

2658

REPORT
ON
GEOCHEMICAL AND MAGNETIC SURVEY
ON
EXPO CLAIMS, RUPERT INLET AREA
BRITISH COLUMBIA
OF
BALLINDERRY EXPLORATIONS LIMITED

92L/11W.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2658 MAP

October 23, 1970
Vancouver, B. C.

G. C. Singhai
G. C. Singhai
Geologist
M. Tech.
P. Eng.

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(IN TEXT)

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SUMMARY

On March 3 - 10, 1970, the 46 Expo Mineral claims at the East end of Rupert Inlet near Port Hardy area, on Vancouver Island, were visited by the author with Mr. William T. A. Smith, Field Supervisor of the company.

A number of traverses were taken throughout the area and logging of diamond drill core, in order to study the geology. The geochemical and magnetic survey was conducted under the supervision of Mr. Smith and these data were supplied to the author for interpretation. The magnetic anomalies corresponds with some of the geochemical anomalies. The magnetic anomaly was tested by diamond drilling, which indicates the intrusion of granite dike. This dike strikes N 80° W and steeply dipping North. This granite dike is associated with heavy magnetite, pyrrhotite and minor pyrite and chalcopyrite.

Exploration by diamond drilling and trenching appear to be warranted.

INTRODUCTION:

Submitted herewith is a report on the Expo Mineral claims in the Rupert Inlet area of Nanaimo Mining Division of B.C. This report is based on the visit and the examination of diamond drill core by the author with William T.A. Smith, Field Supervisor of the company, during the period of March 3 to March 10, 1970, and on the line cutting, soil sampling and magnetic data supplied by Mr. William T. Smith, then Field Supervisor of the company. Mr. Smith implemented the recommendations of Mr. J.A. Mitchell, P.Eng. Consulting Engineer of the Magnet Explorations Limited.

PROPERTY AND OWNERSHIP:

The claim group consists of 46 located mineral claims at the east end of Rupert Inlet of Nanaimo Mining Division, B.C. All these claims are transferred from Magnet Mines Limited (N.F.L.) to the Sahara Mining Ltd. (N.F.L.) which is the subsidiary of Ballindarry Explorations Limited on September 25, 1969.

<u>CLAIM NAME</u>	<u>RECORD NUMBER</u>
EXPO FR	19880
EXPO 5FR	24517
EXPO 19-24	19828-34
EXPO 33-44	19842-53
EXPO 6-8FR	24518-20
EXPO 9-10FR	27584-85
EXPO 57-70	19866-79
EXPO 71-76	27505-10
EXPO 91	27583

LOCATION AND ACCESS:

These claims are located on the North end of Vancouver Island, at the Southeastern end of Rupert Inlet, and are ten miles from Port Hardy, British Columbia.

The claims are accessible in any type of vehicle by a twelve mile gravel road from Port Hardy. It is also accessible from Port McNeil by gravel road.

PROGRAM:

A number of traverses were taken throughout the property and along the creeks to study the preliminary geology and diamond drill core was logged.

The magnetic and geochemical data were studied and interpreted.

TOPOGRAPHY:

The area underlain by the property is gently undulated with some swamps and generally well timbered. Overburden is generally quite deep and there are very few outcrops. It is therefore necessary to depend on geophysical and geochemical information for the further exploration work

GEOLOGY:

The property is underlain by volcanic and sedimentary rocks and upper triassic and cretaceous age intruded in places by late cretaceous coast intrusions. Very few outcrops are known to occur but these are seen indicate that the property is underlain by volcanic rocks of the Bonanza Group.

Diamond drill core of 14 diamond drill holes is examined and logged by the author indicates an interbanding of holocrystalline rocks in the granite to monzonite range and volcanic tufts and the Bonanza Group propylitized and often brecciated. Pyritization is associated with magnetite and minor chalcopyrite. The granite rocks are mineralized with disseminated pyrite and magnetite with very minor specks of chalcopyrite.

GRID LAYOUT:

A base line was established N 30° W along the East boundary of claims Expo 58, 57, 35, 33 and 38, and then shifted to the West by 3000' along the East boundary of claims EXPO 20 and 22 and 35 line miles of grid lines oriented perpendicular to the base line at 400' intervals. Stations are established at 100' intervals on each line.

All the lines were chained and surveyed by Mr. Smith.

GEOCHEMISTRY:

Soil sampling was done on the above mentioned grid under the supervision of Mr. Smith.

Soil Sampling Technique:

1,210 soil samples were collected on these grids wherever possible. These samples were collected from "B" soil horizon by auger. The top soil is consistant of dark brown and brown colour organic material, sand and pebbles. The thickness of this horizon varies from 6" to 4'. The "B" sub soil horizon consists of reddish brown to light brown coloured sands and clay. The auger was driven into the "B" horizon and pulled out. The soil was collected from the grooves of the auger, and kept into the kraft water proof paper soil bags.

The analysis of soil samples was done by Chemex Laboratories Ltd. , 1416 Crown, North Vancouver, B. C. The samples were dried and seaved through -80 mesh seave. 1/2 gms. of each sample was weighed in a testtube. This soil was digested in perchloric acid and nitric acid for about 3 hours and sample volume was made to 25 milliliters. Sample solution is mixed and solution was analyzed for copper by Atomic absorption method and detection was one part per million of copper.

The values of copper in P.P.M. were plotted on the grid and contoured at an interval of 25 P.P.M. Most of the values show high copper background taking into consideration the depth of the overburden, which is plus or minus 100 feet. The background is about 60 P.P.M.

The depth of the overburden in the area sampled is too great to provide any really significant high readings but any area within a contour of 75 p.p.m. or more may be of some significance and should be studied in relationship to trends and ground slopes.

MAGNETOMETER SURVEY:

The magnetic survey was carried on the above mentioned area, by Mr. Smith, during the same period. A M700 vertical force McPhar fluxgate magnetometer was employed for this survey. Observations were taken at each 100' along grid lines spaced 400' apart. A base station was established along the base line on xl2\$, as marked on plate 6. Magnetic readings were checked at the base station after every two hrs. to control the data for base level and diurnal variations.

The actual observations are plotted in gammas for each station on plate 5 and 6, and the contours were drawn at the interval of 50 gammas.

DISCUSSION OF RESULTS:

Much of the survey area exhibits a rather uniform magnetic field with broad relief of a few hundred gammas. The general observations of the relatively positive and negative contours may indicate the geological contact and/or the structural features. The area on Plate 6, at line X48 and 30W, indicates a magnetic anomaly which is trending N 84° W and the magnetic body steeply dipping North. This indicates the intrusive magnetic body at a shallow depth. The diamond drill holes in this area indicates a granite dike with heavy magnetite and pyrrhotite with minor pyrite and chalcopyrite. A similar type of anomalous areas are indicated near the South end of the base line on plate 6 and Southwest part of plate 5. The strike of this body varies from Northwest to Eastwest respectively and dipping approximately towards North.

PRESENTATION OF RESULTS:

Plate 2 on the scale of 1"=400' shows the survey grid and claims.

Plates 3 and 4 on the scale of 1"=200' are contour plans of the geochemical data. The actual observations are shown in parts per million for copper for each station.

Plates 5 and 6 on the scale of 1"=200' are contour planes of the magnetic data. The actual observations are shown in gammas for each station. The contour interval of 50 gammas are used.

CONCLUSIONS:

Most of the values shows high copper background taking into consideration the depth of the overburden to provide any really

significant results, but the area within 100 P.P.M. contour should be studied.

The areas of magnetic anomalies indicates the intrusive bodies which carries the magnetite and other magnetic minerals may be the cause of anomalies and the contact of these should be studied. Some of the geochemical anomalies corresponds to the magnetic anomalies which warrants the attention.

RECOMMENDATIONS:

1. Trenching and diamond drilling should be done within areas of geochemical anomalies and magnetic anomalies.
2. Geological mapping of trenches and area is warranted.
3. The anomalies should be tested by diamond drilling.

COST OF PROGRAM

1. 35 line miles @ \$100.00 per line mile	\$ 3,500.00
2. Soil sampling of 1,210 samples @ \$3.30 per sample	\$ 4,000.00
3. Analysis of soil samples @ \$1.20 To chemex labs.	\$ 1,452.00
4. Magnetometer survey- over 35 line mile	\$ 1,850.00
	<hr/>
TOTAL	\$10,802.00
	<hr/> <hr/>

Respectfully Submitted

G. C. Singhai
G. C. Singhai
P. Eng.

Vancouver, B. C.
October 23, 1970

CERTIFICATION

I, Gyan Chand Singhai of 875A No. 2 Road, Richmond, British, Columbia, do hereby certify that:

1. I am a graduate of the University of Saugor, Sagar, Madhya Pradesh, India. (B.Sc., M.Tech. (Applied Geology), 1959).
2. I am a member of the Professional engineers of British Columbia and have been since 1969.
3. I have practiced my profession continuously since graduation while employed by the Lahiri Degree College, Chirimiri M.P. India; National Mineral Development Corporation Limited, Faridabad, India; Scurry Rainbow Oils Ltd., Calgary, Alberta; Ray Ore Mines Ltd.(N.P.L.), Vancouver, B.C. and now am employed by Ballinderry Explorations Limited, #1108-1111 West Hastings, Vancouver, B. C.
4. I have worked in India, West Indies and Canada.
5. My report is based on a seven day examination of the property and diamond drill core. Geochemical and magnetic data are supplied by Mr. William T. Smith, the Field Supervisor of the company, and the grids are surveyed by Mr. Smith.
6. I examined all parts which I came across in the course of my investigation and found them to be staked in accordance with the Mineral Act of the Province of British Columbia.
7. I am now permanently employed as a Geologist by the Ballinderry Explorations Limited, and have been since Feb. 1/70.

Respectfully Submitted,

G. C. Singhai

G.C. Singhai
(M. Tech.)
P. Eng.

Vancouver, B. C.
October 23, 1970

CERTIFICATION

I, William T. A. Smith of #105-331 Hospital St.,
New Westminster, British Columbia, do hereby certify that:

1. I have completed Grade 12 and graduated from Maple Ridge High School in 1952.
2. I have ten years experience in mining exploration as Field Supervisor.
3. I have experience as a cat operator and diamond driller.
4. I have had ten years experience running Geo-chemical surveys;
- Ten years experience running magnetometer surveys; surveying with Transit & Brunton; working with I.P. Surveys and drafting above surveys.

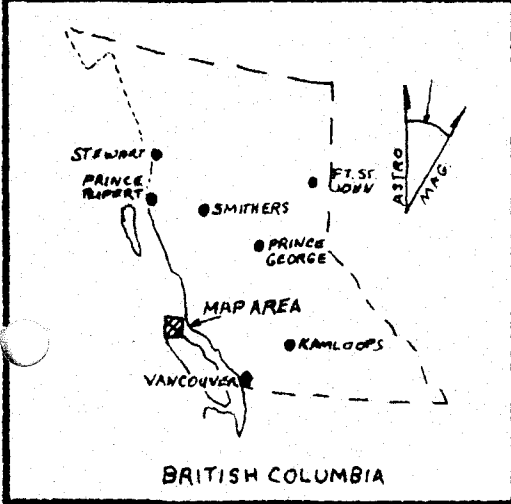
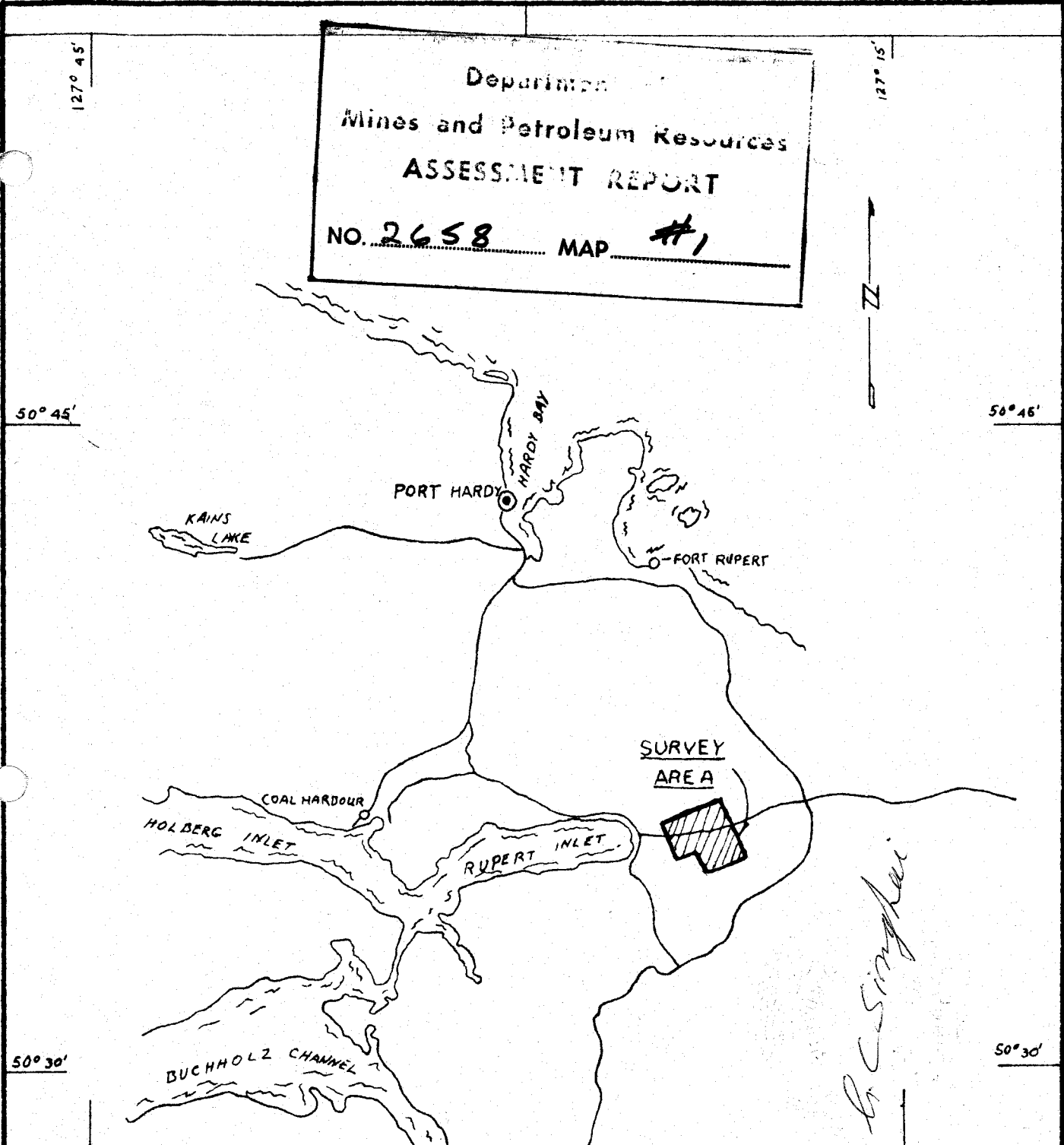
PROPERTIES

5. 1960-1966: Sheba Copper Property in Highland Valley,
Imperial Power & Metals Property in Lodestone Mtn.,
Peel Resources - Cinderell Prop. in Merritt,
Friday Mines Property in Aspen Grove & Ollala.
6. 1967-1968: Coronet Property in Pine Point, N.W.T.,
Calta Property in Pine Point, N.W.T.,
Christina Lake Property in ~~Nahanni River~~, N.W.T.
PINE POINT
7. 1968-1970: Magnet Exploration Property on Vancouver Island.
8. 1967 : Magnet Exploration Property at Relay Creek.
9. 1970 : Samantha Exploration Property in Nahanni River, N.W.T.
10. The magnetic, geochemical and grid surveys on the Expo claims of Ballinderry Explorations Limited. were carried out under my supervision.

William T. A. Smith
William T. A. Smith

Vancouver, B.C.
October 23, 1970

Department of
 Mines and Petroleum Resources
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BALLINDERRY EXPLORATIONS LIMITED

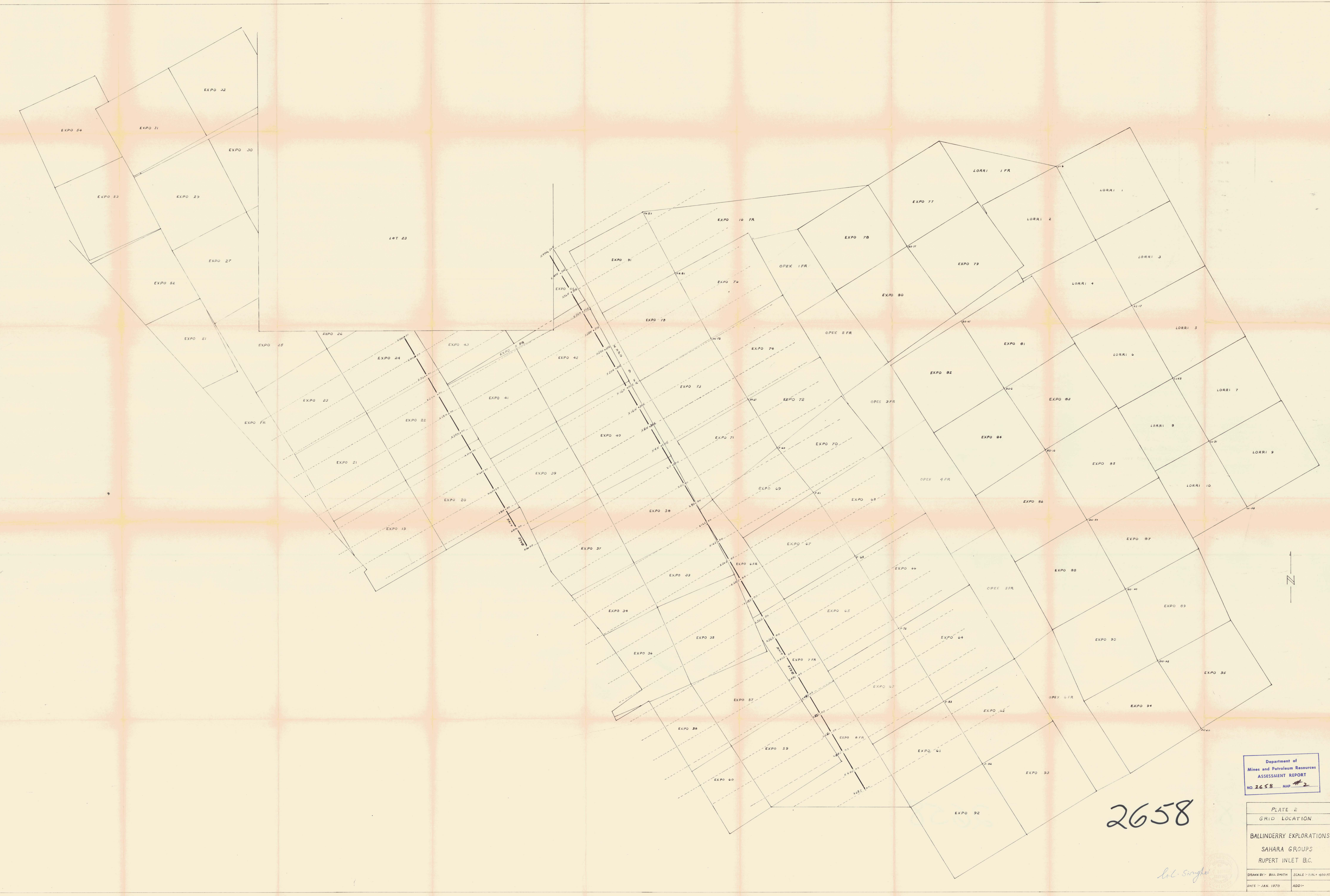
LOCATION MAP

PORT HARDY AREA, BRITISH COLUMBIA

SCALE IN MILES

SURVEY BY
 BALLINDERRY EXPLORATIONS LTD.
 SEPT. 1969 - FEB. 1970

PLATE 1



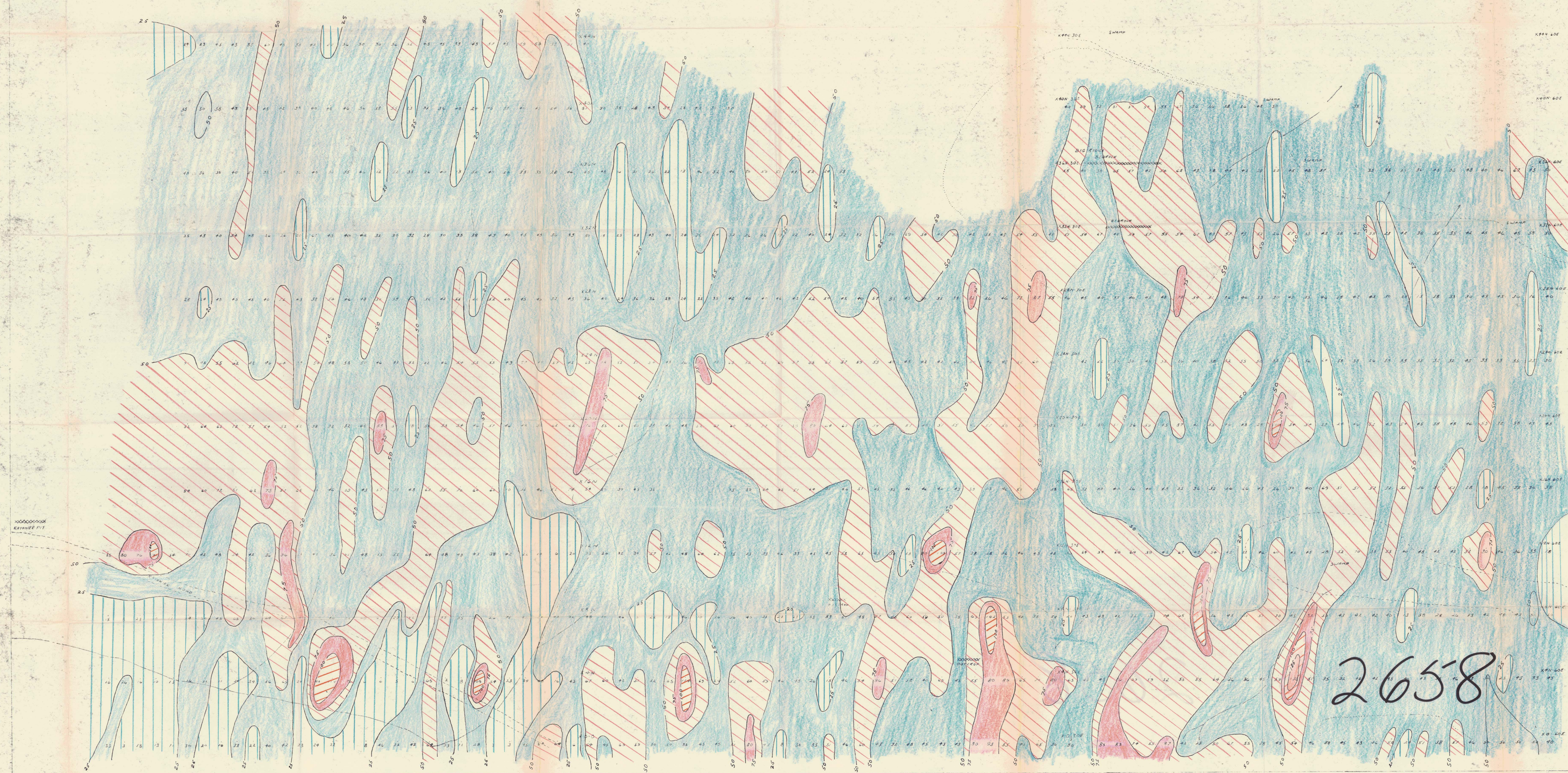
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PLATE 2	
GRID LOCATION	
BALLINDERRY EXPLORATIONS	
SAHARA GROUPS	
RUPERT INLET B.C.	
DRAWN BY: BILL SMITH	SCALE: 1 IN. = 400 FT.
DATE: JAN. 1970	ADD:

Bill Smith

W 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 E



- LEGEND
- 0-25
 - 26-50
 - 51-75
 - 76-100
 - 101-125
 - OVER-125

PLATE 3



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SAHARA EXPO GROUP
GEO-CHEM SURVEY

DRAWN BY: B. SMITH SCALE: 1 in = 2000 ft
DATE: OCT 1969 ADD: BARRAGE N30'W

EXPO GEO-CHEM SURVEY

W 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 E



LEGEND
 0 - 25 PPM
 26 - 50 PPM
 51 - 75 PPM
 76 - 100 PPM
 101 - 125 PPM
 126 - 150 PPM

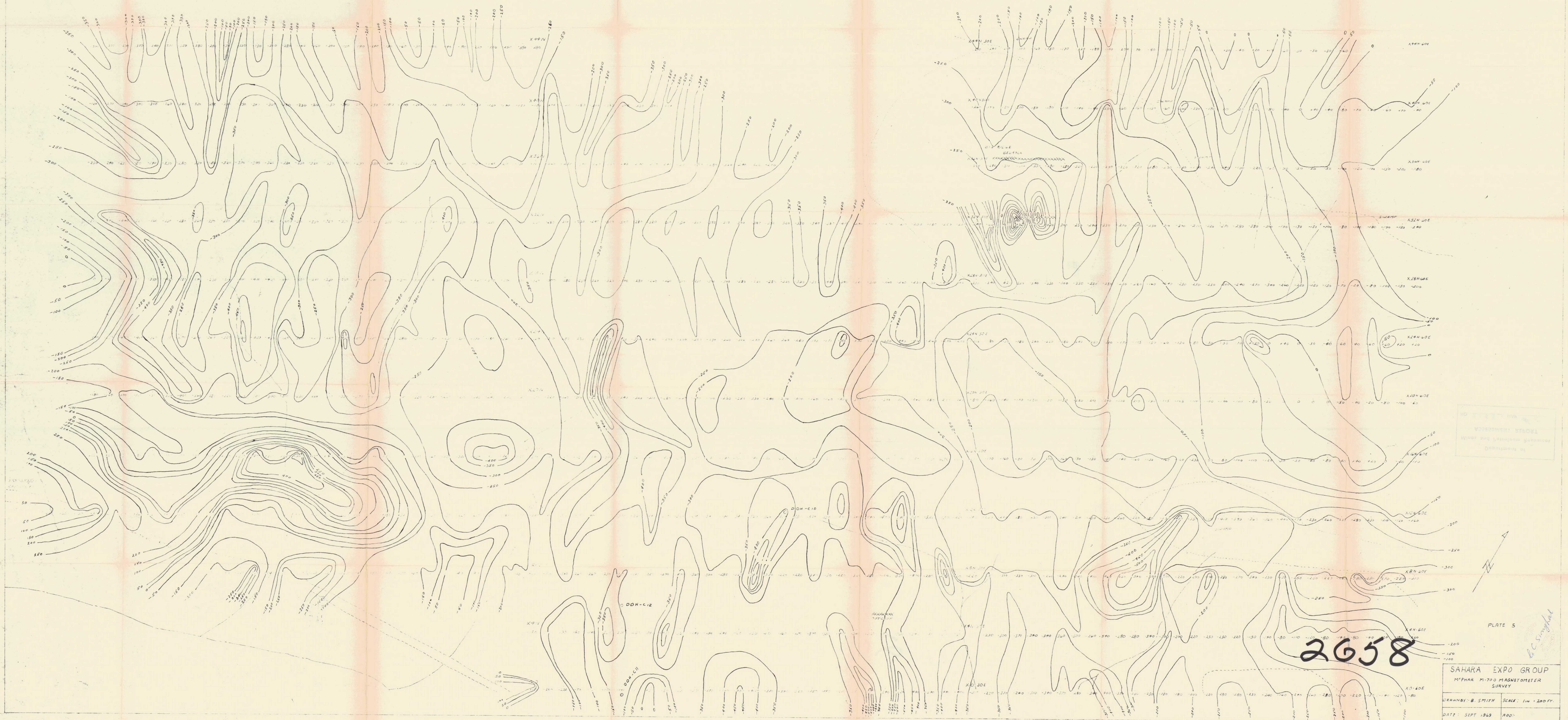
PLATE 4

Dr. Douglas

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Demari: 1:1
 Mines and Petro. 8/19/58
 ASSESSMENT PLATE #4
 NO. 2658
 SAHARA EXPO GROUP
 GEO - CHEM
 SOUTH LINE
 DRAWN BY - D PORTER, SCALE - 1 IN. = 200 FT.
 DATE - SEPT. 1959, ADD -

W 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 E

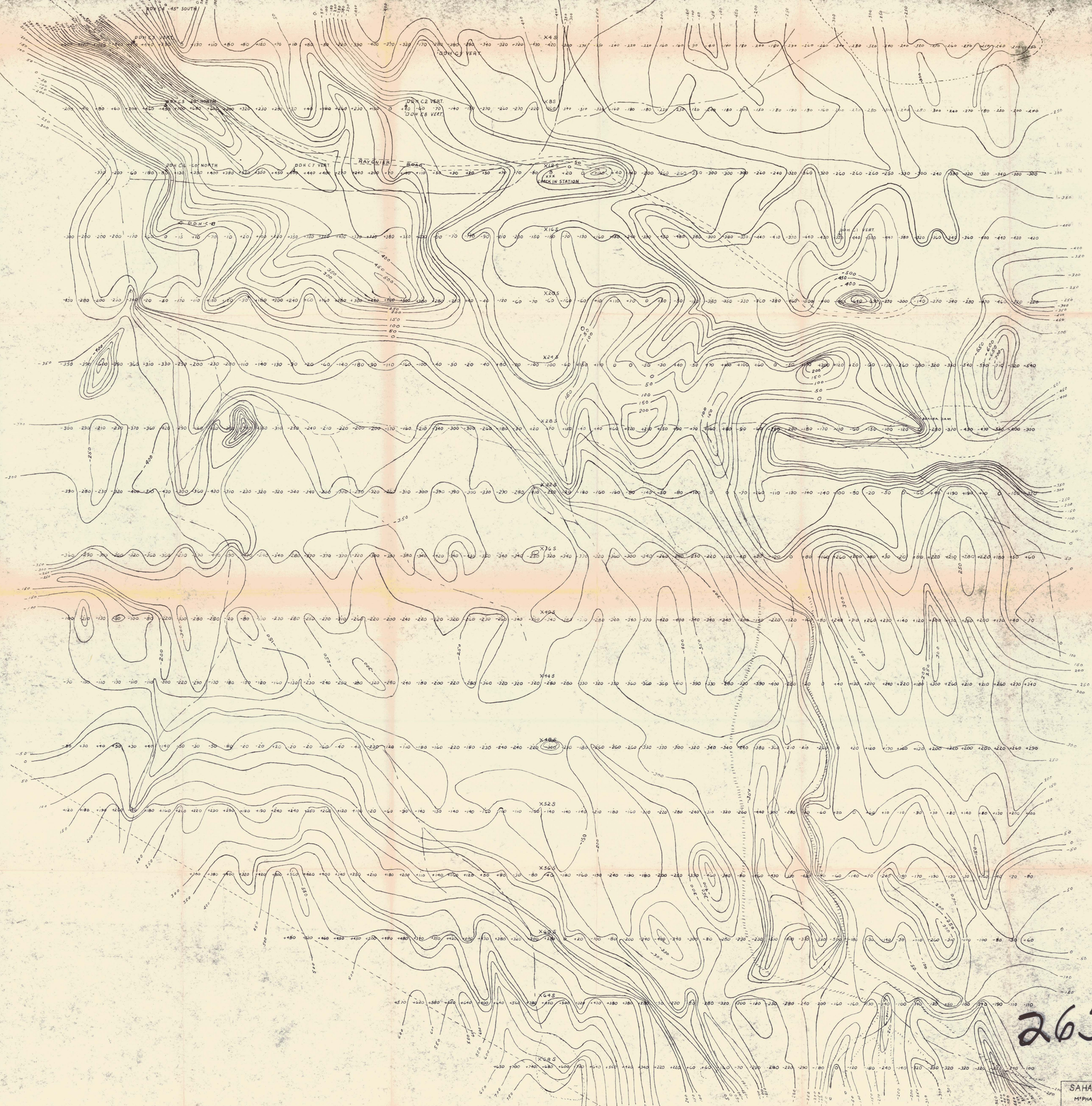


SAHARA EXPO GROUP
MIPHAR M-700 MAGNETOMETER SURVEY

PLATE 5

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SAHARA EXPO GROUP
MIPHAR M-700 MAGNETOMETER SURVEY
DRAWN BY: B. SMITH SCALE: 1 in = 200 FT.
DATE: SEPT 1969



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NO 2655 MAP #6

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PLATE 6

SAHARA EXPO GROUP
M'PHAR M-700 MAGNETOMETER
SURVEY
DRAWN BY: D. PORTER SCALE: 1 IN. = 200 FT.
DATE: 1 SEPT. 1963

W 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 E