ASSESSMENT REPORT ON GOLDEN NEIGHBOUR GROUP TOODOGGONE LAKE AREA OMINECA MINING DIVISION 94E/6E

Co-Ordinates

57° 19' North Latitude 127° 02' West Longitude

Owner

Lacana Mining Corporation, 312 - 409 Granville Street, Vancouver, B.C. V6C 1T2

Operator

Alban Explorations Ltd., 508 - 475 Howe Street, Vancouver, B.C. V6C 2B3

Consultant

Harold M. Jones, P.Eng. Harold M. Jones & Associates Inc.

Date Submitted August 30, 1985



HAROLD M. JONES CONSULTING GEOLG VANCOUVER, B.

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GEOLOGICAL BRANCH ASSESSMENT REPORT

13,896

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SUMMARY

The Golden Neighbour property is located in the Omineca Mining Division 280 km due north of Smithers, B.C., at the headwaters of Saunders Creek. It consists of seven claims and fractional claims totalling 38 units.

Exploration on the property during 1980-81 by Lacana Mining Corporation was successful in delimiting a large area as being geochemically anomalous in gold and silver. They also located and hand-trenched several areas of quartz-sericite alteration which were accompanied by quartz veining.

During July 24 - August 6, 1985 a party of one consulting geological engineer and two experienced field assistants conducted a program of VLF-Em and magnetometer surveying and detailed soil sampling on the Golden Neighbour property. All work was conducted within the area found by Lacana Mining Corporation to be anomalous in gold and silver.

The VLF-Em data was plotted as profiles as well as filtered and contoured. The resulting contour map defines a weak northwest trending anomaly. It is coincident with an inferred fault and alteration zone, anomalous gold soil samples and at least one quartz vein - all found from previous exploration by Lacana Mining Corporation.

The magnetic data shows several weak magnetic anomalies, all of which occur in areas absent of outcrop. The VLF-Em anomaly lies on the eastern flank of the largest magnetic anomaly.

Detailed soil sampling was conducted to better define some of the anomalous areas located by Lacana Mining Corporation. Samples were prepared for assaying but have not yet been analysed.

It was concluded that because of the coincident features in the vicinity of the VLF-Em anomaly that it should be explored by either backhoe trenching or diamond drilling.

INTRODUCTION

At the request of Alban Explorations Ltd., Harold M. Jones & Associates Inc., between July 24 - August 6, 1985, conducted a program of VLF-Em and magnetometer surveying and fill-in soil sampling on the Golden Neighbour property, which is located in the Toodoggone Lake area of the Omineca Mining Division. The program was under the supervision of the writer who was aided by two experienced field assistants.

The purpose of the field program was to explore a large area of anomalous gold and silver soil samples for the presence of a gold-bearing structure. If a structure was located, it would be tested by trenching or diamond drilling at a later date.

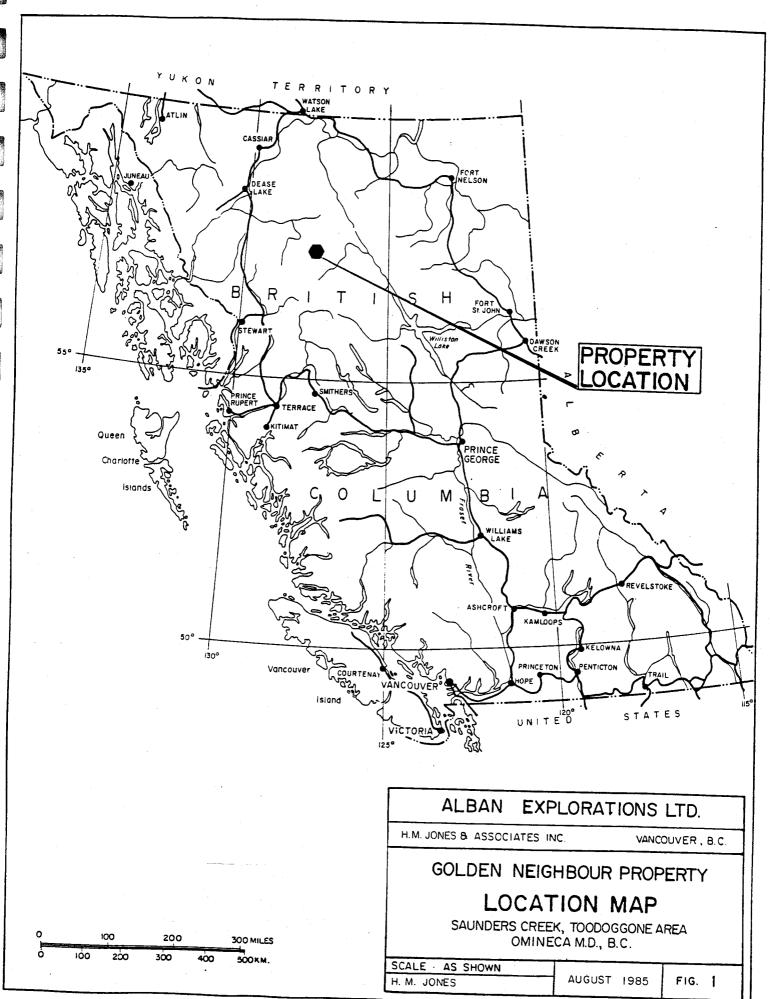
LOCATION AND ACCESS

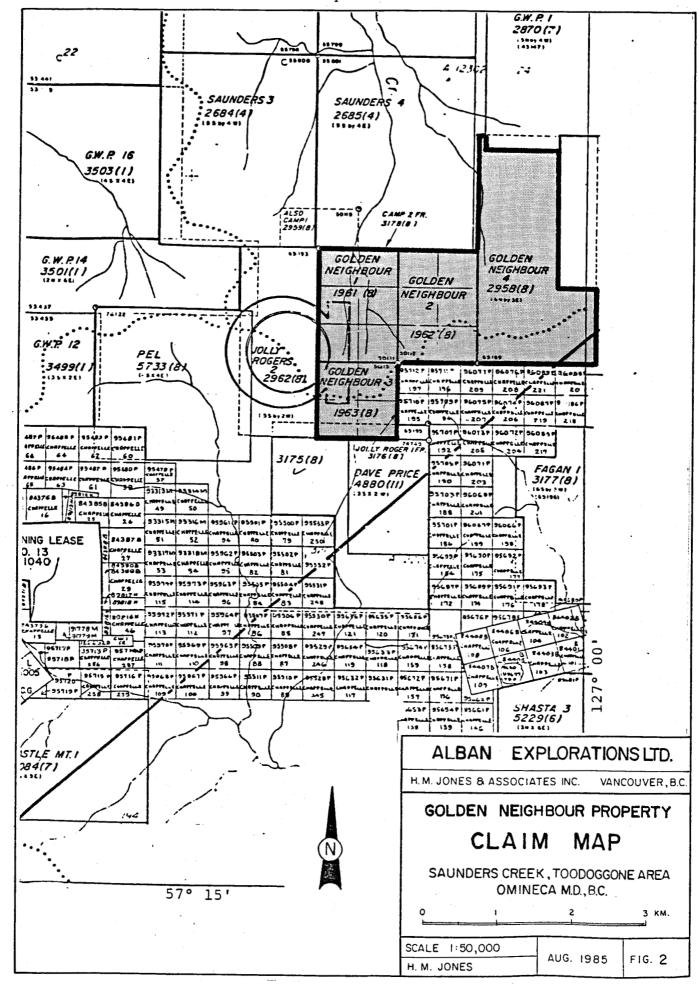
57° 19' North Latitide)
127° 02' West Longitude)
To approximate centre of claims

The Golden Neighbour property is located in the Omineca Mining Division approximately 280 km due north of Smithers, B.C. Locally, it is situated at the headwaters of Saunders Creek, a northerly flowing stream draining into the Toodoggone River five kilometres west of Toodoggone Lake.

The property is not accessible by road. Travel to the property is best originated from Smithers, which is serviced by a daily scheduled airline and is also the supply centre for west central British Columbia.

Direct access to the claims may be made by helicopter from Smithers. During the current field season, travel costs were reduced by flying via chartered aircraft from Smithers to the Sturdee air-





strip, then flying the remaining six kilometres via one of the helicopters based on or near the airstrip.

Since the only access to and in the Toodoggone area is by air, travel and camp support costs are relatively high.

TOPOGRAPHY AND VEGETATION

The claims are located within the Stikine Mountains which are characterized by steep slopes and rounded to jagged peaks and ridges. The mountains are separated by U-shaped valleys, some of which contain deeply incised rivers or creeks.

Timber line is at approximately 1600 metres. Below this level most slopes and valley bottoms are well forested with fir and spruce. Above 1600m elevation thick ground cover of alpine fir gives way to grassy slopes and alpine meadows. The former vegetation, while being low, is very thick and greatly impedes foot travel. Elevations on that part of the property explored in 1985 ranged from 1500m to 2000m.

PROPERTY

The Golden Neighbour property consists of 5 claims and two fractional claims. They are:

	# of <u>Units</u>	Record No.	Expiry Date
Golden Neighbour 1	6	1961	Aug.17, 1985
Golden Neighbour 2	6	1962	Aug.17, 1985
Golden Neighbour 3	4	1963	Aug.17, 1985
Golden Neighbour 4	18	2958	Aug. 1, 1985
Camp 1	2	2959	Aug. 1, 1986
Camp 2 Fraction	1	3178	Aug.26, 1985
Jolly Roger l Fraction	1	3176	Aug.26, 1985

The claims are owned by Lacana Mining Corporation, 312-409 Granville Street, Vancouver, B.C. They are presently under option to Alban Explorations Ltd., 508-475 Howe Street, Vancouver, B.C.

The field work completed during 1985 by Alban Explorations Ltd. has been applied as assessment work, advancing the expiry dates by two years on each claim and fractional claim.

HISTORY AND PREVIOUS WORK

The earliest record of exploration and mining in the area relates to placer mining activities on McClair Creek and Toodoggone River in 1930. These records indicate that only a minor amount of gold was taken out of the Toodoggone area. There was sporadic exploration for gold, copper, lead and zinc between 1934 and 1960. The area was actively explored by Sumitomo, Umex and Texas Gulf. Sulphur between 1963 and 1967, and in 1968 for porphyry copper and molybdenum deposits by Kennco Exploration (Western) Ltd., Cominco Ltd., and Cordilleran Engineering Ltd. Numerous Cu-Mo prospects were acquired and explored as a result of the 1968 reconnaissance programs.

Kennco Exploration (Western) Ltd. recognized the precious metal potential of the area and staked the Lawyers and Chappelle claims and explored them until 1975. The Chappelle property was eventually optioned to Conwest Explorations Ltd. and then to DuPont of Canada Exploration Ltd. This lead to the discovery of the Baker deposit. The Baker mine was placed into production with indicated reserves of 52,000 tons and grades of 1.07 oz/T Au and 23.2 oz/T Ag in the Main Zone. The Baker deposit was mined out in 1983. The Lawyers property is presently held under option by Serem Inc. Surface and underground drilling have defined several deposits containing a conservative 1,000,000 tons grading 0.211 oz/T gold and 7.11 oz/T silver.

A host of other companies are either holding ground and/or actively exploring in the Toodoggone area, among them Cominco Ltd., Kidd Creek Mines Ltd., Newmont Exploration, DuPont of Canada Exploration Ltd., Golden Rule Resources Ltd., Lacana Mining Corporation, St. Joe Canada Inc., Energex Minerals Ltd., and Great Western Petroleum Corp. Energex has recently reported drill indicated reserves of 48,000 tons with a grade of 0.575 oz/T Au on its BV zone.

The Golden Neighbour property was previously held as the Saunders claims by Kennco Exploration (Western) Ltd. Silt and soil geochemistry by Kennco in 1971 defined strong coincident copper, molybdenum and gold anomalies over portions of the ground now held as the Golden Neighbour property. Kennco allowed the ground to lapse in 1973.

The Golden Neighbour claims were staked in 1979 and 1980 by Lacana Mining Corporation, and a program of soil geochemistry was done over a larger area than previously examined by Kennco. Approximately 2,000 soil and silt samples were taken from the property. About 200 rock samples were collected from trenches, outcrop and float. Twelve trenches, totalling about 150 metres, were blasted in talus and overburden. Large anomalous areas were defined for both gold and silver in soils. A magnetometer survey was done in 1980, but severe magnetic storms during the period of the survey prevented obtaining of meaningful results.

GEOLOGY

GENERAL GEOLOGY

The Toodoggone gold camp is a 15-20 kilometre wide belt of volcanic, sedimentary and intrusive rocks extending northwesterly from Thutade Lake to the Stikine River, a distance of more than 100 kilometres. The oldest rocks in the area belong to the Asitka Group of Permian age. This group consists of cherts, argillites, limestones and greenstones. They are overlain by the Takla Group, which

consists of intermediate flows and pyroclastics of Upper Triassic age. The Takla is characterized by abundant flows of augite andesite, basalt, porphyritic feldspar andesite and their volcaniclastic sedimentary equivalents.

The volcanic rocks lying stratigraphically above the Takla Group have been classified under two headings: the Toodoggone Group and the Hazelton Group. The Toodoggone Group is of Lower Jurassic age and is equivalent to the base of the Hazelton Group (Panteleyev, 1984). The Toodoggone volcanics consist predominantly of subaerial dacite, latite, trachyte and rhyolite pyroclastic rocks more than 500 metres in thickness, which unconformably overlie the Takla. The majority of the epithermal precious metal occurrences in the area are associated with the Toodoggone volcanic rocks.

The Toodoggone volcanics are bordered on the east by, and are in fault contact with, the Hazelton Group, consisting of intermediate volcanic conglomerate, breccia, lahar and abundant pink feldspar porphyry dikes and sills. These rocks range in age from Lower Jurassic to Upper Jurassic. Non-marine sedimentary rocks of the Sustut Group unconformably overlie the Toodoggone rocks along the western margin of the belt. These non-marine rocks are predominantly conglomerates, sandstones, siltstones and tuffs of Upper Cretaceous and Tertiary age.

In addition to the abundant intrusive dikes and sills noted within the Toodoggone and Hazelton Groups, there are acid to intermediate and alkaline stocks and plugs that are intruded into the Toodoggone area. These intrusions are believed to be related to the Omineca batholith of Jurassic age.

LOCAL GEOLOGY

The Golden Neighbour property is underlain by a variety of altered feldspar and quartz-feldspar porphyries of the Toodoggone Group. These are poorly exposed along the central and eastern tributaries of Saunders Creek but are well exposed along the upper ridges where they form prominent outcrops and large areas of coarse talus.

The volcanics exposed along the creeks are characterized by weak to strong iron gossans. These rocks are mostly light grey, medium to coarse grained dacites and/or rhyodacites containing numerous small "quartz eyes". Due to the intense weathering and leaching, it is difficult to distinguish whether these rocks are pyroclastics or flows. Some areas of notably weaker iron staining appear to contain feldspar porphyry with few, if any, "quartz eyes".

The higher ridges and talus slopes are underlain by a variety of volcanic porphyries. Many are dark grey to grey-brown to purple with abundant white to pink feldspar phenocrysts. Others are dark green and strongly chloritized and epidotized.

A coarse volcanic breccia, the matrix of which contains abundant limonite, overlies the porphyries below approximately 1800m elevation. It contains rounded and angular fragments of porphyries which vary up to 30 cm in diameter. This particular rock unit may be a product of weathering, e.g. a ferricrete.

Kaolin [±] sericite alteration occurs within the rhyodacite porphyries exposed in the central creek tributary north of grid line 14+50N and along the eastern tributary to about line 12+00N. Similar alteration is also exposed near the head of the south tributary.

At least one significant quartz vein is present on the property. It was exposed by two trenches located near grid lines 10+50N and 11+00N at 2+50E. At the time of the 1985 field work, both trenches were full of snow. An attempt was made to clean out these trenches but this effort failed due to thick ice and frozen ground beneath the snow.

Coarse blocks of float, blasted from the trenches, were observed down slope from them. These included pieces of both massive quartz and silicified rhyodacite porphyry. Some pieces were vuggy, others massive. All were stained with limonite while a few pieces had appreciable malachite and azurite. Some float contained appreciable disseminated pyrite.

Numerous trenches are present at the south end of the grid, some of which are reported to contain quartz veins (Lacana Mining Corp. private reports). These are now sluffed and expose no bedrock.

STRUCTURE

Attitudes within the volcanics are not obvious. The only contact seen was that of the volcanic breccia which overlies the porphyries. Its attitude is $N30W/30^{O}SW$ and appears to reflect the slope of the hill.

A gougy fault zone striking N25W and dipping vertically was seen in the east creek tributary on line 12+50N. A similar fault was seen in the south tributary near line 5+00N at 1+65E. The latter strikes N38W and dips 55° SE.

GEOPHYSICAL SURVEYS

Soil sampling by Lacana Mining Corp. in 1980-81 defined an area lying between lines 5+00S and 15+00N and mostly northeast at the base line as being anomalous in gold and silver. The 1985 geophysical program surveyed that part of the area lying between 2+00N and 15+00N. To the south of this latter area, the geochemical anomaly is on claims owned by others.

Prior to running the geophysical surveys a grid had to be established. It was planned to use the old Lacana grid which was prepared in 1980-81. However, little could be found of it except for the odd remnant of flagging and a few stakes, the markings on which were lost due to weathering.

The old baseline was re-established from 16+00N to 2+00N. The line was measured, using a nylon rope-chain, and slope corrected.

It was well flagged, with each 50m station distinguished by contrasting flagging and marked with the appropriate co-ordinate number. The base line was laid out on a bearing of $S30^{\circ}E$.

Grid lines were laid out at each 50m station from 15+00N to 2+00N. These lines were run at $N60^{\circ}E$. Line length varied from 250m to 350m. Stations were marked on each line at 25m intervals.

When the grid was completed, a survey was run tying in the eastern end of each line. This provided a reasonably accurate plot of the grid.

A total of nine line km of grid lines were laid out. These lines all lay to the northeast of the baseline except for short sections of lines 7+00N-9+00N, which were also carried 150m to the southwest.

VLF-EM SURVEY

The above grid was surveyed using a Sabre VLF-Em instrument, model 27, serial no. 52, manufactured by Sabre Electronic Instruments Ltd. of Burnaby, B.C. All readings were made using Seattle Station, frequency 18.6 khz. A total of 8.9 km of line were surveyed.

Dip angle and field strength readings were taken on each line at 12.5m intervals. All data was recorded on appropriate Em field note paper.

Following completion of the survey, all data was "Fraser" filtered. Figures 3 and 4 show respectively the raw and contoured filtered data plotted on a scale of 1:2500. Dip angles and field strength were plotted as profiles, which accompany this report as Appendix I.

MAGNETOMETER SURVEY

A magnetometer survey was run over the grid, surveying only the 100m lines; i.e., lines 2+00N to 15+00N but not the intermediate lines. In addition, lines 7+00N, 8+00N and 9+00N were run for 150m southwest of the baseline. Readings were taken at each 25m station.

A Scintrex MF-2 magnetometer was used. The latitude adjustment was set so that only readings in excess of 50,000 gammas were measured.

Magnetometer base stations were established along the baseline. Before and after each pair of lines was surveyed, check readings were made at various base stations. Since there was little variation in these readings at the base stations, no adjustments were made to the magnetometer data.

All magnetometer data was plotted on a map on a scale at 1:2500 and contoured in 200 gamma intervals. It is shown on Figure 5.

GEOCHEMICAL SOIL SURVEY

Soil sampling by Lacana Mining Corp. during 1980-81 located a large area anomalous in gold and silver. This sampling was done on a 50m x 50m grid. In the present program selected areas were sampled on a 25m x 25m grid, the purpose of which was to better define this anomalous area. A total of 24l soil samples were collected. Their locations are shown in Appendix II.

The soil samples were prepared for analysis by Min-En Laboratories Ltd., 705 West 15th Street, North Vancouver at their field preparation laboratory at the Sturdee airstrip in the Toodoggone area. The prepared samples were sent to the North Vancouver laboratory for analyses. Due to temporary financial constraints, the assaying of the samples was postponed.

RESULTS

VLF-EM SURVEY

The VLF-Em data, plotted in profile form (Appendix I), tends mostly to reflect the steep topography and indicates, but does not clearly define, anomalous areas. However, when readings are taken at relatively close intervals (15m or less) and filtered, the topo-

graphic effect is removed. In the recently completed survey, readings were taken at 12.5m intervals, then filtered and contoured (Fig. 4). The contoured data defines a weak but continuous anomaly from line 8+50N to 11+00N, centred at approximately 2+15E.

The dip angle profiles indicate a cross-over in the same vicinity as the above anomaly, while the field strength profiles show a slight increase in field strength in the same area (see Appendix I).

The above anomaly is located in an area inferred by Lacana (1980 geological mapping) to contain a major fault structure and alteration zone. The two snow-filled trenches, referred to in "Local Geology" as containing a significant quartz vein, also occurs within the anomalous area. Because of these coincident features the anomaly must be considered valid and of future interest.

Other weak VLF-Em anomalies are present within the grid area but do not appear to be significant when seen in the profiles. They are not considered of interest at the present time.

MAGNETOMETER SURVEY

The magnetic data shows a subtle magnetic high trending north-westerly through the survey area. The above mentioned VLF-Em anomaly lies on its eastern flank. Since no outcrop is present within the anomalous area, its significance is unknown.

A second magnetic anomaly occurs on the baseline between 7+00N and 9+00N. This area is completely covered by overburden and thick alpine fir. The source of this anomaly is presently unknown.

GEOCHEMICAL SOIL SURVEY

No results are presently available. However, it is interesting to note that soil sampling by Lacana Mining Corp. in 1980 returned anomalous gold assays which are coincident with the VLF-Em anomaly.

This area was re-sampled at closer spacings, the results of which will be available at a later date.

CONCLUSION

It is concluded that the VLF-Em anomaly extending from line 8+50N to 11+00N and approximately 2+15E of the baseline is significant because of coincident inferred faulting and alteration, anomalous gold in soils, and the presence of at least one quartz vein. It is also concluded that this anomalous area warrants additional exploration.

RECOMMENDATION

It is recommended that the VLF-Em anomaly be explored by either backhoe trenching or diamond drilling. Trenching is preferred but because of the property's remote location it may not be feasible.

Respectfully submitted

Harold M. Jones, P.Eng.

Amed In Jones

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CERTIFICATE

- I, Harold M. Jones, of the City of Vancouver, British Columbia, do hereby certify that:
 - I am a Consulting Geological Engineer with offices at
 721 602 West Hastings Street, Vancouver, British Columbia.
 - 2. I am a graduate of the University of British Columbia in Geological Engineering, 1956.
 - 3. I have practised my profession as a Geological Engineer for over 25 years.
 - 4. I am a member of the Association of Professional Engineers of British Columbia, Registration No. 4681.
 - 5. I supervised the field program on the Golden Neighbour property and personally conducted the VLF-Em survey.

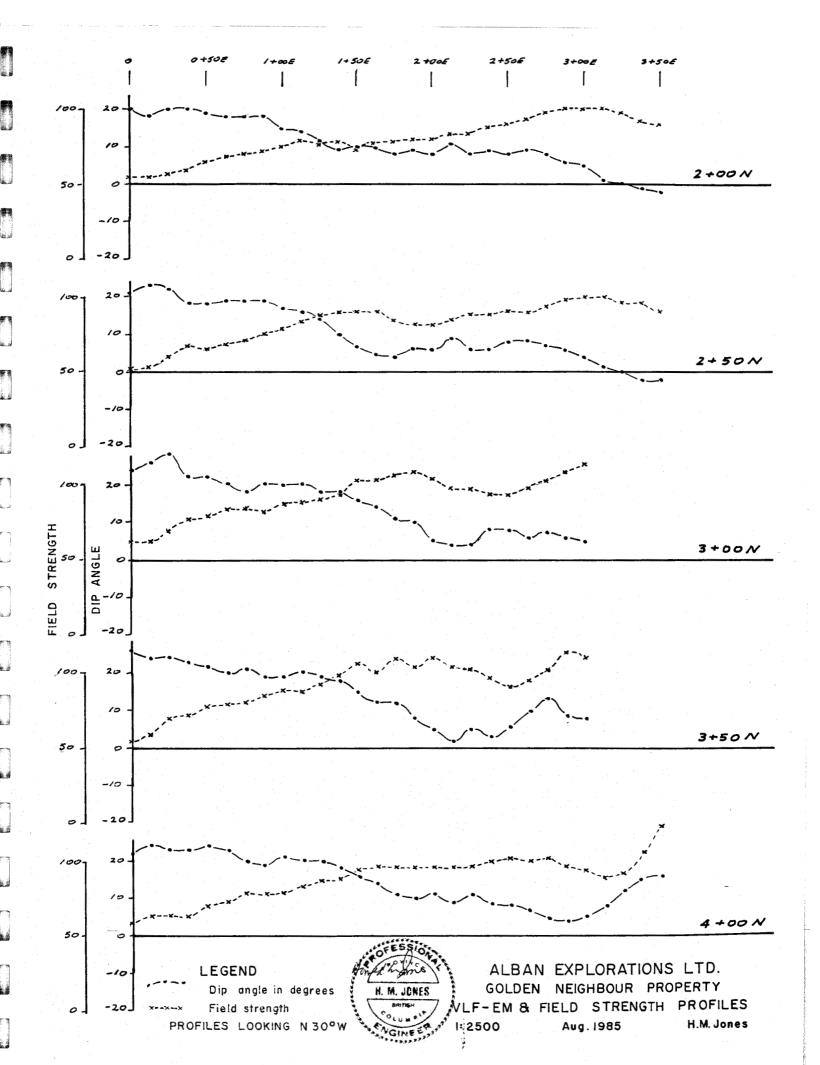
DATED AT VANCOUVER, B.C. this 30th day of August, 1985.

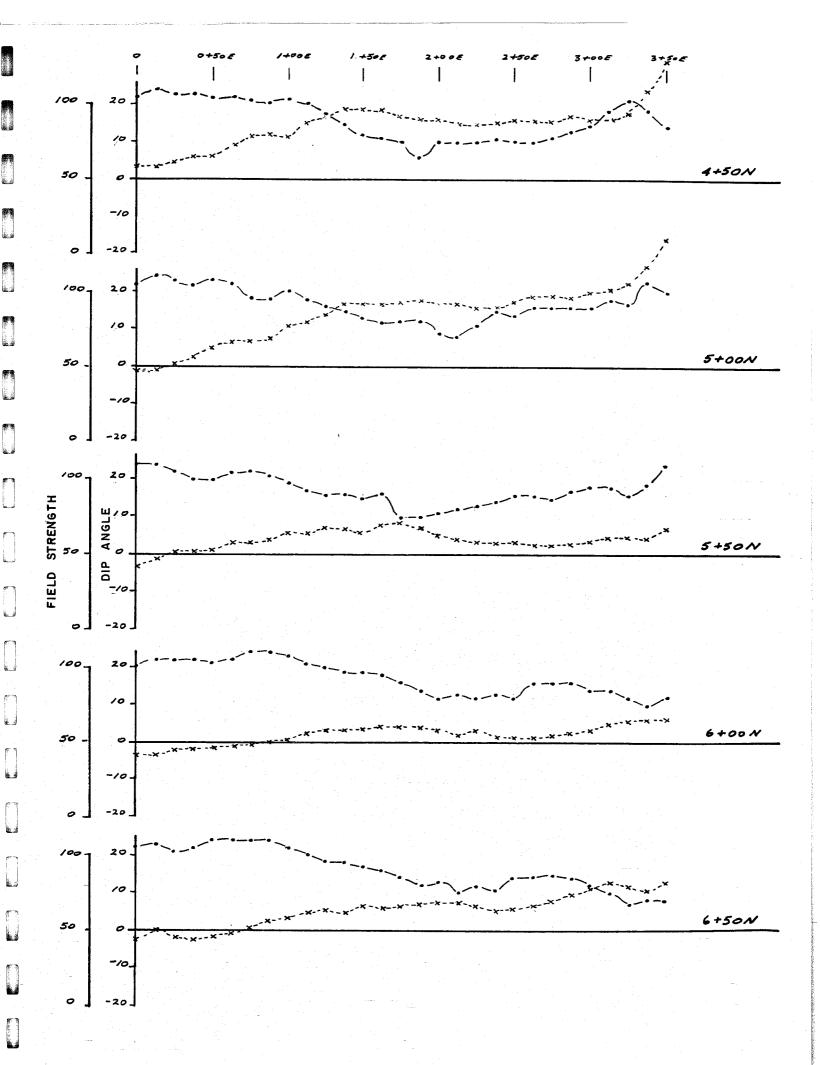
Harold M. Jones, P.Eng.

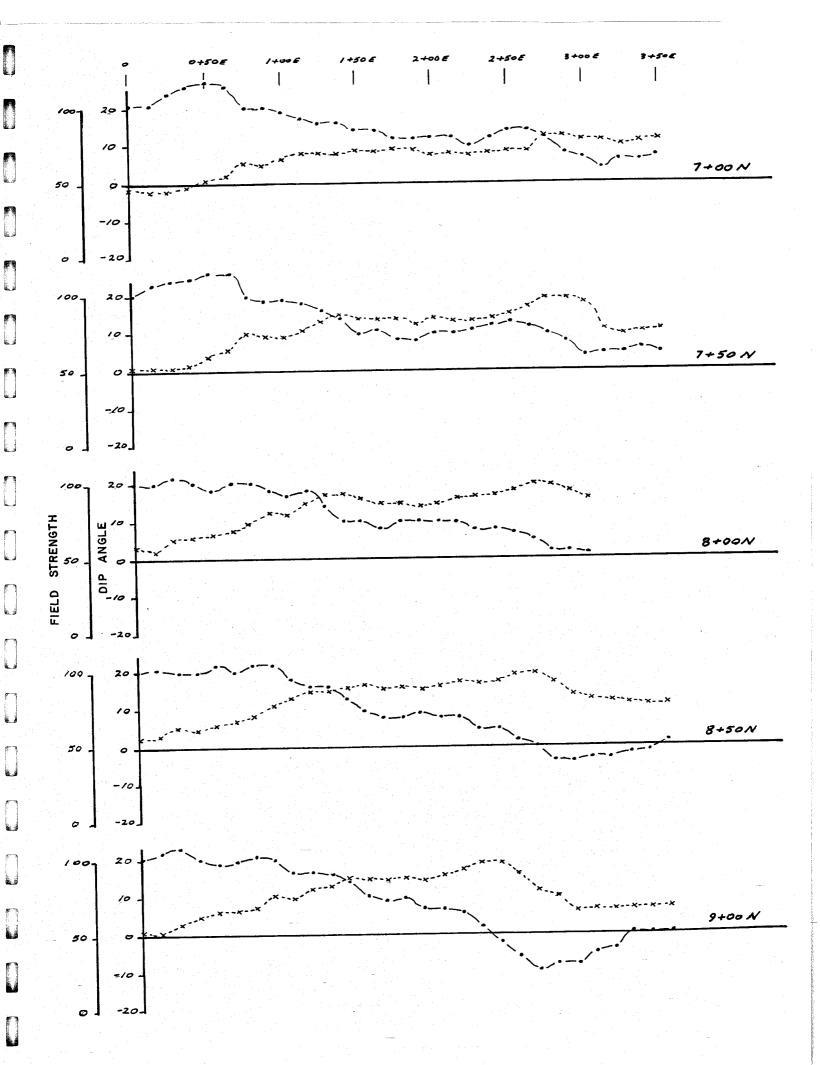
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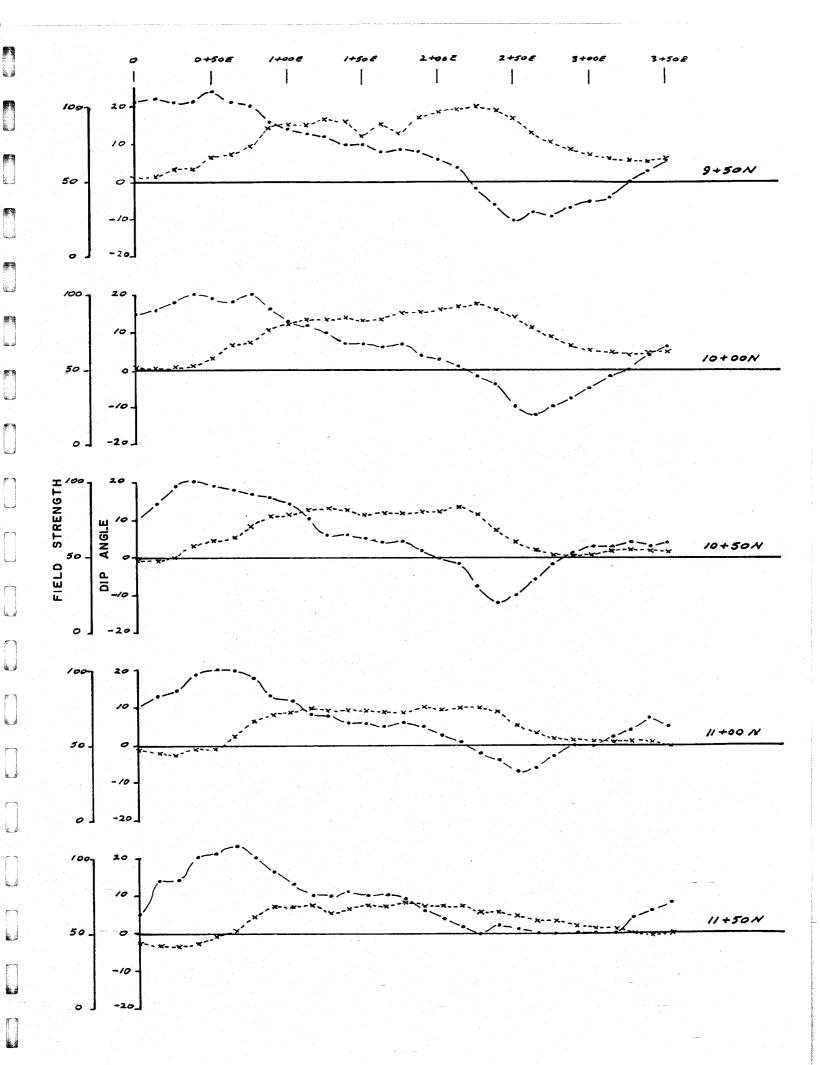
APPENDIX I

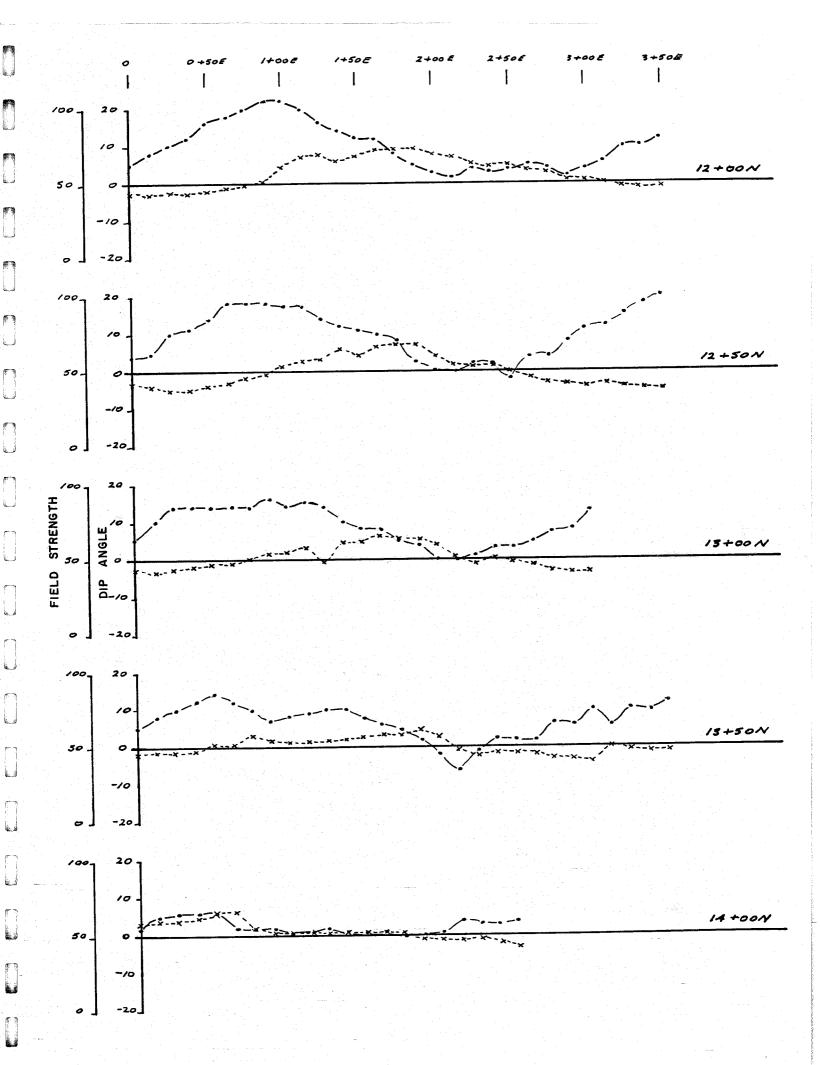
VLF-EM AND FIELD STRENGTH PROFILES

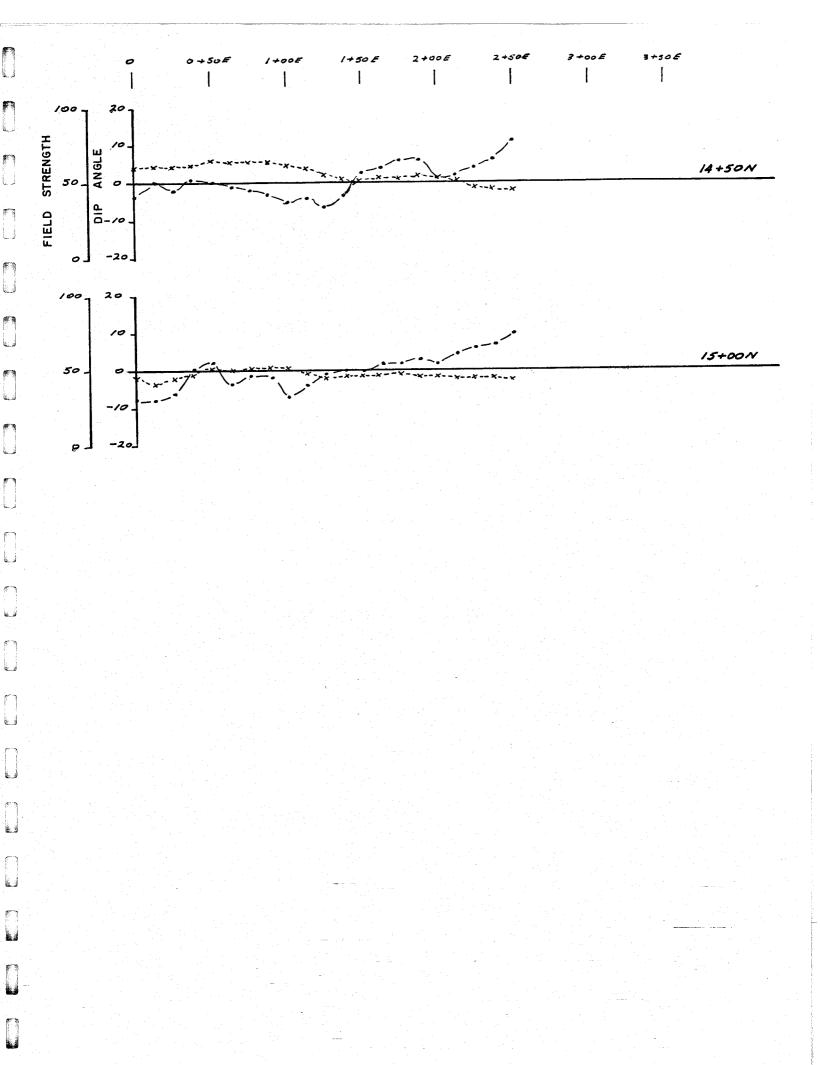






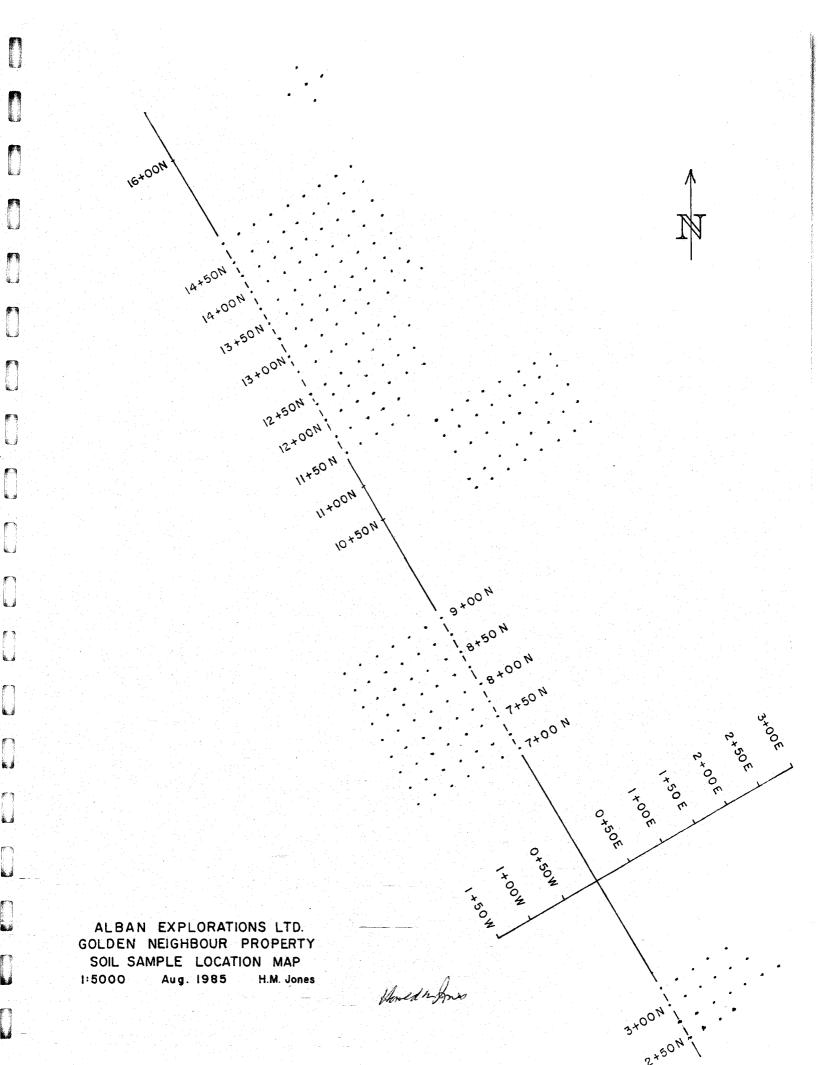






APPENDIX II

SOIL SAMPLE LOCATION MAP



APPENDIX III

STATEMENT OF EXPENDITURES

APPENDIX III

STATEMENT OF EXPENDITURES

Wages:			
M. MacKillip -	July 24-August 6, 1985 13 days @ \$110/day	\$ 1,430.00	
R. Ney	July 25-August 5, 1985 11½ days @ \$100/day	1,150.00	
H.M. Jones, - P.Eng.	Geological Consultant - July 24 - August 5, 1985 12 days @ \$350/day	4,200.00	\$ 6,780.00
Travel:			
	Airfare - Vancouver/Smithers/ return		
	3 men @ \$322.65/person	967.95	
	Ground transportation - taxis to and from airports, accommodation and meals in		
	Smithers	308.74	1,276.69
Transportation:		**************************************	
	Charter Aircraft - Central Mountain Air ALC Airlift Helicopters	1,257.90 1,339.00	
	Freight, by truck, Vancouver/Smithers/return	180.00	2,776.90
Camp and Field Su	upplies:		
	- Camp Equipment - Groceries	1,600.00 606.00	
	 Field Supplies, sample bags, flagging etc. 	172.00	2,378.00
Instrument Rental		And the second second	
	- VLF-Em	200.00	
	- Magnetometer	100.00	
	- Radio-telephone	100.00	400.00
Report and Maps:			
A second	- Report & map preparation	1,500.00	
	- Drafting	150.00	
	- Secretarial	125.00	1,775.00
TOTAL	그렇게 얼굴하는 얼마나 있는 사람들은 사람들이 없었다.		\$15,386.59
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HAROLD M. JONES, P.ENG. CONSULTING GEOLOGIST



