5441

ARGENTIA MINES LTD. (NPL)

82E/6E

REPORT

ON

GEOLOGIC AND MAGNETIC SURVEYS

ON THE

DOORN GROUP

GREENWOOD MINING DIVISION

1 April 1975

Eric R. Smith, P.Eng.

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Geological Engineer
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INTRODUCTION AND GENERAL REMARKS

This report discusses the survey procedure, compilation of data, and interpretation of results of a combination magnetic and geologic survey carried out between April 21, 1974 and March 28, 1975 on the Doorn Group of mineral claims in the Beaverdell area, Greenwood Mining Division.

The field work was carried out and supervised by myself, with the services of an assistant. The magnetic survey was carried out in detail, with a total of 15,700 feet of grid being covered. The geological survey comprised mapping outcrops and trenches within the confines of the grid area.

In general, the objective was to identify the magnetic characteristics of and area known to contain gold and silver mineralization and to establish whether or not additional areas have the magnetic characteristics similar to the mineralized area. The mineralization is related to an andesite dyke in granitic host rocks, the dyke being of higher magnetic composition than the wall rocks. It is thought that a magnetic survey would outline the disposition of the dyke material and present a target area for additional development.

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PROPERTY AND OWNERSHIP

The Doorn Group of mineral claims is owned by Argentia Mines Ltd. (NPL) of 205-1460 Pandosy Street, Kelowna, British Columbia.

The following is a list of the claims in the Doorn Group which have been the focus of this report:

CLAIM NAME	RECORD NUMBER
Ron 2	28729
Ron 4	28731
Doorn 8	27209
Doorn 9	27210
Doorn 10	27211
Doorn 11	27212
Doorn 12	27213
Doorn 13	27214
Doorn 15	27216
Doorn 18	28719
Doorn 19	28720

LOCATION AND ACCESS

The center of the area of interest is at 49°24'27"N, 119°06'45"W. This point is located 2½ miles southwest of Beaverdell in the Greenwood Mining Division.

Access to the property is by dirt road along the west side of the West Kettle River from Beaverdell, for a total road distance of about 3½ miles.

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GENERAL GEOLOGY

The Beaverdell area is underlain by an intrusive environment consisting of a core of Nelson granodiorite about 10 miles in diameter surrounded by a younger Valhalla intrusive body of batholitic dimensions. Remnant masses of the Anarchist sediments and volcanics are found in the Nelson suite. These intrusive rocks have been assigned to Lower Cretaceous by the G.S.C.

Mineralization in the area is dominated by base and precious metals found in shear zones in the Nelson granodiorite. On the east side of the West Kettle River valley, and in particular on Wallace Mountain, the mineralization is in the form of quartz-sulphide veins with the predominant metals being silver, lead, and zinc. On the west side of the valley, the mineralixation in the vein deposits carries gold, silver, copper, and minor amounts of lead, zinc, and molybdenum. This mineralization is found in the Carmi area and along Cranberry Ridge.

Other forms of mineralization found in the Beaverdell area are all located near contacts between the Nelson and Valhalla intrusives. This mineralization is predominantly molybdenum stockworks with minor copper values, with some disseminated zinc and lead deposits occurring south of Beaverdell.

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DESCRIPTION OF SHOWING

Several narrow quartz-sulphide veins have been exposed by surface stripping and trenching over an area of 300 feet long and 100 feet wide. The accompanying sketch at 1"=100' shows the location of these veins in relation to the trenched area. The vein system strikes at 120° and has a dip of from 60° to 70° south. Due to sloughing in the trench, the veins were only exposed for a foot or so where they could be seen. They vary in width from 2" up to 36", and as many as three separate veins are believed to exist. Either that, or one vein has been chopped up by cross faults to give several enechelon structures resembling a small vein swarm.

The veins consist mainly of Quartz and Pyrite with many portions containing various amounts of Chalcopyrite, Bornite and occasional Galena and Sphalerite. In hand specimens, visible amounts of native Gold and Bismuth Tellurides have been observed. These veins are occupying a chloritic shear zone in Granodiorite, with irregular masses (dykes?) of Andesite associated with the shear zone.

Channel samples of the exposed vein have been taken, the assays of which are shown on the accompanying map.

A second area of trenching, 200' to 300' west of the main trench, has uncovered slightly altered granodiorite which has been cut by andesitic dykes similar to those associated with the Gold-Quartz vein. One of these trenches contains mineralized shear about 3" wide striking at 060° with a 70° dip to the northwest. A composite sample of the shear

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DESCRIPTION OF SHOWING (Continued)

returned 0.26 ozs/ton Au, 2.04 ozs/ton Ag and 0.87% Cu. It is doubtful that this shear is the same zone exposed in the main trench. Several shears more or less parallel with the one discussed above were found cross-cutting the Gold-Quartz in the main trench. Several samples of the gangue material in the shear zones and of the granodiorite wallrock were assayed, with one sample across 100 feet returning 0.043 ozs/ton Gold and 0.05 ozs/ ton Silver.

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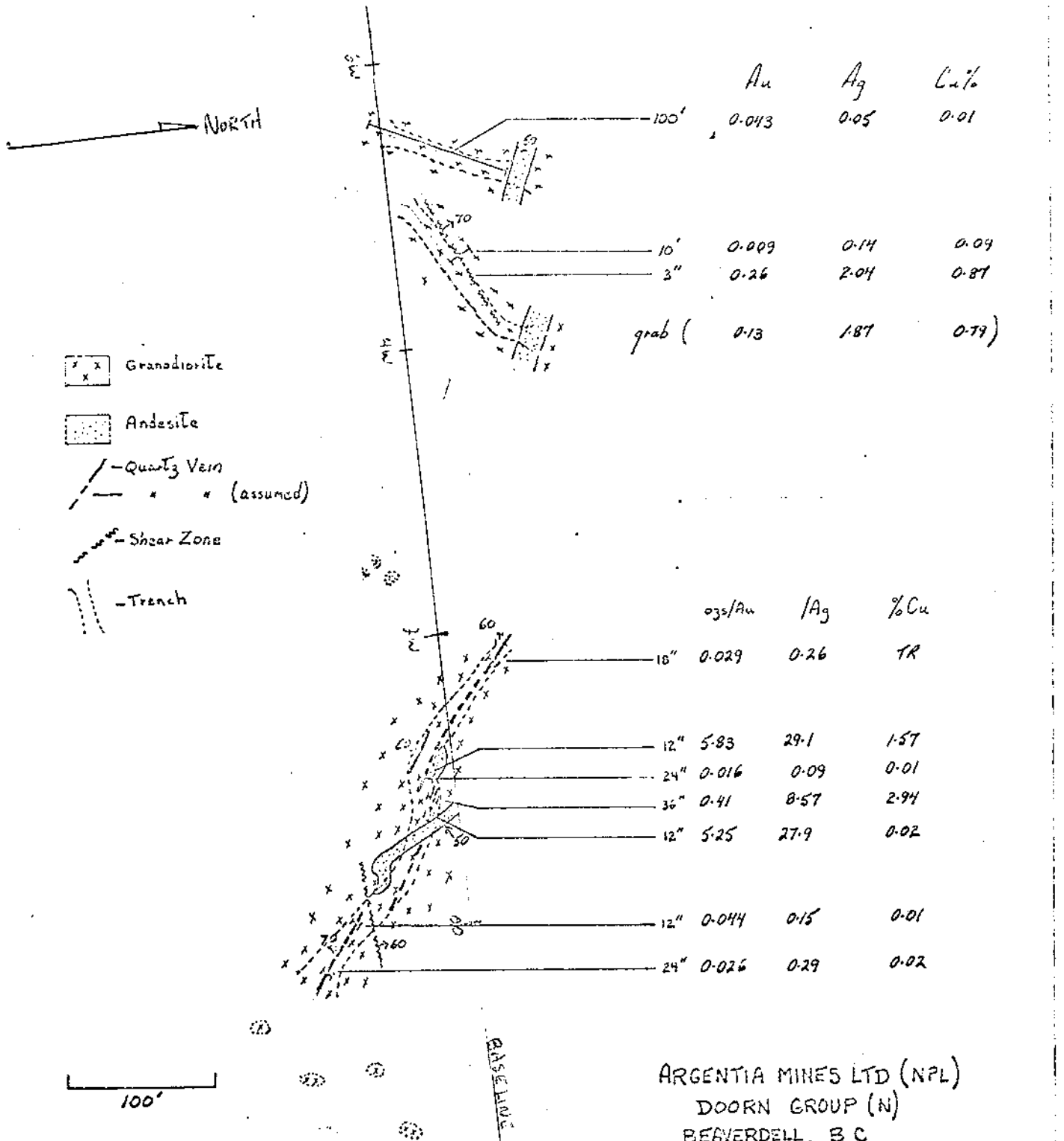

ARGENTIA MINES LTD (NPL)
DOORN GROUP (N)
BEAVERDELL, B C

Gold - Quartz Vein Zone

1"=100' E.R.Smith 22 June/74

5441
MAP 1

INSTRUMENTATION AND THEORY

The magnetic survey was carried out using a portable vertical component, Model G-110 fluxgate magnetometer manufactured by Geotronics Instruments Ltd. of Vancouver, B.C. This is a visual null-type instrument using a digital dial readout with a range of 100,000 gammas and a reading accuracy of 10 gammas. The G-110 has a temperature co-efficient of 2 gammas per degree centigrade.

Only two commonly occurring minerals are strongly magnetic; magnetic and pyrrhotite. Hence, magnetic surveys are used to detect the presence of these minerals in varying concentrations. Magnetic data are also useful as a reconnaisance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

SURVEY PROCEDURE

The grid was put in with the magnetic survey. The baseline was run in an east-west direction as shown on the accompanying maps and flagged with red ribbon. Every 100 feet of survey line was chained and marked using a compass, with the cross lines perpendicular to the base line. In general, the cross lines were run with magnetic readings being taken every 50 feet, with the magnetometer facing to the north. The magnetic diurnal change was monitered in the field by the closed loop method, and double checked by a series of base line stations.

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COMPILATION OF MAGNETIC DATA

A cumulative frequency curve (attached) was drawn from all the data to determine the data's parameters. The mean background value was found to be 54,650 gammas (50% cumulative). The straight line curve below 54,900 gammas is indicative of a single rock type being present at the locations of these readings. Above 54,900 gammas, the curve has a shallower slope, indicating either a change in rock type or a "position anomaly" for these readings.

The data was then plotted on a plan map (attached). For ease of drafting all values were plotted omitting the first and last digit (i.e. 450 reads 54,500 gammas). All values of 54,800 gammas and above were contoured at 100 gamma intervals and are shown by solid contour lines. Similarly, all values below 54,400 gammas were contoured by dashed lines to show the location of magnetically low areas, but these lows are not considered as anomalous. The values between 54,400 gammas and 54,800 gammas are considered as background values and were not contoured as this would detract from the interpretability of the map.

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DISCUSSION OF RESULTS

The magnetic values range from a minimum of about 54,200 gammas to a maximum of about 55,200 gammas with a mean background of 54,650. This gives a range of 1000 gammas which is quite moderate.

The greatest magnetic variations occur in the west-central and south-central portions of the grid. This area is underlain by granodiorite which has been intruded by andesite dykes. This dyke material is strongly magnetic in hand specimens and is believed to cause the variations in the magnetic data.

The main anomalous zone runs in a north-west to south-east direction from the west-central to the south-central portions of the grid. This zone is 500 feet wide as it crosses the base line and appears to break up as it runs south-east.

Although the general trend of this main anomaly is NW-SE, a North to north-east cross trend is apparent in the apexes of some of the individual magnetic high and lows within the zone. This could indicate either a N to NE fracture system, or a subsidary dyke system with the main trend.

The geological mapping and trenching shows that mineralized quartz veins are related to andesite dykes in the vicinity of L1W 0+50S. Here, both the veins and the dykes have a NW-SE strike, and appear to parallel the high magnetic zone immediately to the south and to the north.

Mineralized shear zones also exist in the vicinity of L5W 0+50N, and here they appear to parallel the N to NE trending magnetic variations in the vicinity.

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CONCLUSIONS

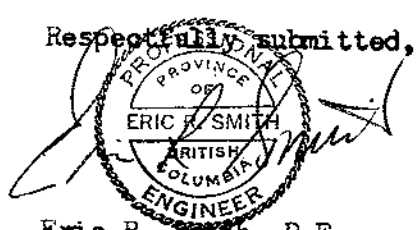
Assuming that the mineralization and the magnetic variations (high or "positive anomalies") are related by way of the andesite dykes, it becomes evident that several other target areas exist within the grid which should be examined for mineralization potential. In particular, the "positive anomalies" located at L3W 4+00S; L3+50W 1+75S; L2E 6+50S; and L8W 11N should be tested by trenching and/or drilling to evaluate their economic potential.

RECOMMENDATIONS

It is recommended that the areas indicated as "positive anomalous" by the magnetic survey be examined and tested by trenching and/or drilling since a relationship between the known mineralization in the trenched areas and the magnetic variations has been indicated.

To this end, the first step would be to prospect the areas immediately adjacent to the "positive anomalies" by trenching using backhoe or scraper equipment. At the same time, the known mineralization should be extended by trenching using the magnetic data as a guide.

Respectfully submitted,



1 April 1975

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Geological Engineer

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CERTIFICATE

I, Eric R. Smith of 4444 44B Avenue in the Corporation of Delta in the province of British Columbia do hereby certify that:

1. I am a Consulting Engineer with an office at 4444 44B Avenue, Delta, B.C.

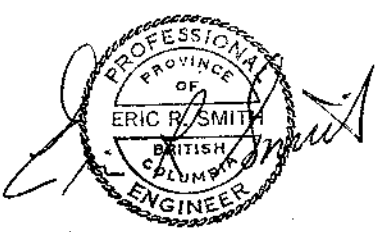
2. I am a graduate od Carleton University, Ottawa, Ontario, and hold a B.Sc. degree in Geology.

3. I am registered with the Association of Professional Engineers of British Columbia.

4. I have practiced my profession for the past 9 years, and have been actively engaged in the mining industry for the past 11 years.

5. This report is based on my personal examination and studies of the property between April 21, 1974 and March 28, 1975.

6. I have no interest, direct nor indirect, in the properties described herein, or in the securities of Argentia Mines Ltd. (NPL), nor do I expect to receive any interest in the future.



Dated at Delta, B.C.
on the 1st of April 1975

Eric R Smith, P.Eng.

4444 44B Avenue, Delta, B.C.

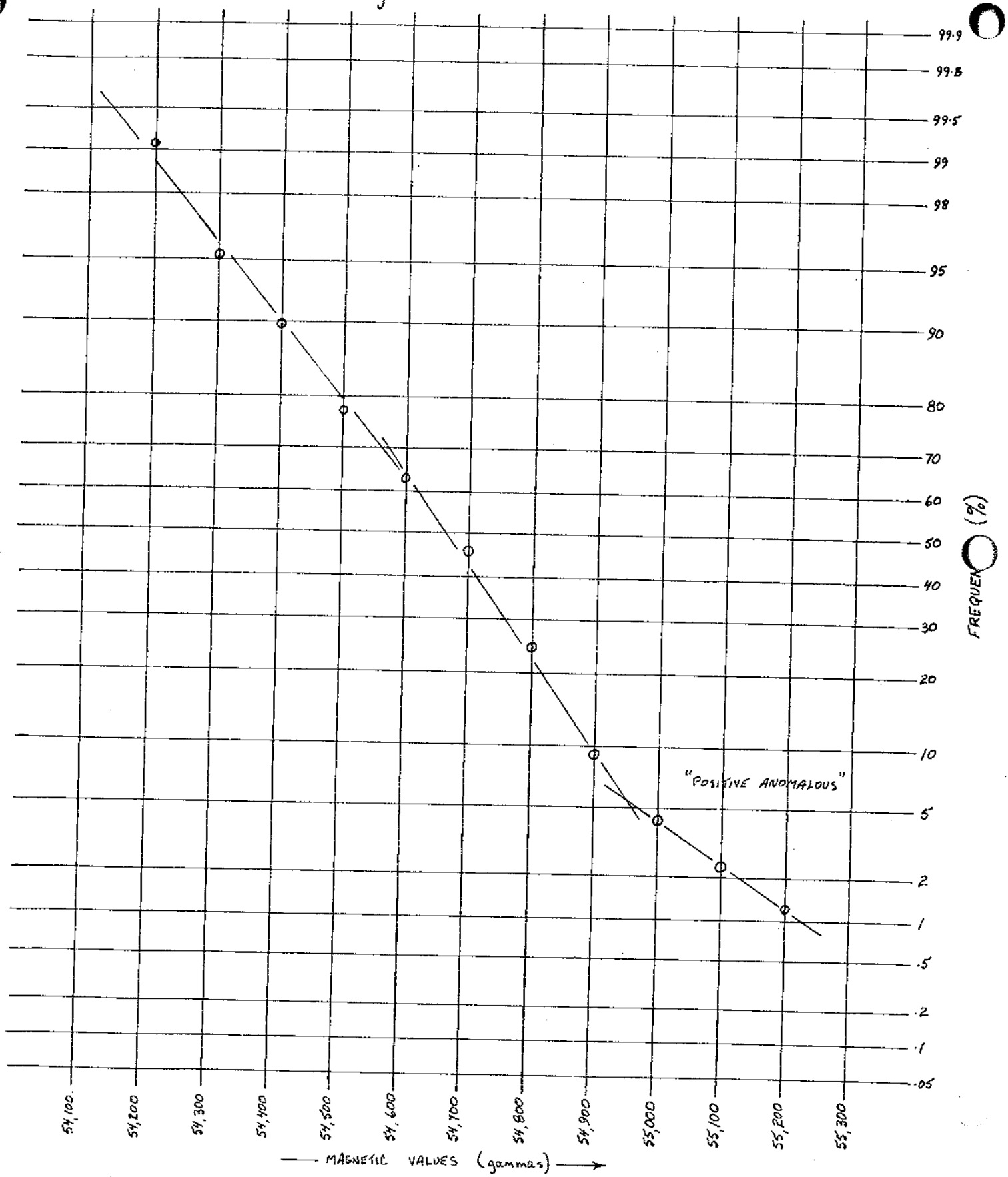
ERIC R. SMITH, P. Eng.
Geological Engineer

BY..... DATE.....
CHKD. BY..... DATE.....

SUBJECT.....

SHEET NO..... OF.....
JOB NO.....

Cumulative Frequency Curve
Magnetic Data



DOORN GROUP, BEAVERDELL, B.C.

BY..... DATE..... SUBJECT..... SHEET NO..... OF.....

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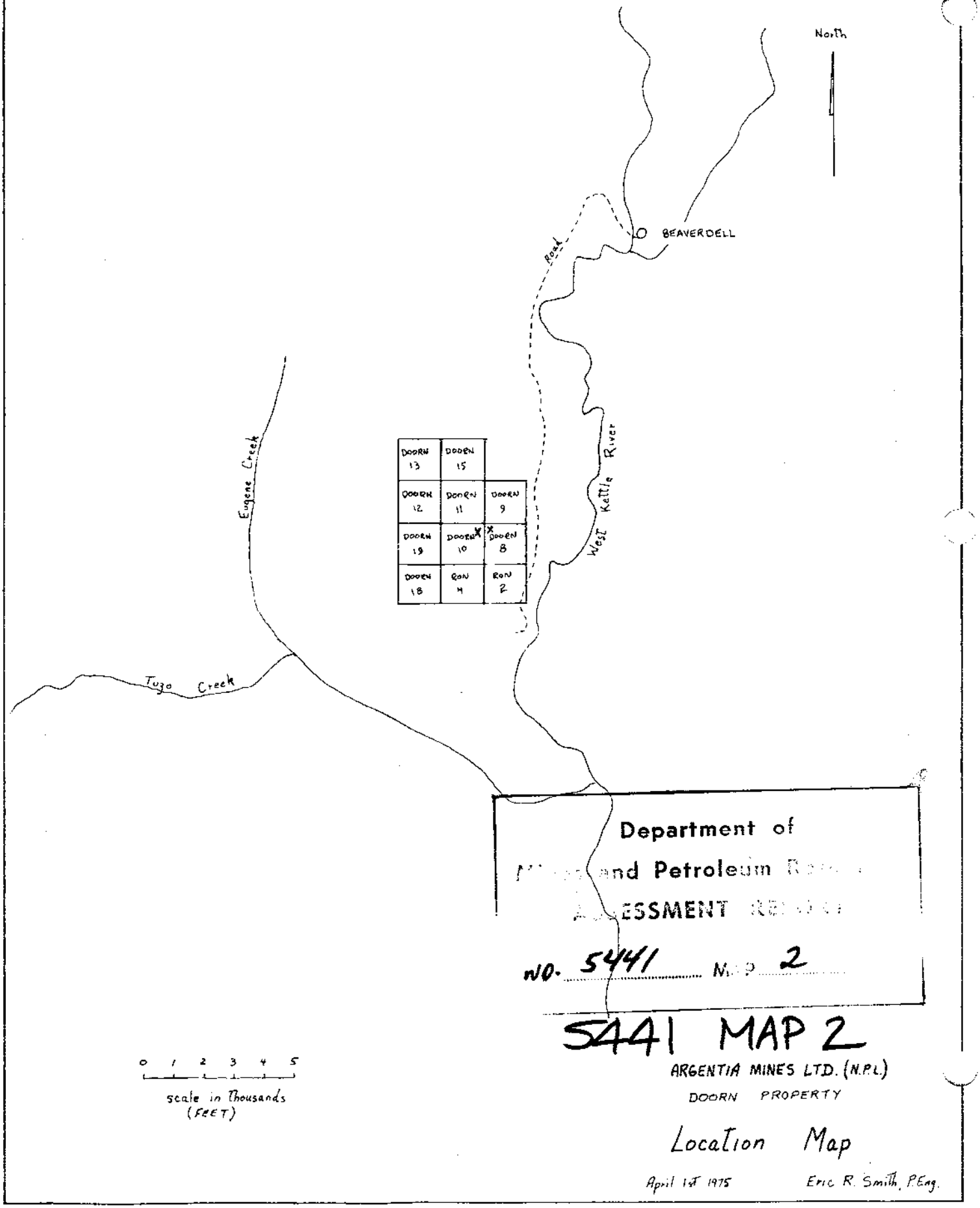


Department of

Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 5441 MAP 2

5441 MAP 2

ARGENTIA MINES LTD. (N.P.L.)

DOORN PROPERTY

Location Map

April 1st 1975 Eric R. Smith, P.Eng.

NORTH

LEGEND

TRENCH

ROCK OUTCROP

DYKE MATERIAL (ANDESITE)

GRANODIORITE

SHEAR ZONE with dip

QUARTZ-SULPHIDE VEIN (exposed ; extrapolated)

STRIKE & DIP OF FRACTURING

M.C. DOORN 11 | M.C. DOORN 9

M.C. DOORN 10 | M.C. DOORN 8

N.E. CORNER L.1272

SW-136

SW-115

"Plain 1 Mineh"

"Vein material composed of 2% Pyrite with Chalco, Bornite, Galena, Sphal and Gold & Silver"

2' dyke material

BASE LINE

Logan Creek

0 100 200 FEET

MI. gaw 3/76

5441
MAP 4

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
ERIC R. SMITH

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5441 MAP 4

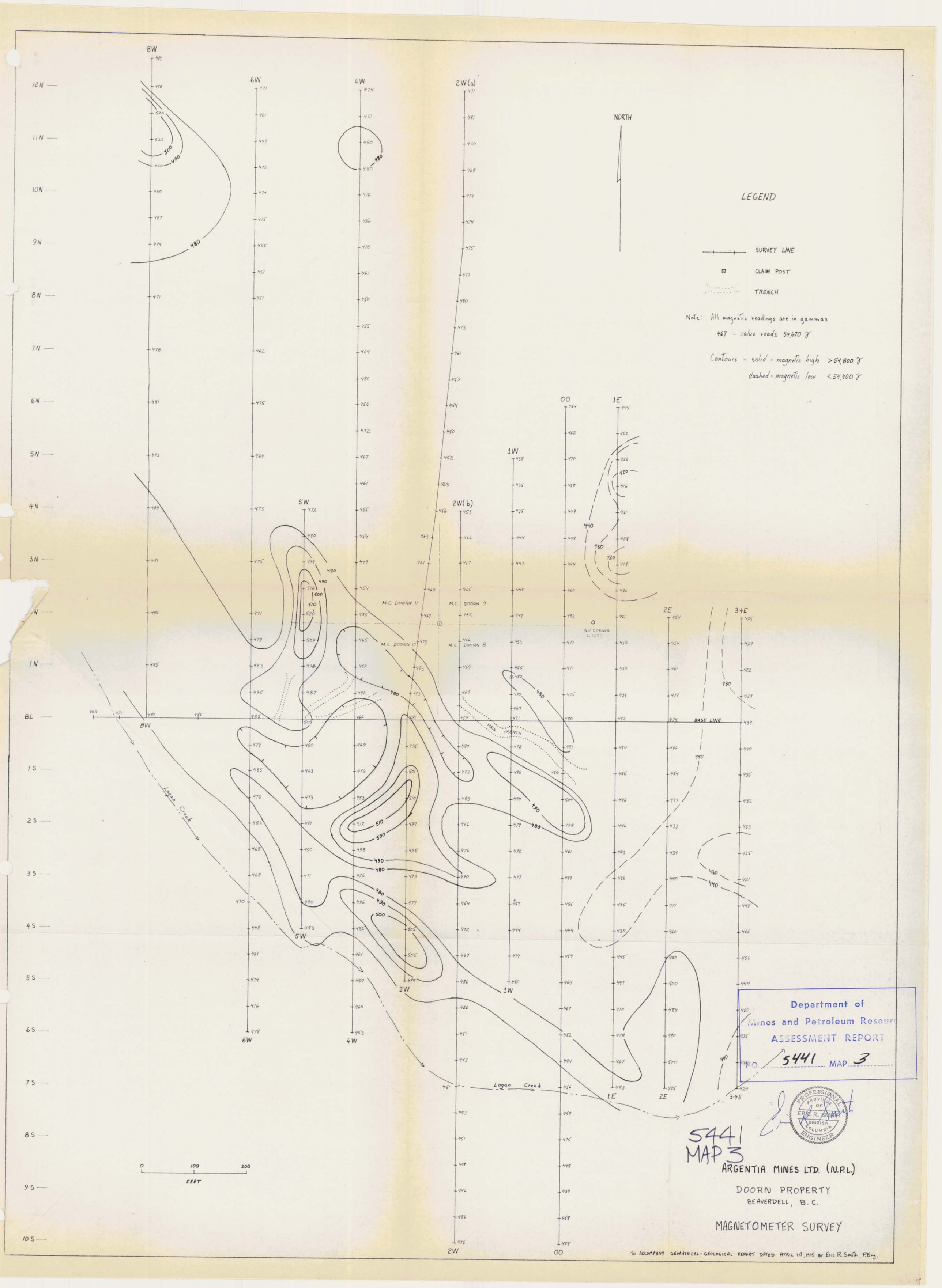
ARGENTIA MINES LTD. (N.P.L.)

DOORN PROPERTY

BEAVERDELL, B.C.

GEOLOGICAL MAP

TO ACCOMPANY GEOPHYSICAL-GEOLOGICAL REPORT DATED APRIL 1, 1975 BY ERIC R. SMITH, P.Eng.


8W
6W
4W
2W(a)
NORTH
LEGEND
SURVEY LINE
CLAIM POST
TRENCH
Note: All magnetic readings are in gammas
467 - value reads 54,670 γ
Contours - solid = magnetic high >54,800 γ
dashed = magnetic low <54,400 γ
5W
2W(b)
1W
00
1E
2E
3-4E
M.C. DOORN 11
M.C. DOORN 9
M.C. DOORN 10
M.C. DOORN 8
N.E. CORNER L 1272
BASE LINE
MAIN TRENCH
Logan Creek
3W
4W
6W
0 100 200
FEET
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Mines and Petroleum Resour
ASSESSMENT REPORT
NO. 5441 MAP 3
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
ERIC R. SMITH
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MAP 3
ARGENTIA MINES LTD. (N.P.L.)
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BEAVERDELL, B.C.
MAGNETOMETER SURVEY
TO ACCOMPANY GEOPHYSICAL-GEOLOGICAL REPORT DATED APRIL 1st, 1975 BY Eric R. Smith, P.Eng.