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REPORT ON  
AIRBORNE MAGNETOMETER SURVEY  
IN THE  
LAC LE JEUNE AREA, BRITISH COLUMBIA  
FOR  
CANADIAN JOHNS-MANVILLE COMPANY LIMITED  
BY  
SPARTAN AERO LIMITED  
Project No. 70200

92I/8W, 9W

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 2870 MAP.....

REPORT ON

AIRBORNE MAGNETOMETER SURVEY

IN THE

LAC LE JEUNE AREA, BRITISH COLUMBIA

FOR

CANADIAN JOHNS-MANVILLE COMPANY LIMITED

BY

SPARTAN AERO LIMITED

PROJECT NO. 70200

E.J. Wilson, M.Sc.,  
Geophysicist

OTTAWA, ONTARIO,  
December 7, 1970

Robert W. Stemp, P.Eng.,  
Chief Geophysicist.

SPARTAN AERO LIMITED

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### Accompanying This Report:-

- A1* - One Airborne Magnetic Contour Map -  
Scale: 1 inch = 1000 feet.

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AIRBORNE MAGNETOMETER SURVEY  
IN THE  
LAC LE JEUNE AREA, BRITISH COLUMBIA  
FOR  
CANADIAN JOHNS-MANVILLE COMPANY LIMITED

I. INTRODUCTION

A magnetometer survey was flown by Spartan Aero Limited Ottawa, on behalf of Canadian Johns-Manville Company Limited, over mining claims numbered Pine 1 to 102 in the area of Lac Le Jeune, British Columbia. Lac Le Jeune is about 12 miles S.S.W. of Kamloops. A magnetometer equipped Aztec aircraft, registration CF-ORH based at Kamloops, performed the survey on the 26th. and 27th. of October, 1970.

Aero magnetic data was gathered from a total of 113.3 line miles of survey. Flight lines spaced 1/8 of a mile apart were oriented E.W. and the mean terrain clearance throughout the survey was 250 feet.

Spartan Aero Limited personnel associated with this project were as follows:

B. Duperron	Pilot - Navigator
D. Brady	Instrument Operator
W. Knappers	Chief Data Processor
D. Fitzsimmons	Chief Draftsman
E.J. Wilson	Geophysicist
R.W. Stemp	Chief Geophysicist.

## II. INSTRUMENTATION

The instrument flown is the Gulf Fluxgate Air Magnetometer, Model No. 3, with the sensor mounted in a tail stinger. The magnetometer was operated on the 600 gamma sensitivity setting and the output recorded on one pen (blue ink) of a 2 channel Hewlett Packard recorder Model 7100B which uses 10 inch chart paper. The short term sensitivity is approximately 1 gamma in the above installation and mode of operation. The second 1 channel of the recorder is used to provide a terrain clearance profile (red ink). The altitude is monitored using a Bonzer Radar Altimeter (non linear output).

The entire flight path is photographed by a vertically mounted Aeropath AS-5 35 mm. continuous-strip camera.

Synchronization of the film strip with the recorder is accomplished by means of an automatic fiducial numbering system using a Canadian Aero Service timer unit which prints simultaneous time markers on each record every 20 seconds. A test for time lag between the magnetometer and camera records was performed by flying traverse 30 in both directions.

The magnetic record is read in the following manner. With the chart oriented so that fiducial numbers increase from the right to the left, upward deflections on the chart indicate increases of the total magnetic field strength of the earth. When the record steps a change of 500 gammas is indicated. The step number multiplied by 500 gives an approximate value ( $\pm 300$ ) of the total magnetic field strength in gammas.

An altimeter calibration will be found at the beginning of flight no. 1

III. SURVEY AND MAP COMPILATION PROCEDURES

An uncontrolled airphoto mosaic serves as the base map for the survey and for compilation of the data. The scale is 1 inch to 1,000 feet approximately.

During compilation an arbitrary base level was selected, 5,000 gammas in the centre of the record for traverse 1. Levelling from profile to profile was done visually with guidance from the tie lines. The data is contoured to an interval of 10 gammas.

Respectively submitted,

*E. J. Wilson*

E.J. Wilson, B.Sc.,  
Geophysicist

*R. W. Stemp*

Robert W. Stemp, P.Eng.,  
Chief Geophysicist.

OTTAWA, ONTARIO,  
December 7, 1970.

Exp. Date: 12/31/72

NAME: WILSON, Edward, John  
DATE OF BIRTH: February 13, 1942  
PLACE OF BIRTH: Launceston, Australia  
CITIZENSHIP: Australian  
PASSPORT NUMBER: GE 273145  
PLACE OF ISSUE: Hobart, Tasmania  
DATE OF ISSUE: April 14, 1967  
DATE OF EXPIRY: April 15, 1972  
ADDRESS: 840 Springland Dr., Apt. 615,  
Ottawa, Ontario.



EDUCATION: 1960 - 1964 - University of Tasmania  
1965 - 1966

DEGREE: B.Sc. (1966) Major - Geophysics

Pre-Spartan Aero Experience:

Dec. 1963 - March 1965: Geological assistant with Hydro - Electric Commission of Tasmania. Assistance on civil construction projects (damsite, tunnel, power station) and geophysical prospecting for materials, chiefly by seismic refraction methods.

April 1966 - May 1967: Geophysicist with Hydro - Electric Commission of Tasmania. Duties included foundation assessment on civil construction projects involving dams, tunnels, power stations, roads etc. and geophysical prospecting for materials.



Spartan Aero Experience:

- (1) Ground EM, magnetic and geologic surveys in the Coppermine area, Northwest Territories Canadian Arctic.
- (2) Supervisor and electronic operator of airborne EM and magnetometer surveys in Northern Ontario and Quebec.
- (3) Geophysicist in charge of Induced Polarization surveys in parts of Ontario, Quebec and British Columbia utilizing the Newmont receivers.
- (4) Office interpretation of induced polarization surveys.
- (5) Office interpretation of airborne electromagnetic surveys.
- (6) Project manager of a large ground EM, magnetometer and geological ground follow-up program of an airborne survey in northwestern Quebec.

LANGUAGES:

English, basic French.



COST ANALYSIS

1. CONTRACT GEOPHYSICAL SURVEY:

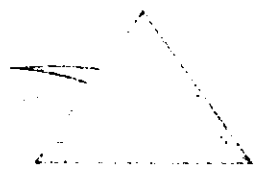
Airborne magnetometer survey \$ 2,500.00

TOTAL \$ 2,500.00



Expiry Date: Jan. 28, 1972

For detailed Cost Analysis Geophysical Survey, see Appendix III to Report on Ground Geophysical Survey Between October 21 and December 21, 1970 on the Pine Claim Group, Lac Le Jeune area, Kamloops, B.C.



# SPARTAN AERO LIMITED

OLD  
5

Canadian Johns Manville Co. Limited,  
P.O. Box 1500,  
ASBESTOS, Quebec.

Attention: Mr. H.K. Conn.

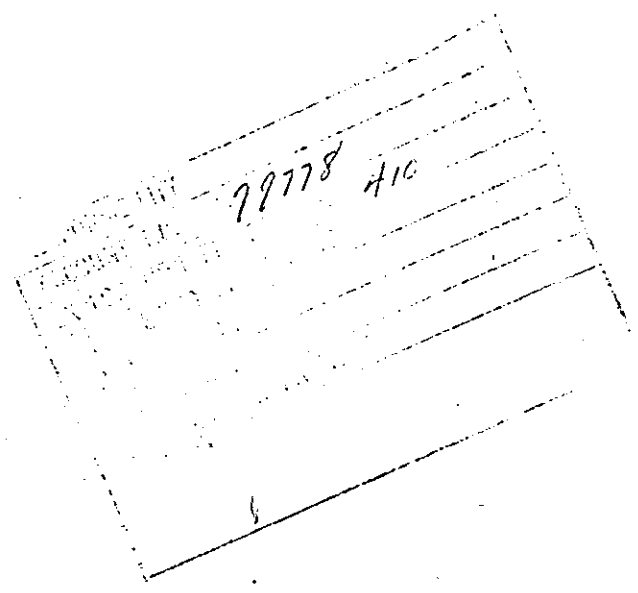
## INVOICE

NUMBER SAL1377  
DATE Dec.8th, 1970.  
YOUR ORDER Contract  
OUR ORDER 70200

RE: Contract dated October 29th, 1970

TO: Airborne magnetometer survey in the  
Lac Le Jeune Area of British Columbia

\$2,500.00





LEGEND

10 GAMMA CONTOUR .....

50 GAMMA CONTOUR .....

250 GAMMA CONTOUR .....

MAGNETIC LOW .....



*1/2 AS  
9/78*

AIRBORNE MAGNETOMETER SURVEY  
**LAC LE JEUNE AREA**  
 BRITISH COLUMBIA  
 CANADIAN JOHNS-MANVILLE CO. LTD.  
 SCALE: 1 INCH TO 1000 FEET (APPROX)

0585

2870

MEAN TERRAIN CLEARANCE ..... 250 FEET  
 TRAVERSE INTERVAL ..... 1/8 MILE  
 CONTOUR INTERVAL ..... 10 GAMMA  
 BASE INTENSITY ..... ARBITRARY  
 HORIZONTAL CONTROL ..... BASED ON PHOTO LAYDOWN

M-1

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 2870 MAP #1



SPARTAN AERO LIMITED  
 OTTAWA, ONTARIO