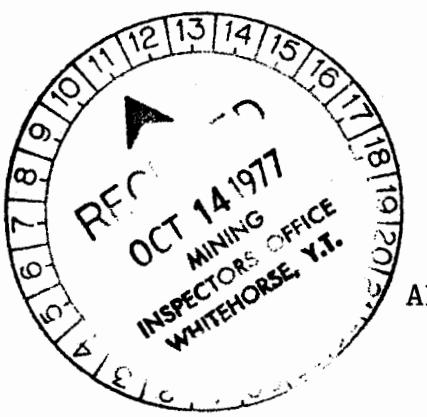
1977 Geophysical Assessment Report

TITLE	Fishook Creek Gravity Survey
CLAIMS	AM #1 - 176 Inclusive and PM #1 - 8 Fractional Inclusive
COMMODITY	Pb-Zn
LOCATED	Twenty miles northwest of Faro, Y.T. Latitude 63°33'N Longitude 134°07'W Whitehorse Mining District 105L 8 & 9
BY	J.L. LeBel
FOR	AMAX POTASH LIMITED
WORK PERIOD	Work was carried out during June 20 to July 19, 1977

105-L-8 & 9



AMAX VANCOUVER OFFICE

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This report has been examined b
Geological Evaluation Unit and is
mended to the Commissioner to be c
ed as representation work in the a
$ 25,403.60

J A Mann
Resident Geologist or
Resident Mining Engineer

Considered as representation wor
Section 53 (4) Yukon Quartz Min

B. R. BAXTER
Supervising Mining Recorder

Commissioner of

TABLE OF CONTENTS

APPENDICES

ILLUSTRATIONS

SUMMARY

Approximately thirty miles of gravity survey were executed on Fishook Creek Property by Airborne Geophysical Surveys of Calgary.

The survey detected several modest positive and negative gravity anomalies of unknown significance.

Further definition of the positive residual anomalies by reducing line spacing may be warranted. Since the steep terrain on the property has considerable influence on the results, additional levelling may be required to ensure complete removal of terrain effects especially from anomalies near the edge of the present coverage.

INTRODUCTION

This report documents the results of a gravity survey conducted on the Fishook Creek Property.

The Fishook Creek property is located about twenty miles northwest of the town of Faro on the flanks of Tay Mountain in the Anvil Range (see Figure 1). The property lies within the boundaries of Whitehorse Mining District on maps NTS 105-L-8 and 9.

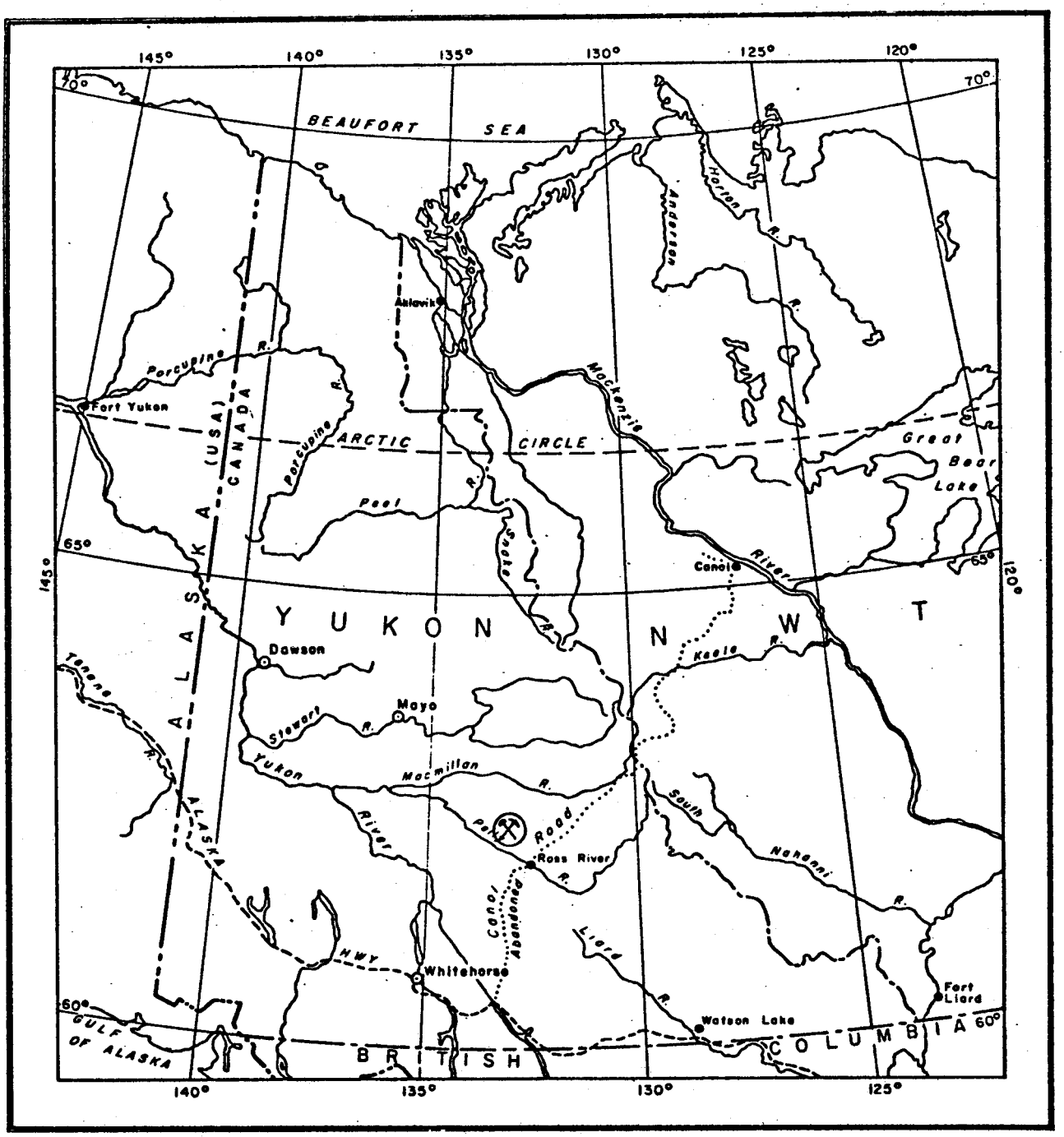
The property consists of 176 full-sized claims (AM 1-176) and 8 fractional claims (PM 1-8) owned by AMAX Potash Limited (see Figure 2).

The gravity survey was conducted between June 20 and July 19, 1977 by Airborne Geophysical Surveys of Calgary. Sixteen northeast/southwest lines spaced at 800-foot intervals and a northwest/southeast oriented base-line totalling approximately thirty line-miles were surveyed. A total of 1,349 gravity stations and 1,501 transit stations were occupied.

The crew assigned to the project by Airborne Geophysical Surveys consisted of M. McCombe, M. deBoer, and A. deBoer. Some comments on the survey and interpretation of the results reported herein were made by R. Galeski of Airborne Geophysical Surveys.

About twenty miles of line cutting by Eastern Associates of Whitehorse preceeded the gravity survey.

The gravity survey was undertaken to evaluate a sequence of graphitic phyllites for massive sulphide occurrences.



AMAX POTASH LIMITED

FISHOOK CREEK PROPERTY

WHITEHORSE MINING DISTRICT — YUKON TERRITORY

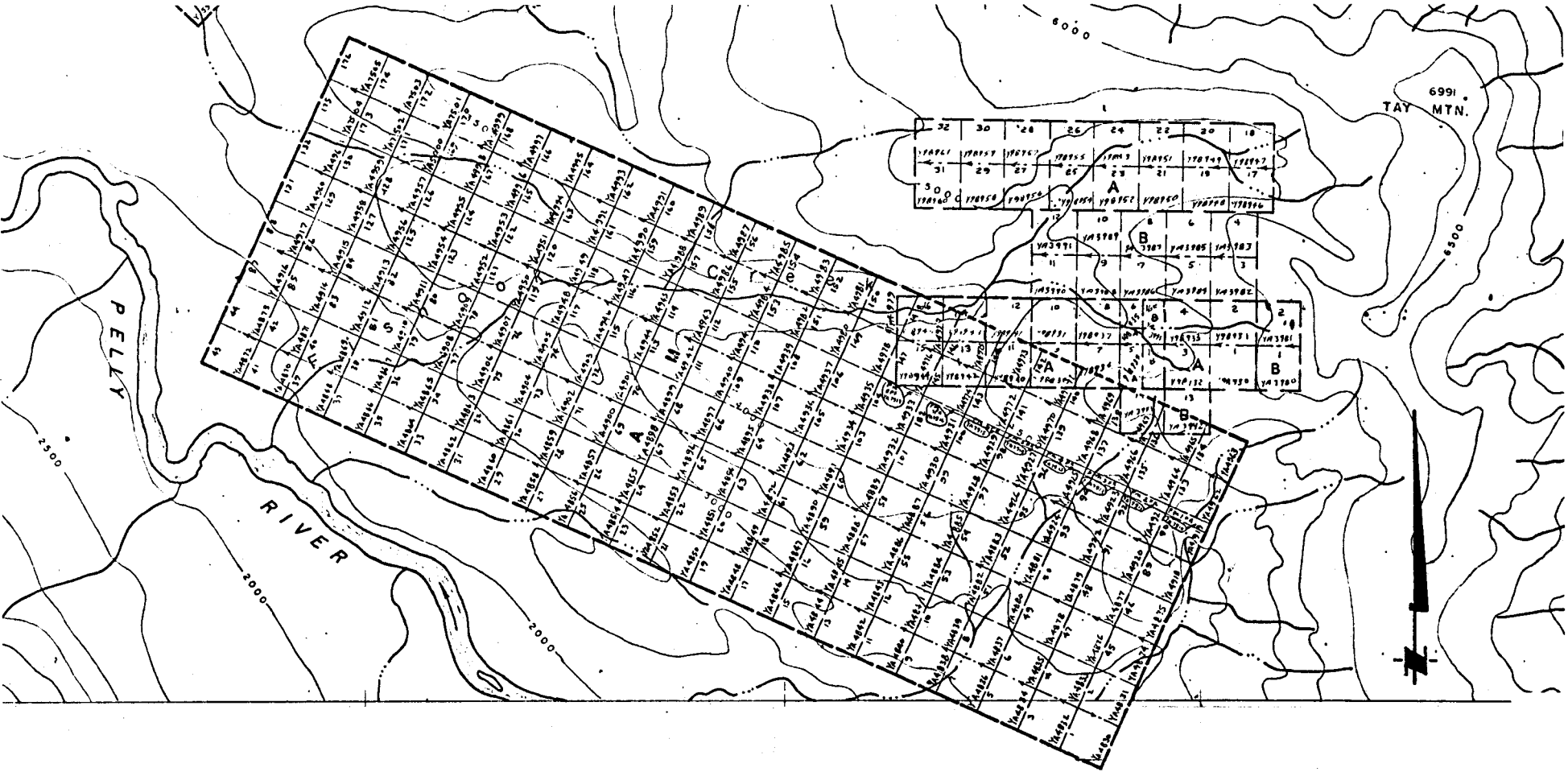
LOCATION MAP

SCALE 1" = 120 MILES

N. T. S. Ref. 105 L 8 and 9

FIG. 1

Vancouver - H.P.



AMAX POTASH LIMITED

FISHOOK CREEK PROPERTY

WHITEHORSE MINING DISTRICT — YUKON TERRITORY

CLAIM MAP

SCALE 1 0 1 MILES
2 0 2 KILOMETRES

N. T. S. Ref.: 105 L 8 and 9

FIG. 2

PROCEDURE AND DATA REDUCTION

The gravity survey was conducted with a LaCoste Romberg Model G gravimeter. Readings were taken at 100-foot intervals.

The level survey was done by transit and stadia. The elevations are referenced to station 7N on Line 72E where an elevation of 4,300 feet was estimated from a topographic map.

Standard elevation corrections assuming 2.67 gm/cc density and latitude corrections were applied to the gravity data. Terrain corrections for C, D, and E rings of standard terrain correction charts for a density of 2.67 gm/cc were also calculated and applied to each reading. Extrapolated topography correction estimates were applied, for topographic features outside the survey area to stations within 500 feet of the edge of the area.

The data were plotted in profile and the regional gravity was visually estimated. The residual gravity was calculated by subtracting the regional gravity from the terrain corrected Bouger gravity.

PRESENTATION OF DATA

The results of the gravity survey are presented in plan at a scale of 1" = 400'.

Figure 3 shows the elevations contoured at 20-foot intervals and the disposition of the claims within the survey area.

Figures 4, 5, and 6 display complete Bouger gravity, regional gravity and residual gravity respectively.

RESULTS

The Bouger gravity varies from 11 mgal at the northwest end of the grid to 9 mgal at the southeast end. The gravity displays a broad high which plunges and flattens from northwest to southeast as emphasized by the estimated regional gravity map. Numerous local gravity features are superimposed on the regional component.

A sharp linear gravity low corresponds to the Fishook Creek valley occurs in the north corner of the map. It is not considered in the residual gravity map because of its proximity to the edge of coverage where terrain corrections are imprecise.

Another low occurs at 33N on Lines 104E and 112E. Comparison with elevation map indicates coincidence with a broad topographic high. A similar low occurs at 4S on Line 56E where the elevation map indicates a local topographic high.

Noses on the regional gradient in the vicinity of 96E-20S and 128E-20S produce positive residual anomalies as shown relative to the regional component selected.

A Bouger gravity closure extends between 35-40S on Line 40E and 31S on Line 64E. The anomaly continues as a "nosing" feature as far as 40S on Line 88E. The anomaly occurs along a pronounced bench in the topographic profiles and is close to the boundary of the survey area. In the residual map the anomaly appears 3,000 feet long with 1 mgal maximum amplitude and may extend northwest to Line 40E.

DISCUSSION OF RESULTS

Two residual gravity lows occur at or near two topographic highs in the area (33N on Lines 104E and 112E and 4S on Line 56E). The anomalies suggest that the topographic highs are composed of less dense material perhaps gravels (drumlins?). According to Galeski similar anomalies occur elsewhere in the Yukon where the glacial gravel explanation is invalid. Graphite occurs on the property but usually in bands rather than equidimensional bodies as suggested by the shape of the gravity lows. The gravity low which coincides with the Fishook Creek Valley serves to emphasize the inadequacy of the terrain correction in areas of steep topography.

The significant positive residual gravity anomalies are labelled A to D.

Interpretation of Anomaly A at 35-40S on Line 80E yields a causative mass (slab configuration) less than 500 feet deep and about 100 feet thick. The apparent continuation of the anomaly to Line 40E may result from an inability of the terrain correction to compensate for the steep topography in the area. Although the anomaly coincides with a bench on a steep topographic incline, the anomaly appears relatively free of topographic effects between Lines 56E and 88E.

Inspection of Anomaly 13 at 24S on Line 96E suggests a causative body similar to Anomaly A but with smaller lateral dimensions. The proximity of Anomaly B to Anomaly A is noted.

Anomaly C, near the north end of Line 64E is not convincing because of its proximity to the edge of the area where terrain corrections are imprecise and its occurrence on only one line.

Anomaly D, with apex at 12S on Line 128E, is consistent with a 35 foot thick mass located at depth less than 225 feet. An overburden effect is suspected.

RECOMMENDATIONS AND CONCLUSIONS

Several positive gravity anomalies of unknown significance were detected by the survey. Detailed, interline gravity coverage is required to fully define the extent of the anomalies. Expanded level coverage may be required to ensure adequate removal of terrain effects from anomalies near the edge of the survey area, particularly near Anomaly A.

AMAX Vancouver

September 30, 1977

J.L. LeBel. M.Sc.

APPENDIX IV

LIST OF CLAIMS

CLAIM NAME	GRANT NUMBERS	ANNIVERSARY DATE
AM 1-171 inclusive	YA4830-YA5000 inclusive	July 20, 1977
AM 172-176 inclusive	YA7501-YA7505 inclusive	July 20, 1977
PM 1-8 FR. inclusive	YA7910-YA7917 inclusive	Aug. 27, 1977

Located claim post.

Claim post not located.

Claim location line.

Claim boundary.

AMAX

FISHOOK CREEK

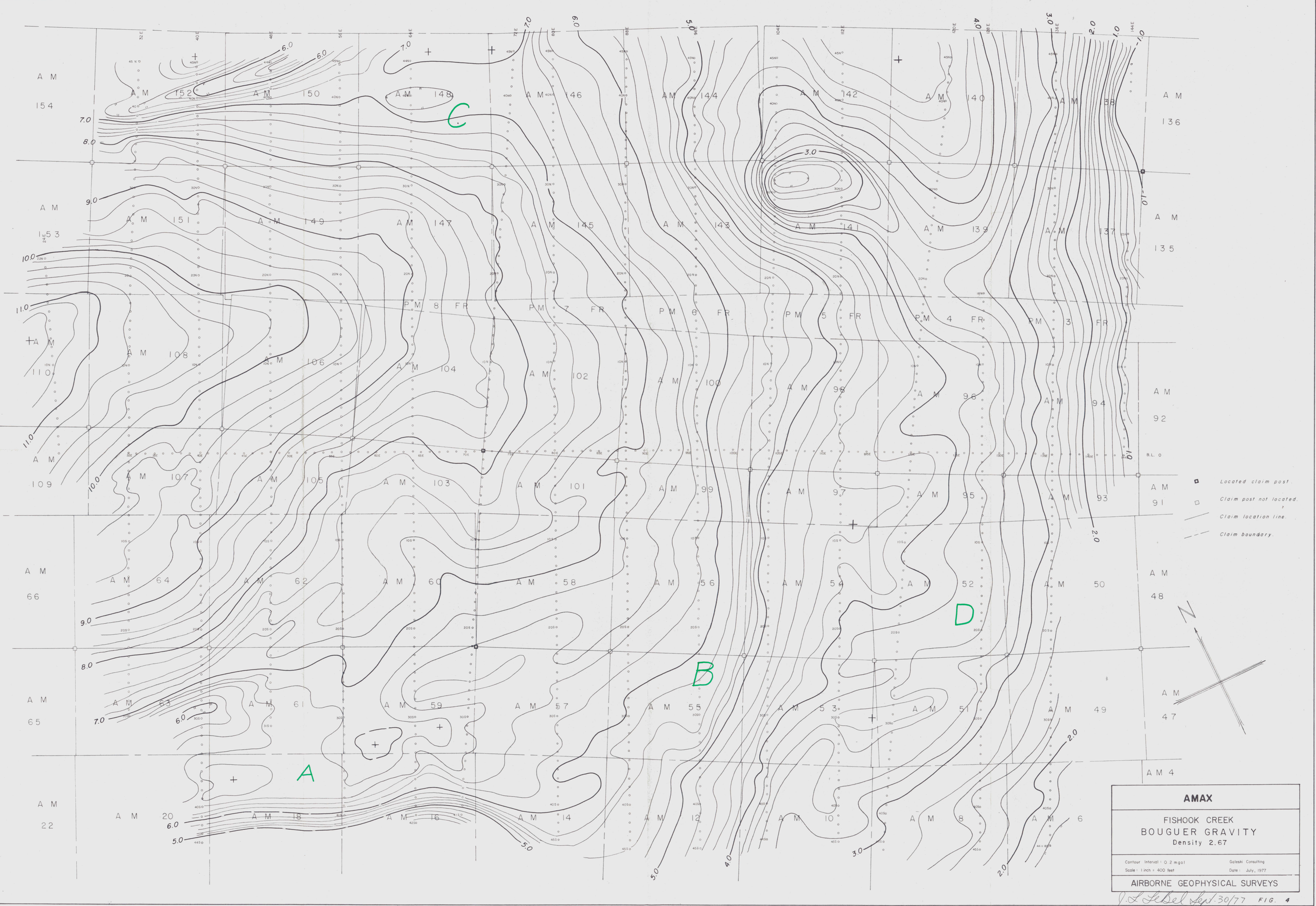
SURFACE ELEVATION

Contour Interval : 20 feet — Galeski Consulting

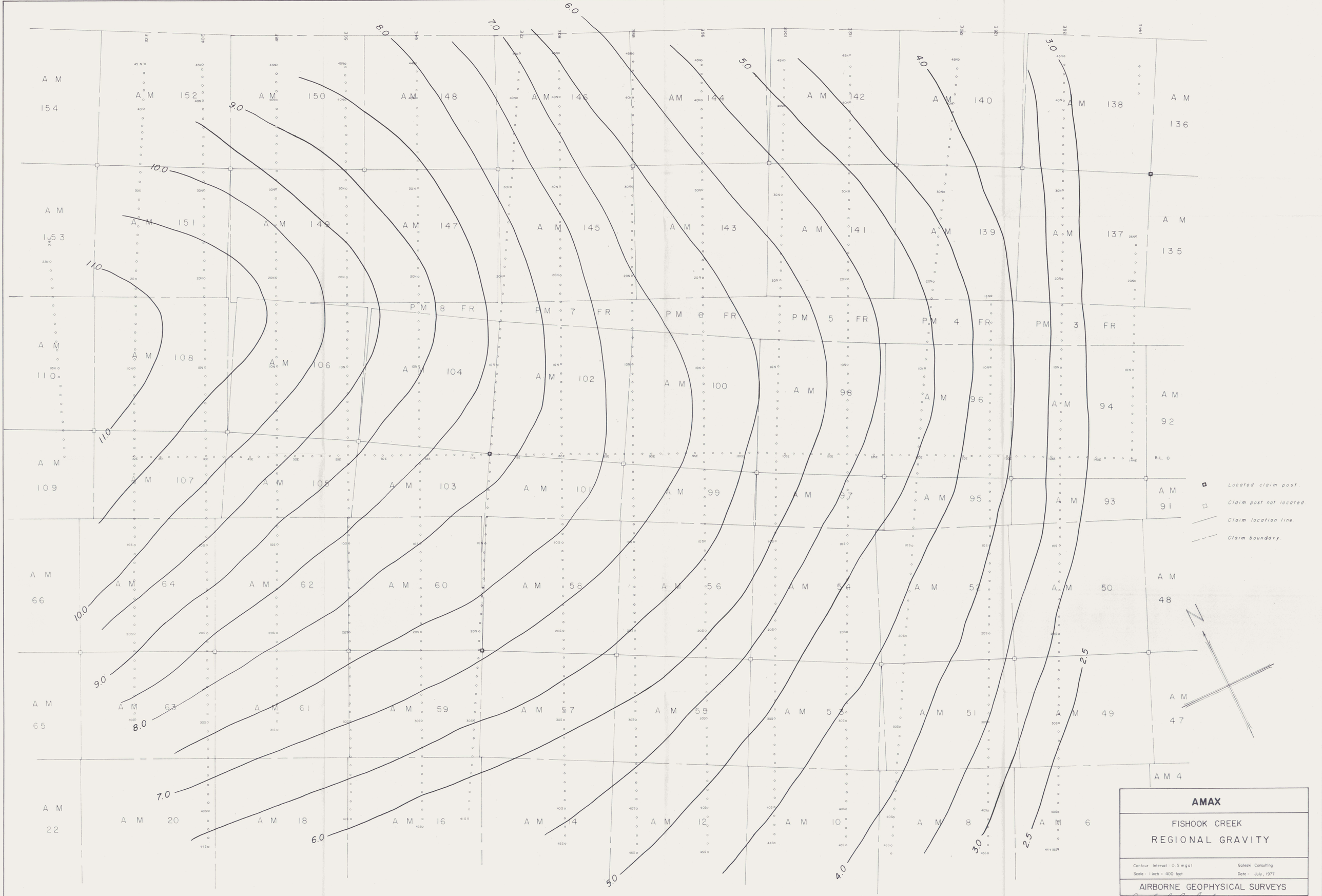
Scale : 1 inch = 400 feet — Date : July, 1977

AIRBORNE GEOPHYSICAL SURVEYS

D. L. LeBel Sept. 30/77 FIG. 3



J. L. LeBel Sept. 30/77 FIG. 4


6.0
7.0
8.0
9.0
10.0
11.0
AM 154
AM 152
AM 150
AM 148
AM 146
AM 144
AM 142
AM 140
AM 138
AM 136
AM 153
AM 151
AM 149
AM 147
AM 145
AM 143
AM 141
AM 139
AM 137
AM 135
PM 8 FR
PM 7 FR
PM 6 FR
PM 5 FR
PM 4 FR
PM 3 FR
AM 110
AM 108
AM 106
AM 104
AM 102
AM 100
AM 98
AM 96
AM 94
AM 92
AM 109
AM 107
AM 105
AM 103
AM 101
AM 99
AM 97
AM 95
AM 93
AM 91
AM 66
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AM 56
AM 54
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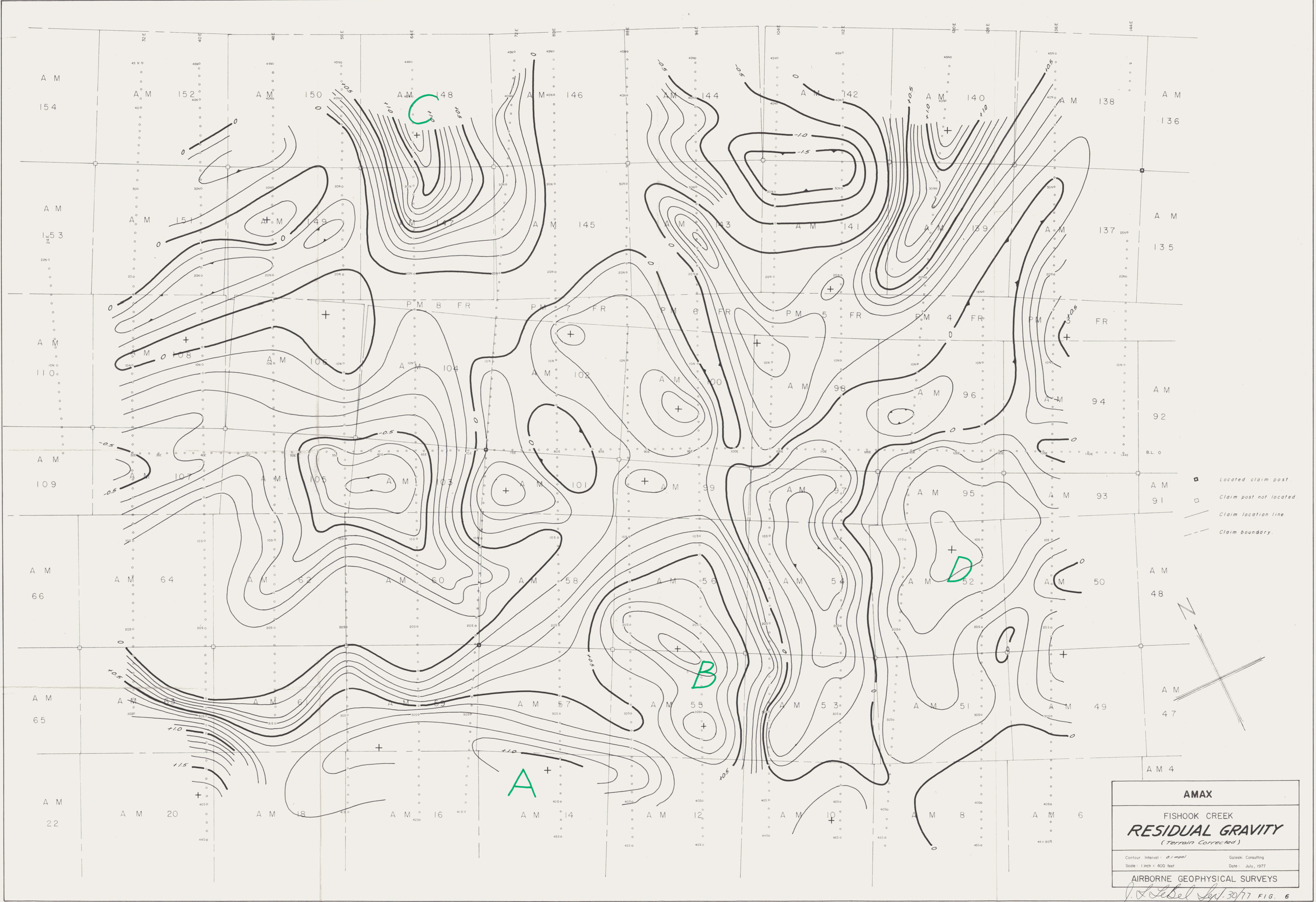
AM 50
AM 48
AM 65
AM 63
AM 61
AM 59
AM 57
AM 55
AM 53
AM 51
AM 49
AM 47
AM 22
AM 20
AM 18
AM 16
AM 14
AM 12
AM 10
AM 8
AM 6
AM 4
B.L. O
Located claim post
Claim post not located
Claim location line
Claim boundary
N
AMAX
FISHOOK CREEK
REGIONAL GRAVITY
Contour Interval : 0.5 mgal
Scale : 1 inch = 400 feet
Geleski Consulting
Date : July, 1977
AIRBORNE GEOPHYSICAL SURVEYS
J. L. LeBel Sept. 30/77
FIG. 5


A
B
D
Located claim post
Claim post not located
Claim location line
Claim boundary
B.L. 0
AMAX
FISHOOK CREEK
RESIDUAL GRAVITY
(Terrain Corrected)
Contour Interval : 0.1 mgal
Scale : 1 inch = 400 feet
Galeski Consulting
Date : July, 1977
AIRBORNE GEOPHYSICAL SURVEYS
J. A. LeBel Sept. 30/77 FIG. 6