

2955

Department of
Mining and Petroleum Resources
ASSESSMENT REPORT
NO. 2955 MAP

GEOLOGICAL REPORT
and
GEOPHYSICAL REPORT

on

PAUL CREEK CLAIMS

in the OSOYCOS MINING DIVISION

for

CONOCO SILVER MINES LTD. N.P.L.

Submitted By

David W. Burns.
Suite 203, 5976 Tisdall Street,
Vancouver, 13, B.C.

VANCOUVER BRITISH COLUMBIA.

DECEMBER 10th 1970.

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- #5 Magnetometer Survey - Paul Creek Claims
- #6 " " - Don's 15416
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MAGNETOMETER

SCINTREX LIMITED:

MF-2 Fluxgate Magnetometer

Serial Number 002192



LOCATION - CONOCO

Scale 1" = 50 Miles

INTRODUCTION

The writer was retained by Conoco Silver Mines Ltd. N.P.L. to make a preliminary examination of their mineral prospect in the Hedley area of British Columbia and to advise the company on specific areas of work as recommended generally in the report of A. Allan Geological Consultants Ltd. in its report on the property in June of 1969.

The examination was made on July 3rd 1970 and the writer was accompanied by Mr. Walter Kapp, President of Conoco Silver Mines Ltd. N.P.L. In the July visit the writer recommended that the scope of the work on the Paul Creek prospect should include further stripping in conjunction with a detailed ground magnetometer survey of four claims on the Don Group that cover the granite-sedimentary contact.

In September of 1970 a tent camp was set up on the Paul Creek property. A tractor was hired for stripping under the direction of Mr. Kapp while the writer laid out the grid on the Don 15 and 16 and Don 65 and 66 claims followed by a ground magnetometer survey of these four claims.

SUMMARY and CONCLUSIONS

PAUL CREEK

The magnetometer survey outlined two anomalous zones in the claims covered. One occurs in the Don 16 claim and the other in the Don 65 and 66.

The anomalous zone in the Don 65 and 66 claims has a strike length of approximately 1,000 feet and covers an area that had been partially prospected in the 30's by a series of intermittent trenches.

Mineralization occurs as selective replacement of several individual beds of limestone adjacent to the granite contact. Mineralization is chiefly fine to coarse arsenopyrite, varying amounts of pyrrhotite, pyrite and minor chalcopyrite. The mineralization and the geological setting is somewhat similar to that found in Nickel Plate Mountain where mining of gold ore was carried on for over forty years.

Width of mineralization is impressive as shown by several old pits which crosscut mineralized material up to 40 feet in width. The surface assays taken by the writer showed only minor values in gold and silver, however, the surface is heavily oxidized and leaching of the precious metals cannot be overlooked.

The magnetometer indicated the continuity of the mineralized area partially prospected by the old open-cuts. The anomalous readings to the southwest in relation to the known geology indicates the bedded replacement continues to depth.

The anomalous zone indicated by the magnetometer on the Don 16 claim is entirely covered by overburden. It appears to have an approximate length of 600 feet and width varying from 20 to 200 feet. The magnetometer showed exceptionally high readings in this zone. An open-cut bulldozed by the tractor uncovered a heavily oxidized surface mineralized with fine grained arsenopyrite, much pyrrhotite and pyrite. A chip sample of this material returned only traces of gold and silver.

RECOMMENDATIONS

The writer concludes, because of good width and length of mineralization and the possibility the gold values may be important below the zone of oxidation, that the two anomalous zones be tested in an initial programme by percussion drilling.

It is recommended that at least six holes be drilled - two on the Don 16 anomaly and four on the Don 65 and 66.

The Company should budget for 1500 feet of drilling and this amount should cost about \$6,000.00. An additional \$2500.00 should be budgeted for to take care of supervision and assaying.

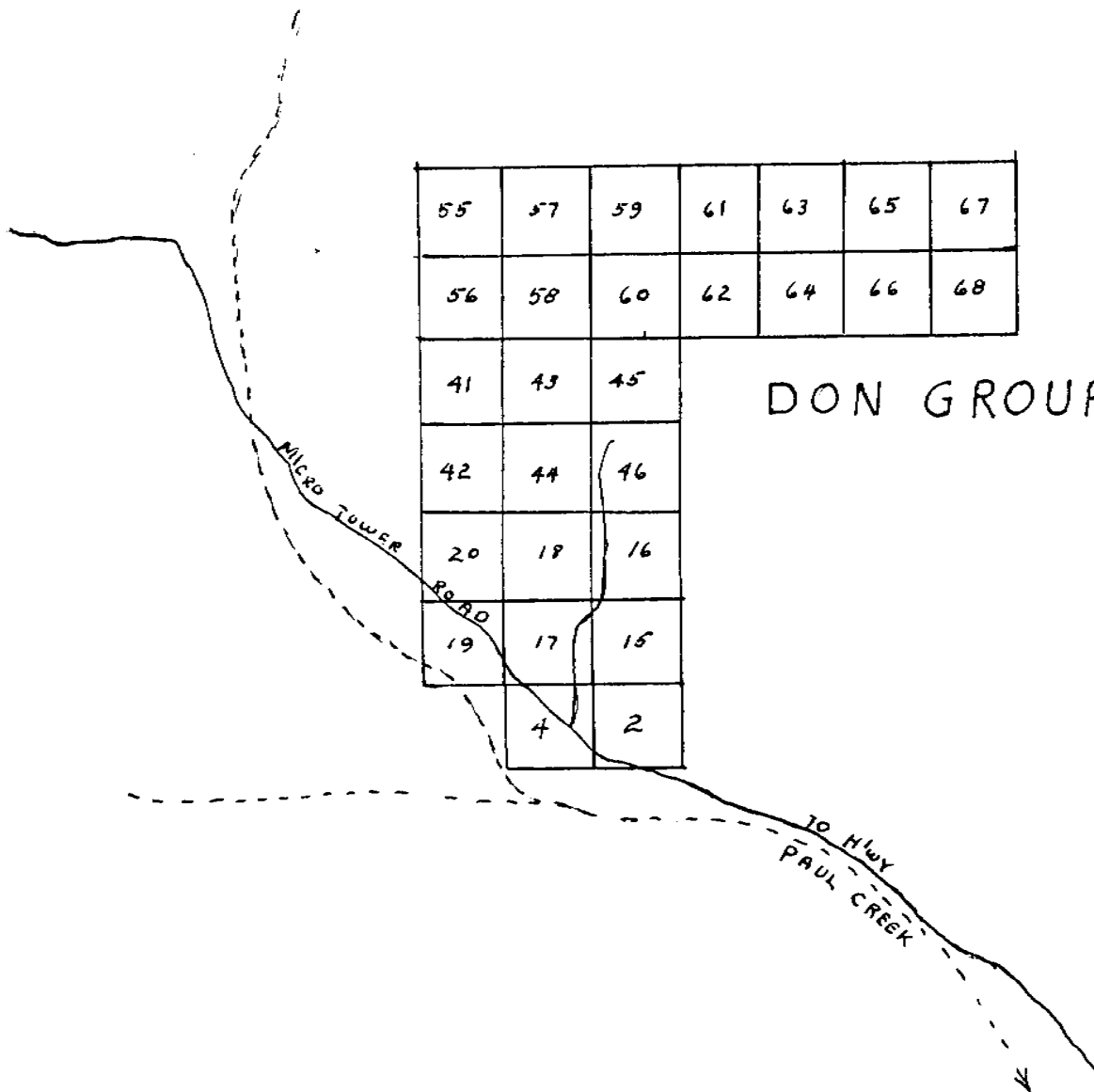
The percussion drilling has the advantage of costing one-third that of diamond drilling. This type of drilling, however, has the disadvantage of not producing geological information of the rock types penetrated. Should the percussion drill intersect values of interest then the next phase would require core drilling.

TRUE NORTH ↑

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55	57	59	61	63	65	67
56	58	60	62	64	66	68
41	43	45				
42	44	46				
20	18	16				
19	17	15				
	4	2				

DON GROUP



dlw Burr

CONOCO SILVER MINES LTD
PAUL CREEK PROPERTY
HEDLEY, BC
SCALE 1" = 3000'
DSC. '70
dlw Burr

LOCATION and ACCESS

This property is located in the west side of the Similkameen valley half way between Hedley and Keremeos British Columbia. It lies at approximately 5500 feet elevation.

The main showings can be reached by a steep gravel road that leaves the Hedley - Keremeos highway approximately 9 miles from Hedley. Six miles up this gravel road, which services the Micro Wave Tower of B.C. Telephone, a rough jeep road branches northerly and crosses the Don claims terminating at the Don 65 claim.

PROPERTY

The property consists of 28 claims named Don 2 and 4, 15 to 20, 41 to 46, and 55 to 68. The claims form a right angle in the north and west border of the Indian Reservation 10 A in the Osoyoos Mining Division.

TOPOGRAPHY

Paul Creek, draining an area of about 12 miles long and six miles wide, flows into the Similkameen River some 9 miles southeast of Hedley British Columbia.

The Don Group lies just north of Paul Creek. The westerly portion of the claims lie in a wooded area having a medium up slope westerly to an elevation of approximately 6000 feet. The easterly and northerly portions of the Don Group cover well-rounded knolls and very steep draws that extend

easterly towards the Similkameen River. The slopes to the east are grassy with light overburden. The draws for the most part are wooded with stands of poplar and evergreens.

GENERAL GEOLOGY

The property is underlain by a granitic intrusive and highly altered sediments of the Nicola series. The sediments are chiefly limestone, argillites and quartzitic members. The limestone is intensely silicified - some beds more than others. Differential weathering of the softer beds leaves much of the limestone surface with a ribbed effect. The general strike of the sediments is N 45° W and low to steep dips to the southwest. Several tight folds noted in the old cuts and dip changes indicate that the area is probably highly folded. The granite contact follows the valley of Paul Creek on the south side of the Don claims then swings northerly in a very irregular course leaving it appears, large embayments of the altered sediments.

MINERALIZATION

The old rock cuts in the Don 65 and 66 claims indicate that mineralizations is a selective replacement of certain beds or zones of limestone. The mineralizations is quite massive and highly oxidized. Width of mineralizations (as shown by the cuts) is impressive with widths of up to 40 feet. The chief mineral is arsenopyrite with varying amounts of pyrrhotite, pyrite, and miner chalcopyrite. It is believed that the gold and silver values, as in the Old Nickel Plate Mine is associated with the arsenopyrite.

MAGNETOMETER

The magnetometer measures the degree of magnetic susceptibility. It is a very useful direct tool in some situations such as the exploration of iron ore in the form of magnetite. The magnetite has a very high magnetic attraction. The instrument is also useful as an indirect tool when co-ordinated with the geological information of an area.

In the Paul Creek area the sought after precious metals are associated with the magnetic mineral pyrrhotite. It is this association that makes it feasible to use the magnetometer as an indirect tool to search for precious metals on the Don Group in areas of high magnetic anomalies.

The granite underlying the claims has also an unusual high attraction due to the accessory mineral magnetite. Fortunately there are sufficient outcrops in the claims to ascertain the type of formations being traversed and consequently a reasonable interpretation of the magnetometer readings can be made.

GRID

The base lines in the Don 65 and 66, 15 and 16 were laid out for 1500 feet in an eastwest direction using their common claim lines as the base-line. There were eight lines run in a north - south direction across the claims at 200 foot intervals. Stations were placed at 100 foot intervals along these north - south lines. The ground survey was run by nylon chain and Brunton compass. The area is quite steep in places, consequently, a clinometer was used to correct for slope distances.

MAGNETOMETER SURVEY

In the Don 15 and 16 sufficient outcrops were found to show that the two claims are entirely underlain by highly altered sediments - principally a silicified limestone.

In the Don 15 claim the magnetometer readings were quite constant. In the Don 16, however, several magnetic highs and lows were picked up in line 4 from station 6 to 12 a distance of 600 feet. The area was detailed as shown on Map two. Nine readings were - plus 1000 Gammas above norm - 22 readings, 300 - 1000 above, and 17 readings, 100 - 300 above normal. The magnetic lows on each side of the zone indicate a steeply dipping structure.

A six foot deep trench was made with a tractor in station 8 uncovered a short section of highly oxidized mineralized material containing massive fine grained arsenopyrite, pyrite and pyrrhotite.

A chip sample of this material at station 8 assayed a trace of gold and silver.

Line 6 in the Don 16 followed, for a good part, a long rock ridge and the readings were above normal throughout. Samples from the several outcrops, however, showed that the high recordings were entirely due to disseminated pyrrhotite in a highly silicified rock.

The anomalous area in the Don 65 and 66 is in a rounded knoll that has a steep southerly grassy slope averaging approximately 25 degrees. The top of the knoll is essentially flat for about 200 feet then the ground slopes north through a wooded area at about 15 degrees.

The altered sediments are bounded by granite in the north and east to form a projecting nose into the granitic mass. The strike length of the anomalous zone is approximately 1000 feet. The recordings in the north west show that the magnetic attraction continues 500 feet southwest of the outcrop mineralization. Considering that the limestone beds at the surface show a 50 degree dip to the southwest, then it can be expected that the mineralized zones continue to a depth of at least 500 feet in this area.

CERTIFICATE OF QUALIFICATIONS:

I, DAVID W. BURNS, of Suite 203, 5976 Tisdall Street,
City of Vancouver, Province of British Columbia DO HEREBY
CERTIFY THAT:

- (1) I am a graduate Geological Engineer from
the University of British Columbia - 1944.
- (2) I am a member of the Association of
Professional Engineers of British Columbia.
- (3) I have been associated with exploration,
property development and production in the
mining profession for the past twenty-five
years.
- (4) This report is based on the following visits
to the property of Conoco Silver Mines Ltd.
N.P.L.

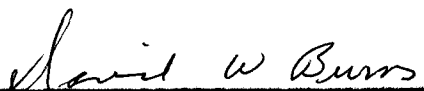
July 3rd 1970 - Paul Creek

Sept. 10th - 16th 1970.

Sept. 21st - 24th 1970.

Sept. 28th - 30th 1970.

- (5) I have no interest, directly or indirectly,
in the property or securities of Conoco
Silver Mines Ltd. NPL.

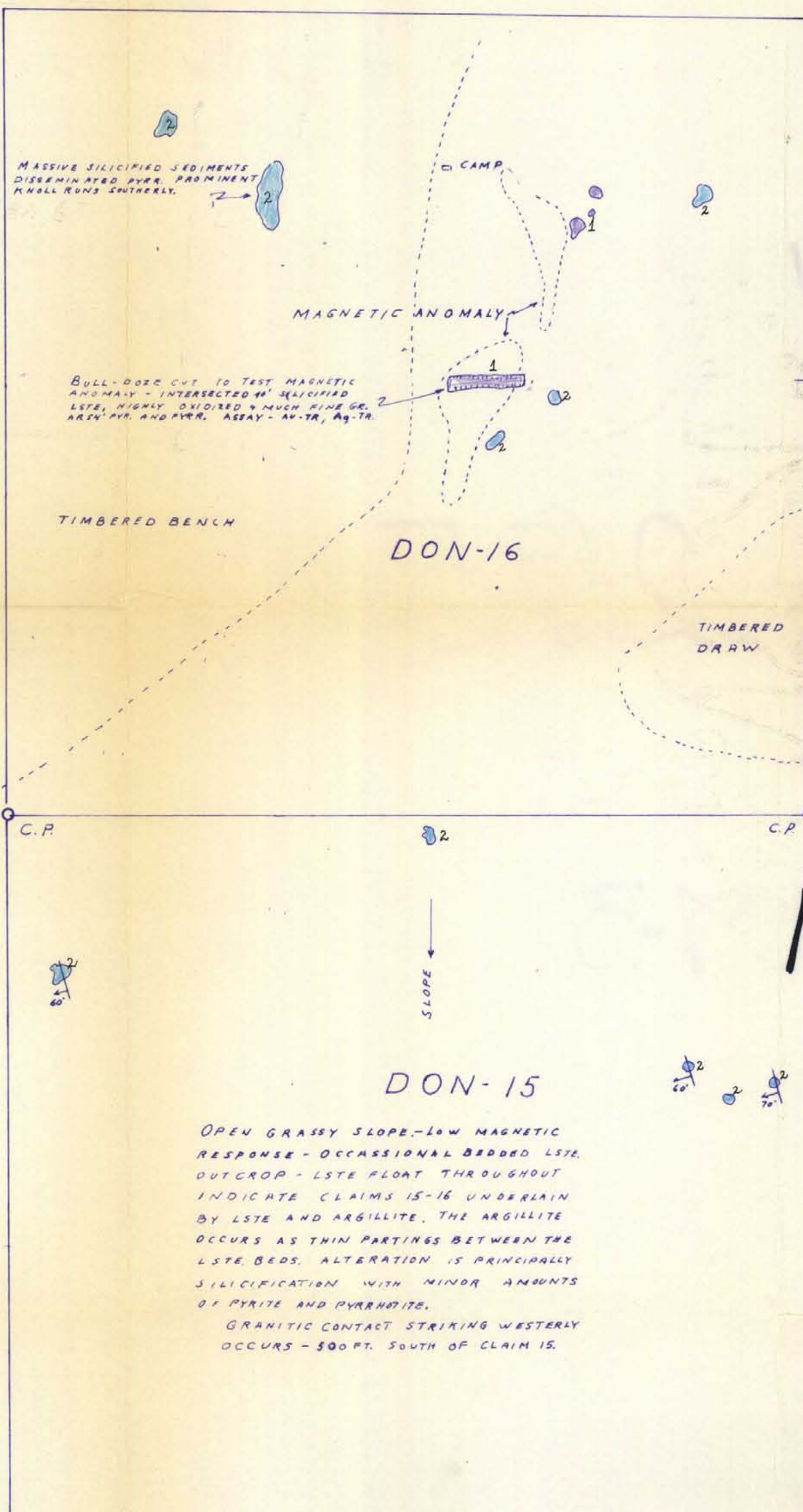


David W. Burns. P.E.

Vancouver, B.C.
December 10th 1970.

REFERENCES

BOSTOCK, H.S., and McNAUGHTON, Map 568 A GSC
MINISTER MINES REPORT, BRITISH COLUMBIA 1934



2955

M-3

LEGEND

- 2 SILICIFIED LIMESTONE
- 1 OXIDIZED CAPPING-LIMESTONE
- BEDDING
- BULL-DOZE CUT

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CONOCO SILVER MINES LTD.
(N.P.L.)

GEOLOGICAL MAP

DON'S 15 & 16 M.C.'S PAUL CREEK

SCALE 1" = 200' JWB:ams DEC-1970

NO. MAP
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Department of
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Don 63

Don 65

Don 64

Don 66

INFERRED GRANITIC CONTACT

OXIDIZED CAPPING
DISSEMINATED MINERAL

TRENCH CUTS 40 FT. MASSIVE
MINERALIZATION - PYR-PYRR-ARSN-PYR

CREEK

C.P.

Department of
Mines and Petroleum Resources
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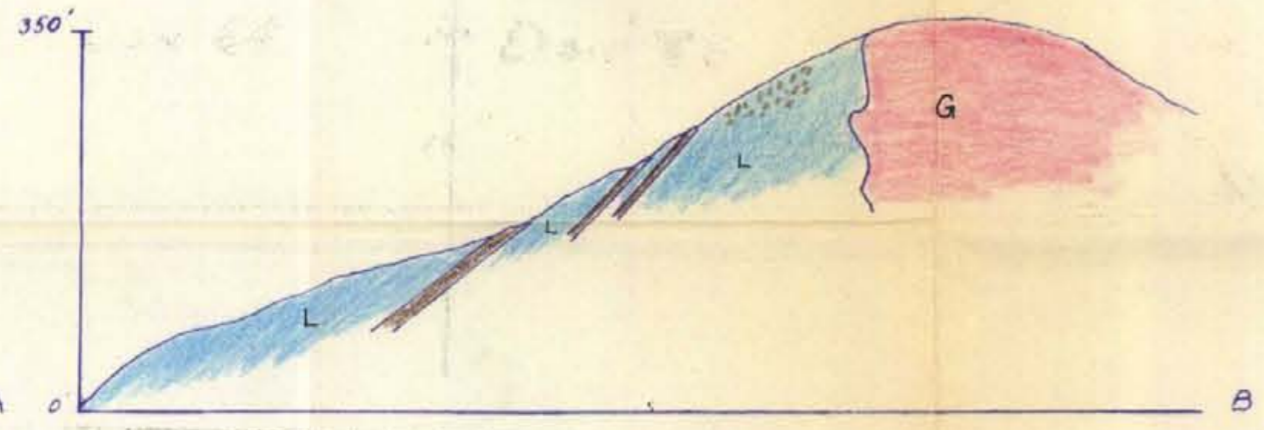
2955

LEGEND

- G GRANITIC INTRUSIVE
- O.C. OPEN-CUT INTERSECTING
BEDDING REPLACEMENT
OF LSTG. BY PYR-PYRR-ARSN-PYR.
- L SILICIFIED LIMESTONE
- OXIDIZED CAPPING
- 50° BEDDING

M-4

SCALE 0 100 200 400 600 800 FEET



CONOCO SILVER MINES LTD
(N.P.L.)
GEOLOGICAL MAP
DON'S 65 & 66 M.C.'S - PAUL CREEK
SCALE 1" = 200' J.W. BURRO DEC-1970

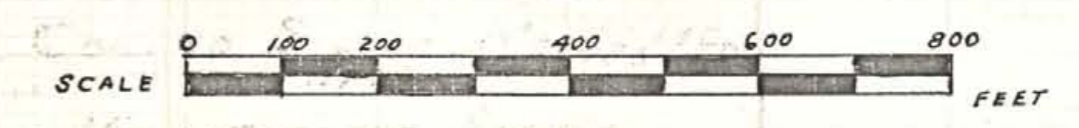
M-5

2955

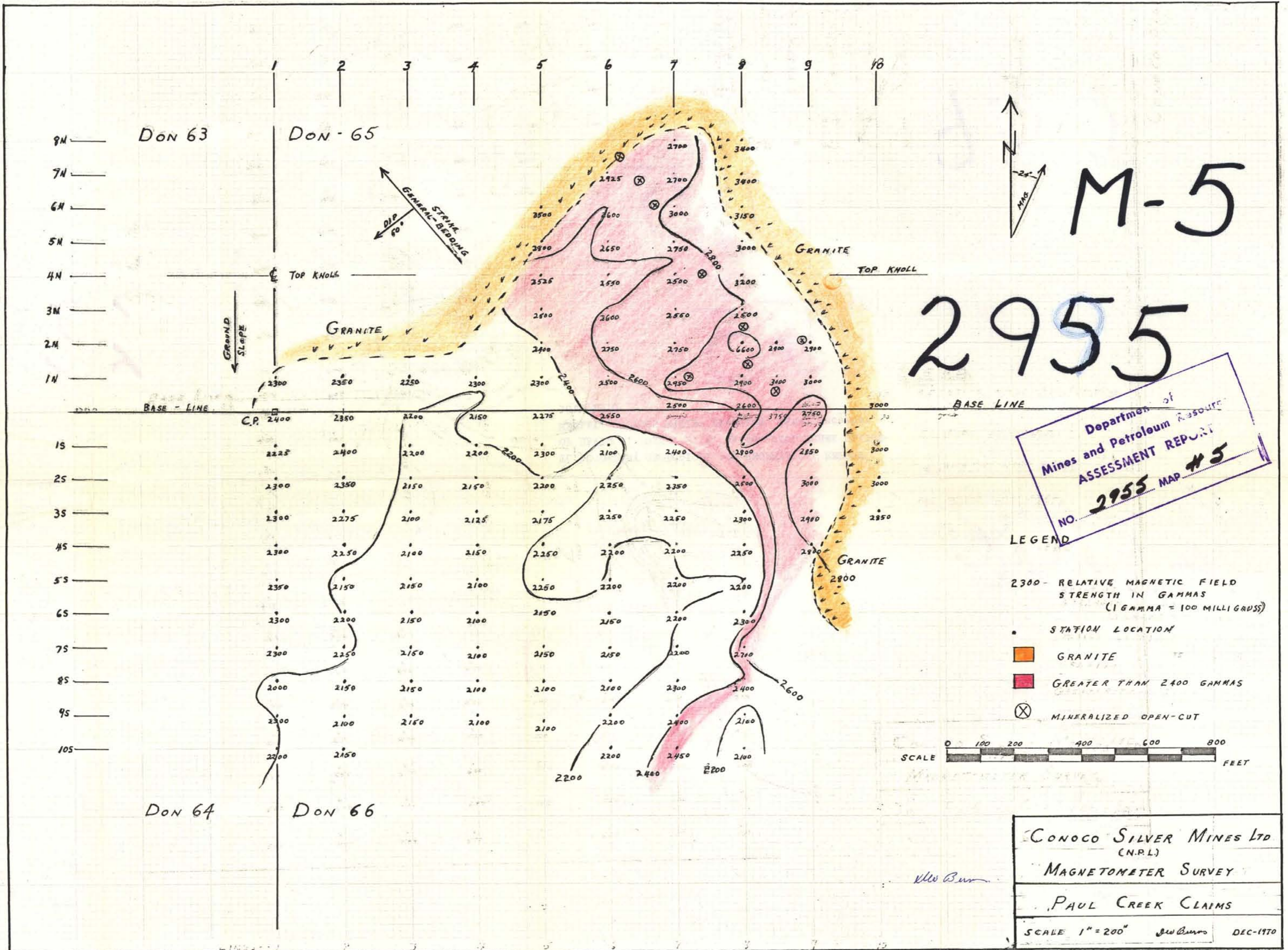
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LEGEND

- 2300 - RELATIVE MAGNETIC FIELD STRENGTH IN GAMMAS (1 GAMMA = 100 MILLIGAUSS)
- STATION LOCATION
- GRANITE
- GREATER THAN 2400 GAMMAS
- ⊗ MINERALIZED OPEN-CUT



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(N.P.L.)
MAGNETOMETER SURVEY
PAUL CREEK CLAIMS
SCALE 1" = 200' JWB/BBW DEC-1970



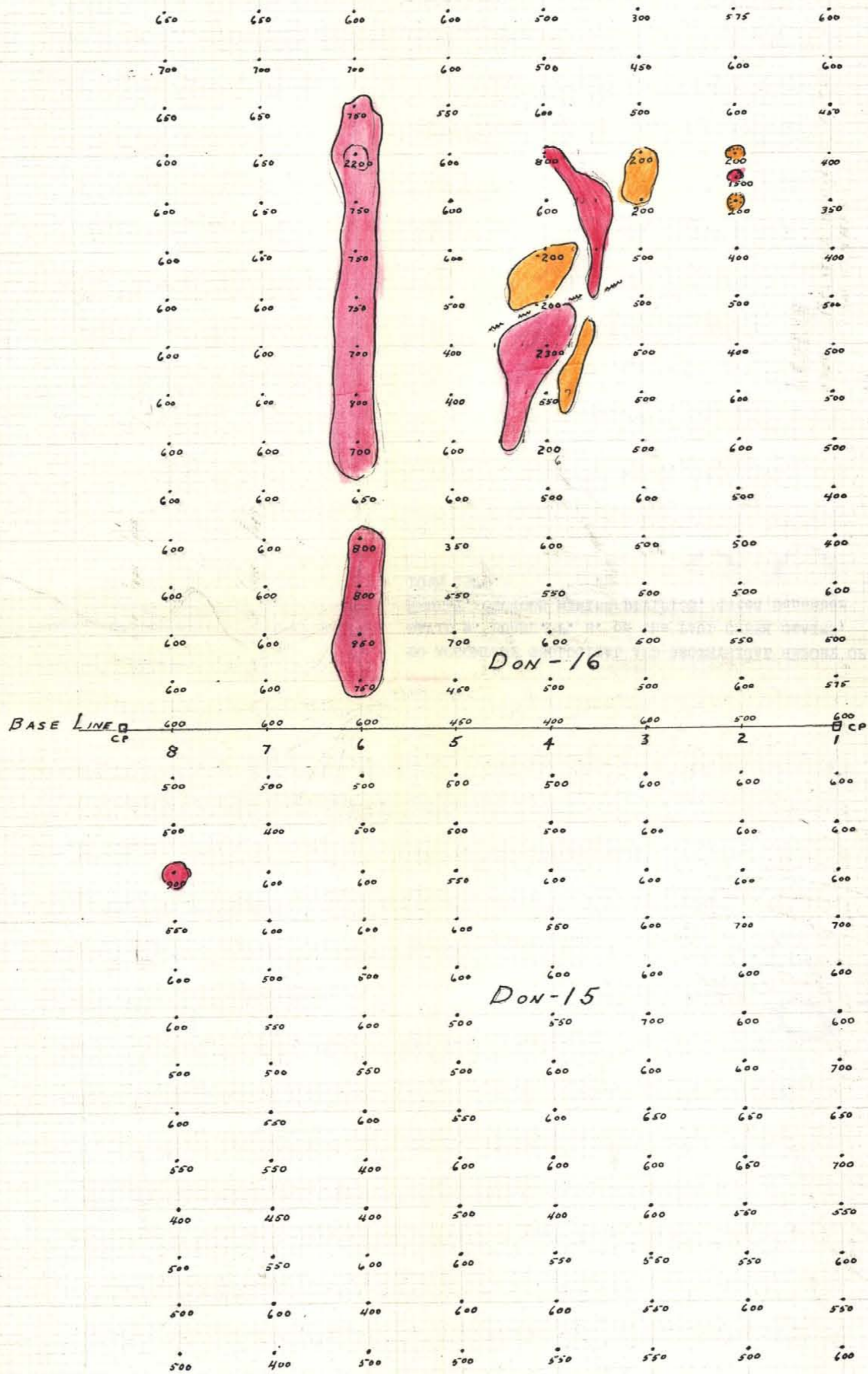
DON 63

DON 65

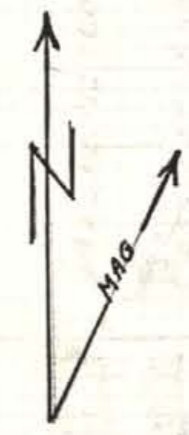
DON 64

DON 66

W.B. Burr



2995



LEGEND

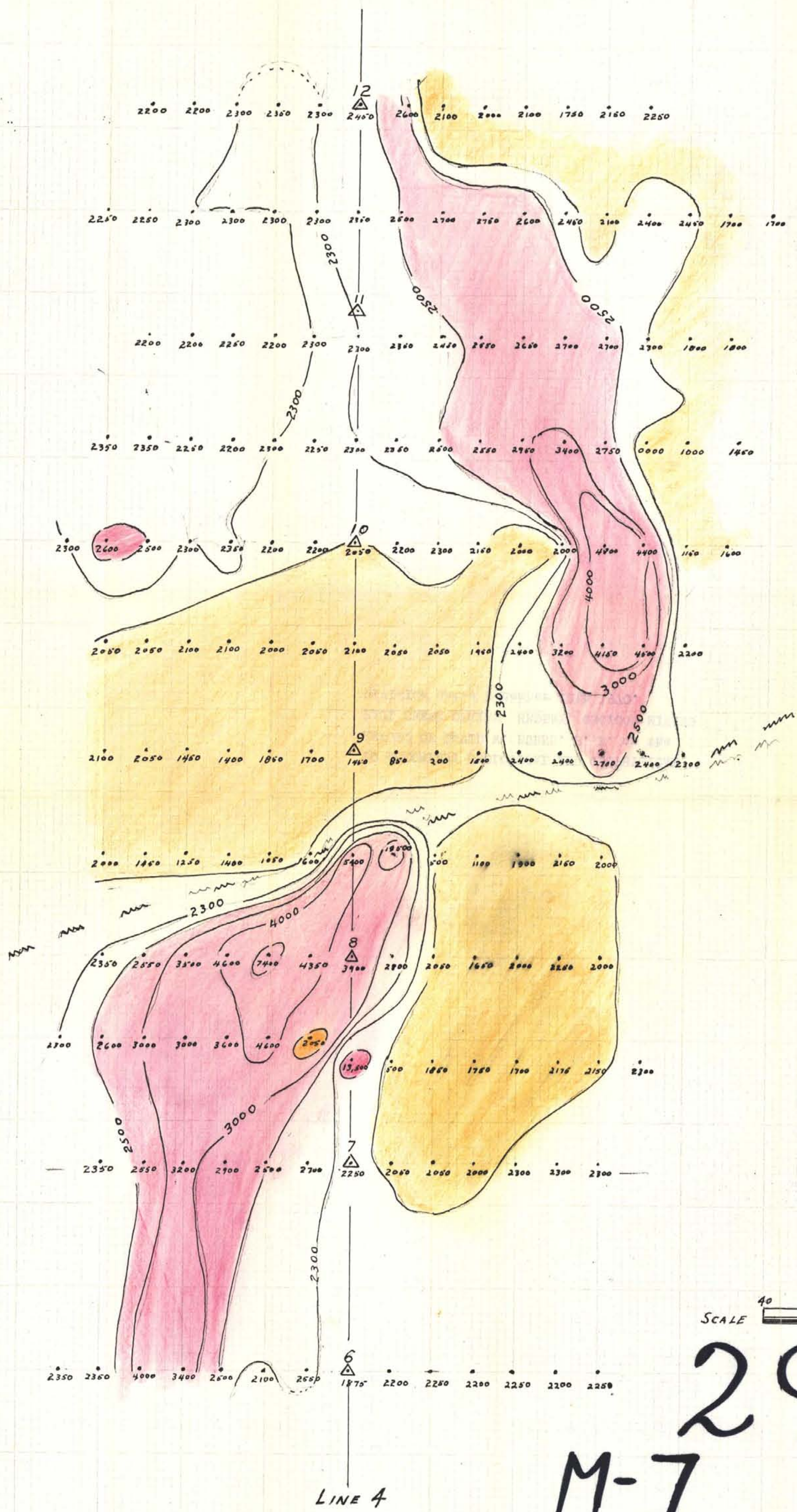
- 600 - RELATIVE MAGNETIC FIELD IN GAMMAS
- STATION LOCATION
- MAGNETIC HIGH AREA
- MAGNETIC LOW AREA
- FAULT ZONE?

M-6

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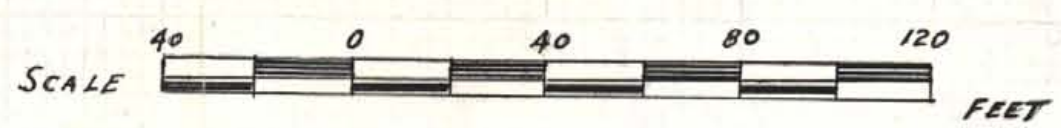
CONOCO SILVER MINES LTD
 (N.P.L.)
 MAGNETOMETER SURVEY
 DON 15-16 M.C. HEDLEY, B.C.
 SCALE 1" = 200' & W.B. SUMMERS DEC-1970

W.B. Summers



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- LEGEND**
- 2300 RELATIVE MAGNETIC FIELD IN GAMMAS
 - 10 LINE STATION
 - STATION LOCATION
 - MAGNETIC HIGH
 - MAGNETIC LOW
 - POSSIBLE FAULT ZONE



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M-7

W. Burns

CONOCO SILVER MINES LTD. (N.P.L.)	
MAGNETOMETER SURVEY	
LINE 4	DON 16 M.C.
SCALE 1" = 40' <i>W. Burns</i> D/BC-1970	

LINE 4