ARCHER, CATHRO
& ASSOCIATES LIMITED
CONSULTING GEOLOGICAL ENGINEERS

VANCOUVER, B.C. (604) 688-2568

BOX 4127, WHITEHORSE, Y.T. Y1A 3S9 (403) 667-4415

1016 - 510 WEST HASTINGS STREET
VANCOUVER, B.C. V6B 1L8

WERNECKE JOINT VENTURE

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

APE 1-24 CLAIMS

(YA62415-YA62438)

JANUARY, 1982

Claim Sheet 106C/13

Latitude 64°53'N; Longitude 133°58'W

D. Eaton, B.A., B.Sc.

Work done from July 12, 1981 to August 17, 1981

...port has [illegible] d by
...ological [illegible] t
...r Section 53 [illegible] Quartz
...ing Act and is [illegible] as
...presentation [illegible] the amount
of $ 9,111.00.

[signature]

for Regional [illegible] ation and
Geological [illegible] Commissioner
of Yukon Territory.

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IN POCKET

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INTRODUCTION

The Ape property was staked by Wernecke Joint Venture (Chevron Canada Limited and Aquitaine Company of Canada Ltd.) in late May, 1981 to cover strong gold splits. The anomalous results were all from radioactive rock specimens which had previously produced assays ranging from 680 to 2660 ppm U and 500 to 6800 ppm Mo. A portion of the property was previously staked by Noranda Exploration Company Limited in 1976 as a uranium prospect but the claims lapsed in 1978.

The 1981 WJV exploration program included geological mapping, prospecting, geochemical and radiometric grid surveys and chip sampling. The work was done from the WJV base camp at Bear River between July 12 and August 17 and required a total of 24 mandays and 6.75 hours of helicopter support. Appendix I lists personnel who conducted the work, their addresses and the dates of employment.

PROPERTY, LOCATION AND ACCESS

The Ape property consists of 24 contiguous mineral claims recorded in the name of Archer, Cathro & Associates (1981) Limited in the Mayo Mining District as follows:

Claim Name	Grant Numbers	Expiry Date
Ape 1-24	YA62415-YA62438	8 June, 1982

The property is located at latitude 64°53'N and longitude 133°58'W within NTS claim sheet 106C/13, 175 km northeast of Mayo. The closest lake suitable for float-equipped, fixed-wing aircraft is Fairchild Lake 11 km to the northeast, while the closest bush airstrip is on the Bear River 17 km to the southwest. Access in 1981 was by helicopter from the WJV base camp at Bear River.

GEOLOGY AND MINERALIZATION

The claims lie at the head of a north-flowing tributary of the Bonnet Plume River and cover parts of three cirques separated by steep ridges. Elevations range from 1375 m on the cirque floors to 1850 m on the ridges. The valley floors and lower hillsides are largely obscured by talus, tarn lakes and lateral moraines produced by Pleistocene alpine glaciation, thus limiting outcrop to cliffs on the upper slopes and a few windows through the till and talus. Vegetation is restricted to moss and lichens.

Figure WJV81 A1 in Pocket A illustrates property geology which consists of several fault blocks containing lower Proterozoic metasediments cut by Unit Hb heterolithic breccia bodies. The stratigraphy is strongly deformed but shows decreasing age from north to south across the property. The oldest rocks, Unit Hcs2, pale green phyllites and spotted schists are unconformably overlain by Unit Hs black argillites and siltstones interbedded with light grey quartzites, and Unit Hc orange weathering, stromatolitic dolomites. The heterolithic breccias are composed of 80 per cent variously altered subrounded to rounded metasediment fragments and 20 per cent carbonate and hematite matrix. Homolithic crackle breccias, comprised of uniformly altered angular country rock fragments with a minor, carbonate ± hematite matrix, occur locally on the margins of heterolithic breccia and exhibit sharp contacts with the heterolithic breccias but gradational contacts with the wallrocks. Unit Hsa, pale green altered argillites are common adjacent to breccia bodies and along faults. The last movement on most faults post-dates the breccia bodies, however multiple lineations on slickensided surfaces suggest a complex history. Although fault offsets are generally small a few have displacements of at least 100 m.

Several radioactive occurrences have been discovered on and adjacent to the property ranging from isolated boulders to 10 m by 10 m zones. The larger occurrences consist of pitchblende-filled, hairline fractures paralleling cleavage in Unit Hcs2 and Hs metasediments, while the smaller occurrences are usually scattered, 1 mm to 1 cm blebs of brannerite in Unit Hb heterolithic breccia. Although assays up to 0.5 per cent U_3O_8 have been obtained from selected hand specimens the average grade of the occurrences is less than 0.05 per cent U_3O_8. Some pitchblende-bearing samples have produced high molybdenum and gold assays, up to 0.68 per cent Mo and 0.328 oz/ton Au, but no molybdenum minerals or native gold have been observed.

Pyrite, chalcopyrite and traces of cobaltite, occur in siderite, ankerite and quartz veins and in open fractures along breccia margins and faults. The veins rarely exceed a few metres in width and tens of metres in length and usually contain 1 to 5 per cent chalcopyrite and trace to 0.2 per cent cobaltite. Limonite, malachite and erythrite are common on weathering surfaces. Disseminated hematite averages about 25 per cent of the heterolithic breccia matrix and massive pods up to 5 m in diameter are occasionally found along breccia margins. Magnetite is not common, however, 1-2 mm euhedral crystals locally form up to 10 per cent of strongly sheared, carbonatized and chloritized Unit Hsa argillites.

GEOCHEMISTRY AND RADIOMETRICS

General

Geochemical and radiometric exploration included grid surveys in the central portion of the property where reanalysis of sample splits from a small pitchblende

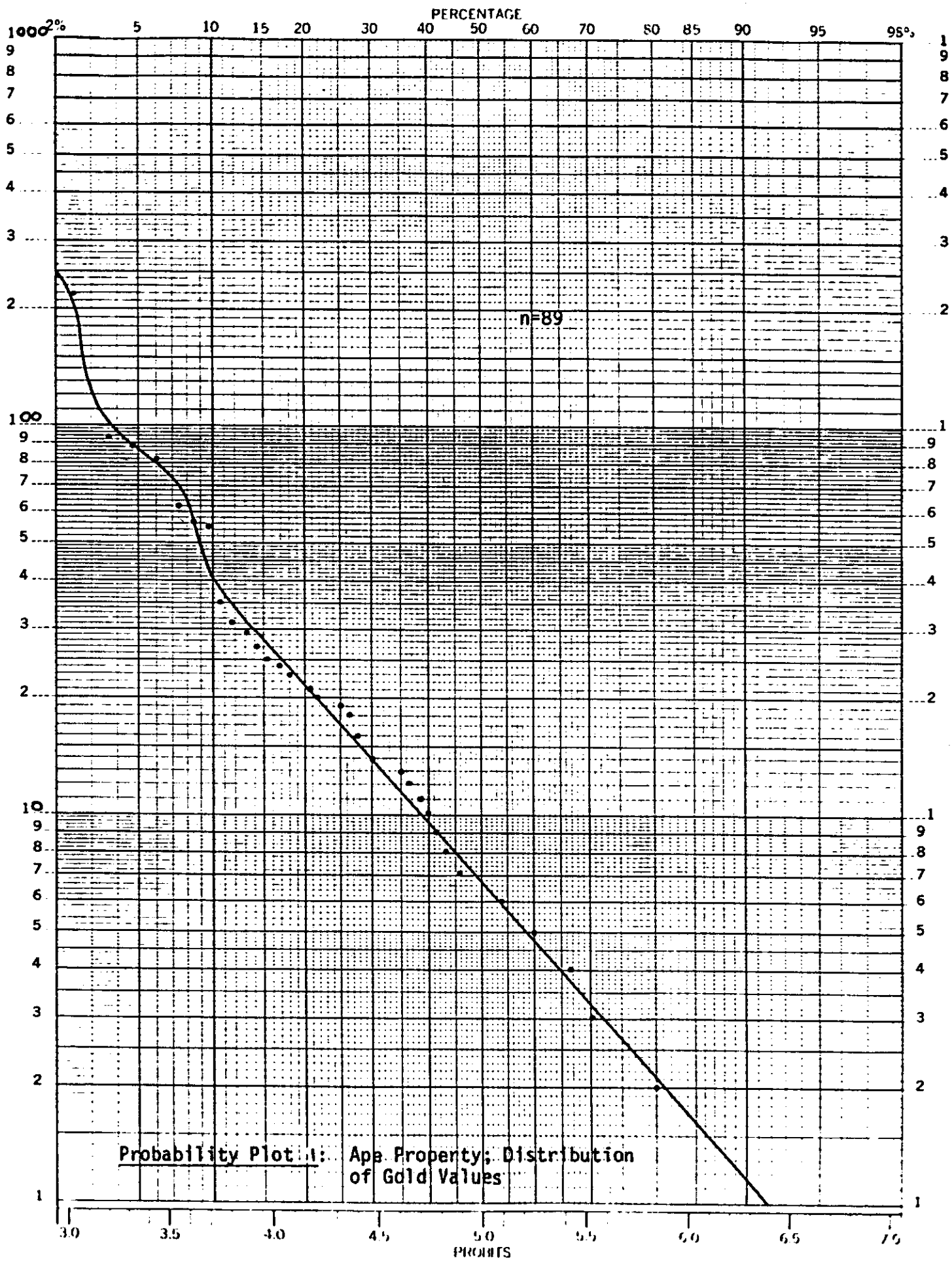
occurrence produced high gold values, widely-spaced chip sampling in the vicinity of this occurrence, and a series of prospecting and sampling traverses in the surrounding cirques on and peripheral to the property. The samples were analyzed at Chemex Labs Ltd., North Vancouver, B.C., and the analytical techniques used are discussed in Appendix II. Geochemical results are discussed in the following two sections.

Reconnaissance Sampling

Figure WJV81 A2 in Pocket B illustrates geochemical and radiometric data collected during prospecting traverses. The work was done on talus covered lower slopes and involved radiometric and visual prospecting plus geochemical sampling of rocks and soils. Most samples were analyzed for gold, molybdenum, copper and cobalt, but a few were analyzed only for gold. The results are tabulated below:

Element	Maximum	Minimum	Mean	Number of Samples
Au	434	<1	20	83
Mo	21	1	2.1	45
Cu	3550	7	454	51
Cu	1000	10	93	51

Although the data base is small, a statistical examination indicates that gold-copper and copper-cobalt have a moderate correlation and gold-cobalt has a weak correlation, with surprisingly little correlation between gold and molybdenum (see next section). Probability Plot 1 following this page shows the distribution of gold values and divides them into three, non-intersecting populations: a well-defined, log normally distributed background population which comprise 90 per cent of the values, and two poorly defined anomalous populations which account for the remainder. The geochemical threshold separating the anomalous



Probability Plot 1: Apa Property; Distribution of Gold Values

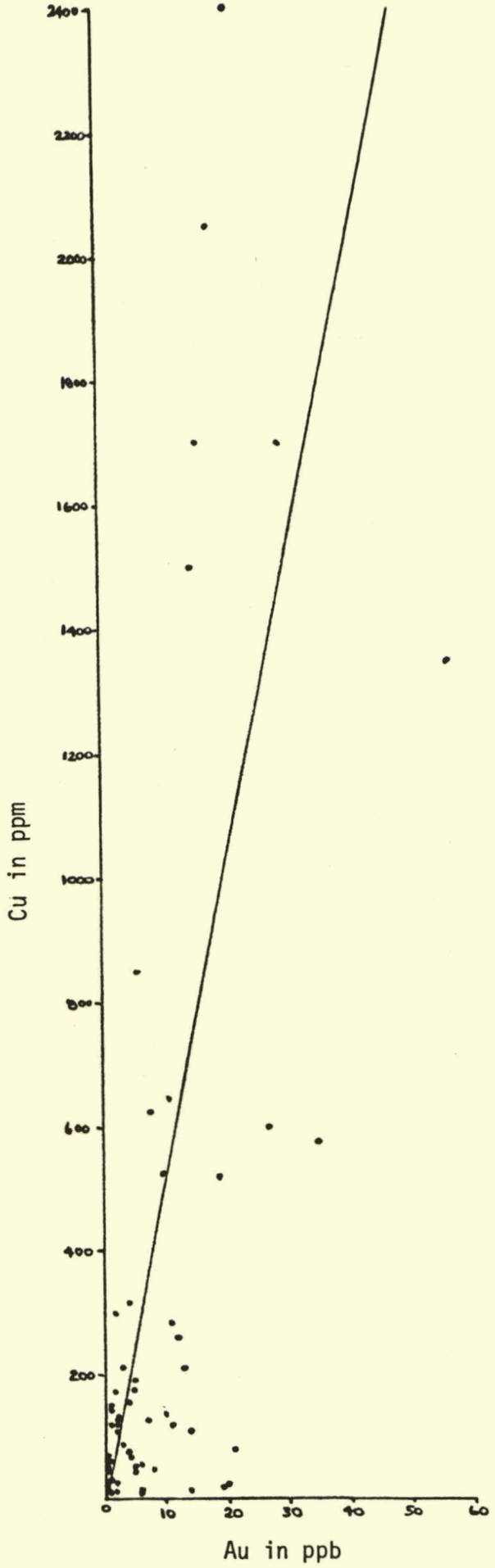
46 8080

K&E PROBABILITY X 3 LOG CYCLES
KEUFFEL & ESSER CO MADE IN U.S.A.

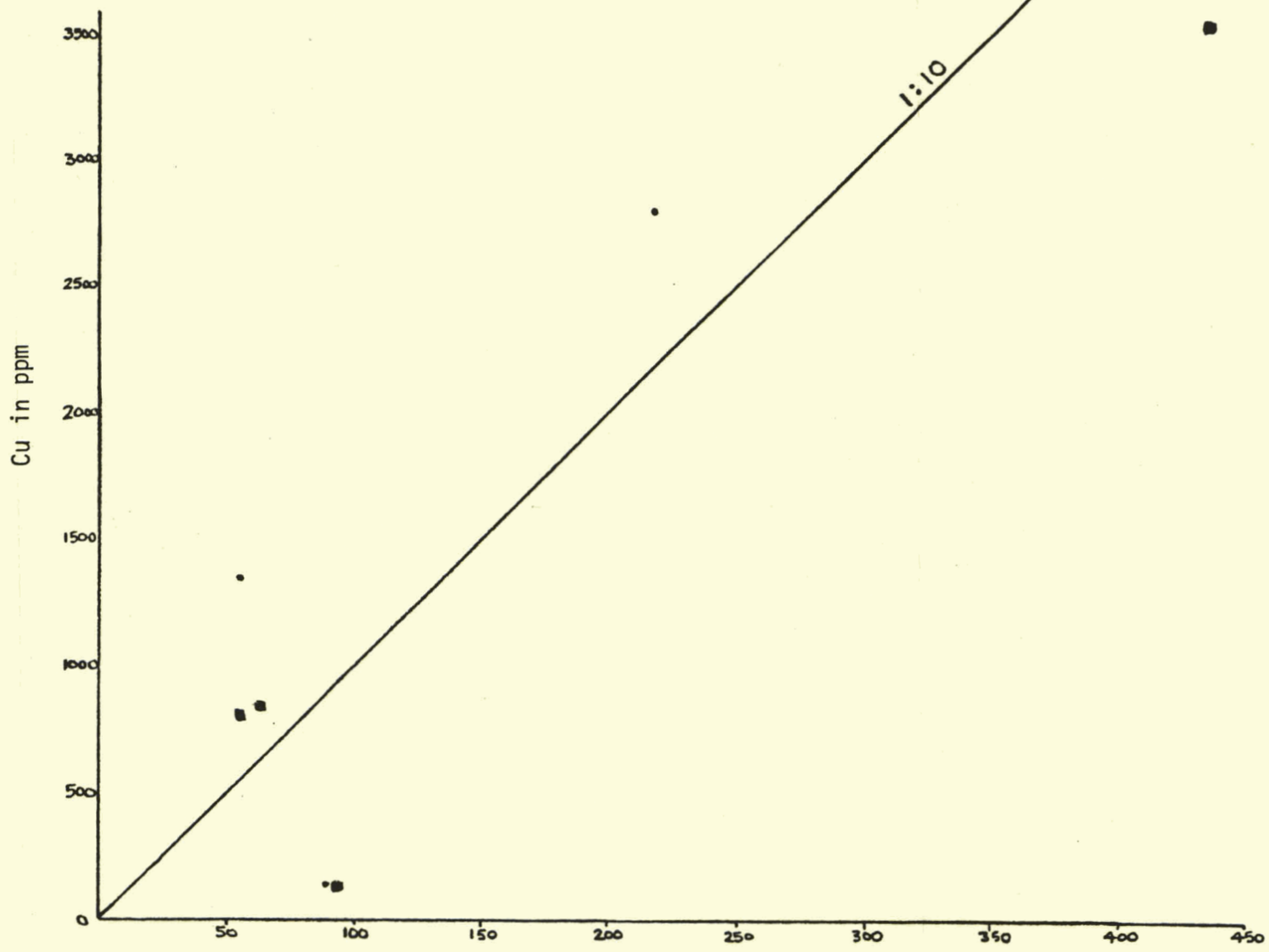
and background populations is approximately 40 ppb gold. While all samples belonging to the anomalous populations were collected directly below heterolithic breccia-metasediment contacts, not all samples collected in this environment are anomalous in gold. The distance between the contact and the sample location often exceeds 400 m, thus it is possible that soil derived from a narrow mineralized zone may be severely diluted with background soil effectively masking anomalies. Graph 1 following the Probability Plot is a scatter diagram comparing gold values to copper values. By plotting gold versus copper and passing regression lines through the points belonging to background and anomalous populations, it is possible to estimate gold to copper ratios characteristic of each population. Although the points defining the background ratio are more tightly clustered than those corresponding to the anomalous population there is little doubt that the two are significantly different. The resulting ratios are 1 ppb gold to 50 ppm copper for the background population compared to 1 ppb gold to 10 ppm copper for the anomalous population. In other words a rock belonging to the background population which contained one per cent copper should average 200 ppb gold, whereas an anomalous rock assaying one per cent copper should ideally yield 1000 ppb gold. These gold to copper ratios are comparable to ratios obtained elsewhere in the district.

Grid and Chip Sampling

Figures WJV81 A3 and A4 in Pockets C and D respectfully, illustrate results of the geochemical and radiometric grid surveys and the reconnaissance chip sampling. These compass- and topofil-controlled grid surveys were conducted from picketed baselines on lines spaced 50 m apart over a 0.5 square km area. Soil or rock fragments were collected at 50 m intervals along the lines, and



BACKGROUND POPULATION



ANOMALOUS POPULATION

Graph 1: Ape Property; Gold to Copper Ratios for Soils and Rocks Belonging to Background and Anomalous Populations.

and waist height radiometric readings were taken every 25 m with a Scintrex BGS-1SL scintillometer. Two hundred and nineteen gold analyses obtained from the grid ranged from <1 to 143 ppb with a mean of 8.8 ppb, while one hundred and forty-three molybdenum analyses ranged from 1 to 155 ppm with a mean of 4.8 ppm. Although the results are contourable and there is a strong correlation between molybdenum and gold, no specific areas of interest were outlined. As might be expected, given the close relationship between molybdenum and uranium, areas exhibiting higher than background radioactivity also have slightly higher gold values.

Widely-spaced chip samples were taken from outcrop and talus at a density of 3 to 4 chips per metre in order to establish gold backgrounds in rocks for comparison with soil backgrounds and to explore for non-radioactive gold occurrences in the vicinity of a gold-bearing pitchblende occurrence. A total of 12 samples analyzed for gold, silver and molybdenum with a mean of 5.8 ppm. All samples returned 0.1 ppm (detection limit) silver. A 10 metre long chip sample across the 2 m by 3 m, strongly radioactive pitchblende occurrence, (which had previously yielded a grab sample assaying 800 ppm uranium, 6800 ppm molybdenum, and 11250 ppb gold), and adjacent country rock returned only 25 ppb gold and 15 ppm molybdenum. The highest gold value of 75 ppb was obtained from magnetite-bearing, sheared, bleached and carbonate-altered Unit Hsa.

DISCUSSION AND CONCLUSIONS

Gold is concentrated in two geological environments on this property: (1) with pitchblende in narrow veins in sheared Unit Hsa; and, (2) with chalcopyrite in fractures and veins along the breccia contacts. The pitchblende occurrences

have no tonnage potential and are of no further interest. Insufficient work has been done to evaluate the potential of gold occurring with chalcopyrite. Geochemical sampling indicates two populations one with a ratio of 1 ppb gold to 10 ppm copper and one with a ratio of 1 ppb gold to 50 ppm copper. If the 1 ppb to 10 ppm gold to copper ratio calculated for the anomalous population is correct, a modest tonnage of 1 to 2 per cent copper belonging to this population would be economic for gold. Further work should explore for gold with particular emphasis directed toward chalcopyrite occurring in metasediments adjacent to breccia bodies.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED,

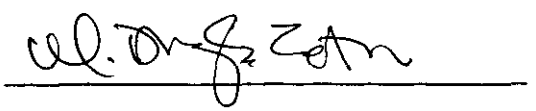
/jm

W. Douglas Eaton

STATEMENT OF QUALIFICATIONS

I, W. Douglas Eaton, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia, and residential address in Burnaby, British Columbia, do hereby declare:

1. I graduated from the University of British Columbia in 1980 with a B.Sc. and am currently enrolled in a M.Sc. majoring in Geological Sciences.
2. From 1971 to the present, I have been actively engaged in mineral exploration in British Columbia and Yukon Territory and on June 1, 1981, became a partner in Archer, Cathro & Associates (1981) Limited.
3. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.



W. Douglas Eaton, B.A., B.Sc.

APPENDIX I

PERSONNEL

PERSONNEL

Name	Position	Address	Period During Which Work Was Done
D. Eaton	Geologist	6108 Burns St., Burnaby, B.C.	July 12 to August 7
D. Heberlein	Geologist	4639 W. 9th St., Vancouver, B.C.	July 12 to August 7
S. Bilawich	Student	27 Klondike Rd., Whitehorse, Y.T.	July 12 to August 7
B. Brown	Student	4 Hoeschen Cres., Saskatoon, Sask.	July 12 to August 7
K. Cockell	Student	45 Canfield Rd., Nepean, Ont.	July 12 to August 7
B. Halleran	Student	Box 793, Fort St. James, B.C.	July 12 to August 7
M. Wong	Student	3147 Brookridge Dr., N. Vancouver, B.C.	July 12 to August 7

APPENDIX II

ANALYTICAL TECHNIQUES

ANALYTICAL TECHNIQUES

Preparation

All soil samples were dried and sieved through an ASTM 35 mesh screen (0.50 mm). The -35 mesh fraction was then pulverized and homogenized in a ring grinder to approximately -100 mesh (0.15 mm). For grab and chip samples from rocks, the entire sample was crushed and split. A subsample was then pulverized in a ring grinder to approximately -100 mesh.

Analytical Techniques

Gold was analyzed by a "combo technique" consisting of a fire assay followed by neutron activation, while copper, cobalt, molybdenum and silver were analyzed using a perchloric-nitric acid extraction followed by atomic absorption spectrometry.

ARCHER, CATHRO
AND ASSOCIATES LTD.
CONSULTING GEOLOGICAL ENGINEERS

BOX 4127, WHITEHORSE, Y.T. Y1A 3S9 667-4415

STANDARD BUILDING, VANCOUVER, B.C. 688-2568

1016 STANDARD BUILDING
510 WEST HASTINGS STREET
VANCOUVER, B.C.
V6B 1L8

AFFIDAVIT

I, Joan Mariacher, of Vancouver, B.C. make oath and say:

That to the best of my knowledge the attached Statement of Expenditures for exploration work on the Ape 1 - 24 mineral claims on Claim Sheet 106C/13 is accurate.

Joan Mariacher

Sworn before me at Vancouver, B.C.
this 7 day of
January, 1982.

Notary, Yukon Territory

090967

Statement of Expenditures
Geological Mapping, Geochemistry and Geophysics
Ape 1 - 24 Claims
January 4, 1982

Management		
Archer, Cathro & Associates (1981) Limited		$ 500.00
Labour		
B. Brown - July 12,16,17, Aug. 6,7,8,17 - total 7 days at $89/day	$ 623.00	
K. Cockell - July 16-18 - total 3 days at $80/day	240.00	
S. Bilawich - July 16-18, Aug. 17 - total 4 days at $74/day	296.00	
M. Wong - July 12, 16-18, Aug. 5-6 & 17 - total 7 days at $80/day	560.00	
B. Halleran - July 12 at $104/day	104.00	
D. Heberlein - Aug. 6-7 - total 2 days at $137/day	274.00	
D. Eaton - Aug. 17 field plus 2 days November report preparation - total 3 days at $230/day	690.00	2,787.00
Expenses		
Helicopter - 6.75 hours Hughes 500D on contract from Viking Helicopters Ltd. at $360/hr	2,430.00	
Helicopter fuel - 6.75 hours at 25 gal/hr = 168.75 gal at $4.50/gal on site	759.00	
Room and board - 25 mandays at $45/day	1,125.00	
Geochem - 222 samples analyzed for one or more of Au, Ag, Cu, Mo, Co	1,510.00	5,824.00
Total		$9,111.00

In Account With

Project – WERNECKE JOINT VENTURE

Date – – JULY 31, 1981

		Total
MANAGEMENT		
July	•	2,250.
LABOUR		
Supervisory		
Field — D. EATON – JULY 1-27; 30-31 AT 3000/mo	2807.00	
J. COCKELL – JULY 1-31 AT 1900/mo	1900.00	
T. STOKES – JULY 1-31 AT 2050/mo	2050.00	
L CYMBALISTY – JULY 1-31 AT 1700/mo	1700.00	
[illegible] HALLERAN – JULY 1-31 AT 1650/mo	1650.00	
C. BROWN – JULY 1-31 AT 1400/mo	1400.00	
K. COCKELL – JULY 1-31 AT 1250/mo	1250.00	
M. WONG – JULY 1-31 AT 1250/mo	1250.00	
S. BILAWICH – JULY 1-31 AT 1150/mo	1150.00	
D. HEBERLEIN – JULY 1-31 AT 2200/mo	2200.00	17357.00
plus 50 %		8678.50
Casual		
K. Hachman – July 26		120.00
EXPENSES		
Accounting July	400.00	C3
Expediting July 1-31	900.00	D3
Room & Board in Whse J. Cockell 4 day; D. Heberlein 3 day; Hachman 1 day. total 8 days at $ 35 / day	280.00	D2
Field equipment from AC stock —	17.00	D1
Xerox copies, 270 copies at 25¢ /copy	67.50	C1
Radio rental SBX 100 July; SBX 10 July; SBX 10 ½ Mo.	575.00	D1
Rental AC truck at $ / mo.		
plus (to) kms at /km		
Petty cash 44.80 [illegible] + 9.25 D1 + 1.75 D1	55.80	D1 – 11. [illegible]
Telephone		
Blueprinting, — sq. ft. Ozalid at — c/ft plus — sq. ft. Dilar at $ — /ft.	—	
Drafting, 1½ hrs. at $ 18 /hr.	27.00	C1
Honda generator, June 1 – July 31 $5/day	305.00	D1
Rental AC diamond saw, July 1-31	60.00	D1
Rental AC computer for Chemex data	150.00	D1
T shirts for crew	100.20	D1
[illegible]	14.70	D2
Air North	263.30	H
Can. Freightways	11.64	D3
Yukon Hardware	1.50	D1
[illegible]	80.00	F
[illegible]	50.00	D2
Whitehorse [illegible] – June bill – [illegible]	49.70	D4
		3407.3[illegible]
Total		3181[illegible]

In Account With

Project – WERNECKE JOINT VENTURE
Date – – AUGUST 31, 1981

		Total
MANAGEMENT		
Aug		2,250.
LABOUR		
Supervisory		
M.P. Phillips – 3/4 day prepare File arrows.		187.5
Field D. EATON – AUG 1-? 25-31 AT 3000/mo	2702.00	
C. COCKELL – AUG 1-6 AT 1800/mo	368.00	
L. CYMBALISTY – AUG 1-31 AT 1700/mo + JULY CL 95.00	1795.00	
B. BROWN – AUG 1-31 AT 1400/mo + JULY CL $20	1420.00	
E. HALLERAN – AUG 1-31 AT 1650/mo	1650.00	
M. WONG – AUG 1-31 AT 1250/mo + JULY CL 28.00	1278.00	
K. COCKELL – AUG 1-31 AT 1250/mo + JULY CL 115.00	1365.00	
S. [illegible] – AUG 1-31 AT 1150/mo + 150 JULY CL	1300.00	
T. STOKES – AUG 1-31 AT 2050/mo	2050.00	
L. HEELEIN – AUG 1-13, 26-31 AT 2000/mo + JULY CL 95.00	1446.00	15575.0
plus 50 %		7787.5
Casual C. CHARLES – 5 DAYS AT 140/DAY	700.00	
M. DOVRENOVICH – 2 hrs shopping for Rio @ $20/hr.	40.00	
J. Miller – 2 hrs " " " @ $16/hr	32.00	
		772.0
EXPENSES		
Accounting Aug	400.00	E3
Expediting Aug 1-31	900.00	D3
Room & Board in Whse C. CHARLES-3; EATON-7; STOKES-3; CYMBALISTY-4; COCKELL-3; WONG-4; BROWN-3; HALLERAN-3; [illegible]-4, total 34 days at $ 35 / day	1120.00	D2
Field equipment from AC stock		
Xerox copies, 197 copies at 25¢ /copy	49.25	D1
Radio rental 5 BX 100 for Aug @ $350/mo + 1 SBX11 for Aug @ $150	500.00	D1
Rental AC truck at $ / mo. plus (to) kms at /km		
Petty cash D2 5.25	5.25	D2
Telephone 1.20	1.20	C2
Blueprinting, 150 sq. ft. Ozalid at 30 c/ft plus sq. ft. Dilar at $ /ft.	45.00	C1
Drafting, 9 1/2 hrs. at $ 18 /hr.	171.00	C1
Rental AC computer terminal for Claim data	150.00	D1
Honda generator Aug 1-25 @ $5/day	125.00	D1
rental AC diamond saw for Aug.	60.00	D1
Hougen's Office – 16.75 + 3.02	19.77	C2
Northern Cartridge –	7.80	D3
Coffee, Tea & Spice	4.35	D2
General Enterprises	10.29	D1
Quality	18.50	D1
Reliance General	15.35	C2
Chevron	29.20	D1
C.P. Air Int	13.80	D3
Northern Service	37.37	C2
Yukon Office	15.60	C2
Plating	100.00	C2
White Pass, charges	302.29	63
		4101.02
Credits		
AMAX billing, helicopter + fuel	(2140.88)	61
Enterprise Ex, fuel	(180.00)	63
Craig Ca, fuel & helicopter	(447.39)	61
		(2768.27)
Total		27,904.75

VIKING HELICOPTERS LIMITED FLIGHT REPORT

No. 008582

BOX 5104, STN. F, OTTAWA, ONTARIO, CANADA, K2C 3H4 613-257-4660

DATE July-12-81

PILOT	HELICOPTER REGISTRATION	CTC ZONE	CONTRACT No.	IF NO FLYING CHECK:
Harold Gourley	C-GYUA	9.0		☐ NIL ASSIGNMENT ☐ WEATHER ☐ UNSERVICEABLE
ENGINEER	HELICOPTER TYPE 500-D	CLASS ☒4 ☐7 TYPE	TOTAL A/F HOURS	

FLT. NO.	JOURNEY FROM PREVIOUS LINE TO	PASSENGERS	TIME UP	TIME DOWN	AIR TIME	FUEL GALS. REFUNDABLE
1	Igm	4	8:45	9:15	:30	
2	Ape		9:16	9:41	:25	
3	~~Antennae~~			/	:05	
4	Tgm	4	16:15	16:40	:25	
5	Ape		16:40	12:05	:25	
6						
7						
8						
9						
10						
11						
12						
13						
14						

REMARKS

CLIENT NAME & ADDRESS

A/C & Assoc.

DAILY TOTAL HOURS	1:50
BROUGHT FORWARD	106:40
TOTAL CONTRACT HOURS	108:30

CONDITIONS OF CARRIAGE

The Charter Tariff of Viking Helicopters Limited (the Carrier), which is available for examination (at any office of the Carrier upon request), is deemed to form a part of this and all contracts for the carriage of the Charter and/or his servants, agents and/or goods. In particular, the Charterer is advised that the liability of the Carrier for loss or damage to the goods of the Charterer is limited to the sum of 10¢ per lb., pursuant to Rule 13 of its said Charter Tariff.

APPROVAL AUTHORIZED COMPANY REPRESENTATIVE.

VIKING HELICOPTERS LIMITED FLIGHT REPORT

Nº 008583

BOX 5104, STN. F, OTTAWA, ONTARIO, CANADA, K2C 3H4 613-257-4660

DATE July-18-81

PILOT	HELICOPTER REGISTRATION	CTC ZONE	CONTRACT No.	IF NO FLYING CHECK:
Harold Gourley ↕	C-GYUA	9.0		☐ NIL ASSIGNMENT
ENGINEER	HELICOPTER TYPE 500-D	CLASS ☑ 4 ☐ 7 TYPE	TOTAL A/F HOURS	☐ WEATHER ☐ UNSERVICEABLE

FLT. NO.	JOURNEY FROM PREVIOUS LINE TO	PASSENGERS	TIME UP	TIME DOWN	AIR TIME	FUEL GALS. REFUNDABLE	REMARKS
1	Iga	4	8:35	9:00	:25		
2	Apo "	"	9:15	9:35	:20	"	
3	~~Trunk~~ Rabbit	"	10:00	10:30	:30	"	
4	~~Trunk~~ Rabbit		15:25	15:55	:30		
5	Apo		17:30	17:50	:20		
6	Plane				:10		
7	Iga	4	15:55	16:20	:25		
8							
9							
10							
11							
12							
13							
14							

DAILY TOTAL HOURS	2:40
BROUGHT FORWARD	108:30
TOTAL CONTRACT HOURS	111:10

CLIENT NAME & ADDRESS

A/C & Assoc.

CONDITIONS OF CARRIAGE

The Charter Tariff of Viking Helicopters Limited (the Carrier), which is available for examination (at any office of the Carrier upon request), is deemed to form a part of this and all contracts for the carriage of the Charter and/or his servants, agents and/or goods. In particular, the Charterer is advised that the liability of the Carrier for loss or damage to the goods of the Charterer is limited to the sum of 10¢ per lb., pursuant to Rule 13 of its said Charter Tariff.

[signature]

APPROVAL AUTHORIZED COMPANY REPRESENTATIVE.

VIKING HELICOPTERS LIMITED FLIGHT REPORT

No. 008630

BOX 5104, STN. F, OTTAWA, ONTARIO, CANADA, K2C 3H4 613-257-4660

DATE July - 12 - 81

PILOT	HELICOPTER REGISTRATION	CTC ZONE	CONTRACT No.	IF NO FLYING CHECK:
Harold Gourley	C-GYUA	9.0		☐ NIL ASSIGNMENT
ENGINEER	HELICOPTER TYPE 500-D	CLASS ☐ 4 ☐ 7 TYPE	TOTAL A/F HOURS 2724:10	☐ WEATHER ☐ UNSERVICEABLE

FLT. NO.	JOURNEY FROM PREVIOUS LINE TO	PASSENGERS	TIME UP	TIME DOWN	AIR TIME	FUEL GALS. REFUNDABLE	REMARKS
1	Ape	3	9:30	9:55	:25		
2	Geo Phy	4	12:05	12:30	:25		
3	Plane	Fuel			:10		
4	Geo Phy	4	16:50	17:20	:30		
5	Ape	2	17:30	17:55	:25		
6	Bird Firewood	2	22:05	23:05	1:00		
7							
8							
9							
10							
11							
12							
13							
14							

DAILY TOTAL HOURS	2:55
BROUGHT FORWARD	88:10
TOTAL CONTRACT HOURS	91:05

CLIENT NAME & ADDRESS

Archer Cathro & Assoc.

CONDITIONS OF CARRIAGE

The Charter Tariff of Viking Helicopters Limited (the Carrier), which is available for examination (at any office of the Carrier upon request), is deemed to form a part of this and all contracts for the carriage of the Charter and/or his servants, agents and/or goods. In particular, the Charterer is advised that the liability of the Carrier for loss or damage to the goods of the Charterer is limited to the sum of 10¢ per lb., pursuant to Rule 13 of its said Charter Tariff.

APPROVAL AUTHORIZED COMPANY REPRESENTATIVE.

VIKING HELICOPTERS LIMITED FLIGHT REPORT

No 008639

BOX 5104, STN. F, OTTAWA, ONTARIO, CANADA, K2C 3H4 613-257-4660

DATE July - 16-81

PILOT	HELICOPTER REGISTRATION	CTC ZONE	CONTRACT No.	IF NO FLYING CHECK:
Harold Gourley	C-GYUA	9.0		☐ NIL ASSIGNMENT ☐ WEATHER ☐ UNSERVICEABLE
ENGINEER	HELICOPTER TYPE 500-D	CLASS ☑ 4 ☐ 7 TYPE	TOTAL A/F HOURS 2752:45	

FLT. NO.	JOURNEY FROM PREVIOUS LINE TO	PASSENGERS	TIME UP	TIME DOWN	AIR TIME	FUEL GALS. REFUNDABLE	REMARKS
1	Geo	4	8:30	9:00	:30		
2	Ape		9:11	9:36	:25		
3	Geo	4	16:15	16:45	:30		
4	Ape		16:55	17:20	:25		
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

CLIENT NAME & ADDRESS

Archer-Cathro & Assoc.

DAILY TOTAL HOURS	1:50
BROUGHT FORWARD	104:50
TOTAL CONTRACT HOURS	106:40

CONDITIONS OF CARRIAGE

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APPROVAL AUTHORIZED COMPANY REPRESENTATIVE.

VIKING HELICOPTERS LIMITED FLIGHT REPORT

№ 003723

BOX 5104, STN. F, OTTAWA, ONTARIO, CANADA, K2C 3H4 613-257-4660

DATE: Aug-05-81

PILOT	HELICOPTER REGISTRATION	CTC ZONE	CONTRACT No.	IF NO FLYING CHECK:
Harold Gourley	C-GHUA	9.0		☐ NIL ASSIGNMENT ☐ WEATHER ☐ UNSERVICEABLE
ENGINEER	**HELICOPTER TYPE**	**CLASS** ☐4 ☐7 **TYPE**	**TOTAL A/F HOURS**	
Joe Nichols	500-D		2877:40	

FLT. NO.	JOURNEY FROM PREVIOUS LINE TO	PASSENGERS	TIME UP	TIME DOWN	AIR TIME	FUEL GALS. REFUNDABLE	REMARKS
1	Ape		8:20	8:40	:20		
2	PTend		9:00	9:20	:20		
3	Ape		16:45	17:05	:20		Aug-05-81
4	PTend fuel		19:20	19:30	:10		
5	PTend		6:50	7:20	:30		
6	Ape		8:12	8:32	:20		
7	PTend		16:20	17:00	:40		Aug-06-81
8	Ape		11:00	11:20	:20		
9	PTend		6:50	7:00	:10		
10	Ape		8:15	8:30	:15		Aug-07-81
11	PTend + Ape	:40 8:30	16:30	17:30	1:00		
12	Igar + Ape		8:15	9:10	1:00		Aug-08-81
13	Pickup		16:15	17:10	:55		
14	Take + Pickup Ape 2 trips		11:15	12:15	:40		Aug-09-81

DAILY TOTAL HOURS	~~10:05~~ 7:00
BROUGHT FORWARD	157:10
TOTAL CONTRACT HOURS	167:15

CLIENT NAME & ADDRESS

A/C & Assoc.

CONDITIONS OF CARRIAGE

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[signature]

APPROVAL AUTHORIZED COMPANY REPRESENTATIVE.

VIKING HELICOPTERS LIMITED FLIGHT REPORT

№ 003728

BOX 5104, STN. F, OTTAWA, ONTARIO, CANADA, K2C 3H4 613-257-4660

DATE ~~Friday~~ - 17 - 20 - 81

PILOT Harold Gourley

ENGINEER

HELICOPTER REGISTRATION C-GYUA

HELICOPTER TYPE 500-D

CTC ZONE 9.0

CLASS ☒ 4 ☐ 7

TYPE

CONTRACT No.

TOTAL A/F HOURS

IF NO FLYING CHECK:

- ☐ NIL ASSIGNMENT
- ☐ WEATHER
- ☐ UNSERVICEABLE

FLT. NO.	JOURNEY FROM PREVIOUS LINE TO	PASSENGERS	TIME UP	TIME DOWN	AIR TIME	FUEL GALS. REFUNDABLE
1	Ape		8:30	8:50	:20	
2	Slab Rog "		9:50	9:15	:25	
3	Ape "		16:30	16:50	:20	
4	Slab Rog		12:00	12:25	:25	
5	J Pike		9:00	9:20	:20	
6	Delson (Rog)		9:20	10:05	:45	
7	Pike		16:50	17:10	:20	
8	Delson (Rog)		12:10	12:55	:45	
9	Winnard HK Rog	2 crew	9:00	9:45	.45	
10	Winnard HK Rog	2 crew	16:30	17:15	:45	
11	Pike	2 crew	9:00	9:40	:40	
12	Pike	2 crew	16:15	16:55	:40	
13						
14						

REMARKS

Aug-17-81

Aug-18-81

Aug-17-81

Aug-20-81

CLIENT NAME & ADDRESS

A/C & Assoc.

DAILY TOTAL HOURS	6:30
BROUGHT FORWARD	174:50
TOTAL CONTRACT HOURS	181:20

CONDITIONS OF CARRIAGE

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W. T. [illegible]

APPROVAL AUTHORIZED COMPANY REPRESENTATIVE.

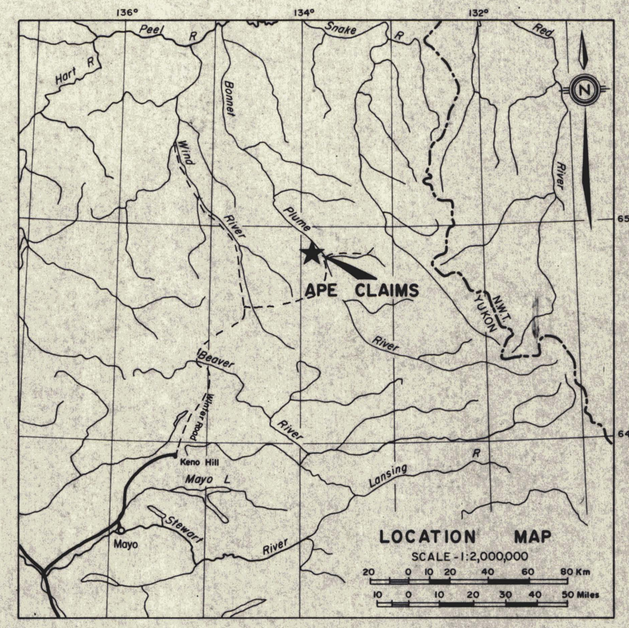
134°00'

133°55'

64°52'

LADY LONGLEGS CIRQUE

BROWN BILLY CIRQUE



GEOLOGY

HELIKIAN

Hb - Heterolithic breccia composed of dark grey to pink, angular to rounded fragments in a dark matrix of carbonate, hematite, chlorite and minor magnetite, pyrite and chalcopyrite

Sheared and deformed breccia, closely related to faults

Hb_1 - Homolithic, crackle breccia comprised of slightly altered and rotated wallrock fragments with minor carbonate ± hematitic matrix

HELIKIAN, POSSIBLY APHEBIAN

Hc - Orange weathering, thick bedded to massive dolomite, in part stromatolitic

Hs - Interbedded black slates, argillites and quartzites, with occasional green slates and quartzites

Hsa - pale grey-green, buff and purple, occasionally limy equivalents of Hs

APHEBIAN

Hcs_2 - Principally dark green spotted phyllites, occasional slates.

— — Approximate geological contact

~ ~ ~ Fault trace

Angular unconformity

Bedding attitude

Cleavage attitude

Limit of outcrop

FIG. WJV81-A 1

ARCHER, CATHRO & ASSOCIATES (1981) LTD.

GEOLOGY

090967

APE PROPERTY

WERNECKE JOINT VENTURE

W. D. Eaton. January 21, 1982

SCALE - 1:10,000

200 100 0 100 200 300 400 500 600 Metres

200 100 0 100 200 400 600 Yards

January 1982

To accompany report dated December 1981

134°00'

133°55'

64°52'

PAN OCEAN
L F V CLAIMS

APE 1 - 24
CLAIMS

SEE FIGURES
WJV81 A3 & 4

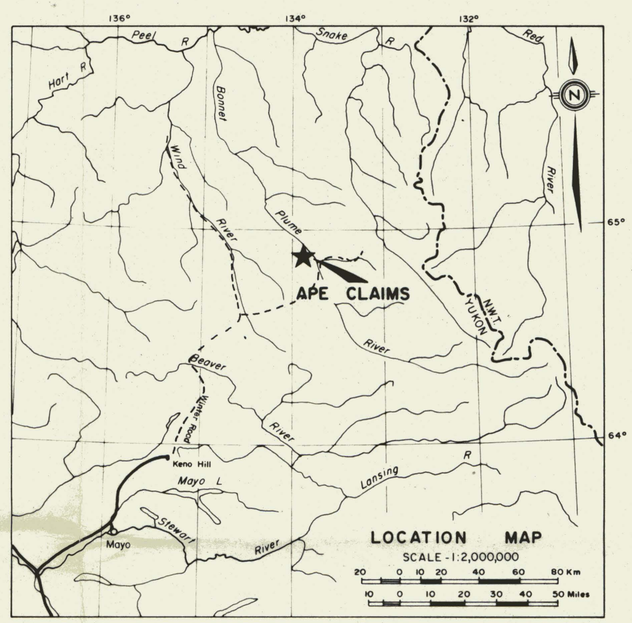
LADY LONGLEGS
CIRQUE

BROWN BILLY
CIRQUE

Hcs2

Hs

Hc



GEOLOGY

HELIKIAN

Hetrolithic breccia

HELIKIAN, POSSIBLY APHEBIAN

Hc — Orange weathering, dolomite

Hs — Interbedded argillites, slates and quartzites

APHEBIAN

Hcs2 — Pale green phyllites and slates

Approximate geological contact

Fault trace

Angular unconformity

LEGEND

Soil
Rocky soil
Rock
— Au in ppb, Mo, Cu & Co in ppm

Au, U occurrence

Radioactive occurrence with counts per second with Scintrex BGS-15 SC Scintillometer

FIG. WJV81-A 2

ARCHER, CATHRO & ASSOCIATES (1981) LTD.

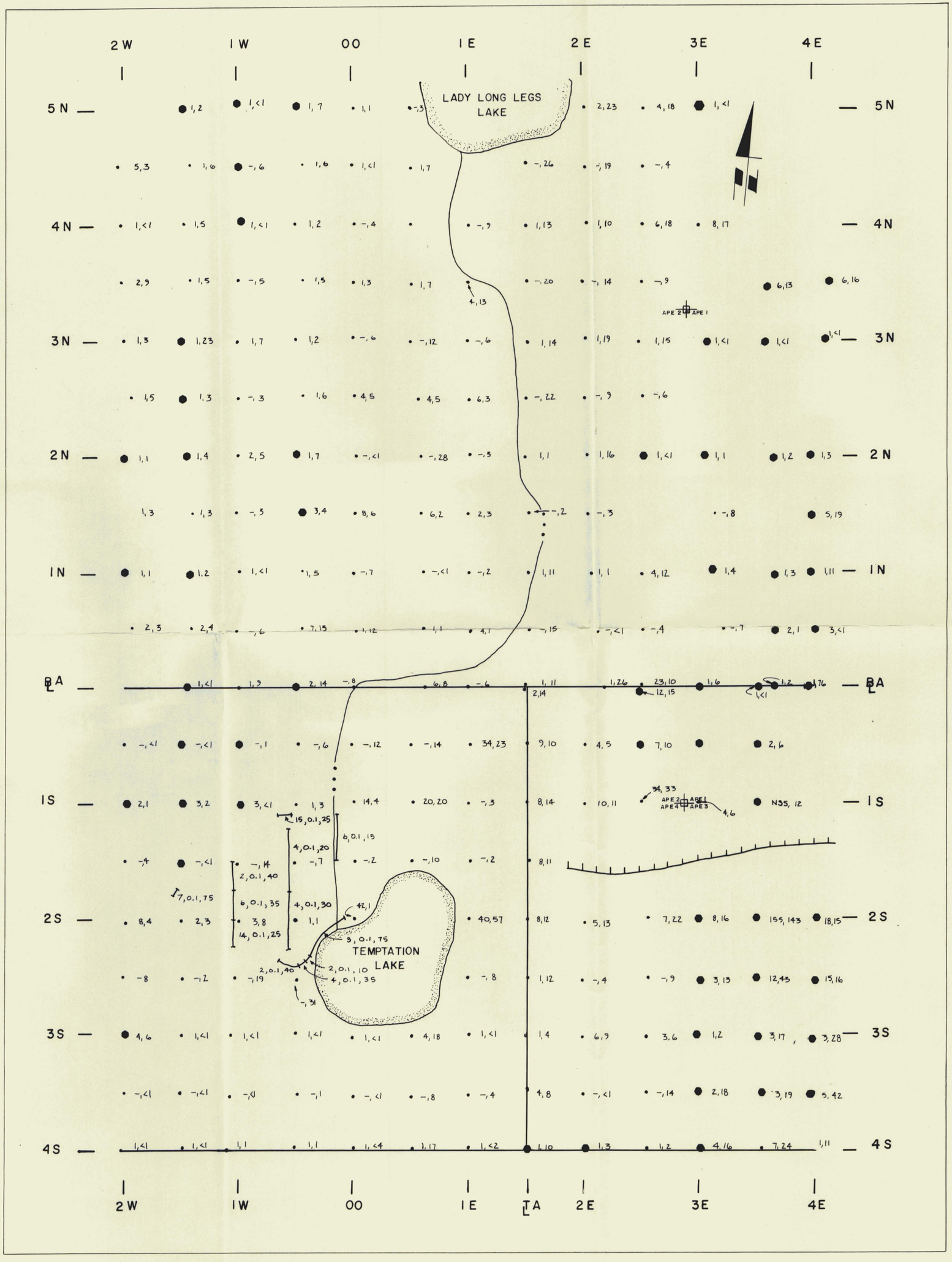
GEOCHEMISTRY

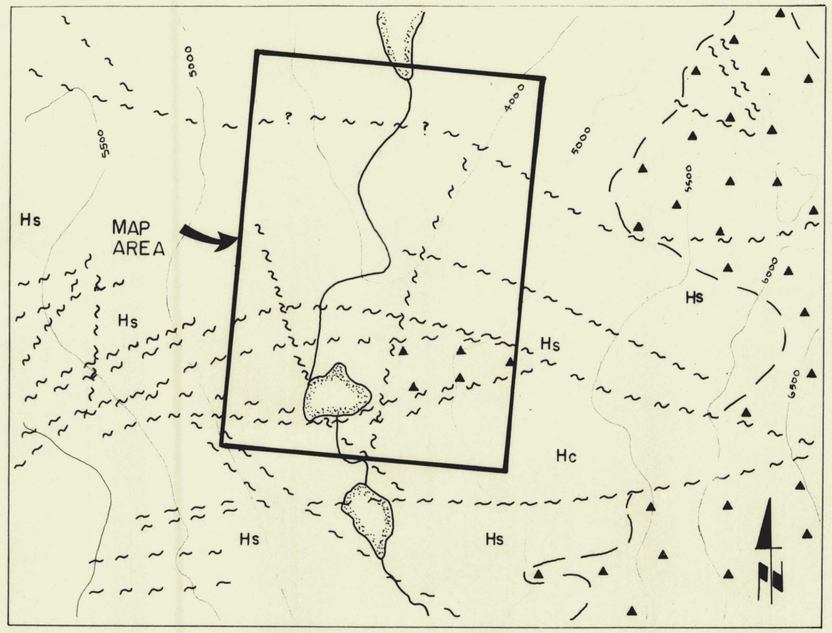
APE PROPERTY
WERNECKE JOINT VENTURE

SCALE - 1:10,000
200 100 0 100 200 300 400 500 600 Metres
200 100 0 100 200 400 600 Yards

090967

To accompany report dated December 1981





LOCATION MAP

SCALE – 1:10,000

200 100 0 100 200 300 400 500 600 Metres

200 100 0 100 200 400 600 Yards

LEGEND

• 34, 23	Soil sample location
● 8, 16	Rocky soil sample location, Mo in ppm, Au in ppb
■ 45, 900, 10	Rock sample location
500, 400, 5, 25	Chip sample location, Mo, Ag in ppm, Au in ppb
NSS	Not sufficient sample

FIGURE WJV81 A3

ARCHER CATHRO AND ASSOCIATES (1981) LTD.

GEOCHEMISTRY

090967

DETAIL GRID

APE PROPERTY

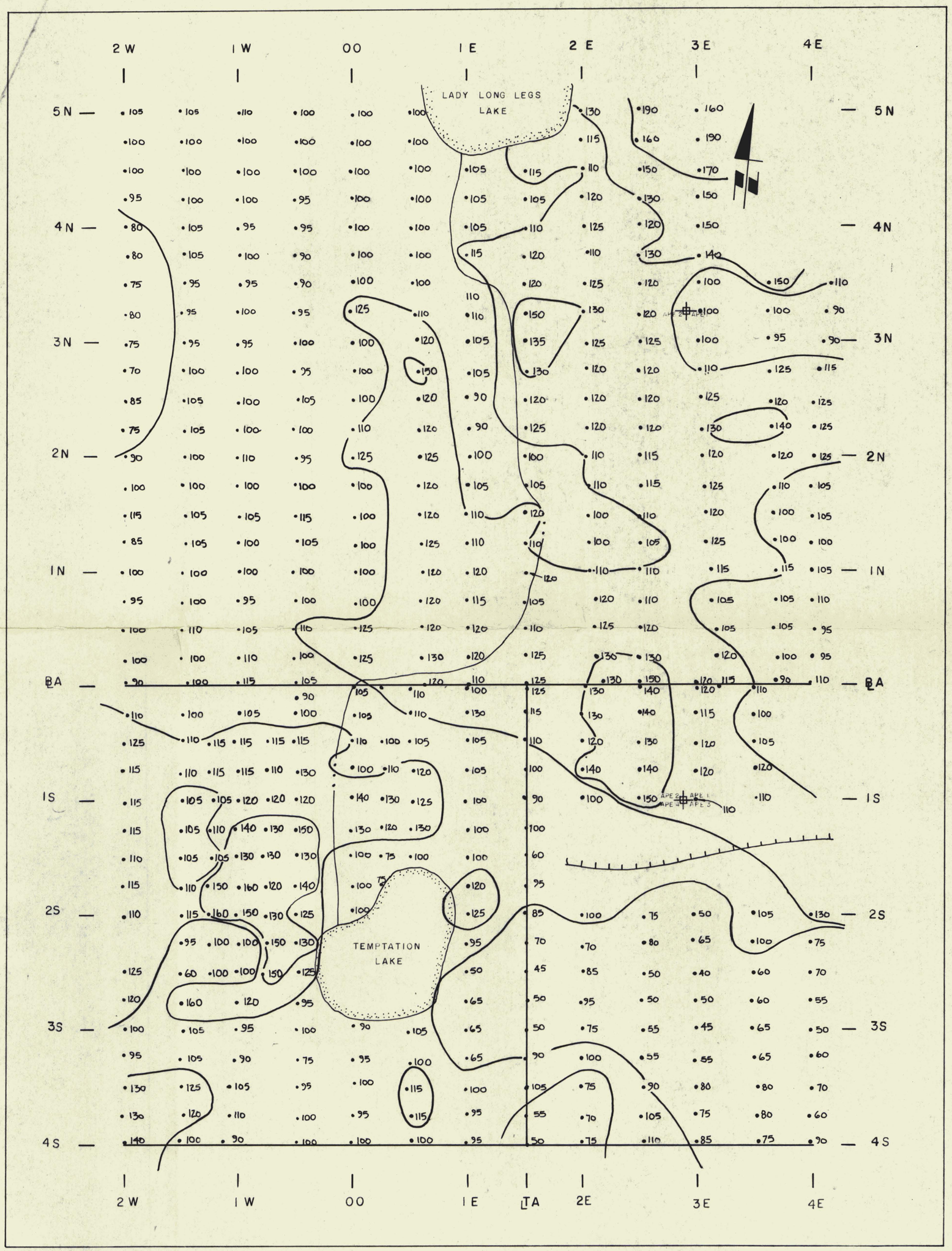
WERNECKE JOINT VENTURE

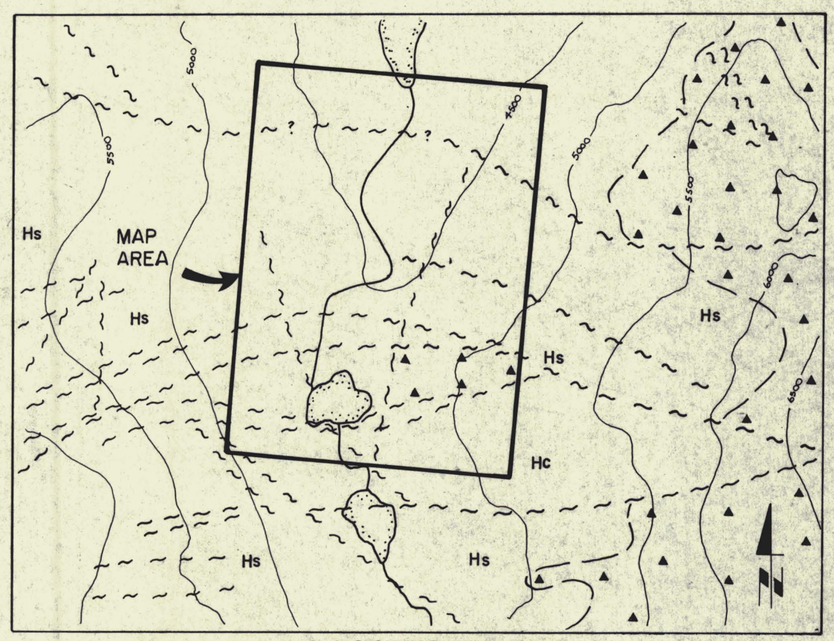
January 21, 1982

50 0 50 100 150 200 Metres

January 1982

To accompany report dated ~~December 1981~~





LOCATION MAP

SCALE – 1:10,000

200 100 0 100 200 300 400 500 600 Metres

200 100 0 100 200 400 600 Yards

LEGEND

•150 Radiometrics measured in counts per second with Scintrex BGS-ISL scintilometer

Cliff

FIGURE WJV81 A4

ARCHER CATHRO AND ASSOCIATES (1981) LTD.

RADIOMETRICS

090967

DETAIL GRID

APE PROPERTY

WERNECKE JOINT VENTURE

January 21, 1982

50 0 50 100 150 200 METRES

To accompany report dated January 1982 ~~December 1981~~