

6/88

GEOPHYSICAL REPORT

ON

AIRBORNE MAGNETIC AND VLF-EM SURVEYS

OVER THE

MOON CLAIM GROUP

HATCHAU LAKE, DEASE LAKE AREA

ATLIN MINING DIVISION, BRITISH COLUMBIA

MOON CLAIMS : On Hatchau Lake, 95 km S74°W  
 (254°E) of Dease Lake  
 : 58° 12' North latitude  
 : 131° 36' West longitude  
 : NTS - 104J/4E

WRITTEN FOR : UNITED CAMBRIDGE MINES LIMITED  
 1414-8th Street S.W.  
 Calgary, Alberta, T2R 1J6

SURVEYED BY : COLUMBIA AIRBORNE GEOPHYSICAL  
 SERVICES (1984) LTD.  
 #1016-470 Granville Street  
 Vancouver, B.C. V6C 1V5

WRITTEN BY : David G. Mark, Geophy . . .  
 Patrick Cruickshank,  
 GEOTRONICS SURVEYS LTD  
 #530-800 West Pender  
 Vancouver, B.C., V6C

DATED : September 2, 1987

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GEOTRONICS SURVEYS LTD.  
Engineering & Mining Geophysicists  
VANCOUVER, CANADA

SECTION:

FILE NO: 87-465-16311

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BRANCH VANCOUVER, B.C.

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## SUMMARY

Airborne magnetic and VLF-EM surveys were carried out over the Moon Claim Group owned by United Cambridge Mines Limited of Calgary, Alberta on June 8, 1987. The center of the property is located 95 km S74°W of the village of Dease Lake. Access is by float-equipped aircraft to Hatchau Lake, located within the property boundaries, or by helicopter. The terrain consists of gentle to steep slopes lightly forested with coniferous trees. The purpose of the surveys was to aid in the mapping of geology as well as to locate probable areas for exploration of gold and copper mineralization.

The property is within the Upper Triassic Stuhini group of volcanics; underlain by andesitic to basaltic flows and a variety of sedimentary rocks. The Moon group is intruded by a gabbriodiorite stock with associated dyke or sill-like masses, and dissected by numerous faults. Shear zones are believed to host sulphide mineralization.

The airborne surveys over the Moon Group were flown at about a 50-meter terrain clearance on east-west lines with a separation of 200 meters. The instruments used were a Sabre Electronics proton precession magnetometer and a Sabre Electronics VLF-EM receiver. The magnetic data were picked from the strip charts and hand contoured. The contours were drawn on a survey plan on which the VLF-EM anomalies were plotted as well.

### CONCLUSIONS

1. The magnetic survey over the Moon claims has indicated the rock types to be mainly sedimentary across the southern portion, and mainly volcanic on the northern half of the property. The magnetic highs across most of the northern half, particularly within the Moon 3 claim, could be due to a large gabbroic-diorite stock and/or its associated dykes and sills.
2. The VLF-EM survey has revealed two associated conductors, labelled A and B, which are closely associated with the magnetic highs and could indicate structural sources such as dykes or shear zones hosting sulphides.
3. None of the VLF-EM conductors directly correlated with any of the three previous outcrop showings, but does show some agreement with structural information gained there.

RECOMMENDATIONS

1. VLF-EM conductors A, B, C, and D should be located on the ground by VLF-EM surveying. Local grids should be established and follow-up work should include soil sampling, magnetic surveying and geological mapping. Of the four, conductors a and b are the most important.
2. Carry out prospecting and geological mapping at a scale of 1:10,000.
3. Conduct heavy mineral concentrate and silt sampling at 500-m intervals of all drainages on the property. Visually inspect and fire assay the concentrates for gold and analyse for silver, lead, zinc and copper.
4. Conduct a VLF-EM and magnetic survey to outline geologic contacts and/or shear zones, and conductive structures in areas of interest as determined in steps 1 to 3.
5. Carry out a 'B' horizon soil sampling in areas of interest determined from steps 1 to 4. Analyse these samples for copper, lead and zinc, re-analysing the anomalous zones for gold and silver.

If positive results are obtained, then further work may include trenching, MaxMin EM, induced polarization and finally diamond drilling.

**GEOPHYSICAL REPORT**

**ON**

**AIRBORNE MAGNETIC AND VLF-EM SURVEYS**

**OVER THE**

**MOON CLAIM GROUP**

**HATCHAU LAKE, DEASE LAKE AREA**

**ATLIN MINING DIVISION, BRITISH COLUMBIA**

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**INTRODUCTION AND GENERAL REMARKS**

This report discusses the survey procedure, compilation of data and the interpretation of low-level airborne magnetic and VLF-EM surveys carried out over the Moon claim group within the Dease Lake area on June 8, 1987. The surveys were carried out by Lloyd Brewer, instrument operator and project manager, and Dean Bowra, navigator, both of whom are of Columbia Airborne Geophysical Services (1984) Ltd. A total of 202.1 line km of airborne surveys were done over the Moon property.

The object of the two surveys was to aid in the geological mapping of lithology and structure for the purpose of exploration of the type of gold and copper mineralization as is found in the Sheslay area. Magnetic surveys have especially been proven to be a good geological mapping tool. Also the VLF-EM has responded to some of the mineralization in the area.

Much of the preliminary information is taken from the three previous reports on the property by T.E. Lisle.

PROPERTY AND OWNERSHIP

The property consists of four claims containing 80 units as shown in Fig. 2 and as described below:

<u>Claim Name</u>	<u>No. Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
Moon 1	20	2323	June 20, 1988
Moon 2	20	2324	June 20, 1988
Moon 3	20	2325	June 20, 1988
Moon 4	<u>20</u>	2326	June 20, 1988
	80		

The expiry date shown for the Moon claims takes into account the surveys under discussion as being accepted for assessment credits.

The property is owned by United Cambridge Mines Limited of Calgary, Alberta.

LOCATION AND ACCESS

The center of the property is found 95 km S74°W of the village of Dease Lake, B.C. Hatchau Lake is located within the claim boundaries.

The geographical coordinates for the center are 58° 12' north latitude and 131° 36' west longitude.

Access to the property is gained by float-equipped plane to Hatchau Lake or via helicopter.



### PHYSIOGRAPHY

The property is located at the southwest edge of the Nahlin Plateau at its boundary with the Tahltan highland, both of which are physiographic divisions of the Stikine Plateau. The terrain varies from gentle along the valley bottom to steep on the valley sides, and to moderate on the plateau north of Hatchau Lake.

Elevations vary from 625 meters a.s.l. on Hackett River on the southwestern edge of the property, to 1,220 meters a.s.l. along the northern edge of the central part of the property to give a relief of 595 meters.

Hatchau Lake and Kennicott Lake occur on the southern part of the property and form part of the Hackett River system which flows northwesterly across the property. The property is mainly drained by two southerly-flowing tributaries of the Hackett River.

The forest cover consists of lightly to moderately dense cover of coniferous trees.

### HISTORY

The following is quoted from Lisle's report of June 28, 1986.

"The gold prospect near Hatchau Lake was believed to have been initially staked by prospector Frank Hoey in 1963 who completed some hand trenching and sampling.

"The prospect was included in the Pat Group in 1969 when Skyline Explorations Limited conducted widespread geochemical surveys in a search of porphyry-type copper deposits. (Assessment Report 2554).

"The ground was again restaked in 1977 by prospectors for Utah Mines Limited. During 1978 that company cut 91.4 kilometers and collected 772 soil samples for analysis. In 1979, the company cut a further 52.5 kilometers of line, collected 1214 soil samples, ran I.P. and magnetic surveys over 122 kilometers of line, and surveyed 12 kilometers. Anomalous conditions found in the geophysics and geochemical work were partly investigated by bulldozer trenching in 1980. This program did not result in significant concentrations of porphyry-type copper mineralization and the company allowed the claims to lapse."

The property was staked on June 28, 1984 and subsequently optioned to United Cambridge Mines Limited. In 1985 and 1986, United Cambridge carried out limited soil sampling.

## GEOLOGY

### A. General Geology

The following is also quoted from Lisle's 1968 report.

"C.I.M.M. Special Volume 15, 'Porphyry Deposits of the Canadian Cordillera' shows the Sheslay area to be within or near a northerly trending belt of alkalic plutonic rocks. The plutonic rocks are believed to be related to regional faults and are comagmatic with thick complex sequences of subaerial and submarine volcanic rocks of the Upper Triassic Stuhini Group.

"The Stuhini Group is a part of a larger geological complex that includes the Takla and Nicola Groups and forms a prominent belt almost the full length of British Columbia. This belt is host to a significant number of British Columbia's Porphyry Copper deposits, commonly referred to as 'Alkaline Suite Deposits'. These deposits are marked by distinct mineralogical

and alteration assemblages in areas of strong faulting, fracturing and brecciation; and contain significantly more gold and silver and less molybdenum than deposits of the Calc-Alkalic Suite.

"Extensive exploration work carried out in the southern sections of the belt, particularly in the Quesnel Trough and its extensions, has revealed one well defined deposit and a large number of prospects where gold is the principal commodity. Drill indicated reserves at the QR deposit near Quesnel are reported close to one million tons grading about 0.20 oz/ton. The gold occurs in basaltic breccia below a sedimentary contact and is associated with pyrite and epidote above a strongly carbonated zone flanking a zoned alkalic stock. (Saleken, L. and Simpson, R.). This environment is the focus of much of the current exploration work underway.

#### B. Geology of the Moon Claims

"The geology of the Moon Claims has been mapped by previous operators, however this data is not on public record. The author's knowledge of the area indicates the following:

The Stuhini Group rocks include an upper maroon (sub-aerial?) fragmental unit underlain by andesitic to basaltic flows, and by a variety of sedimentary rocks ranging from cherty tuff, argillite, siltstone, sandstone, to limy sediments.

"The volcanic-sedimentary assemblage is intruded by a large gabbroic-diorite stock, and by a number of small dyke or sill-like masses that range from diorite to syenite in composition. The claim area is dissected by a number of northwest, northeast and northerly trending lineaments that are known in places to reflect faults. A number of the known mineral occurrences in the area are close to these structures.

"Three areas of the claims were examined by limited geochemical survey work during 1986. Brief descriptions of these areas follow:

(1) 'E' (Gossan) Creek

"This creek drains the Moon 3 and 4 claims toward Hatchau Lake and exposes the most conspicuous gossan in the Sheslay area. The gossan is a bright orange-yellow zone of alteration cut by numerous shears that, where measured, trend  $\pm 110^{\circ}$ - $130^{\circ}$ ,  $045^{\circ}$ ,  $250^{\circ}$  or  $360^{\circ}$ . Host rocks include bedded tuff, green porphyritic volcanic, and lesser amounts of monzonite. The zone is brecciated, and veined by chalcedony, quartz, calcite and dolomite. The rocks are variably bleached and mineralized with a low content of pyrite, chalcopryrite and lesser amounts of galena and sphalerite.

"The 1986 work was concentrated over about 650 meters of the creek trending south-southwest. An outcrop on the east bank of the creek comprised of boulders cemented by calcareous sinter suggests an area of hot-spring activity likely related to the Level Mountain volcanic complex to the north.

(2) Hoey Prospect

"The Hoey prospect is situated on the west-facing slope of a small steeply incised creek draining south to Hatchau Lake. The showings are about 120 meters (400 feet) above the lake and some 750 meters (2450 feet) above sea-level.

"The showings consist of a number of veins and lenses of specularite with magnetite, chalcopryrite and pyrite, and are clustered on the steep valley slope. The area is also marked by a number of calcite veins variably mineralized with chalcopryrite

and minor pyrite. Erythrite (cobalt bloom) has also been noted in the showing area.

"The mineralization occurs in an area of fine grained intrusive rocks ranging from diorite to monzonite in composition. Dark green andesite and cherty tuffaceous rocks are present and calcareous argillaceous rocks are reported at the lower elevations to the south. The best sample collected by the author in 1984 yielded 0.62 opt over 0.35 meters.

"Approximately 600 meters to the north-northeast, a 1985 reconnaissance sample yielded 6,600 ppb gold. This sample was from a northerly? trending fault zone poorly exposed along a road trench near the flank of Big Creek. The fault is believed to roughly parallel the trench and its relationship to the main Hoey prospect is uncertain.

### (3) 'D' Showing

"Three samples selected from a large trench area near 1515E and 1410N in 1985 yielded 1320 to 3810 ppb gold. The trenches are believed to have partly investigated a large IP chargeability anomaly. Rock outcrops in the area are rare but those in the trenches include andesite, bedded tuff and porphyry that could be intrusive or extrusive. Material samples from the trenches included limonitic rocks in part related to faults."

## INSTRUMENTATION AND THEORY

### A. Magnetic Survey

The magnetic data are detected using a nuclear free precession proton magnetometer, manufactured by Sabre Electronic

Instruments Ltd. of Burnaby, B.C. The magnetometer measures the total count of the earth's magnetic field intensity with a sensitivity of one gamma. The data are recorded on magnetic tape and 12 cm analog strip chart.

The magnetic patterns obtained from a regional airborne survey are directly related to the distribution of magnetite in the survey area. However, the geology cannot be deduced from isomagnetic maps by simply assuming that all magnetic highs are underlain by gabbro or ultramafic rocks, and that all magnetic lows are caused by limestone or chert. The problem with such a simplistic approach is that magnetite is not uniformly distributed in any type of rock. Other problems arise from the fact that most geologic terrains have rocks of high susceptibility superimposed on less 'magnetic' rocks, and vice versa. Cultural features such as powerlines, pipelines and railways also complicate matters. So many variables can be involved that it may be impossible to make a strictly accurate analysis of the geology of an area from magnetic data alone. It is preferable to use other information such as geological, photogeological and electromagnetic in combination with magnetic data to obtain a more accurate geological analysis.

#### B. VLF-EM Survey

A two-frequency omni-directional receiver unit, manufactured by Sabre Electronic Instruments Ltd., of Burnaby, B.C., was used for the VLF-EM survey. The transmitters used are NLK Arlington (Seattle), Washington, operating on 24.8 KHz, and Annapolis, Maryland, transmitting at 21.4 KHz. These signals are used due to their ideal orientation with respect to easterly and north-westerly geological structures, and their good signal strengths.

The VLF (Very Low Frequency) method uses powerful radio transmitters set up in various parts of the world for military communications. These powerful transmitters can induce electric currents in conductive bodies thousands of kilometers away from the radio source. The induced currents set up secondary magnetic fields which can be detected at surface through deviations in the normal VLF field. The VLF method is inexpensive and can be a useful initial tool for mapping structure and prospecting. Successful use of the VLF requires that the strike of the conductor be in the direction of the transmitting station so that the lines of magnetic field from the transmitter cut the conductor. Thus, conductors with northeasterly to southeasterly strikes should respond to Annapolis transmissions, while conductors with northwesterly to southerly strikes should respond to Seattle transmissions. Some conductors will respond to both stations, giving coincident field strength peaks.

It is impossible to determine the quality of conductors with any reliability, using field strength data alone. The question of linearity is in doubt if the conductor does not appear to cross the adjacent flight lines. The relatively high frequency results in a multitude of anomalies from unwanted sources such as swamps, creeks and cultural debris. However, the same characteristic also results in the detection of poor conductors such as faults, shear zones, and rock contacts, making the VLF-EM a powerful mapping tool.

The interpretive technique requires information from magnetic surveys, air photo analyses, and ground traverses to aid in discrimination between important and unwanted anomalies. Even armed with this information the interpreter can easily be misled.

### SURVEY PROCEDURE

A two-meter bird was fitted with a magnetometer coil and two omni-directional EM receivers and towed beneath the helicopter on a 10-meter cable. The terrain clearance for the bird was 50 meters.

The survey was straight-line flown (east-west) with a line spacing of 20 meters. Navigation was visual, using 1:50,000 scale maps blown up to 1:10,000.

The aircraft used to conduct this survey was a Bell 206B Jet Ranger helicopter operated by Northern Mountain Helicopters. Airspeed was a constant 60 KPH so that creek valleys and canyons were penetrated thoroughly. The slow airspeed provided safety, detailed coverage of boxed-in areas, and consistency of data retrieval, which is critical in rugged terrain, such as within this survey.

The number of line km flown on the property as shown on Fig. 3 is 202.1.

The project supervisor, Mr. L. Brewer, has over 7 years of experience in conducting aerial magnetic and electromagnetic surveys from rotary-wing aircraft, under all types of terrain conditions.

### DATA REDUCTION AND COMPILATION

The observed magnetic total field was recorded on analogue strip charts. These were played-back together with audio recordings containing fiducial markers, and the fiducial markers were transferred to the strip charts. The fiducial markers were identified with topographic features along the flight lines.



The magnetic data were taken from the strip charts and plotted at a scale of 1:10,000 (1 cm = 100 m) onto Fig. 3. The data were then contoured at a 200-gamma interval over the northern part of the property, and at a 100-gamma interval over the southern part. The background is 56,000 gammas so that a 1500-gamma contour reads 57,500 gammas.

The VLF-EM survey measured the field strength. The resulting anomalies were taken from the strip charts and plotted on the sheet with the magnetics. A distinction has been made on the map between weaker and stronger anomalies.

## DISCUSSION OF RESULTS

### A. Magnetics

This survey shows a strong response over most of the northern half of the property. The magnetic field overall varies from a low of below 400 gammas in the southern part, to a peak of over 4,500 gammas in the northern part. The great extent of the northern anomalous region suggests that the causative source(s) could be magnetic rocks such as basic volcanics or intrusives.

The quiet southern part probably reflects the sedimentary rocks described by Lisle.

The northern part shows a very wide, strong response with a high reaching over 4500 gammas. This high response could be reflecting the large gabbroic-diorite intrusive described by Lisle, along with the associated dykes of diorite.

A sub-linear pattern of magnetic highs striking north-northwest occurs within the Moon 3 claim, which could reflect the presence of a wide dyke.

A local magnetic high of low amplitude has been noticed to correlate with the Hoey showing, and the 'D' showing higher up the slope is within the eastern end of the main wide magnetic anomaly. This outcrop suggests that the andesite or diorite rocks in the area are the causative sources of the strong magnetic field in the area.

B. VLF-EM

The major cause of VLF-EM anomalies, as a rule, are geologic structure such as fault, shear and breccia zones. It is therefore logical to interpret VLF-EM anomalies to likely be caused by these structural zones. Of course, sulphides may also be a causative source. But in the writer's experience, when VLF-EM anomalies correlate with sulphide mineralization, the anomalies are usually reflecting the structure associated with the mineralization rather than the mineralization itself.

There is some variation in intensity from one VLF-EM anomaly to the next. This is not only due to the conductivity of a causative source, but also the direction it strikes relative to the direction to the transmitter. In other words, those conductors lying close to the same direction as the direction to the transmitter can be picked up easier than those that are lying at a greater angle. Depending upon its conductivity, a conductor may not be picked up at all if it is at too great an angle.

Conductor A is not the strongest conductor, being classified only very weak to medium, but is the most interesting because of its association with the magnetic anomalies. Occurring within the center of the lower half of the Moon 3 claim, it has a minimum length of 1200 meters and strikes roughly north across two of the highest magnetic peaks. The causative source could be a sheer zone associated with a gabbroic-diorite dyke, as discussed earlier. Another possible causative source would be a sulphide-

bearing shear zone. Its strike direction (roughly north) agrees with shear zones mapped at the 'E' Gossan Creek showing to the southeast.

Conductor B consists of two parts striking NE across the northern end of conductor A, and is only a very weak to weak conductor up to 1600 meters long. This conductor strikes along the direction of the northern edge of the magnetic high zone, and at a strike of about  $50^{\circ}$ - $60^{\circ}$ , close to the direction of shear zones measured at the 'E' Gossan Creek showing. As the gossan in those shear zones suggests sulphide enrichment at greater depths, this anomaly could be caused by a sulphide-enriched shear zone.

Conductor C is a weak-to-strong anomaly in the bottom central part of the property, with a north-northwest strike length of approximately 1200 meters. This conductor occurs within a relatively quiet zone over and adjacent to two low-amplitude local magnetic highs. The causative source could be a small diorite or syenite dyke, or a sulphide-bearing shear zone.

Conductor 'D' is a very weak to strong conductor striking northwest at least 1300 meters long, northeast of Hatchau Lake. The northern end of this conductor correlates with a low-amplitude local magnetic low approximately 800 meters east of the 'E' Gossan Creek showing. The causative source could be a sulphide-bearing shear zone, as there is very little magnetic activity here.

Conductor E is a northerly trending anomaly apparently consisting of two separate parts of about 300 meters each, in the upper central part of the Moon 2 claim. This conductor is classified as very weak to moderate strength, showing side-by-side correlations with two local magnetic highs, and direct correlation with a sub-linear break in the magnetic highs. This anomaly could be

reflecting a shear zone with some sulphide mineralization.

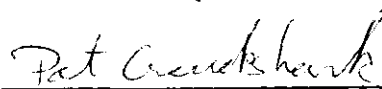
Along with these mapped conductors, there are a number of smaller, spot occurrences of very weak and weak VLF-EM responses. These could be reflecting very narrow shear zones, but because they lack structural identity, it is difficult to speculate on these causative sources.

Respectfully submitted,  
GEOTRONICS SURVEYS LTD.



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David G. Mark,  
Geophysicist



---

Patrick Cruickshank,  
Geophysicist

September 4, 1987  
41/G403

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Lisle, T.E., Preliminary Report on the Moon Prospect, Sheslay Area, Atlin M.D., B.C., for United Cambridge Mines Limited, July 5, 1984.

Lisle, T.E., Assessment Report on the Moon Prospect, Sheslay Area, Atlin M.D., B.C., for United Cambridge Mines Limited, June 16, 1986.

Lisle, T.E., A Review of the Gold and Copper Potential of the Sheslay Area, Atlin M.D., B.C., July 29, 1986.


GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices located at #530-800 West Pender Street, Vancouver, British Columbia.

I further certify:

1. That I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
2. I have been practising my profession for the past 19 years and have been active in the mining industry for the past 22 years.
3. That I am an active member of the Society of Exploration Geophysicists and a member of the European Association for Exploration Geophysicists.
4. This report is compiled from data obtained from airborne magnetic and VLF-EM surveys carried out by Columbia Airborne Geophysical Services (1984) Ltd., under the supervision of L. Brewer on June 8th, 1987.
5. I have no direct or indirect interest in the property mentioned within this report, nor in United Cambridge Mines Limited, nor do I expect to receive any interest as a result of writing this report.



David G. Mark  
Geophysicist

September 2, 1987  
41/G403

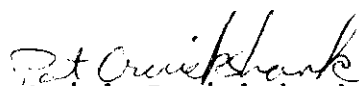
GEOPHYSICIST'S CERTIFICATE

I, M.A. PATRICK CRUICKSHANK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a consulting geophysicist of Geotronics Surveys Ltd., with offices located at 530-800 West Pender Street, Vancouver, British Columbia.

I further certify:

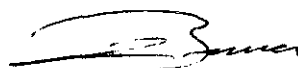
1. I am a graduate of the University of British Columbia (1986) and hold a B.A.Sc. degree in Geophysics Engineering.
2. I have been practising my profession for one year.
3. I am registered with the British Columbia Association of Professional Engineers as an Engineer-in-Training, in geophysics.
4. This report is compiled from data obtained from airborne magnetic and VLF-EM surveys carried out by Columbia Airborne Geophysical Services (1984) Ltd., under the supervision of L. Brewer on June 8th, 1987.
5. I have no direct or indirect interest in the property mentioned within this report, nor in United Cambridge Mines Limited, nor do I expect to receive any interest as a result of writing this report.

  
Patrick Cruickshank  
Geophysicist

September 2, 1987  
41/G403

AFFIDAVIT OF COSTS

I, Lloyd Brewer, president of Columbia Airborne Geophysical Services (1984) Ltd., certify that the airborne magnetic and VLF-EM surveys were flown on June 8th, 1987, and that they were flown at a cost of \$100/km. The total number of km on the Moon survey was 202.1 and thus the cost was 20,210.00.



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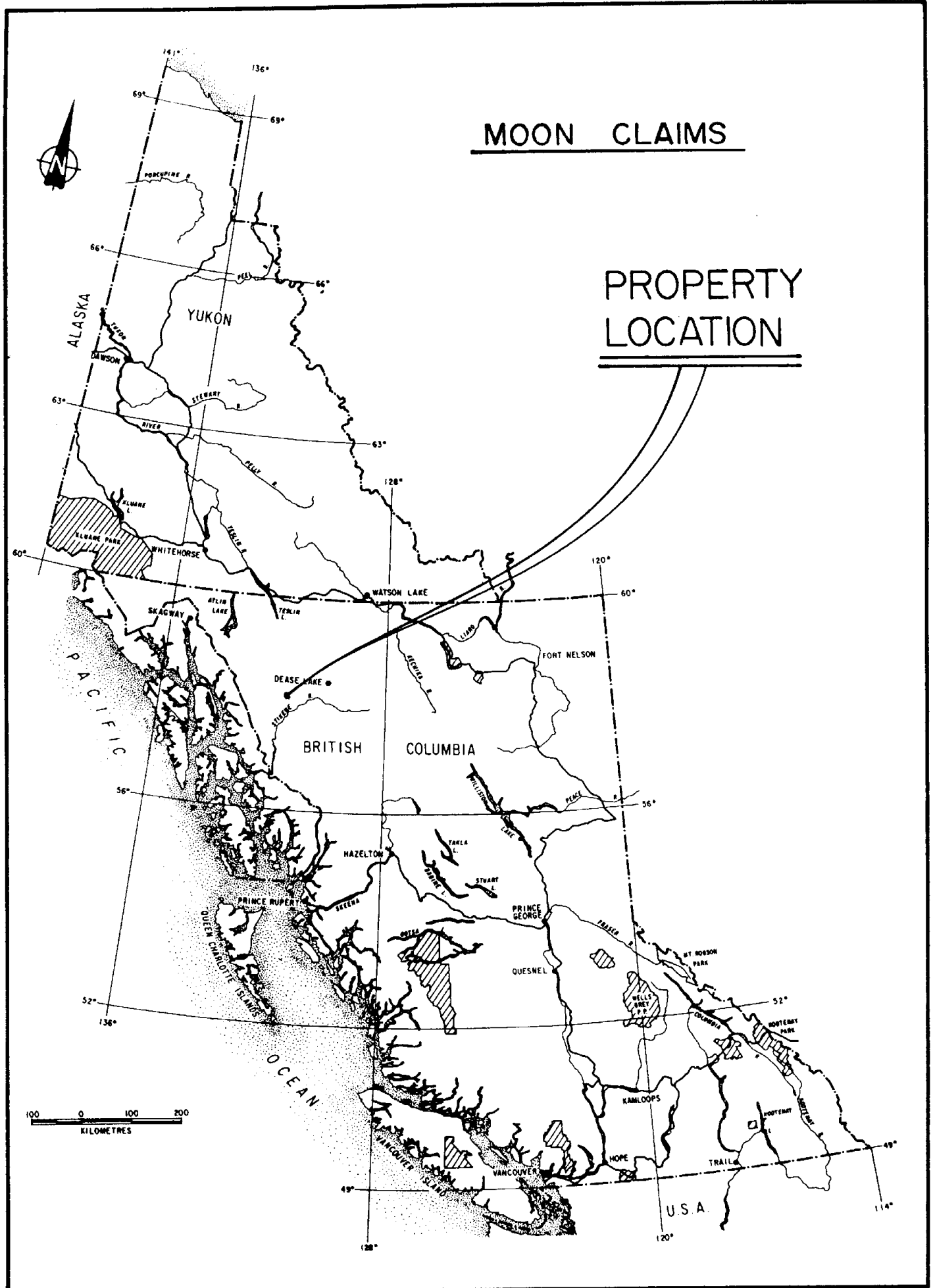
Lloyd Brewer

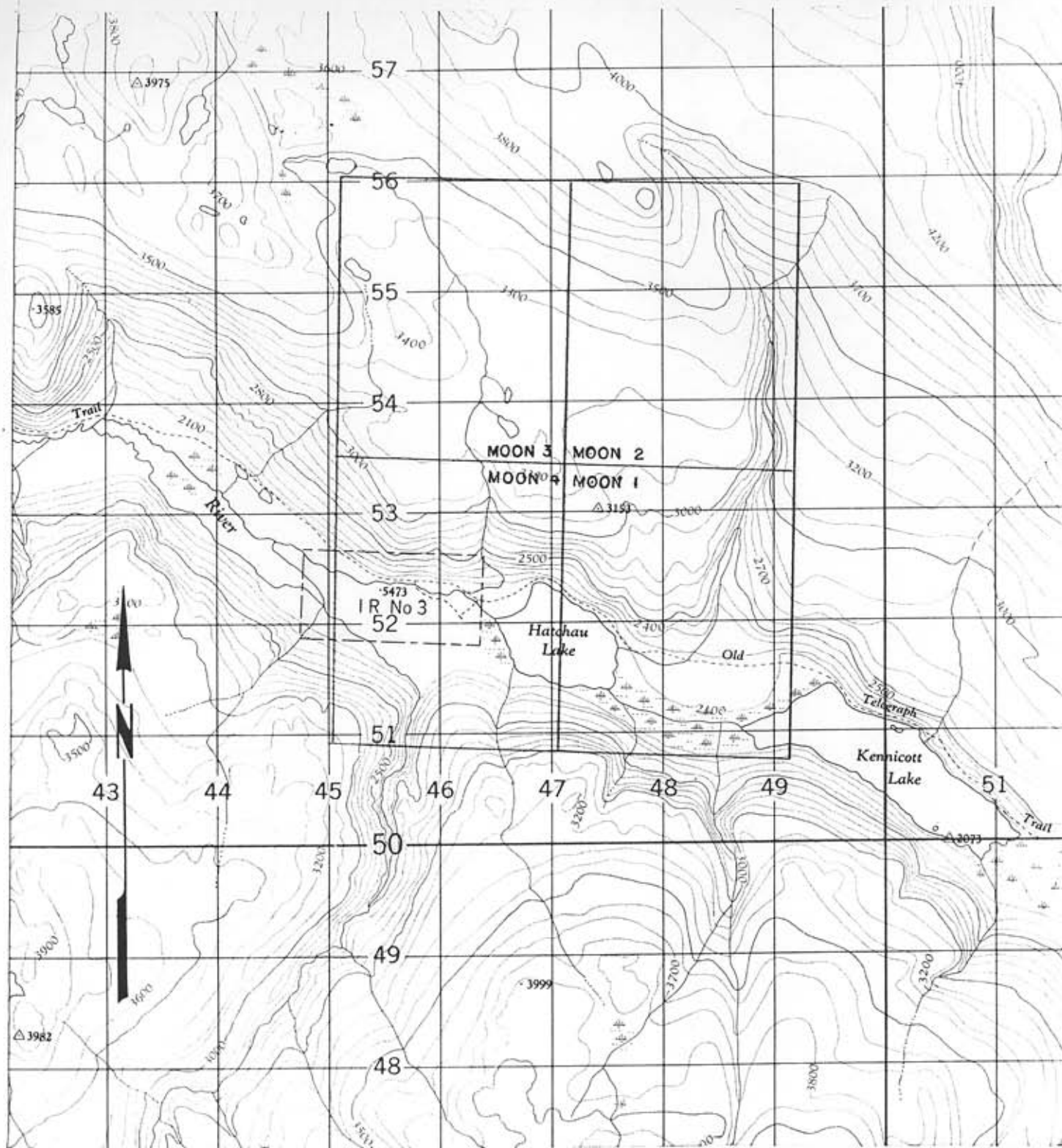
September 2, 1987



# MOON CLAIMS

# PROPERTY LOCATION





<b>UNITED CAMBRIDGE MINES LTD.</b>		
<b>MOON CLAIMS</b>		
<b>HATCHAU LK., DEASE LK. AREA, ATLIN M.D., B.C.</b>		
<b>CLAIM MAP</b>		
to accompany report by: D.G. Mark, Geophysicist		
N.T.S. 104J/4	SCALE: 1:50,000	FIG.
DATE: AUG. 1987	DRAWN: L.C.B./D.A.	2

SMITHERS

87-664-16311



Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S) Geophysical		TOTAL COST \$20,210.00
AUTHOR(S) David G. Mark Patrick Cruickshank	SIGNATURE(S) <i>[Signature]</i> Patrick Cruickshank	
DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED June 22, 1987		YEAR OF WORK 1987
PROPERTY NAME(S) PAT, OH		
COMMODITIES PRESENT Cu, Au, Ag		
B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 104J-15,21		
MINING DIVISION Atlin	NTS 104J/4E	
LATITUDE 58°11'48"	LONGITUDE 131°56'	
NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:		

.....  
 Moon 1 (20 units), Moon 2 (20 units), Moon 3 (20 units)  
 Moon 4 (20 units)  
 .....

OWNER(S)  
 (1) Thomas E. Lisle (2)  
 .....

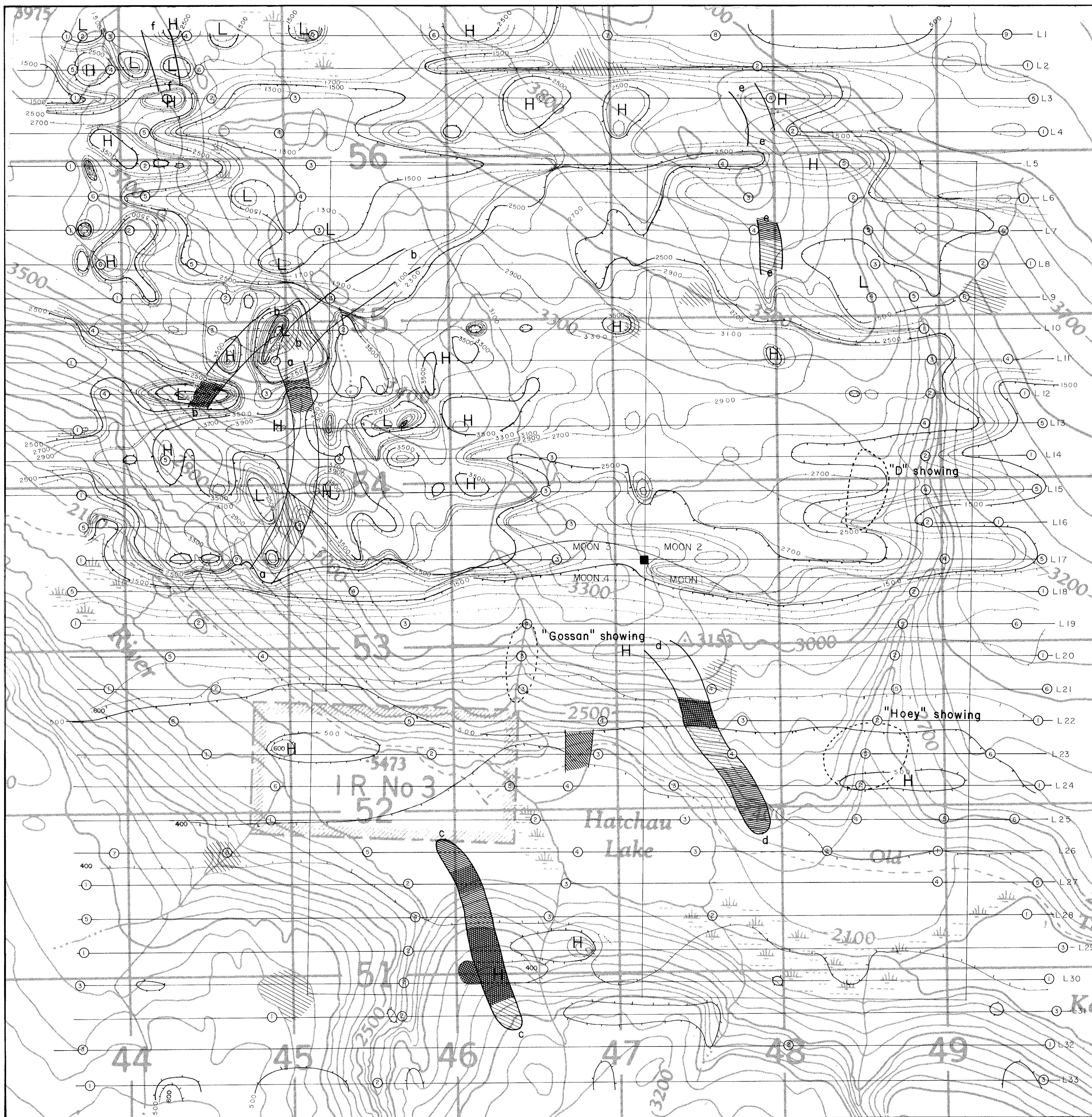
MAILING ADDRESS  
 145 Rocklane Road  
 North Vancouver, B.C. V79 2V8  
 .....

OPERATOR(S) (that is, Company paying for the work)  
 (1) United Cambridge Mines Limited (2)  
 .....

MAILING ADDRESS  
 1414-8<sup>th</sup> Street S.W.  
 Calgary, Alberta, T2R 1J6  
 .....

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):  
 The property is underlain by Upper Triassic Stuhini Group  
 andesitic to basaltic flows and a variety of sedimentary  
 rocks intruded by a gabbroic-diorite stock with  
 associated dykes or sill-like masses, and dissected by numerous faults.  
 Shear zones are believed to host sulphide mineralization.  
 .....

REFERENCES TO PREVIOUS WORK  
 .....



Survey Carried Out By: COLUMBIA AIRBORNE GEOPHYSICAL SERVICES (1984) LTD.

**LEGEND**



Note: Magnetic Base = 56,000 gammas

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**16,311**

To Accompany Report By: David G. Mark, Geophysicist  
& Patrick Cruickshank, Geophysicist.

**UNITED CAMBRIDGE MINES**  
MOON PROPERTY  
HATCHAU LK. & DEASE LK. AREA, ATLIN M.D., B.C.  
**AIRBORNE MAGNETOMETER  
& VLF-EM SURVEY**

GEOTRONICS SURVEYS LTD.

DATE: AUGUST 1987	SCALE: 1:10,000	FIG.
NTS 104 J/4 E	DRAWN: D.A., L.C.B./d.w.	3

