

44409

Lo, Amigo, Old Alameda  
ADAR RESOURCES LTD.

Swakum Mountain Report of  
Assessment Work

BY: C.H. Donaldson, P. Eng.

February 14, 1973.

92I/7E

MAPS

- #1 Line Cutting
- #2 Magnetic Contours
- #3 Geochemical Survey
- #4 V.L.F.-EM Survey
- #5 Claim map

44409

PART A

INTRODUCTION:

The writer was requested by the Directors of Adar Resources Ltd., of 330 - 850 W. Pender St., Vancouver, B.C., to submit a report covering the recently completed extended magnetometric Survey, Geochemical Survey and Electromagnetic Survey on the LO Claim Group, Amigo Claim Group and Mineral Leases M 27H and M 28H.

This report covers the work done on the claims during the 1972 - 73 assessment period and is submitted as an application for a "Certificate of Work" under the Mineral Act of B.C.

SUMMARY & RECOMMENDATIONS:

The work was done between October 3rd and December 4th, 1972, by Brent Oldheiser and Assistants.

The work was in four parts as follows:

- (a) Line cutting: Lines 1 - 13 were extended 500' East to the East boundary of LO 3 & 5 and M 28H, and 1,000' West to Midway on Amigo 23, 25, 27 and Lot 4505 of M 27H. (approximately 4 miles). *29,000'*
- (b) Magnetometric Survey was done on the line extensions (approximately 4 miles) with readings at 100' spacing along the lines 300' apart (N-S).
- (c) A Geochemical Survey was done along the full length of the lines with samples taken @ 100' intervals. (approximately 10.3 miles).
- (d) An Electromagnetic Survey was done along the full length of the lines. (approximately 9 miles).

SUMMARY & RECOMMENDATIONS - (Continued)

In the Southern area of the surveyed block the geochemical and electromagnetic anomalies coincide exceptionally well and fit in with the Seigel Associates' interpretation of the magnetometric survey with remarkable accuracy.

The two main controls of mineralization are: (a) faulting and (b) magnetometric lows.

There is a long line of mineralization coincident with or adjacent to the magnetic interpreted fault striking approximately N 30° W from Line 0+00; 7+00 West to Line 36+00 N; 15+00 West.

Another line of geochemical anomalies follows the interpreted magnetic contact striking northerly in a double curve from line 3+00 N; 14+50 West.

Two other lines of mineralization in the South Western section are related to two E-M anomalies, namely L1-A and L1-B.

The Lucky Mike shaft in the Northern section is associated with a magnetic low.

In the South Western section there are three high geochemical anomalies coincident with magnetic lows. These are: (1) at the extreme Western end of line 12+00 N; (2) & (3) on line 3+00 N at 16+00 W and 20+00 W. All three of these require further work to delimit them.

North and slightly East of the Alameda shaft the two geochemical anomalies coincide with a magnetic low and the major fault respectively.

It is noteworthy that the geochemical survey shows a preponderance of Pb-Zn in the Southern area with copper the dominant metal in the Northern section.

SUMMARY & RECOMMENDATIONS - (Continued)

I recommend the following work:

PHASE I

1. Percussion drilling.
2. Additional line cutting.
3. Additional magnetometric surveying.
4. Additional electromagnetic surveying
5. Additional geochemical surveying.

PHASE II

Diamond and percussion drilling.

1. Percussion drilling: Five proposed holes are shown on the E-M map to be drilled in the following order: 1st at 19+50 West on line 6+00 N; 2nd at 20+50 West on line 9+00 N; 3rd at 14+00 West on line 15+00 N. The 4th hole is located at 10+50 West on line 12+00 N; this is a formation hole only. I recommend that the 5th hole be at 14+50 West on line 9+00 N to test the geochemical anomaly at the interpreted intersection of the magnetic contact and fault. The first 4 holes to be drilled bearing S 60° E at -45°; the 5th bearing due East at -45°.
2. Line cutting:
  - (a) Line 12+00 N, 15+00 N, 18+00 N be extended Westward to 30+00 W, with intermediate lines at 13+50 N and 16+50 N.
  - (b) Lines 6+00 N, 3+00 N, 0+00, be extended Eastward from 15+00 to 21+00 with intermediate lines at 1+50 N, 4+50 N to test the geochemical anomaly.
  - (c) Line 0+00 be extended Westward to 30+00 W with an intermediate line at 1+50 N.  
Extend the base line 600 feet South and cut lines at 3+00 S and 6+00 S to 30+00 West and 21+00 East.

Declared before me at the

-4-

*not applicable*  
*R. Donaldson*  
*P. Eng.*

of

, in the

PHASE I - (Continued)

Province of British Columbia, this

day of

, A.D.

3. Magnetometric survey along the 4.1 miles.
4. Electromagnetic survey along the 4.1 miles.
5. When 3 and 4 have been mapped and interpreted the geochemical survey to be carried out over areas of interest.

A Commissioner for taking Affidavits within British Columbia or  
A Notary Public in and for the Province of British Columbia.

PHASE II

Additional percussion drilling to be carried out as targets are available.

Where percussion drilling indicates commercial values, diamond drilling to be carried out.

COSTS:

Phase I

1. Percussion drilling.		
4 holes @ 400' each =		
1600' @ \$6.00/ft.		\$ 9,600
2. Line cutting.		
4.2 miles @ \$150/mi.		630
3. Magnetometric survey.		
4.2 miles @ \$150/mi.		630
4. Electromagnetic survey.		
4.2 miles @ \$150/mi.		630
5. Geochemical survey.		
3+ miles @ 100' = 180 samples		
assaying - 180 @ \$5.00	- \$900	
collecting - 180 @ \$1.50	- <u>270</u>	<u>1,170</u>
		12,720
Camp - 3 men, 30 days @ \$15	\$1,350	
Truck rental, 30 days @ \$25	750	
Travel	300	
Casual labour, 2 men,		
30 days @ \$40	2,400	
Engineering	<u>2,000</u>	<u>6,800</u>
		19,520

COSTS - PHASE I - (Continued)

Balance forward	\$19,520
Contingencies	<u>2,480</u>
	22,000
Bulldozer and instrument rental	<u>2,000</u>
	<u>\$24,000</u>

PHASE II

Percussion drilling 10 holes @ 400' @ \$6/ft.		\$24,000
Diamond drilling 10 holes @ 500' @ \$10.00/ft.		50,000
Engineering	\$2,000	
Bulldozer Rental	2,000	
Truck & equipment rental	2,000	
Sampling & assaying	<u>3,000</u>	<u>9,000</u>
		<u>\$83,000</u>

Declared before me at the  
of  
Province of British Columbia, **VANCOUVER, B. C.**  
day of

, in the

FEB 20 1979

*[Signature]*  
Sub - Mining Recorder

A Commissioner for taking Affidavits within British Columbia or  
A Notary Public in and for the Province of British Columbia.

*not applicable*  
*[Signature]*  
*Ronaldson P. Eng*

PART B

INTRODUCTION:

The work, consisting of line cutting; magnetometric, geochemical and electromagnetic surveys, were carried out between October 3rd and December 4th, 1972, by Brent Oldheiser of Mission, B.C., assisted by G. Oldheiser of Ioco, B.C. and K. Oldheiser of Mission, B.C.

LOCATION AND ACCESS:

The survey was carried out on mineral claims designated as L0 3 to 6 and Mineral Lease 28H.

<u>Claim</u>	<u>Record No.</u>
L0 3	43383
L0 4	42468
L0 5	43384
L0 6	42469
Mineral Lease 28 H	

The work done to apply to Group 1 and Group 2. Group 1 comprises 40 Mineral claims; Group 2 comprises 29 mineral claims and 2 mineral leases.

The claims are situated on Swakum Mountain in the South Western section of Highland Valley, B.C. at co-ordinates of approximately 50° 18' N. Latitude and 120° 41' W. Longitude.

Access is from the settlement of Nicola, which is 6 1/2 miles East of Merritt on No. 5 Highway. At the Eastern edge of Nicola a dirt road turns off Northerly through the Indian Reserve and continues about 15 miles to the property.

The claim group is at an elevation from 5300' to 5666'. The latter being the peak of Swakum Mountain.

## GEOLOGY

The claim group is underlain by the Paleozoic Nicola Series of rocks of Upper Triassic Age. These consist chiefly of basalts, andesites, tuffs, limy tuffs, limestone and some conglomerates.

Six miles to the East the massive Highland Valley Guichon Batholith occurs and 3 miles to the East the Central Nicola Batholith is evident. Both batholiths contain copper deposits, but the Guichon is the more important.

The Nicola series on the claim group has been intruded by an unclassified igneous intrusion consisting of diorite, quartz diorite, granodiorite, quartz porphyry, etc. of the Jurassic Age.

Coincidental with the Jurassic intrusion, the Nicola strata was warped, folded, sheared and faulted; thus creating channels for mineralizing solutions.

## WORK DONE

Line cutting: 13 lines were extended Westward from <sup>15</sup>10+00 to 25+00, and 14 lines Eastward from 10+00 to 15+00, i.e.  $1500 \times 13 = 19,500'$  plus  $500 \times 14 = 7,000$  totalling 26,500' or 5 miles.

Magnetometer Survey: Readings at 100' intervals were taken on the extension of all lines, i.e. 5 miles.

The instrument used was a Sharpes M.F. 1 Fluxgate Magnetometer. The digital readouts are accurate to  $\pm 10$  gammas.

All readings were corrected for diurnal fluctuations.

The readings were submitted to Seigel Associates Ltd. for mapping and interpretation. The enclosed map was prepared by them.

Geochemical Survey: Geochemical samples were taken from the "B" horizon at 100' intervals along the N-S base line for 3900' and along the 14 E-W lines for a total of 580 samples, of which 576 were assayed.



WORK DONE - (Cont'd.)

Geochemical Survey - (Cont'd.)

The samples were assayed for copper, tungsten, lead and zinc in parts-per-million. (P.P.M.)

The results were mapped and anomalous areas colored as per the enclosed plan showing combined metals.

E.M. Survey: The Electromagnetic Survey was done over the total area.

The readings were mapped and the map submitted to Mr. Hings, P. Eng., for interpretation. Mr. Hings' interpretative map is enclosed. It is noted that the E.M. anomalies coincide exceptionally well with both the magnetometric and geochemical anomalies.

Four scout percussion drill holes were set out from Mr. Hings' interpretation.

Percussion Drilling & Site Preparation:

A contract was arranged to drill the four proposed percussion drill holes. Roads were constructed, drill sites prepared and the drill moved in and started drilling. At 120' in the first holes water was present so it was necessary to change to wet drilling. At this time severe weather conditions occurred with temperatures at 16° below zero and 30 mph. winds. It was unfeasible to attempt further drilling so work was stopped temporarily awaiting favourable weather conditions. The drill target was estimated to commence at about 200' hole depth, but low mineralization was already present in the lower section of the hole to 120'.

Diamond Drilling:

Two 250' diamond drill holes were drilled in the Northern area near the Mike shaft to check the previous drilling in the copper-tungsten zone.

COSTS

1. Line cutting:			
5 miles @ \$150 p. mile	\$	750	
Truck rental, 3 days @ \$25		75	
Camp, 2 men, 3 days @ \$15		90	
Travel		<u>100</u>	\$ 1,015.00
2. Magnetometer Survey:			
5 miles @ \$150 p. mile		750	
Truck rental, 3 days @ \$25		75	
Camp, 2 men, 3 days @ \$15		<u>90</u>	915.00
3. Geochemical Survey:			
580 samples taken @ \$1.50		870	
576 samples assayed @ \$4.80		2,770	
Truck rental, 15 days @ \$25		375	
Camp (2 men, 15 days @ \$15 (1 man, 3 days @ \$15 (casual))		495	
Casual labour, 3 days @ \$40		120	
Travel and freight		<u>170</u>	4,800.00
4. E.M. Survey:			
Survey 10.3 miles @ \$150/mi.		1,545	
Truck rental 10 days @ \$25		250	
Skidoo rental 2 days @ \$25		50	
Camp 12 days 2 men @ \$15		360	
Travel, etc.		150	
Instrument & equipment rental		<u>150</u>	2,505.00
Diamond and Percussion drilling and site preparation			5,850.00
Engineering:			
Seigel & Assoc.		100.00	
D.L. Hings		200.00	
C. Donaldson		500.00	
Drafting - Altair		98.81	
" - Oldheiser		500.00	
Printing, etc.		15.00	
Typing and coloring		55.00	
Travel expenses		<u>400.00</u>	1,908.81
Balance from previous work			<u>795.00</u> 700
			* \$17,788.81

Declared before me at the

of

VANCOUVER, B.C.

P

British Columbia, this

FEB 20 1973

e

*[Signature]*, A.D.

Sub - Mining Recorder

*[Signature]* Donaldson P. Eng

WORK APPLICATION:

'71 - '72	M 27 H & M 28 H	\$ 1,920	
'72 - '73	Group 1 - 40 claims	\$ 4,000	
	Group 2 - 28 claims	2,800	
	M 27 H	1,164 )	\$1,920
	M 28 H	756 )	
		\$ 8,820	
'73 - '74	Group 1 - 40 cl. Group 2 - 28 cl.	\$ 6,800	
'74 - '75	L0 8, 10	200	
		<u>\$17,640</u>	

Declarant

Declared before me at the

of

, in the

Province of British Columbia, this

VANCOUVER, B. C.

day of

, A.D.

FEB 21 1973

*S. Hughes*  
Sub-Mining Recorder  
A Notary Public in and for the Province of British Columbia.

*Donaldson Peng*

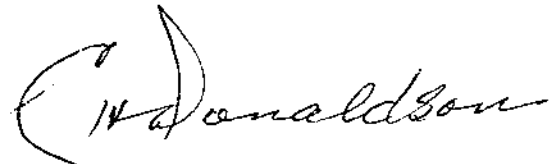
REFERENCES

1. Geological Survey of Canada Memoir 249 by W.E. Cockfield.
2. Report by Sherwin F. Kelly, P. Eng.
3. Map and interpretation of the magnetometric survey by Seigel Associates Ltd.
4. Information from B. Oldheiser, Party Chief.
5. Map and interpretation of the electromagnetic survey by D.L. Hings, P. Eng.

C E R T I F I C A T I O N

I, Clarence H. Donaldson of the City of Vancouver, in the Province of British Columbia, hereby certify as follows:

- 1] That I am a Registered Professional Engineer of the Province of British Columbia and reside at Suite 101, Brentwood Apartments, 2050 Barclay Street, Vancouver 5, B.C.
- 2] That my mining experience embraces all phases of the mining industry and I have worked throughout Canada, Australia, South Seas and parts of U.S.A. and Mexico.
- 3] That I have no interest either directly or indirectly in the claims or securities of Adar Resources Ltd., nor do I expect to receive any.
- 4] That the information contained herein was obtained from perusal of the reports as listed in "References", as well as a personal knowledge and examination of the area.

A handwritten signature in cursive script that reads "C.H. Donaldson". The signature is written in dark ink and is positioned above the printed name.

C.H. Donaldson, P. Eng.

March 20th, 1973.

Mr. E.J. Bowles,  
Chief Gold Commissioner,  
Dep't. of Mines and Petroleum Resources,  
Victoria, B.C.

330 - 3554  
x 90 w. Penick et

Dear Sir:

I have to answer to your letter to Adar Resources Ltd.,  
330 - 890 W. Pender St. of March 2, 1973, file No. 166 - Nicola.

I must apologize for neglecting to include the information  
you require.

The information is as follows:

- (1) Geochemical assays were done by Bondar-Clegg & Co. Ltd., North  
Vancouver, B.C.

For Cu., Pb. and Zn. the samples were sieved and the metals  
extracted by hot aqua regia acid, then assayed by atomic absorption  
giving results in P.P.M.

For  $WO_3$  the samples were fused with a basic flux, then dissolved  
in complex thiocyanate. The solution then analyzed by standardized  
colorimetric comparison against both synthetic and matrix standards.  
Results were recorded in P.P.M.

- (2) Electromagnetic Survey: Infinite source.

(a) Electromagnetic survey to determine electromagnetic features.

(b) The instrument used was a Ronka E.M. 16 receiver on low frequency  
reception using the U.S. Naval Station at Arlington, Wash., U.S.A.  
on 18.6 K.C.S. from the N.P.G. station, 2 component reception  
vertical and horizontal.

(c) Arlington Naval Station.

(d) The parameter measured and recorded were the angular distortions  
at the various points on the grid map as shown quoted in degrees.

The results were interpreted by Mr. Don L. Hings, P. Eng.  
of E.L.C. Geophysics Ltd., 250 North Grosvenor, Vancouver, B.C.

To: Mr. E.J. Bowles,  
Dep't. of Mines and Petroleum Resources

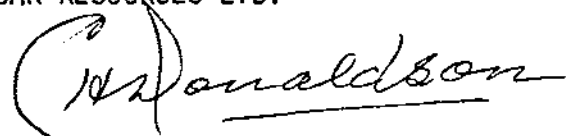
March 20th, 1973.

The base map from which the interpretation was made was returned to Mr. B. Oldheiser, who is now out of town. A copy of this map will be forwarded to you as soon as it is available.

I trust that the above information meets your requirements and it will be filed with the report.

Respectfully submitted,

ADAR RESOURCES LTD.



Per: O.H. Donaldson, P.Eng.

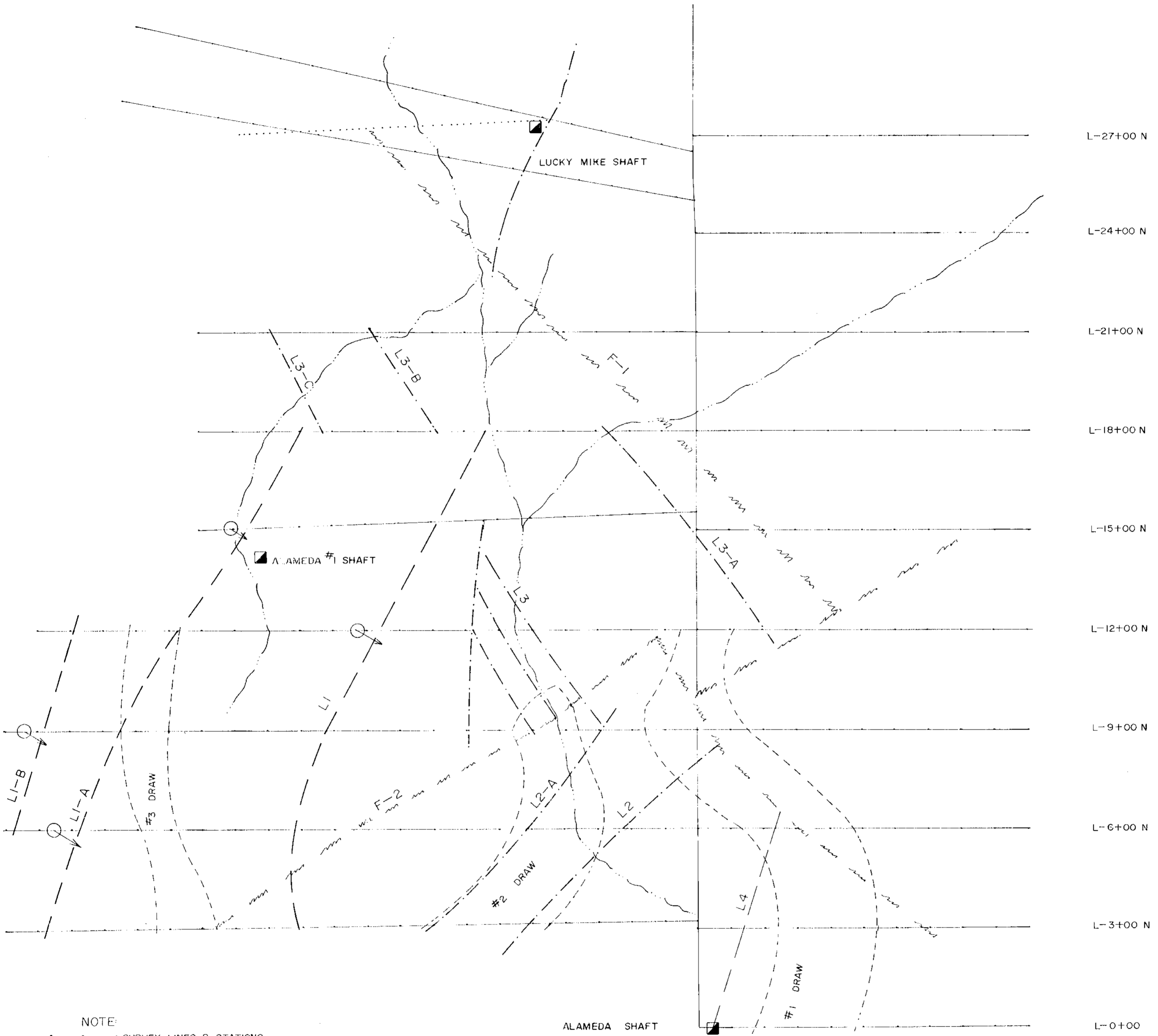
MAR 23 '72 AM



DEPT. OF MINES  
AND PETROLEUM RESOURCES

REFERRED TO	DATE	INITIAL
D. M.		
C.G.C.	✓	
C.C.		
D.C.G.C.		
D.C.C.		
ACCTS.		
C.M.B.		
C.I.		
C.A.		
R. T.		
C.P.E.		

FILED IN 100K



NOTE:

- SURVEY LINES & STATIONS
- ~ CREEK
- SHAFT
- FORMATION CHANGE
- - - GEOCHEM ENRICHMENT (COPPER)
- - - " " (ZINC-LEAD)
- - - " " (TUNGSTEN)
- ⊙ PROPOSED DDH LOCATIONS

Department of  
 Mines and Petroleum Resources  
 ELC GEOPHYSICS LTD  
 ASSESSMENT REPORT  
 NO. 4409 MAP. #1

SWAKUM MTN.  
 ADAR RESOURCES  
 NOV. 23, 1972 SCALE 1"=200'

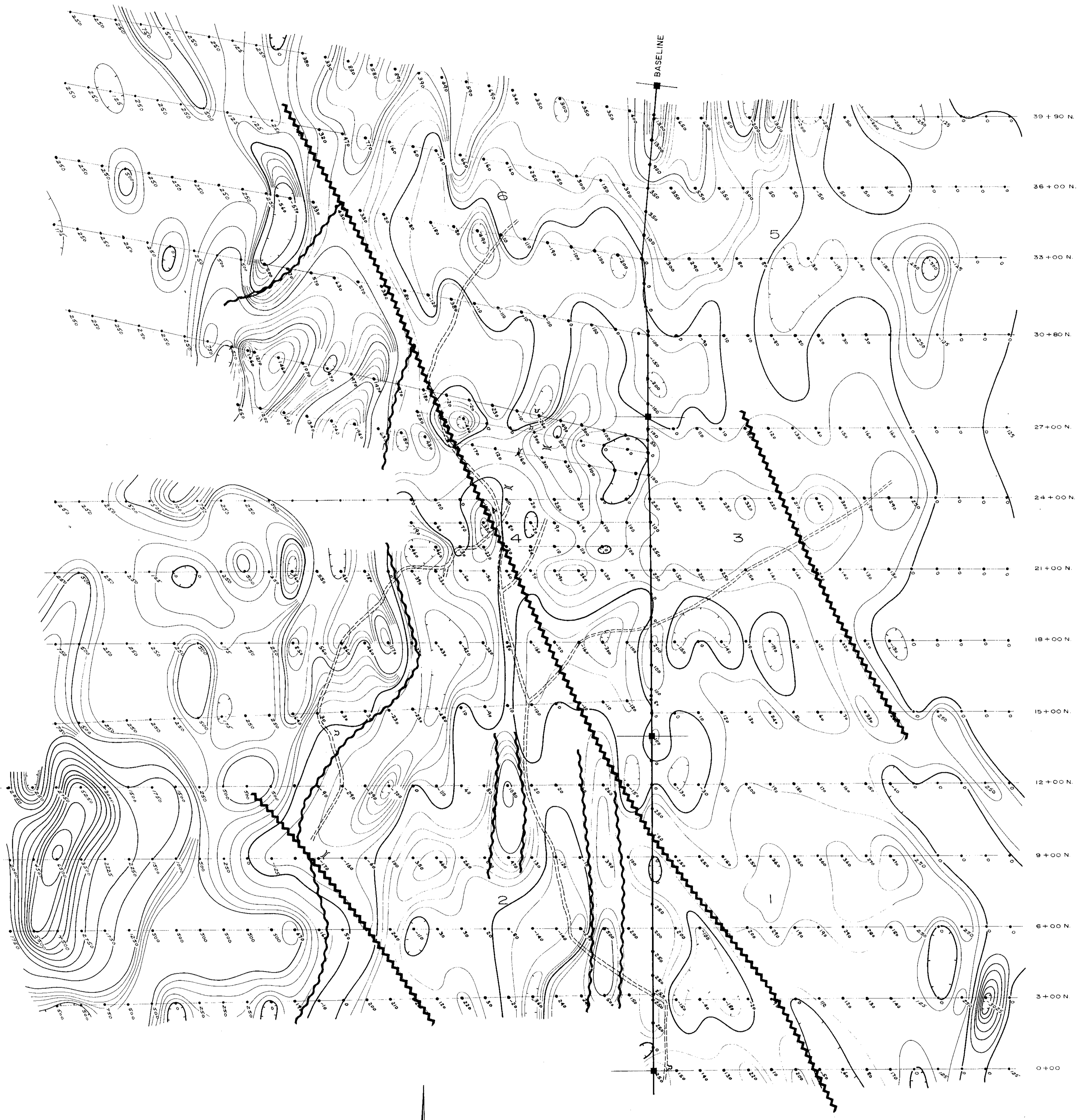
4409 M-1

*Donaldson*

DWG NO. I-SW-1

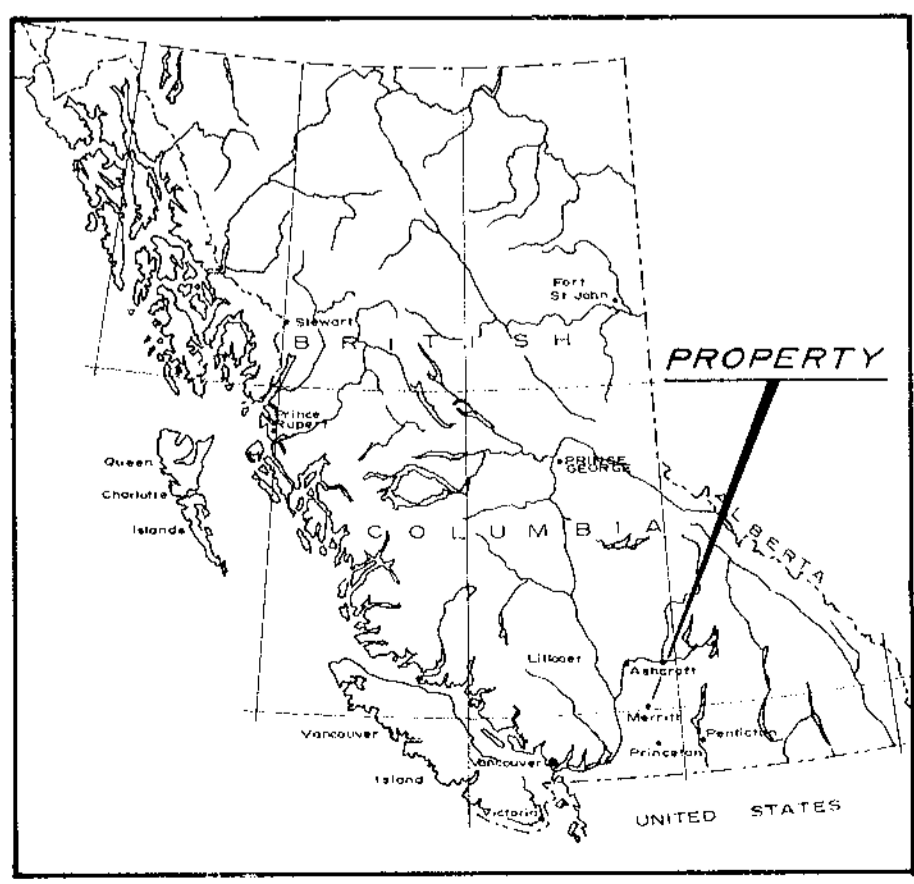
APPROVED.....





Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 4409 MAP #2

LEGEND  
 MAGNETIC CONTOURS  
 0 GAMMA CONTOUR LINE  
 500 GAMMA CONTOUR INTERVAL  
 100 GAMMA CONTOUR INTERVAL  
 INTERPR. FAULT  
 INTERPR. MAGNETIC CONTACT

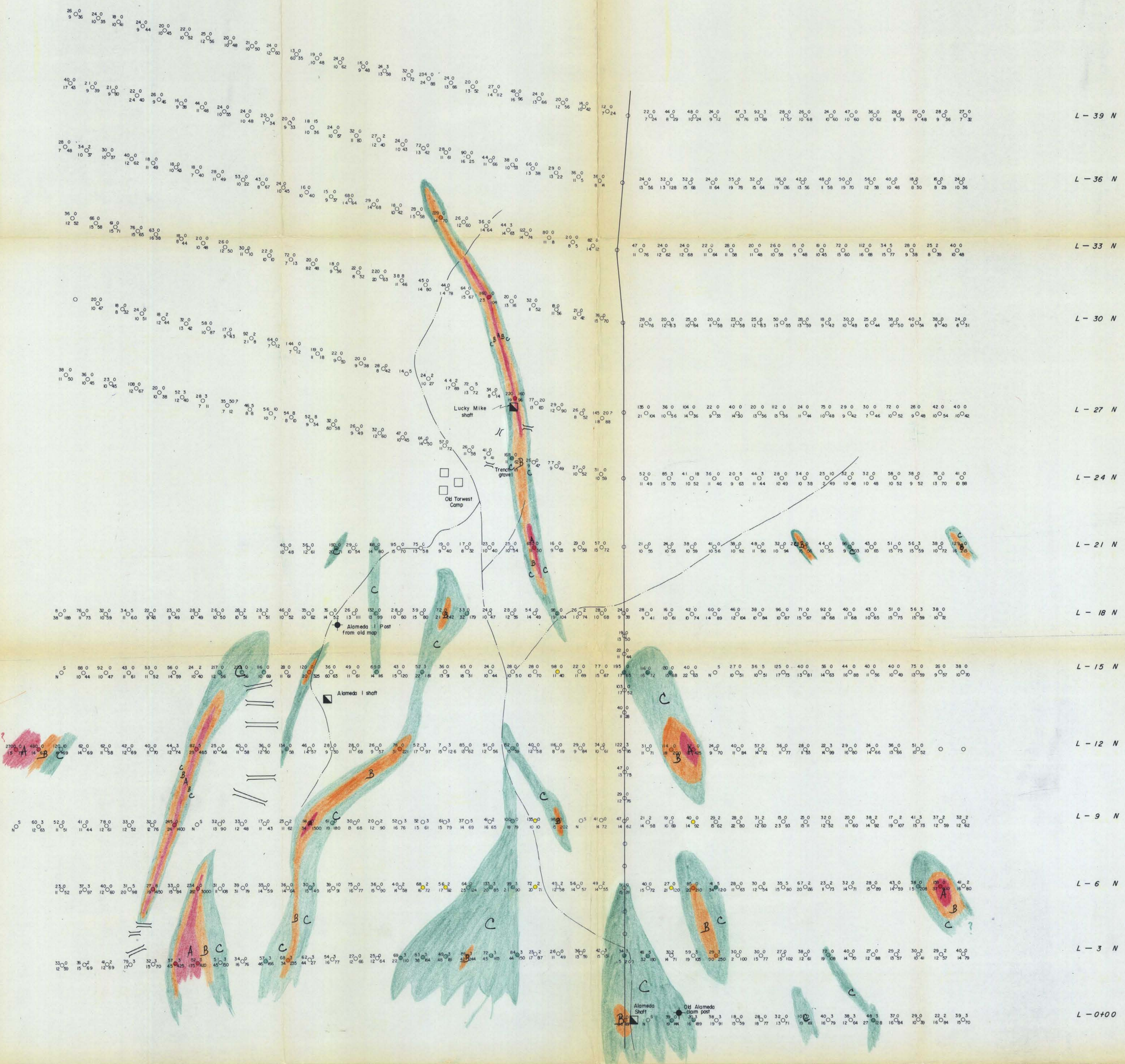
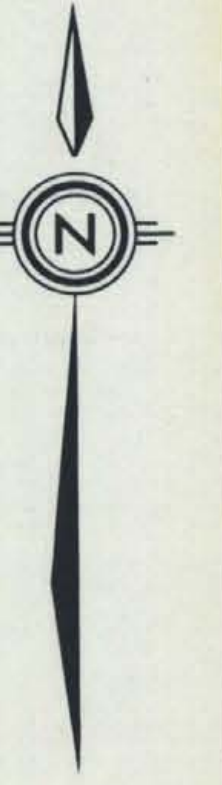


ADAR RESOURCES LTD.  
 LO GROUP  
 SWAKUM MTN., MERRIT B.C.

4409 M-2

SCALE 1" = 200'

*Donaldson*  
 DEC 1, 1972



TOTAL COMBINED METALS

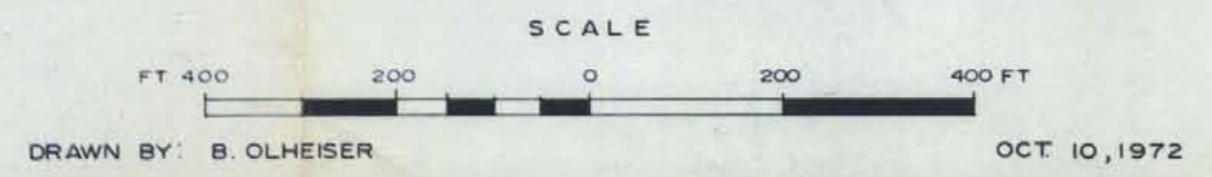
- Over 500
- 300 - 500
- 200 - 300

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4409 MAP # 3

ADAR RESOURCES  
SWAKUM MTN.  
**GEOCHEMICAL SURVEY**

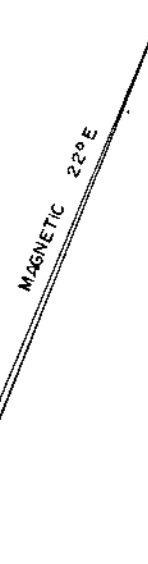
LEGEND

- Cu
- Mo
- Pb
- Zn



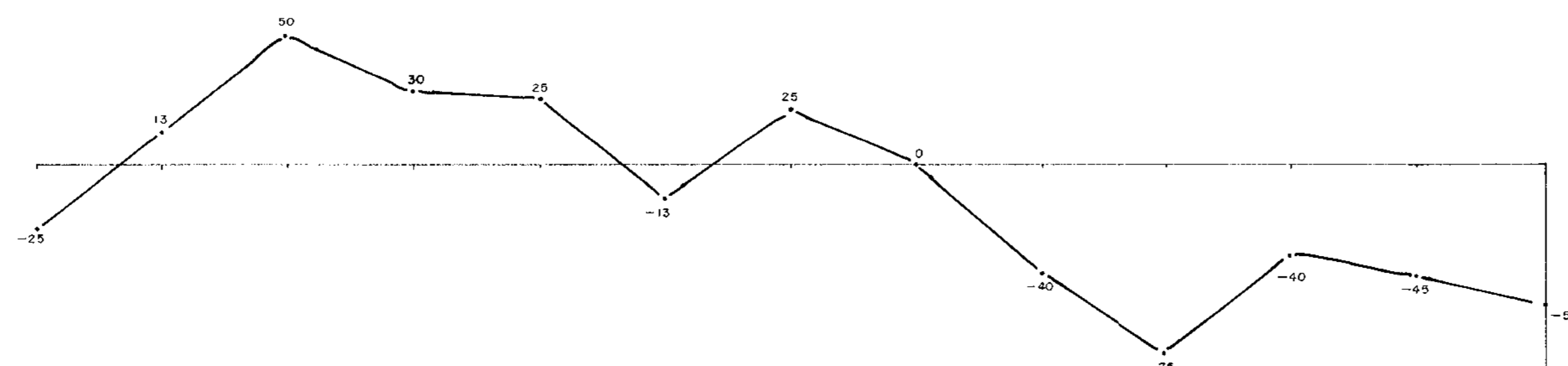
*H. H. H. H.*  
H. H. H. H.

N

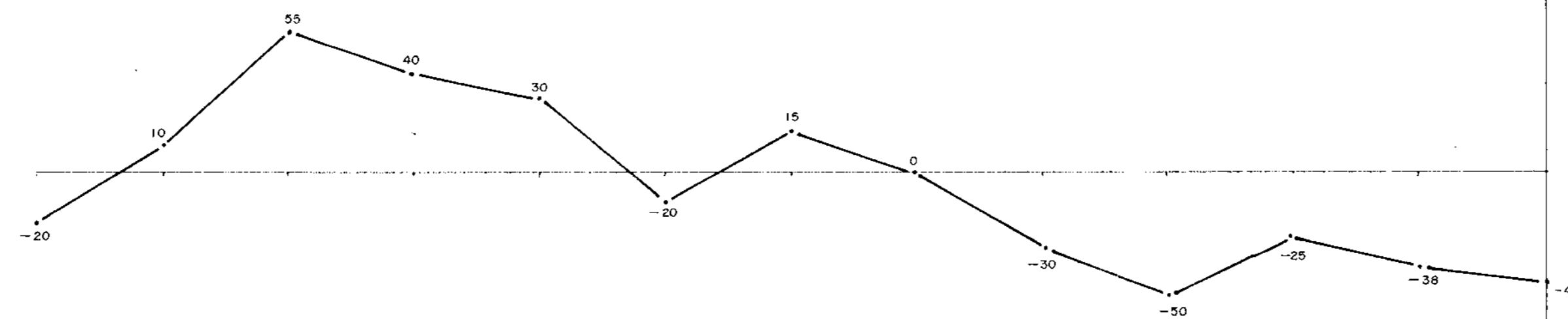


12 W

3 W



L - 24 N



L - 21 N

L - 18 N

L - 15 N

L - 12 N

L - 9 N

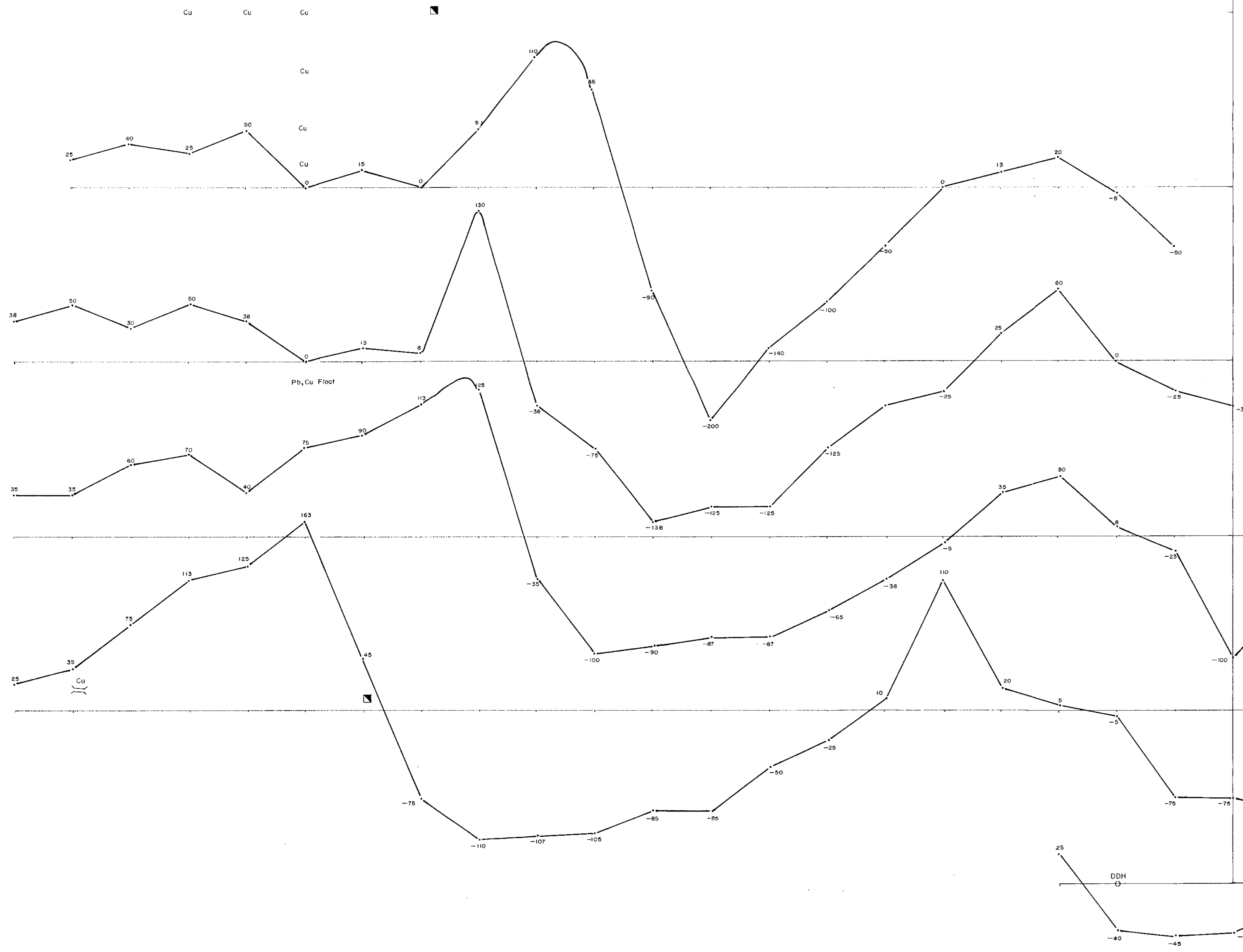
3 E

10 E

L - 6 N

L - 3 N

L - 0 + 00



20 W

10 W

3 W

BASE LINE

NOTE: INSTRUMENT USED - RONKA  
RADIO TRANSMITTER - JIM CREEK  
READINGS ARE IN ~~FOOT~~ PERCENT  
SURVEY BY BRENT OLHEISER.

LEGEND ■ SCHAFT

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4409 MAP #4  
T.H. Smith



ADAR RESOURCES LTD. (N.P.L.)  
 LO & AMIGO GROUPS  
 SWAKUM MTN., MERRITT AREA  
 NICOLA MINING DIVISION, B.C.

V.L.F.-EM SURVEY  
 PROFILES

PDT DRAFTING SERVICES	SCALE 1" = 100' HORIZ. 1" = 50' VERT.	DATE JUNE 1973
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SUB-MINING RECORDER  
RECEIVED  
FEB 21 1973  
M.R. # 80736E  
VANCOUVER, B. C.

Group 1  
Amigo

Group 2  
LO

WAK 1-12

GROUP  
of  
ASARCO

ADAR RESOURCES LTD.

Department of  
Mines and Petroleum Resources  
AREA OF SURVEY'S  
ASSESSMENT REPORT  
NO. 4409 MAP #5

VALID CLAIMS - LO# ~~37-42~~ - 37-42  
AMIGO # 1  
" # 4-21  
" # 23-25-27-29-32-34-36-38-40-41-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73  
" # 42-73  
MINERAL LEASES # 27H - 28H  
TOTAL - 68 CLAIMS  
+ 10 " INCLUDED IN LEASES

1-1500