trenches are parallel to the trace of the outcrop of the deposits the total number of mineralized horizons, their average strike length, thickness and rate, have not been determined.

Current assays indicate the average zone is in excess of 6 m thick and grades between 43.1 gm/tonne silver, 5.57 gm/tonne gold and 22.7 gm/tonne silver, 2.3 gm/tonne gold with a potential frequency of about 50% of the total rock column.

Based on past work on this sort of deposit, it is the writer's opinion that an economic deposit can be located on the claims due to the following reasons:

1. The deposit type has high variability of grade from sample to sample with considerable portion of the gold relatively coarse (+ 80 mesh) with resultant assay repeatability problems.
2. The average grade of this sort of deposit appears to be from 0.10 to 0.20 oz/ton gold.
3. Each sheet located by drilling tends to have extremely long rake with a lens shape normal to the rake direction. The lens shape for the DONA claims appears to be 200 m by 10 m.
4. Average grade cannot be determined by surface sampling unless long expanses of the subcropping gold bearing zone are opened with trenching. Bulk sampling

and/or large diameter core drilling are required to determine average grade and in general surface samples usually grade 10 to 20% less than drilling.

As the average grade is low, the exploration target must be an open pittable deposit. The attitudes of the lenses is such that the mineralization near the top of the hill (Trench 4 area) must be the principal area of search. Cat trenching exposing the dimensions of the subcrop of the mineralized zone in the area of Trench 4 with line trenches down hill in order to locate the outcrop of the mineralization encountered in percussion drilling along Trench No. 4, should outline a target for preliminary drill testing. The proposed drilling must be done with HQ core rig with extreme care to maintain as close to 100% recovery as possible of cored rock.

BUDGET

Preliminary Work Programme

Phase I

1.	Cat trenching	100 hrs. @ \$65/hr.	\$ 6,500
2.	Backhoe trenching	50 hrs. @ \$65/hr.	3,250
3.	Supervision		10,250
4.	Core drilling, 500 m at \$80/m all inclusive of assays		40,000
5.	Room and board, consumables, equipment rental		5,000
6.	Truck rental		3,000
7.	Reports, assessment filing, fees and licenses		7,000
8.	Travel Costs		2,000
	Contingencies		<u>8,000</u>
	Total Phase I		\$ 85,000

Phase II

1.	Diamond Drilling	1500 m @ \$80/m all inclusive of assays	\$ 120,000
2.	Road and drill support		20,000
3.	Supervision		10,000
4.	Room and board, consumables, equipment rental		5,000
5.	Reports, assessment filing, fees and licenses		10,000
6.	Truck rental		5,000
7.	Travel costs		2,000
8.	Compilation and project evaluation		8,000
	Contingencies		<u>20,000</u>
	Total Phase II		\$ 200,000
	Total Phase I and II		\$ 285,000



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MacKenzie, M.J.

Summary Report 1973 Field Work, December 6, 1973.

Okulitch, A.V. and Campbell, R.B.

GSC. Open file 637, Thompson-Shuswap-Okanagan.

Ryback-Hardy, V.

Geochemical and Geophysical Report on the DONA Group of Claims, November 21, 1973.

Ryback-Hardy, V.

Report on the DONA Group of Claims for Salmat Resources Corporation, October 30, 1980.

Smith, F.M.

Report on the Examination and Evaluation of the DONA Claims for Granex Resources Corporation, June 15, 1980.

CERTIFICATE OF QUALIFICATIONS

I, F. Marshall Smith, do hereby certify that:

1. I am a consulting geologist and geochemist with offices at Mayflower Drive, Richmond, British Columbia.
2. I am a graduate of the University of Toronto with a degree of B.Sc., Honours Geology.
3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
4. I have practiced my profession continuously since 1967 primarily in the Cordillera of North America.
5. This report is based on one day of field examination of the claims directly and the examination of all available field data collected from the claims. The writer is familiar with the geology of the gold mineralization in the district currently being evaluated.
6. I have no interest direct or indirect in the mineral claims controlled by or any of the shares of Granex Resources Corporation.

Dated this 3rd day of December, 1982 at Richmond, British Columbia.



EXPENDITURES 1982

Geology DONA 3,4,5,6; IRENE 2,3,4,5

F.M. Smith, P.Eng.

Oct. 12-17 at \$350/d	\$ 2,100.00
20-25 at \$350/d	2,100.00
report - 4 days at \$350/d	1,400.00

Trenching, DONA 3,4,5,6

410 cu. meters Oct. 12-25	\$ 5,500.00
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Soil Sampling, IRENE 2,3,4,5

100 contour samples Oct. 16-25	1,250.00
--------------------------------	----------

Field Costs - Truck 13 days at \$64.84/d	842.92
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Room, board truck gas, Oct. 12-25	957.91
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Assays & Geochem. Analysis

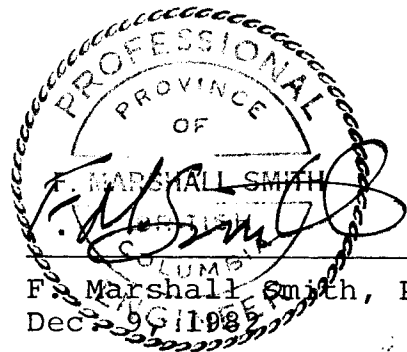
MIN-EN	1,621.50
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Chemex	110.00
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Report	<u>686.05</u>
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TOTAL	<u><u>\$16,568.38</u></u>
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I, F. Marshall Smith, do hereby certify that the costs itemized above are the true costs expended on the DONA and IRENE claims from Oct. 12 to Dec. 8, 1982.



F. Marshall Smith, P.Eng.
Dec 9 1985

APPENDIX I

PETROGRAPHIC DESCRIPTIONS



Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY, B.C.
VOX 1J0

PHONE (604) 888-1323

June 24, 1982

Inv. # 3322

Dear Sir:

Enclosed please find petrographic descriptions, thin sections and remaining sample material for 9 rock specimens submitted to us earlier this month.

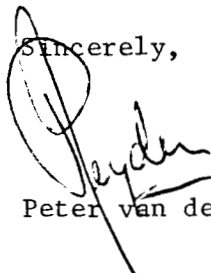
The specimens can be divided into two separate suites of related rocks. Specimens 1086-A, 1086-B, D4, D5 and D6 are all medium grained plutonic or hypabyssal intrusive rocks, of quartz monzonitic to quartz dioritic affinities. These rocks are all quite altered, in the case of D6 quite severely so, but their original nature is clearly visible under the microscope. Although the plagioclase feldspars in these intrusive rocks are albitic, there is no reason to assume a primary sodic composition for the rocks themselves, which on the whole contain fair amounts of (primary) calcium and potassium. The albites are undoubtedly derived from originally more calcic plagioclase through late stage deuteric activity or subsequent alteration. The monzonitic members of this suite may be border phases or satellitic offshoots of the more dioritic varieties. On the whole there is no supporting evidence, microscopically, for assigning an extrusive origin to these rocks.

The second suite, represented by specimens D2, D3a, D3b and D3c, are closely related. D2 is a albite actinolite hornfels which was most probably derived from a banded tuff of andesitic composition. A small band of lithology similar to D2 occurs in D3b, suggesting a interstratified sequence of andesitic tuffs and calcareous tuffs or impure limestones, now represented by the calc-silicate hornfelds of D3a, D3b and D3c. The interstratified sequence was metamorphosed in the albite actinolite hornfels facies, probably by intrusive rocks represented by specimens 1086-A, 1086-B, D4, D5 and D6. This model seems to be the simplest one, as far as can be determined using only a microscope and no field information.

Hopefully these results are of some help to you in your investigations.

If you have any further questions concerning these samples, please contact me at 888-1323.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter van der Heyden". The signature is written in a cursive style with a large initial "P" and a long horizontal stroke at the end.

Peter van der Heyden

Specimen : 1086-A

Classification : Altered quartz monzonite / quartz monzodiorite

<u>Mode</u> :	Quartz	10-15
	K-spar	20-25
	Plagioclase (albite)	25-30
	Calcite	5-10
	Muscovite + kaolinite	} 25-30
	Epidote/clinozoisite	
	Apatite	tr
	Opagues + Fe-hydroxides	<1

Description : The handspecimen is a fractured and limonite stained, medium grained plutonic or hypabyssal rock. Sawed surface clearly shows euhedral plagioclase laths enclosed by quartz and K-spar. The K-spar occurs in aggregate clots ranging up to several mm in size. In spite of severe plagioclase alteration, which has produced a uniform, somewhat mottled appearance in thin section, the original texture of this rock is clearly hypidiomorphic granular. This, coupled with the medium, equidimensional grain size of the feldspars strongly suggests a plutonic or hypabyssal, rather than an extrusive origin for this sample.

Quartz occurs primarily as anhedral, commonly strained grains up to 1.6 mm in size, interstitial to plagioclase and K-spar. Lesser amounts of quartz occur in veinlets together with calcite.

K-spar, clearly visible due to staining of both handspecimen and thin section, occurs as strained and commonly fractured, subhedral to anhedral grains up to 7 mm across. Most grains show domains with microcline cross-hatching. Fine fractures in K-spar are healed by extremely fine grained epidote and calcite. These fractures also penetrate into neighbouring minerals, appear to be early with respect to macroscopically visible calcite veinlets, and are oriented in a sub-parallel fashion. The most evident fracture orientation is parallel to the length of the section. The large grains of K-spar are somewhat poikilitic.

Plagioclase (albite) occurs as altered, anhedral to subhedral, occasionally also euhedral grains up to 2 mm across. A few grains exhibit relict albite and pericline twinning, but most are dusted with fine grained white mica ('muscovite') and kaolinite. Small amounts of secondary epidote/clinozoisite are present as well.

Calcite occurs as very fine grained replacement patchworks overprinting primary feldspars, as well as in relatively coarse grained veinlets (together with small amounts of quartz), which cut across the specimen. The calcite is commonly stained by limonite, and the possibility that some siderite is present cannot be excluded.

Apatite forms small, clear anhedral grains enclosed in feldspars and quartz. Grainsize ranges up to 1 mm **across**.

Opagues occur as subhedral to euhedral grains up to 1 mm across, disseminated throughout the rock. Some of these are altered to limonite/goethite. Most grains appear to be of primary (magmatic) origin.

Specimen : 1086-B

Classification : Altered, cataclastic quartz monzonite / quartz monzodiorite

Mode : Essentially as in 1086-A, but calcite absent, and minor amounts of cristobalite present.

Description : This ~~specimen~~ specimen is essentially the same as sample 1086-A, but it is more severely fractured and strongly sheared in the upper left corner of the thin section. The shearing undoubtedly took place under low T, brittle conditions, as shown by the fractured and comminuted nature of the larger grains (feldspars and opaques). The strained character of quartz in this specimen, as in 1086-A, is likely due to the same deformation. The shear zone is bordered by an area relatively rich in fine grained opaque matter. The central part is rich in limonite, which commonly lines fractures and locally has a somewhat colloform habit. The fractures form an anastomosing network which encloses fine grained aggregates of kaolinite and relict shards of quartz. Locally, particularly near the border of the shear zone, both fractures and enclosed domains contain thin linings and small aggregates of a spherulitic mineral, which is here tentatively identified as chalcedony.

Specimen : D2

Classification : Albite-actinolite hornfels (meta-tuff)

Mode :

Albite	40
Actinolite	35
Quartz	5-10
Zoisite/clinozoisite	5
K-feldspar	5
Kaolinite	2-5
Epidote	1-2
Opaques	2-3

Description : Fine grained, grey, banded rock. Under the microscope the bands are clearly contrasted due to different texture and varying proportions of opaques.

The darker band has a well developed lamination (either flow-banding or stratification) defined by thin streaks of extremely fine grained opaque material, which commonly wrap around elongate (flattened?) fragments up to 4.5 mm in size. These are very fine grained (average < 10 μ m) aggregates and have evidently been recrystallized; their original nature is no longer discernable. A few fragments are single, clear grains of quartz, but the vast majority are composed of very fine grained, granular aggregates of quartz, actinolite, albite, K-spar and epidote/clinozoisite/zoisite. Epidote and clinozoisite also occur as single, anhedral-subhedral grains up to 0.3 mm in size. Some clayminerals may be present as well; a 3.5 mm long lenticular seam of kaolinite is oriented parallel to the lamination.

The light coloured bands are composed of a generally structureless, but locally faintly banded assemblage of the same minerals that make up the fragments in the laminated band. However, here they are mostly coarser grained and show a characteristic texture, with actinolite forming radiating and sheaf-like aggregates (indiv. crystals up to 0.4 mm in size) partially enclosing fine grained, locally granular assemblages of albite (rare relict twinning!), K-spar (micro staining), quartz, anomalous blue clinozoisite/zoisite, fine grained aggregates of epidote, and disseminated opaques. The opaque minerals occur in single grains and small clusters up to 0.3 mm in size. A conspicuous single grain (2 mm) with a recrystallized border is visible in the section cut-off. Locally some fine grained opaques are situated along the narrow portion of a fracture which cuts across the banding and lamination.

The banded and laminated character of this rock strongly suggests a pre-metamorphic tuffaceous origin for this specimen. A primary andesitic composition

Specimen D2 cont.

is suggested by the metamorphic assemblage albite-actinolite-clinozoisite. The present albite rich nature of this rock is due to metamorphic breakdown of a originally more calcic plagioclase, and the rock as a whole is not particularly sodic.

Specimen : D3a

Classification : Calc-silicate hornfels

<u>Mode</u> :	Diopside	30
	Mineral X	25-30
	Quartz	10
	K-spar	5-10
	Plagioclase	5
	Clinozoisite	10
	Calcite	5-10
	Sphene	tr
	Opaques	<1

Description : The handspecimen is characterized by a mottled, typically metasomatic replacement texture, which overprints a relict primary banding. Thin replacement veins cut perpendicularly across the banding. Metasomatic activity was partly localized along fractures, as can be seen from the colour distribution on a sawed surface. The main mass of the specimen has a fine grained, granoblastic texture.

Quartz occurs as anhedral grains, irregularly distributed through the sample. The largest grains, up to 3.5 mm across, are associated with large crystals of K-feldspar and are probably part of a vein, which, due to the metasomatic history of this rock, is rather irregular in shape and grades marginally into the main body of the specimen. Some of this quartz forms graphic intergrowths with K-spar. Within the rock itself, quartz occurs as small (aver. size 0.2-0.3 mm), anhedral to polygonal grains, commonly in granoblastic relation with diopside.

Plagioclase (albite) forms rare, barely discernable grains up to 0.1 mm in size in the fine grained, granoblastic portion of the sample. These appear to be derived from originally more calcic plagioclase, which has essentially completely reacted during metamorphism to form anomalous blue clinozoisite plus albite.

K-spar forms small (0.2 mm), equant grains in granoblastic aggregates which are locally oriented parallel to the banding. Coarser grained, macroscopically visible grains, anhedral in shape and commonly somewhat poikilitic, are present as well. Very different in character, and most obvious in the stained section cut-off, are coarse grained (up to 4 mm), subhedral crystals associated with quartz in irregular veins. This variety is microcline, some crystals of which have graphic intergrowths of quartz. As such, these veins are probably due to late stage magmatic activity in a nearby granitoid body.

Calcite occurs in the core of a thin vein, together with mineral X, parallel to the left edge of the section. It is also present as irregular grains and aggregates up to 3 mm across, near the base of the section.

Diopside forms abundant, small (aver. size 0.15-0.2 mm), euhedral to subhedral grains, most commonly in the granoblastic domains of the section together with clinozoisite, quartz and albite.

Clinozoisite is clearly recognizable in thin section by its deep blue anomalous interference colour. It occurs as anhedral grains and small aggregates up to 0.5 mm across. A thin veinlet composed of clinozoisite cuts across the band of K-spar at the upper edge of the section. Some epidote is present as well, forming small, aggregate clusters of extremely fine grained grains with high interference colours.

cont.

Specimen D3a cont.

Mineral X, which could not be positively identified, occurs as abundant, commonly poikiloblastic grains up to several mm in size, both in veins and as complete replacements of primary material. This mineral is best distinguished from diopside, which is commonly enclosed in it, by lower relief, different crystal habit, and mode of occurrence. It forms large, anhedral plates enclosing quartz and diopside throughout the specimen. It's local close association with vein quartz and K-spar leads to the assumption that this mineral is of metasomatic origin. Mineralogic and optical properties are as follows :

relief : 1.6-1.65

birefringence : 0.20-0.30

color : colorless in thin section

form : tabular, one faint cleavage parallel to length; mineral is probably orthorhombic

extinction : parallel to cleavage

orientation : cleavage traces parallel to the faster ray

interference figure : positive biaxial, axial angle approx. 60°

A possible candidate for this mineral is prehnite, which is not uncommon in contact metamorphosed calcareous rocks. However, it's identity could not be confirmed with certainty.

Opaques occur as small (up to 0.3 mm), anhedral grains and aggregates, disseminated throughout the rock. A few thin fractures locally contain small amounts of opaques as well. The limonitic stain and fracture fillings, visible in hand specimen, are due to oxidation of these opaques.

Sphene occurs as minute, accessory grains, commonly wedge shaped, scattered throughout the specimen.

Specimen : D3b

Classification : Calc-silicate hornfels

Mode : essentially as in D3a, with slight variations in mineral abundances

Description : The bulk of D3b is quite similar to specimen D3a, and these rocks are undoubtedly closely related. D3b is essentially composed of a very fine grained, granoblastic mosaic of diopside, quartz, calcite, clinozoisite, and localized along discrete bands, some K-spar. The original banded nature of this sample is well preserved, and accentuated by the presence, at the top edge of the section, of a dark band of relatively un-metasomatized actinolite hornfels. This band is most probably of the same rock type as specimen D2, suggesting original interlayering of tuffaceous rocks (D2) with highly calcareous tuffs or impure limestones, now represented by D3b. The boundary between the two layers is quite abrupt, and small load structures are preserved in hand specimen. In thin section the boundary is marked by a narrow (<1mm thick) zone containing relatively coarse grained actinolite (up to 0.7 mm long). It appears that units represented by D2 and D3a, D3b and D3c were metamorphosed simultaneously.

Calcite and clinozoisite are present in greater quantity than in specimen D3a, and calcite forms irregular, medium grained, tongue shaped 'veins' within the main body of the rock. Fracture fillings and small veinlets of calcite, associated with small amounts of fine grained quartz, are present as well.

Specimen : D3c

Classification : Calc-silicate hornfels / calcite breccia

<u>Mode</u> :	Calcite	45-50
	Quartz	10
	Mineral X	10
	Diopside	15
	Clinozoisite	15
	Garnet	1
	Opaques	<1

Description : The cataclastic, brecciated appearance of this sample in hand specimen, coupled with its mineralogy as seen in thin section, lead to the conclusion that this specimen is from a zone of brittle deformation within a rock type rather similar to D3a and D3b. The upper left hand corner of the section contains a relatively undeformed domain in which primary, premetamorphic layering is still visible; this is also evident in hand specimen. This domain is somewhat richer in quartz and coarser grained than either D3a or D3b, but otherwise is quite similar to these specimens.

The brecciated, main part of the section consists of coarse grained aggregates and single grains of slightly deformed calcite (up to 7 mm across), as well as less abundant aggregates of undulose quartz (3mm), enclosed in a granulated, fine grained groundmass of calcite (commonly with a feathery habit), quartz, mineral X, diopside and clinozoisite. The matrix is commonly quite vuggy.

A unique feature of this sample is the presence of small amounts of medium to fine grained, anhedral, birefringent garnet along the boundary of the cataclastic and undeformed domains. A few small grains of garnet occur within the undeformed part of this rock as well.

Specimen : D4

Classification : Altered, amphibole bearing quartz monzonite / quartz monzodiorite

<u>Mode</u> :	Plagioclase (albite)	30-35
	K-spar	25-30
	Amphibole	10-15
	Quartz	5-10
	Epidote/clinozoisite } White mica }	<10
	Calcite	1
	Apatite	<1
	Sphene	1
	Zircon	tr
	Opaques	2-3

Description : Grey, medium grained, equigranular plutonic or subvolcanic intrusive rock. The stained section cut-off clearly shows the monzonitic affinity of this specimen. The texture is somewhat poikilitic, with fairly large grains of K-spar enveloping other constituents. Otherwise the texture is best described as hypidiomorphic granular. The section is cut by thin, parallel fractures perpendicular to the length.

Plagioclase is the dominant mineral of this specimen, forming severely altered, anhedral to subhedral grains up to 1 mm in size. Alteration products include white mica, epidote/clinozoisite, and calcite. The albitic composition of the plagioclase is undoubtedly due to alteration from a originally more calcic variety. Several relatively euhedral grains show relict albite twinning.

K-feldspar (microcline) occurs as fairly large anhedral to subhedral grains (up to 3 mm) which commonly are somewhat poikilitic and form small clusters. The crystal outlines are highly irregular, apparently as a result of pervasive alteration of neighbouring minerals.

Quartz forms small anhedral grains up to 0.8 mm in size, individually scattered throughout the specimen. It is readily distinguished from the other constituents due to its clarity.

Amphibole forms ragged, subhedral prisms up to 3 mm long. Most have a corroded appearance and have evidently been affected by alteration of neighbouring minerals. The amphibole is only very faintly coloured in transmitted light (very pale green) and consequently not noticeably pleochroic; it may be a parasitic hornblende. There is a possibility that the amphibole is in fact derived from primary pyroxene through uraltization, but since no pyroxene was observed, this cannot be stated with confidence.

Small aggregates of secondary (deuteric) white mica ('muscovite'), epidote/clinozoisite and calcite are irregularly scattered throughout the specimen, particularly in plagioclase, which is commonly almost completely replaced by these minerals. A few K-spar grains contain patches (up to 0.8 mm) of anomalous blue clinozoisite. Locally these minerals partially replace amphibole, and calcite lines thin, hair-fine fractures which are oriented perpendicular to the length of the section.

Accessories are sphene, apatite and zircon, which occur scattered throughout the sample. Zircon (trace amounts) and apatite form small, euhedral crystals, whereas sphene commonly has a more anhedral shape, and occurs as larger grains (up to 0.5 mm).

Opaques occur as very irregular, anhedral to subhedral grains (up to 1.8 mm across) disseminated through the specimen. Most of the opaques appear to be of primary magmatic origin, but may have been remobilized (partially) during a deuteric phase, resulting in local overprinting relations with other magmatic minerals. Minor amounts occur along the fractures mentioned previously, together with some limonite.

Specimen : D5

Classification : Altered, amphibole bearing quartz diorite

<u>Mode</u> :	Plagioclase (albite)	35
	Amphibole	20-25
	Quartz	10
	K-spar	5
	Epidote/clinozoisite	15
	White mica	5-10
	Sphene	1-2
	Apatite	1
	Zircon	tr
	Opaques	3-4

Description : Brownish grey, medium grained plutonic or subvolcanic intrusive rock. Staining of the section cu-off points to the dioritic nature of this specimen. Under the microscope this specimen is evidently quite similar to specimen D4, the only obvious difference being the much lower K-spar and much higher epidote/clinozoisite content of this rock. Calcite is absent from this specimen. In terms of other minerals, as well as textural relationships, this sample is nevertheless so similar to D4 as to strongly suggest a genetic relation between the two, with D4 representing a border facies or modified offshoot of D5. Except for K-feldspar, the mode and descriptions for the individual minerals of this sample are quite similar to those of D4.

The bottom part of the section is fractured parallel to the section edge, with thin fractures lined by Fe-hydroxides.

Specimen : D6

Classification : Severely altered quartz diorite (?)

<u>Mode</u> :	Calcite	50
	Kaolinite + white mica	25-30
	Plagioclase (albite)	10
	Quartz	5
	K-spar	2-3
	Apatite	1
	Opaques	1-2

Description : Pervasively altered, fractured and veined, brownish grey, medium grained plutonic or subvolcanic intrusive rock. Low K-spar content points to dioritic affinity. The specimen is highly calcareous (HCl test).

Due to the severe alteration, the original nature of this specimen is no longer evident. Remnant grains of quartz, plagioclase (albite), K-spar (microcline), apatite and opaques suggest, but do not prove, similarities with specimens D4 and D5. A originally medium grained, possibly hypidiomorphic granular texture is poorly preserved under a patchy overprint of secondary minerals. It is not clear whether or not this rock contained any amphiboles prior to alteration. In any case, a primary quartz dioritic composition appears most likely for this sample.

The main alteration assemblage is calcite-white mica ('muscovite')-kaolinite. Calcite generally occurs as very fine grained aggregates and patchworks enclosing remnants and altered varieties of primary minerals. Kaolinite forms irregular flakes, commonly of shredded or aggregate form, which replace primary feldspars. These flakes range up to 3 mm in size. White mica, distinguishable from kaolinite by its higher birefringence, occurs in a similar fashion as in specimens D4 and D5.

Remnant primary minerals (quartz, microcline, plagioclase, apatite and opaques) can be clearly distinguished, although many are overprinted by secondary minerals, and, with the exception of apatite and opaques, have very irregular borders. Some plagioclase grains show relict albite twinning, and a few grains of K-spar have

Specimen D6 cont.

characteristic microcline cross-hatching.

The specimen is cut by numerous calcite-filled fractures and replacement type veinlets composed of calcite plus minor amounts of quartz. A 3-6 mm thick vein composed of relatively coarse grained, strained quartz, albite and minor calcite cuts across one of the two thin sections of this specimen. Borders of this vein are lined by limonite stained calcite/siderite. The vein is cut by fine, calcite-filled fractures, which probably owe their existence to the same deformation that caused the undulose extinction in quartz.

APPENDIX II

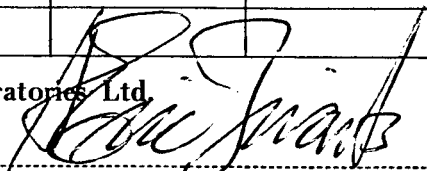
ASSAYS AND GEOCHEMICAL ANALYSES

Certificate of Assay

TO: F.M. Smith,
6580 Mayflower Drive,
Richmond, B.C.

PROJECT No. Granex/Dona
 DATE: June 14/82.
 File No. 2-174

SAMPLE No.	Ag	Au			
	oz/ton	oz/ton			
1084 A	.38	.034			
85	.16	.018			
86	.30	.013			
1087 A	.11	.068			

MINE-EN Laboratories Ltd.
 CERTIFIED BY: 

COMPANY F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

File No. 2-174

PROJECT No.: Granex/Dona

MIN - EN Laboratories Ltd.

DATE: June 11

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

ATTENTION: F.M. Smith

1982

Sample. Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au* ppb			
1087 B			14				18			1250		850	+20 mesh		
1086 B			16				31			2200		150	+20 mesh		
D 7			13				11			280		5	+20 mesh		
							.								
1087 B			37				26			3200		5650	-20+40 mesh		
1086 B			18				22			1900		795	-20+40 mesh		
D 7			25				09			350		55	-20+40 mesh		
							.								
1087 B			38				32			3500		8910	-40+80 mesh		
1086 B			25				31			2700		260	-40+80 mesh		
D 7			29				13			360		5040	-40+80 mesh		
							.								
1087 B			78				58			8000		7780	-80 mesh		
1086 B			35				42			5400		650	-80 mesh		
D 7			24				09			370		170	-80 mesh		
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[Handwritten Signature]

TABLE 3

Sample Number	Size Fraction	Weight (gm)	LEAD (PPM)		SILVER (PPM)		ARSENIC (PPM)		GOLD (PPB)	
			Min-Em	El Paso	Min-Em	El Paso	Min-Em	El Paso	Min-Em	El Paso
1. 1087 B	+20 mesh	327.37	14		1.8		1250		850	
2. 1086 B	+20 mesh	243.06	16		3.1		2200		150	
3. D 7	+20 mesh	136.36	13		1.1		280		5	
1. 1087 B	-20+40 mesh	56.31	37		2.6		3200		5650	
2. 1086 B	-20+40 mesh	88.00	18		2.2		1900		795	
3. D 7	-20+40 mesh	22.34	29		0.9		350		55	
1. 1087 B	-40+80 mesh	34.31	38		3.2		3500		8910	
2. 1086 B	-40+80 mesh	54.44	25		3.1		2700		260	
3. D 7	-40+80 mesh	22.34	29		1.3		360		5040	
1. 1087 B	-80 mesh	101.47	78	61	5.8	5.8	8000	1490	7780	640
2. 1086 B	-80 mesh	72.20	35	22	4.2	2.7	5400	310	650	100
3. D 7	-80 mesh	48.85	24	25	0.9	1.7	370	850	170	330

AVERAGE GOLD

		Total Sample	+80-20 mesh	-20 mesh
1.	av	3256.37	4779.3	7357.44
2.	av	365.97	590.48	416.5
3.	av	518.07	2168.59	1207.1

MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

ANALYTICAL REPORT

Project Granex-Dona Date of report Nov. 9/82.

File No. 2-883 Date samples received Nov. 1/82.

Samples submitted by:

Company: F.M. Smith

Report on: Geochem samples

..... 58 Assay samples

Copies sent to:

1. F.M. Smith, Richmond, B.C.

2.

3.

Samples: Sieved to mesh Ground to mesh -100

Prepared samples stored discarded

rejects stored discarded

Methods of analysis: Ag-Acid digestion-chemical analysis.

..... Au-Fire Assay.

Remarks:

SPECIALISTS IN MINERAL ENVIRONMENTS

Certificate of Assay

TO: F.M. Smith,
6580 Mayflower Drive,
Richmond, B.C.

PROJECT No. Granex-Dona
 DATE: Nov. 9/82.
 File No. 2-883

SAMPLE No.	Ag	Au			
	oz/ton	oz/ton			
13612	.03	.002			
13	.04	.001			
14	.02	.016			
15	.03	.004			
16	.03	.001			
17	.04	.001			
18	.03	.002			
19	.06	.001			
20	.08	.002			
21	.09	.003			
22	.10	.031			
23	.10	.025			
24	.51	.030			
25	.34	.028			
26	.16	.017			
27	.63	.010			
28	.38	.030			
29	4.07	.051			
30	.12	.009			
31	.50	.033			
32	.94	.014			
33	1.60	.039			
34	.22	.008			
✓ 35	.48	.024			
✓ 36	.13	.016			
37	.07	.009			
38	.49	.361			
39 (Top)	1.38	.131			
40	.05	.002			
13641	.08	.010			

MINE-EN Laboratories Ltd.

CERTIFIED BY: _____

Certificate of Assay

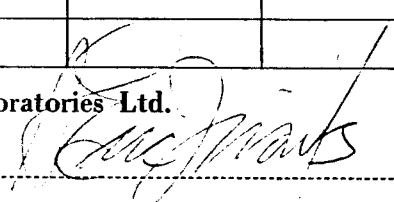
TO: F.M. Smith,
6580 Mayflower Drive,
Richmond, B.C.

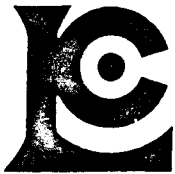
PROJECT No. Granex-Dona
 DATE: Nov. 9/82.
 File No. 2-883

SAMPLE No.	Ag	Au				
	oz/ton	oz/ton				
13642	.09	.026				
43	.05	.032				
44	.04	.019				
45	.09	.109				
46	.06	.029				
47	.03	.003				
48	.10	.071				
49	.09	.021				
13650	.09	.021				
T5-4NE	.08	.039				
T4-2	.04	.001				
4	.04	.001				
6	.03	.001				
8	.06	.021				
10	.08	.009				
12	.09	.041				
14	.07	.009				
16	1.29	.084				
18	.49	.087				
20	.33	.040				
22	.17	.008				
24	.26	.018				
26	.18	.014				
28	.17	.011				
30	.08	.002				
32	.06	.009				
T4-34	.05	.002				
13639	.16	.010	(Bottom)			

MINE-EN Laboratories Ltd.

CERTIFIED BY: _____





CHEMEX LABS LTD.

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

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

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : SMITH, MR. F.M.

6580 MAYFLOWER DRIVE
RICHMOND, B.C.
V7C 3X6

CERT. # : A8214508-001-A
INVOICE # : I8214508
DATE : 29-NOV-82
P.O. # : NONE

Sample description	Prep code	Ag FA oz/T	Au FA oz/t				
13631	207	0.45	0.028	--	--	--	--
13632	207	0.84	0.010	--	--	--	--
13633	207	1.42	0.250	--	--	--	--
13634	207	0.18	0.003	--	--	--	--
T-14	207	0.14	0.005	--	--	--	--
T-16	207	1.02	0.096	--	--	--	--
T-18	207	0.42	0.082	--	--	--	--
T-20	207	0.84	0.066	--	--	--	--

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



MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

ANALYTICAL REPORT

Project Granex-Dona Date of report Nov 5/82

File No. 2-883 Date samples received Nov. 1/82

Samples submitted by:

Company: F.M. Smith

Report on: 101 pulps Geochem samples

Assay samples

Copies sent to:

1. F.M. Smith, Richmond, B.C.

2.

3.

Samples: Sieved to mesh Ground to mesh

Prepared samples stored discarded

rejects stored discarded

Methods of analysis: Au-Aqua Regia.A.A.

Remarks: Assays to follow.

SPECIALISTS IN MINERAL ENVIRONMENTS

COMPANY: F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

File No. 2-883

PROJECT No.: Granex-Dona

MIN - EN Laboratories Ltd.

DATE: Nov. 5,

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

1982.

ATTENTION: F.M. Smith

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb	70	75	80	
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
K, 1												5				
2												5				
3												5				
4												<5				
5												5				
6												5				
7												5				
8												5				
9												10				
10												5				
11												5				
12												5				
13												5				
14												<5				
15												5				
16												5				
17												5				
18												5				
19												5				
20												5				
21												5				
22												5				
23												5				
24												5				
25												<5				
26												5				
27												5				
28												5				
29												<5				
K, 30												5				

[Handwritten signature]

COMP. F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

No. 2-883

PROJECT No.: Granex-Dona

MIN - EN Laboratories Ltd.

DATE: Nov. 5,
1982.

ATTENTION: F.M. Smith

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

Sample. Number	6 Mo ppm	10 Cu ppm	15 Pb ppm	20 Zn ppm	25 Ni ppm	30 Co ppm	35 Ag ppm	40 Fe ppm	45 Hg ppb	50 As ppm	55 Mn ppm	60 Au ppb	65	70	75	80	
	81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
K, 3,1													5				
K, 3,2													5				
A, 1,													5				
2,													5				
3,													5				
4,													<5				
5,													5				
6,													5				
7,													5				
8,													10				
9,													5				
10,													5				
11,													5				
12,													10				
13,													5				
14,													5				
15,													5				
16,													5				
17,													5				
18,													5				
19,													5				
A, 20,													10				
B, 1,													5				
2,													5				
3,													<5				
4,													<5				
5,													5				
6,													5				
7,													5				
B, 8,													5				

COMPANY: F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

No. 2-883

PROJECT No.: Granex-Dona

MIN - EN Laboratories Ltd.

DATE: Nov. 5,

ATTENTION: F.M. Smith

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

1982.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
	Mo	Cu	Pb	Zn	Ni	Co	Ag	Fe	Hg	As	Mn	Au					
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb					
	81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
C 16									.				10				
17									.				5				
18									.				5				
19									.				5				
C 20									.				5				
D 1									.				10				
2									.				5				
3									.				5				
4									.				5				
D 5									.				10				
A 16									.				5	(Duplicate)			
17									.				5		"		
18									.				5		"		
19									.				5		"		
A 20									.				5		"		

[Handwritten signature]

COMPAN: F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

No. 2-883

PROJECT No.: Granex-Dona

MIN - EN Laboratories Ltd.

DATE: Nov. 5,

ATTENTION: F.M. Smith

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

1982.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb				
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
B, 9							.					5				
10							.					10				
11							.					5				
12							.					5				
13							.					5				
14							.					5				
15							.					5				
16							.					5				
17							.					no sample				
18							.					no sample				
19							.					no sample				
20							.					no sample				
21							.					5				
22							.					5				
B, 23							.					5				
C, 1							.					10				
2							.					5				
3							.					5				
4							.					10				
5							.					5				
6							.					5				
7							.					5				
8							.					5				
9							.					10				
10							.					5				
11							.					5				
12							.					5				
13							.					5				
14							.					5				
C, 15							.					5				

COMPAN

F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

o. 2-883

PROJECT No.: Granex-Dona

MIN - EN Laboratories Ltd.

DATE: Nov. 5,

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

1982.

PHONE (604) 980-5814

ATTENTION: F.M. Smith

Sample. Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
	Mo	Cu	Pb	Zn	Ni	Co	Ag	Fe	Hg	As	Mn	Au					
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb					
	81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
K 1													5				
2													5				
3													5				
4													<5				
5													5				
6													5				
7													5				
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13													5				
14													<5				
15													5				
16													5				
17													5				
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20													5				
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22													5				
23													5				
24													5				
25													<5				
26													5				
27													5				
28													5				
29													<5				
K 30													5				

[Handwritten signature]

CERTIFIED BY

COMPANY F.M. Smith

PROJECT No.: Granex-Dona

ATTENTION: F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

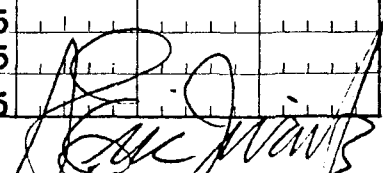
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE (604) 980-5814

Circle No. 2-883

DATE: Nov. 5, 1982.

6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb			
81 86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
K 31							•					5			
K 32							•					5			
A 1							•					5			
2							•					5			
3							•					5			
4							•					5			
5							•					5			
6							•					5			
7							•					5			
8							•					10			
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13							•					5			
14							•					5			
15							•					5			
16							•					5			
17							•					5			
18							•					5			
19							•					5			
A 20							•					10			
B 1							•					5			
2							•					5			
3							•					5			
4							•					5			
5							•					5			
6							•					5			
7							•					5			
B 8							•					5			



COMPANY F.M. Smith

PROJECT No.: Granex-Dona

ATTENTION: F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE (604) 980-5814

No. 2-883

DATE: Nov. 5,

1982.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb				
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
B 9												5				
10												10				
11												5				
12												5				
13												5				
14												5				
15												5				
16												5				
17												no sample				
18												no sample				
19												no sample				
20												no sample				
21												5				
22												5				
B 23												5				
C 1												10				
2												5				
3												5				
4												10				
5												5				
6												5				
7												5				
8												5				
9												10				
10												5				
11												5				
12												5				
13												5				
14												5				
C 15												5				

[Handwritten signature]

COMPANY F.M. Smith

PROJECT No.: Granex-Dona

ATTENTION: F.M. Smith

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

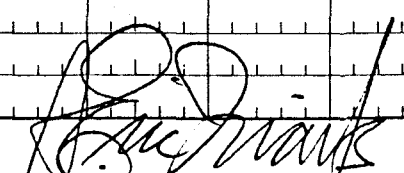
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

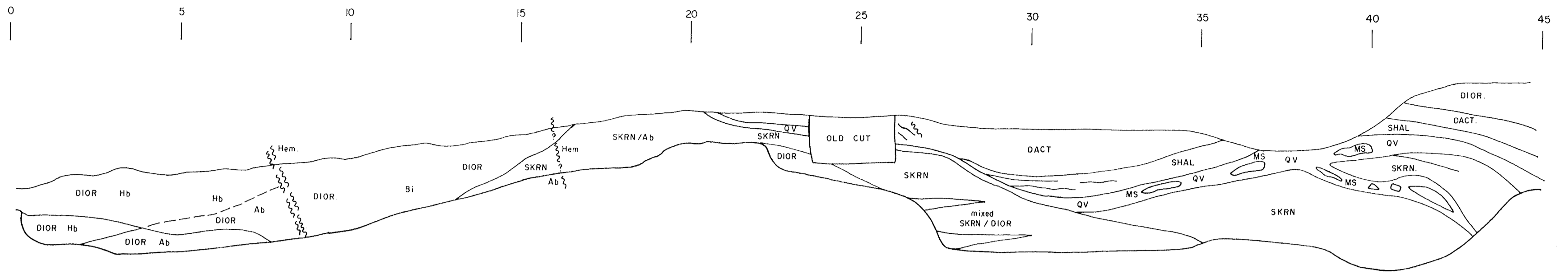
No. 2-883

DATE: Nov. 5,
1982.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb				
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
C 16							.					10				
17							.					5				
18							.					5				
19							.					5				
C 20							.					5				
D 1							.					10				
2							.					5				
3							.					5				
4							.					5				
D 5							.					10				
A 16							.					5	(Duplicate)			
17							.					5		"		
18							.					5		"		
19							.					5		"		
A 20							.					5		"		

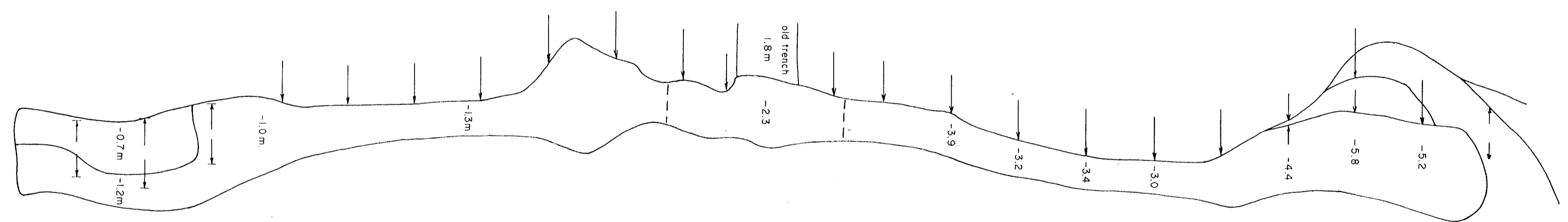
CERTIFIED BY





SECTION ALONG NORTH WALL

SAMPLE No.	DISTANCE (metres)	Au oz/t	Ag oz/t
13612(h)	1.7	0.03	0.002
13614(h)	2.2	0.04	0.001
13615(h)	1.8	0.02	0.016
13616	0.9	0.03	0.004
13617	0.95	0.03	0.001
13618	0.8	0.04	0.002
13619	1.6	0.06	0.001
13620	0.7	0.08	0.002
13621	0.5	0.09	0.003
13622	1.5	0.10	0.031
13623	1.3	0.10	0.025
13624	1.5	0.51	0.030
13625	2.0	0.34	0.028
13626	2.2	0.16	0.017
13627	2.1	0.63	0.010
13628	2.4	0.38	0.030
13629	2.3	4.07	0.051
13630	2.5	0.12	0.009
13631	1.6 top	0.50	0.033
13632	1.6 bottom	0.94	0.014
13633	2.0 top	1.50	0.039
13634	1.8 bottom	0.22	0.008
13635	2.2	0.48	0.024
13636	1.0	0.13	0.016



PLAN OF TRENCH FLOOR

GEOLOGICAL BRANCH
ASSESSMENT REPORT

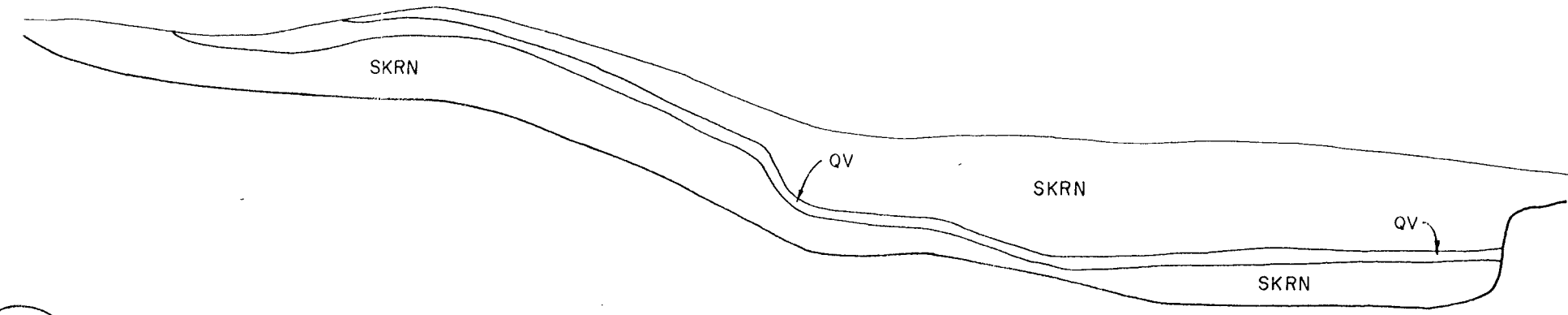
10,920



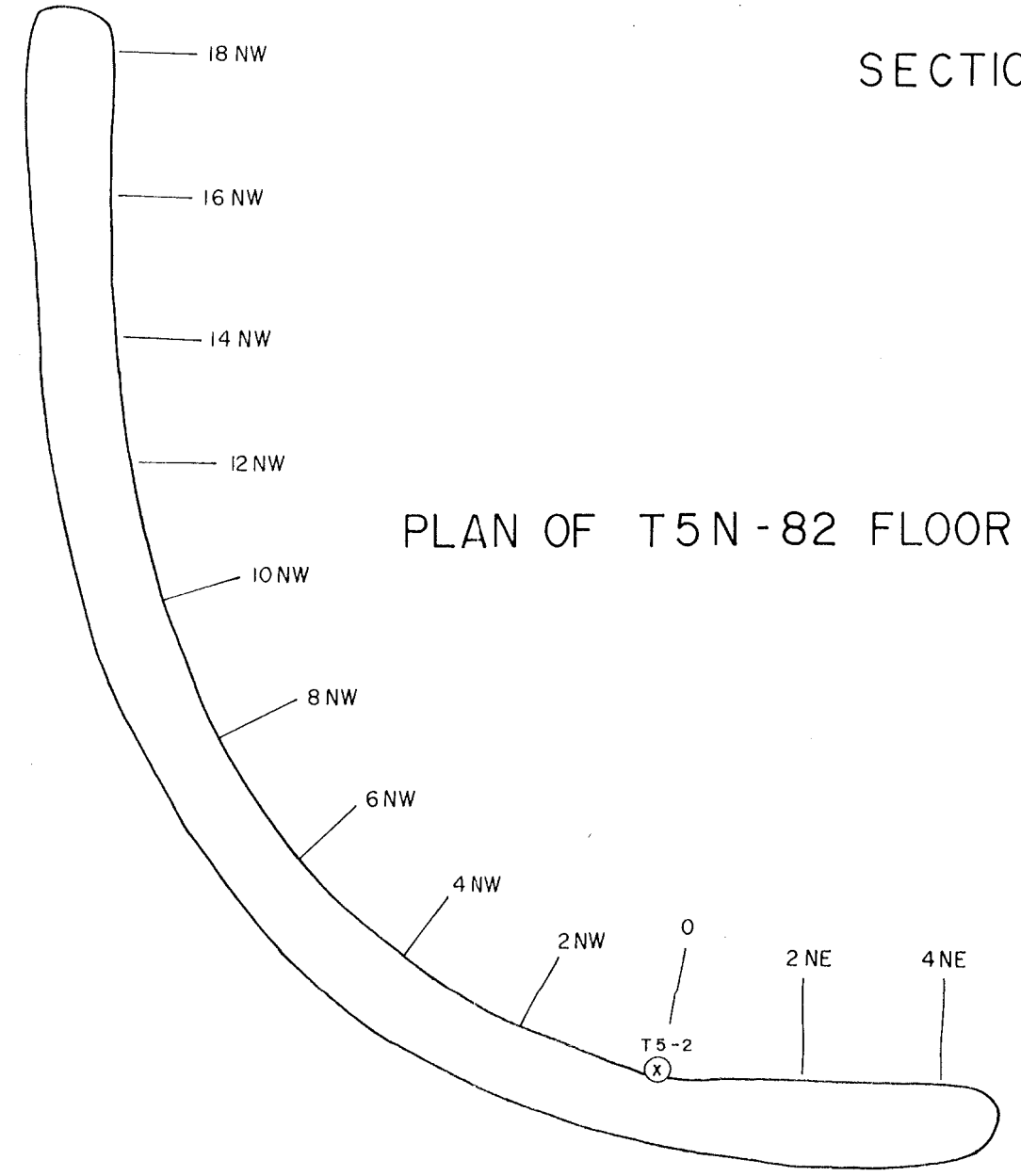
FIGURE G-4

GRANEX RESOURCES CORPORATION	
DONA CLAIMS KETTLE RIVER AREA VERNON MINING DIVISION, B.C.	
TRENCH T1A-82	
F. MARSHALL SMITH, P. ENG.	
SCALE: 1:100	DATE: NOV. 1982

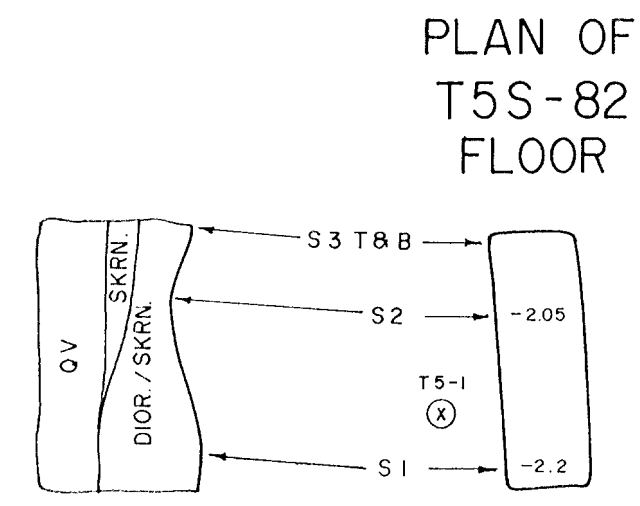
SAMPLE No.	DISTANCE (metres)	Au oz/t	Ag oz/t
13640	0.7	0.002	0.05
13640	0.8	0.010	0.08
13642	1.2	0.026	0.09
13643	1.5	0.032	0.05
13644	0.9	0.019	0.04
13645	1.7	0.109	0.09
13646	2.0	0.029	0.06
13647	1.7	0.003	0.03
13648	1.9	0.071	0.10
13649	2.60	0.021	0.09
13650	2.67	0.021	0.09
	1.80	0.039	0.08



SECTION ALONG NORTH & WEST WALL



PLAN OF T5N-82 FLOOR



PLAN OF T5S-82 FLOOR

SECTION ALONG SOUTH WALL

SAMPLE No.	DISTANCE (metres)	Au oz/t	Ag oz/t
13639T	0.65	0.131	1.38
13639B	1.4	0.010	0.16
13638	1.7	0.361	0.49
13637	2.2	0.009	0.07

GEOLOGICAL BRANCH ASSESSMENT REPORT

10,920



FIGURE G-7

GRANEX RESOURCES CORPORATION

DONA CLAIMS
KETTLE RIVER AREA
VERNON MINING DIVISION, B.C.

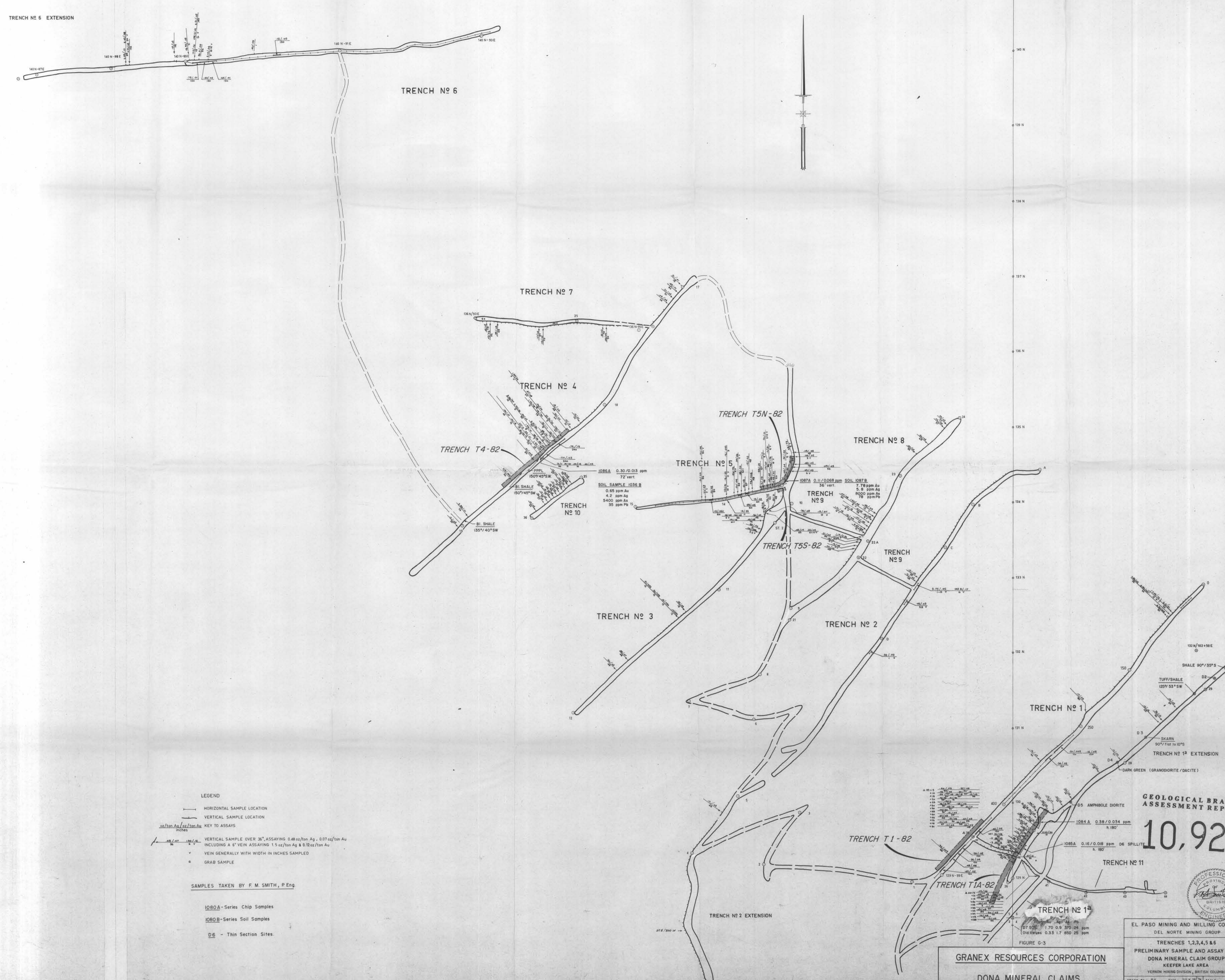
TRENCHES
T5N-82 & T5S-82

0 1 2 3 4 METRES

F. MARSHALL SMITH, P. ENG.

SCALE: 1:100 DATE: NOV. 1982

T5-3
(X)



LEGEND

- HORIZONTAL SAMPLE LOCATION
- VERTICAL SAMPLE LOCATION
- KEY TO ASSAYS
- VERTICAL SAMPLE OVER 36", ASSAYING 0.48 oz/ton Ag, 0.07 oz/ton Au INCLUDING A 6" VEIN ASSAYING 1.5 oz/ton Ag & 0.12 oz/ton Au
- VEIN GENERALLY WITH WIDTH IN INCHES SAMPLED
- GRAB SAMPLE

SAMPLES TAKEN BY F. M. SMITH, P. Eng

IOB0A - Series Chip Samples
 IOB0B - Series Soil Samples
 DE - Thin Section Sites

10,920

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

PROFESSIONAL
BRITISH
COLUMBIA
ENGINEERS

EL PASO MINING AND MILLING COMPANY
 DEL NORTE MINING GROUP

TRENCHES 1,2,3,4,5 & 6
 PRELIMINARY SAMPLE AND ASSAY PLAN
 DONA MINERAL CLAIM GROUP
 KEEFER LAKE AREA
 VERNON MINING DIVISION, BRITISH COLUMBIA

GRANEX RESOURCES CORPORATION
DONA MINERAL CLAIMS

F. MARSHALL SMITH, P. Eng NOV, 1982

DRAWN BY	R.V.	DATE	JULY 1978	SCALE	1" = 40'
CHECKED BY	SM	DATE	1978	REVISION	
DESIGNED BY		DATE		REVISION	
APPROVED BY		DATE		REVISION	

DRAWING NO. 82-L-1-A3

FIGURE G-3

IOB0A	0.30 / 0.013 ppm	72 VERT
IOB0B	0.11 / 0.008 ppm	SOIL IOB7B
IOB0C	0.05 ppm Au	4.2 ppm Ag
IOB0D	8400 ppm As	35 ppm Pb
IOB0E	0.38 / 0.034 ppm	N 180°
IOB0F	0.16 / 0.018 ppm	D6 SPILLITE
IOB0G	1.70 / 0.537 ppm	26 ppm
IOB0H	0.53 / 1.755 ppm	25 ppm