MAR 19950011: FORT FITZGERALD

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GEOLOGICAL REPORT
on
FORT SMITH AND FORT FITZGERALD AREA
EXPLORATION PROJECT
in
NORTHEAST ALBERTA

for

E. J. Friesen and Associates Inc.

Adrian G. Mann Ph.D., P.Geol.

RUTHRIE Enterprises Ltd.,
10443 Brackenridge Road, S.W.,
Calgary, Alberta - T2W 1A1

11 August 1995

FRONTICEPIECE

The Dog River Linear, looking east from the hills southwest of Three Pond Slough, east of Beaver Lake

E.J. Friesen & Associates Inc.

#8 Lake Placid Rise S.E.
Calgary, Alberta T2J 5B5

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ENERGY/ENV. PROT.
MAIL 2

15 AUG 95 06 25

August 12, 1995

Alberta Energy
Mineral Resources Division
Petroleum Plaza - North Tower
9945 - 108 Street
Edmonton, Alberta T5K 2G6

Att: Mr. Brian Hudson
Manager, Mineral Agreements

Dear Sir:

Re: Metallic Mineral Permits
9392060003
9392060004
9392070001
9392070002
9392070003
9392070004

(1) As part of our work on these permits, we have identified the portions which we wish to retain.

Metallic Mineral Permits 9392060003 and 9392060004 were reduced in size in April 1995.

We further wish to reduce the size of Metallic Mineral Permits 9392070001, 9392070002, 9392070003 and 9392070004 as per the attached, which is summarized as follows:

(a) Metallic Mineral Permit 9392070001

Area	LSD's	Hectares
5	70	1120

(b) Metallic Mineral Permit 9392070002

Delete total area

(c) Metallic Mineral Permit 9392070003

Delete total area

(d) Metallic Mineral Permit 9392070004

Area	LSD's	Hectares
6	121	1936

The new metallic Permits are described in detail on the following documents (copies attached)

(i) Area Map - Drawing # 95041-M1 Rev. 1

(ii) Permit descriptions (Pages 1 to 5)

(2) The assessment report (2 copies) for these Metallic Mineral Permits is attached. Apart from claim and permit acquisition costs of $2,700.00, a total sum of $40,614.00 has been spent in geological and allied research work on these properties to July 1995.

Please contact the writer should you have any questions.

Thank you for your assistance.

Yours truly;

E.J. Friesen & Associates Inc.

[redacted]

Ed Friesen
President

E.J. Friesen & Associates Inc.
Alberta Metallic and Industrial Minerals Permit
Description

Minerals Permit # 9392070001
Date: August 12, 1995
Reference Drawing # 95041-M1 Rev. 1

Area # 5

01-04-126-10 W4M	02-04-126-10 W4M
03-04-126-10 W4M	04-04-126-10 W4M
05-04-126-10 W4M	06-04-126-10 W4M
07-04-126-10 W4M	08-04-126-10 W4M
01-05-126-10 W4M	02-05-126-10 W4M
05-05-126-10 W4M	06-05-126-10 W4M
07-05-126-10 W4M	08-05-126-10 W4M
09-05-126-10 W4M	10-05-126-10 W4M
11-05-126-10 W4M	12-05-126-10 W4M
09-06-126-10 W4M	10-06-126-10 W4M
11-06-126-10 W4M	12-06-126-10 W4M
13-06-126-10 W4M	14-06-126-10 W4M
15-06-126-10 W4M	16-06-126-10 W4M
09-34-125-10 W4M	10-34-125-10 W4M
11-34-125-10 W4M	12-34-125-10 W4M
13-34-125-10 W4M	14-34-125-10 W4M
15-34-125-10 W4M	16-34-125-10 W4M
09-35-125-10 W4M	10-35-125-10 W4M
11-35-125-10 W4M	12-35-125-10 W4M
13-35-125-10 W4M	14-35-125-10 W4M
15-35-125-10 W4M	16-35-125-10 W4M
01-36-125-10 W4M	02-36-125-10 W4M
05-36-125-10 W4M	06-36-125-10 W4M
07-36-125-10 W4M	08-36-125-10 W4M
09-36-125-10 W4M	10-36-125-10 W4M
11-36-125-10 W4M	12-36-125-10 W4M
13-36-125-10 W4M	14-36-125-10 W4M
03-31-125-09 W4M	04-31-125-09 W4M
05-31-125-09 W4M	06-31-125-09 W4M

E.J. Friesen & Associates Inc.
Alberta Metallic and Industrial Minerals Permit
Description

Minerals Permit # 9392070001
Date: August 12, 1995
Reference Drawing # 95041-M1 Rev. 1

Area # 5 (continued)

01-30-125-09 W4M	02-30-125-09 W4M
07-30-125-09 W4M	08-30-125-09 W4M
09-30-125-09 W4M	10-30-125-09 W4M
11-30-125-09 W4M	12-30-125-09 W4M
13-30-125-09 W4M	14-30-125-09 W4M
15-30-125-09 W4M	16-30-125-09 W4M

Total 70 LSD's

E.J. Friesen & Associates Inc.
Alberta Metallic and Industrial Minerals Permit
Description

Minerals Permit # 9392070004
Date: August 12, 1995
Reference Drawing # 95041-M1 Rev. 1

Area # 6

01-14-125-09 W4M	02-14-125-09 W4M
03-14-125-09 W4M	06-14-125-09 W4M
09-14-125-09 W4M	10-14-125-09 W4M
01-13-125-09 W4M	02-13-125-09 W4M
03-13-125-09 W4M	04-13-125-09 W4M
05-13-125-09 W4M	06-13-125-09 W4M
07-13-125-09 W4M	08-13-125-09 W4M
11-13-125-09 W4M	12-13-125-09 W4M
14-12-125-09 W4M	15-12-125-09 W4M
16-12-125-09 W4M	
07-01-125-08 W4M	08-01-125-08 W4M
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11-01-125-08 W4M	12-01-125-08 W4M
13-01-125-08 W4M	14-01-125-08 W4M
15-01-125-08 W4M	16-01-125-08 W4M
09-02-125-08 W4M	10-02-125-08 W4M
13-02-125-08 W4M	14-02-125-08 W4M
15-02-125-08 W4M	16-02-125-08 W4M
16-03-125-08 W4M	
09-07-125-08 W4M	10-07-125-08 W4M
11-07-125-08 W4M	12-07-125-08 W4M
13-07-125-08 W4M	14-07-125-08 W4M
15-07-125-08 W4M	16-07-125-08 W4M
05-08-125-08 W4M	06-08-125-08 W4M
07-08-125-08 W4M	08-08-125-08 W4M
09-08-125-08 W4M	10-08-125-08 W4M
11-08-125-08 W4M	12-08-125-08 W4M
13-08-125-08 W4M	14-08-125-08 W4M
15-08-125-08 W4M	16-08-125-08 W4M

E.J. Friesen & Associates Inc.
Alberta Metallic and Industrial Minerals Permit
Description

Minerals Permit # 9392070004
Date: August 12, 1995
Reference Drawing # 95041-M1 Rev. 1

Area # 6 (continued)

05-09-125-08 W4M	06-09-125-08 W4M
07-09-125-08 W4M	08-09-125-08 W4M
09-09-125-08 W4M	10-09-125-08 W4M
11-09-125-08 W4M	12-09-125-08 W4M
01-10-125-08 W4M	02-10-125-08 W4M
03-10-125-08 W4M	04-10-125-08 W4M
05-10-125-08 W4M	06-10-125-08 W4M
07-10-125-08 W4M	08-10-125-08 W4M
11-10-125-08 W4M	12-10-125-08 W4M
01-11-125-08 W4M	02-11-125-08 W4M
03-11-125-08 W4M	04-11-125-08 W4M
05-11-125-08 W4M	12-11-125-08 W4M
02-17-125-08 W4M	03-17-125-08 W4M
04-17-125-08 W4M	05-17-125-08 W4M
06-17-125-08 W4M	07-17-125-08 W4M
03-03-125-07 W4M	04-03-125-07 W4M
01-04-125-07 W4M	02-04-125-07 W4M
03-04-125-07 W4M	04-04-125-07 W4M
05-04-125-07 W4M	06-04-125-07 W4M
07-04-125-07 W4M	08-04-125-07 W4M
01-05-125-07 W4M	02-05-125-07 W4M
05-05-125-07 W4M	06-05-125-07 W4M
07-05-125-07 W4M	08-05-125-07 W4M
09-05-125-07 W4M	10-05-125-07 W4M
11-05-125-07 W4M	12-05-125-07 W4M

E.J. Friesen & Associates Inc.
Alberta Metallic and Industrial Minerals Permit
Description

Minerals Permit # 9392070004
Date: August 12, 1995
Reference Drawing # 95041-M1 Rev. 1

Area # 6 (continued)

05-06-125-07 W4M	06-06-125-07 W4M
07-06-125-07 W4M	08-06-125-07 W4M
09-06-125-07 W4M	10-06-125-07 W4M
11-06-125-07 W4M	12-06-125-07 W4M
13-06-125-07 W4M	14-06-125-07 W4M
15-06-125-07 W4M	16-06-125-07 W4M
13-34-124-07 W4M	14-34-124-07 W4M

Total 121 LSD's

GEOLOGICAL REPORT on PRECIOUS METALS in NORTHEAST ALBERTA

Permit Number's

9392060003
9392060004
9392070001
9392070002
9392070003
9392070004

EXECUTIVE SUMMARY

E.J. Friesen and Associates Inc, has Metallic Mineral Exploration Permits in the area centred on Fort FitzGerald, northeast Alberta, where an unusual configuration of aeromagnetic features requires some attention.

A study of the aerial photographs in and around the permits, in conjunction with a re-examination of the early government aeromagnetic work highlighted certain target areas where field work was required. Field mapping rejected some of these areas as being too difficult to assess, through paucity of outcrop, lack of access; and brought certain others to the fore, where some ground magnetometery, soil-, stream- and rock chip sampling, and detailed structural work has been undertaken.

Apart from claim and permit acquisition costs of $2,700.00, a total sum of $40,614.00 has been spent in geological and allied research work on these properties to July 1995.

The company has the technical and professional ability to address the project in a workmanlike manner. The project is speculative, but is built on solid scientific foundations, and has potential merit.

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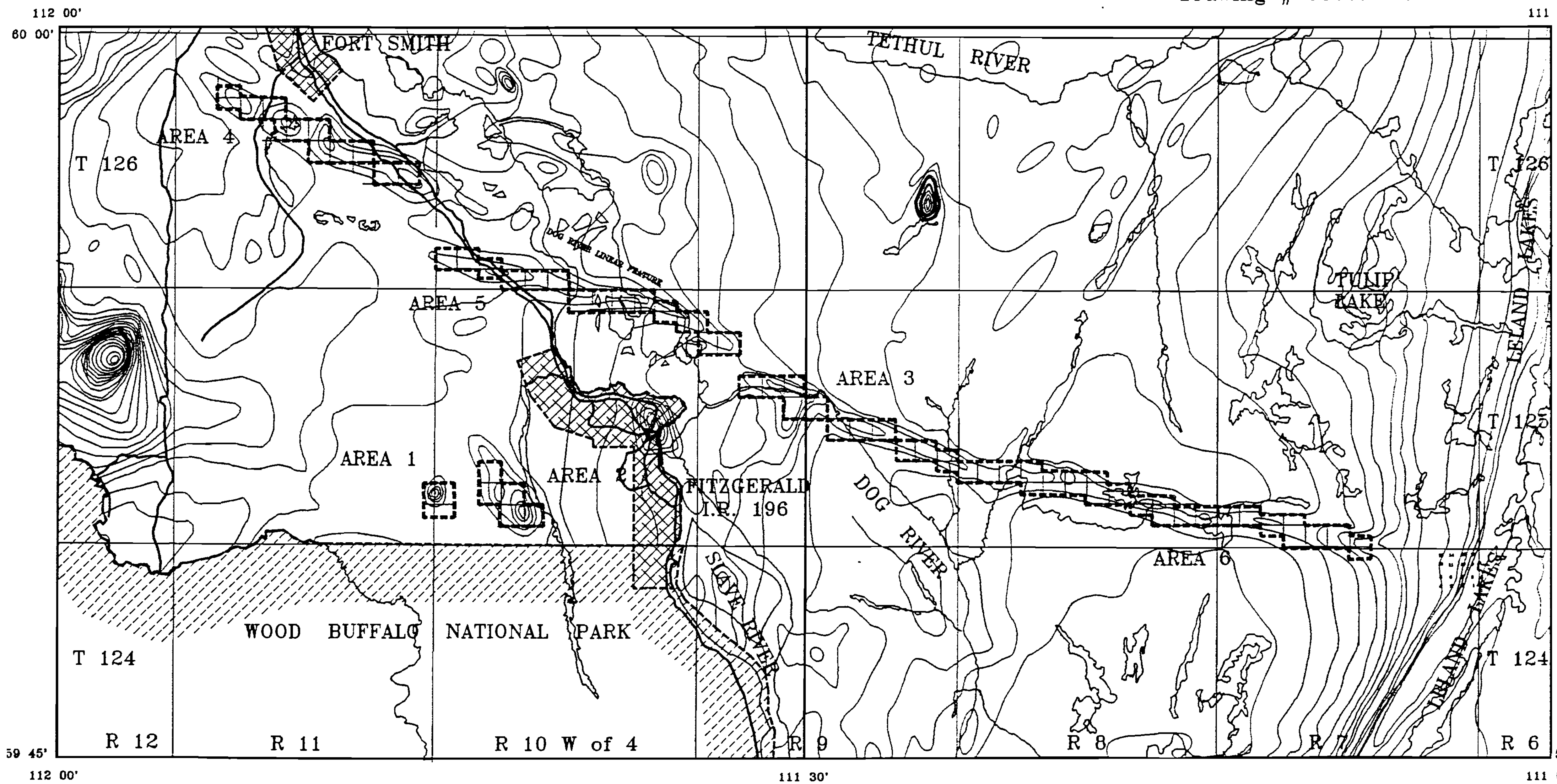
LIST OF FIGURES

E.J. FRIESEN & ASSOCIATES INC.

FITZGERALD EXPLORATION PROJECT - NORTHEAST ALBERTA   Drawing # 95041-M1 Rev. 1



1 Terms of Reference

I, Adrian Gardiner MANN, an associate of E. J. Friesen and Associates Inc., was retained by E.J. Friesen and Associates Inc. at irregular times over the past three years to visit, and to examine all data on, and in the immediate vicinity of, the company's Metallic Minerals Exploration Permits in Northeastern Alberta, to review them critically, and to report on the potential for viable economic mineral deposits in the area in general, and on these permits in particular.

To this end, I have:

1.1 read the literature quoted and other learned papers;

1.2 examined information in the company's records pertaining to the area;

1.3 examined the aerial photographs of the area at the University of Calgary Library;

1.4 visited the area, sketch mapped certain exposures, and taken numerous spot samples.

2 Property Description, Ownership and Location

The company has a modest land holding to the north, east and west of Fort Fitzgerald, being six metallic mineral permits which were staked in 1991. Individual blocks, their ownership and anniversary dates are detailed on Table I, and depicted on Fig 1.

3 Access, Climate, Infrastructure

The Fort Smith Weather Guide, produced by the department of Economic Development and Tourism of the Northwest Territories, describes the climate of the area as one of long cold winters, in which daily maximum temperatures for January average -22°C, daily minimum temperatures average -32°C; and short cool summers, in which July temperatures average 22°C. The area is cool, but summer temperatures in excess of 35°C have been recorded, as too have winter temperatures below -50°C. There are 200 days in which the average daily temperature is below 0.0°C. Snow of a measurable amount falls between 10 and 14 times a month in winter. Annual snowfall averages 150cm, average rainfall averages 210mm per annum. The ground is generally snow free from April through October.

There are power, utilities, and a serviced airport at the town of Fort Smith, some 15km north of Fort Fitzgerald. Forth Smith is connected by gravel highway with Hay River, and thus to Peace River in Alberta, and by excellent gravel road to Fort Fitzgerald. Apart from the main roads detailed above, access thereafter is difficult, served by the winter road through Fort Chipewyan to Fort McMurray in the southeast, and by winter road through the Wood Buffalo National Park to Fort Vermilion in the southwest. Some poor forestry and seismic roads exist, plus hunters' and oil strat-test well-access tracks in poor to very poor condition, but which are generally accessible in most weather by ATV.

Field operations have been headquartered in Fort Smith and all consumables could be obtained there. Apart from the two settlements, the area is largely uninhabited, but skills and equipment are available locally, both in the local native settlement, and in Fort Smith.

4 Geology

4.1 Surficial Geology

The west is characterized by thick glacial drift, and a paucity of outcrop. Indicated ice flow from evidence of glacial fluting, was from northeast towards southwest. Beneath this cover, there is sporadic outcrop of Devonian sedimentary rocks. .

The regional geological map on 1:250 000 scale, shows muskeg and little or no outcrop: the west underlain by Devonian sediments; the east by Archaean gneisses. Baycock's quaternary geology map indicates ice flow from northeast towards southwest, with some outcrop, particularly along the river. The area is a flat and generally featureless plain cut down the centre by the Slave River which runs from south to north in a shallow gorge, some 50 to 75 ft (15 to 25m) deep. Rocky outcrops occur in the river at Pelican, Cassette and Mountain Rapids.

5 Detailed Investigations

A review of the geology, aeromagnetics, regional gravimetry, satellite imagery, and air photogeology of the area was completed in 1992. Several bullseye anomalies occur, together with a distinct linear. These were initially regarded as a suitable target for a low-level airborne magnetometer survey. However, more detailed consideration suggested that field examination would suffice, as the coverage is adequate as a first pass.

5.1 Aeromagnetism.

With flight lines at 800m intervals, and flight elevation of 300m above very level terrain (topography variance of <100ft), the area has good aeromagnetic coverage, albeit unsuited to the small targets envisaged. The magnetic response is subdued, but of interest are:

5.1.1 A remarkably linear feature, of over 40km length, striking 110° from Fort Smith in the northwest to south of Tulip lake in the east, has a magnitude of 50nT above background of c60900nT, and is asymmetric in profile, with a low along the northern flank. Width is generally less than 1000m. Reference is made to this below as the **DOG RIVER LINEAR.**

5.1.2 Several "bullseye" magnetic highs, few of which span more than two adjacent flight lines, have magnitudes of 30 to 120nT above background. Stronger anomalies, spanning several flight lines, and those aligned in a north-northeast direction, were discounted as manifestations of the subsurface preglaciation topography. It is pertinent that selected highs do not coincide with isolated topographic highs or lows. Density of anomalies is some 20 in $250km^2$. Specific features which require further investigation are:

GRQ#1 6km southwest of Fitzgerald is a magnetic high within a broader high zone which trends northwest (against the regional presumed strike). The southernmost "bullseye" is of interest. Magnitude of the local high zone is 40nT, covering some 4000m by 800m. The bullseye is 40nT above this, over a 400m diameter circle.

GRQ#2 Centred directly on Fitzgerald is an isolated bullseye of 120nT magnitude covering 1500m by 1200m. This could be a function of basement proximity.

GRQ#3 3.5km west of GRQ#1 is an isolated bullseye of dimensions 80nT over a circle of 800m diameter.

GRQ#4 Directly south of the Dog River Linear Feature, 5km east of Fitzgerald, is a 30nT magnetic high, elongated 1500m north-south and 500m east-west.

GRQ#5 On the north flank of the peninsula south of Mountain Rapids is an isolated 40nT high of 500m diameter. A magnetic low of equal size lies to the north.

GRQ#6 6km directly east of Pelican Rapids is an isolated 50nT high of 800m diameter. Inflection of the magnetic contours suggests a low to the north.

GRQ#7 1500m due north-northwest of GRQ#5 is a 20nT high of 100m diameter.

5.2 Air photo interpretation studies

Detailed air photo interpretation, with some ground truthing, has been done. Aerial Photographs series AZ4 132-59 and 60 on (1:54000) (1975) and series 74M-40-1950-6815 160 6000-1663-100 and 101, and 160 5914-1854-71 and 72 (1:40000), were examined at the University of Calgary Library. Several features are notable:

GRQ#1 On the north slope of a small knoll there is an ellipse of 200m long axis coinciding precisely with the GRQ#1 magnetic anomaly.
GRQ#1a Along the magnetic ridge trending northwest from GRQ#1 is a second ellipse of 150m x 200m dimensions

GRQ#3a Immediately south of the small lake north of GRQ#3 is a circular feature, similar to GRQ#1.

GRQ#8 On the Tethul River, 25km directly east of Fort Smith, is a small circular feature of 200m diameter, coinciding with a 10nT magnetic high, and sited on a photolinear, here interpreted as a fault.

The Dog River aeromagnetic linear feature was not seen on the photographs, save as an drainage alignment.

5.3 Gravity

The government gravity map is of too small a scale (1:250 000), with stations at too great distances apart ($\pm$4miles) to give any more than a broad regional picture. However, there is a remarkable high reading (-38.8 milligals in a general background of -40.0 to -50.0 milligals) at FitzGerald itself. This is reflected in the outcrop rock density map which shows densities of 2.70 to 2.75 around Fitzgerald, in a regional background of 2.60 to 2.65g/cm^3, but samples are too far apart for meaningful interpretations on a local scale.

6 Interpretations of the features seen

6.0.1 The Dog River Linear Feature is interpreted as a near vertical narrow dyke or perhaps fault or sulphide rich vein not recorded on any geological map of the area.

6.0.2 The northeast trending high on which GRQ#1 is situated could be a manifestation of an anomalous sulphide concentration associated with the unconformity at the base of the Devonian. That there is another, aligned, anomaly of greater magnitude (200nT) some 10km to the southeast, in Wood Buffalo National Park, lends some credence to this idea; reinforced further by the Stoney Island copper showing, 18km southeast of there, along the same contact zone. The zone is a good target for exploration, with the possibility that the circular aerial photograph features are geobotanical anomalies or even sulphide "kill-zones".

6.0.3 The "bullseyes" could represent isolated single or clustered vertical cylindrical pipelike bodies, typical of the pattern of occurrence of kimberlite pipes. Where elliptical aerial photograph features have been observed, they reinforce this concept.

6.1 Field Mapping

Two parties were used in a reconnaissance mapping exercise, the one concentrating on covering as much area as possible by vehicle, west of the Slave River, the other hitting at specific targets for investigation. This second party went mostly on foot or by helicopter to two more remote locations east of the river. Paucity of outcrop in the west precluded meaningful geological mapping, so work was confined to a sequence of magnetometer traverses. In the east, geological mapping was supplemented with geochemical soil sampling, stream sediment sampling for heavy minerals, slough bottom geochemical sampling, and magnetometer traverses. In the extreme southwest, there is outcrop of Devonian sedimentary rocks, and some reconnaissance geological mapping was possible.

Detailed mapping was done on the Portage quarry, where there is an interesting outcrop of black bull quartz, associated with a mafic xenolith in potassic granite gneisses. A chipped channel sample across this feature was taken, totalling twelve metres sampled in one metre intervals, and submitted for broad spectrum multi-element analysis by neutron activation. Results are disappointing.

In an effort to establish more precisely the orientation of faulting associated with the Dog River Linear, some detailed mapping and structural element data collection was undertaken east of Beaver Lake. Jointing indicates that the feature is fault defined to the north and south, and these faults are vertical or near vertical.

6.2 Ground Magnetometery Survey

Exploratory traverses, undertaken with a 2m pole-mounted magnetometer, have been made at 10 m intervals over a number of different lines. A test VLF-EM traverse was also run along the Fred's Area Road.

Preliminary interpretations are favourable, indicating that the linear is the manifestation of a thin, tabular, steeply dipping or vertical, east striking body of high magnetic susceptibility, which penetrates to surface. The body could be a fault, containing a fair quantity of pyrrhotite, or similar highly magnetic material; or it is a mafic dyke. The traverses in the east (3 Pond Slough, east of Beaver Lake; at the Riversedge, opposite Fin island; along the river edge on the Fin Peninsula) are particularly dramatic, with peaks of over 700 gamma above background rising and dropping again within 50m. In the west, the peak is more subdued, generally of the order of 300 gamma, which would be consistent with the thick glacial and fluvial sedimentary cover.

6.3 Ground VLF-EM Survey

Test work demonstrates that the techniques are applicable to locating shear zones of this nature in the basement. A single traverse was made, along the same line of the magnetometer traverse in Fred's area.

6.4 Pilot Gamma Ray Survey

Two traverses were made using a hand held scintillometer. The technique found nothing of interest.

6.5 Pilot Geochemical Surveys

Two lines of samples, of the clay soil immediately beneath the humus layer, were taken, from a depth of 10cm, across the Dog River Linear at 10m intervals west of Beaver Lake. Although there are no exceptional values returned, it is of interest that the highest gold and arsenic values from any samples in the district were returned from these 17 samples. Note that arsenic rises as high as 12ppm in the centre of the linear on one traverse, and to 15ppm on the second traverse. Gold values, which are generally below detection limits elsewhere in the project area, rise to 6ppb in these soil samples. Iron, antimony, barium, bromine, lanthanum, zinc and thorium are also markedly higher in these samples compared with the other samples from the area. The higher of only two nickel values (110ppm) in the area is reported in one of these soil samples.

A sequence of samples was taken from the bottom sediment of a slough which crosses the Dog River Linear west of Beaver Lake. These too are enriched in arsenic, antimony, barium, bromine, zinc; and to a lesser extent, iron, lanthanum and thorium, relative to the other samples taken in the area.

6.6 Pilot Stream Sediment Heavy Mineral Survey

A crude heavy mineral survey was conducted. Seven samples were drawn from gravel beds on the bottom of a stream which cuts across the Dog River linear east of Beaver Lake. Two of the samples were taken from upstream of the feature, two from on the feature, and three from downstream. The samples were coarsely sieved in the field to remove pebbles and vegetal matter, then carefully hand panned in the laboratory from the original 2kg sample down to a rough concentrate of a couple of grams. These final concentrates were submitted to Lakefield Research for optical microscope analysis. All samples are confirmaed as crustal in origin.

7 Expenditure

Physical expenditure on these permits was largely incurred in access to the area, using commercial flights out of Calgary, hotel accommodation and food for five party members while in Fort Smith, and renting a vehicle in Fort Smith. One day's helicopter time, and these items accounted for almost all the costs incurred. The balance claimed is largely in the form of unpaid labour; professional, technical and manual.

Claimed expenditure is detailed on a separate schedule.

8 Conclusions and Recommendations

8.1 In view of the Lakefield microscope test results, the likelihood of diamond bearing kimberlitic material occurring in either the GRQ bullseyes, or along the Dog River Linear is remote;

8.2 The Portage Quarry quartz vein and associated mafic xenolith and quartz stockwork contain no economic mineral concentrations of significance;

8.3 The carbonates outcropping in the extreme south, adjacent to the Wood Buffalo National Park, do not appear to contain any viable base metals;

8.4 There are interesting trace elements returned from the iron stained, sulphide flecked, gneisses within Fort Fitzgerald I. R. 196. The residents of the settlement should be apprised of this, and some follow-up work contemplated, but it is not recommended that E.J. Friesen and Associates Inc. become involved in this work, except in an advisory capacity if band members so desire;

8.5 The Magnetic response of the Dog River Linear is little short of phenomenal:

8.5.1 The profile suggests that it is a vertical or near vertical body, with thickness of less than 20m, penetrating from considerable depth to surface;
8.5.2 The detailed structural analysis confirms verticality and suggests that the feature is fault bound;
8.5.3 A sulphide dissemination alone would not cause such an anomalous feature, nor would a simple planar fault or narrow dyke;
8.5.4 A concentration of pyrrhotite or of magnetite seems to be a likely candidate;
8.5.5 The iron rich ochrous mud, and geochemical nickel and zinc anomalies associated with soil samples over the pilot sample area reinforce this view;
8.5.6 That the magnetic response is suppressed west, and sharp to the east, of the Slave River, indicates that it is a basement feature, covered by the glacial sediments to the west;
8.5.7 This is a primary target for further trenching and possibly diamond drilling work;

PLATES

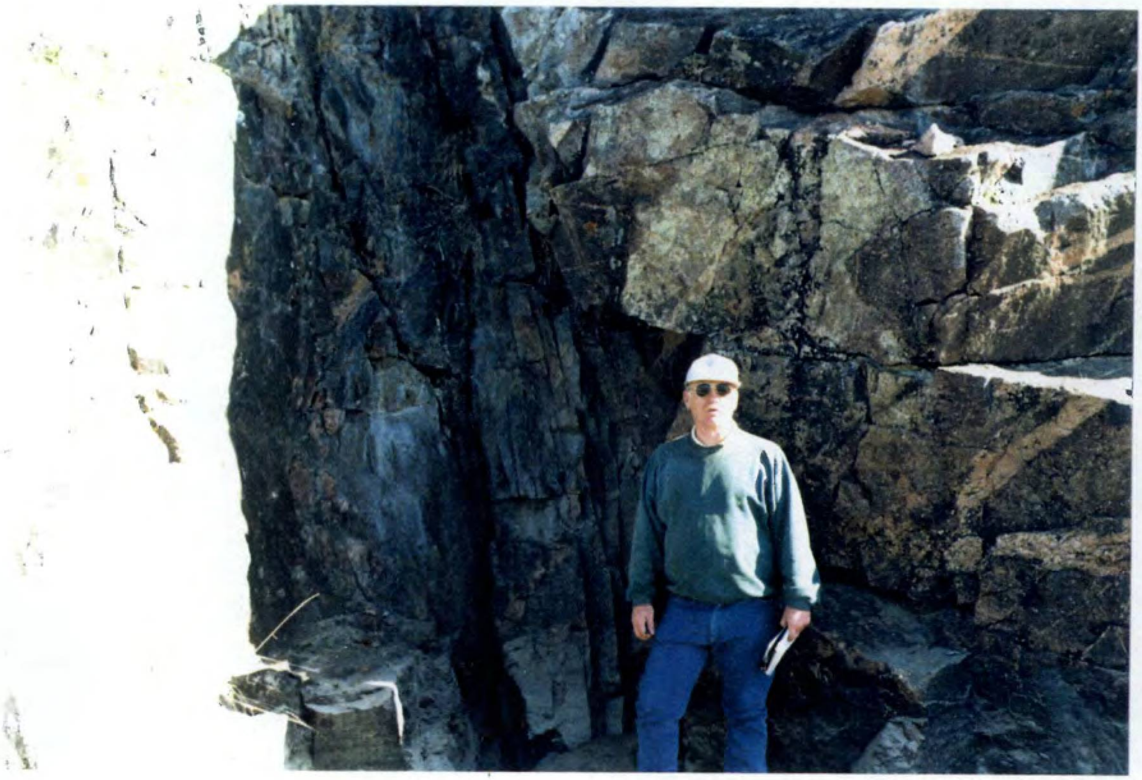


Figure 1 Sheared contact, greenstone xenolith in gneiss, Portage Quarry

PLATES

Figure 2 White bull quatrz vein in gneiss, Portage Quarry

PLATES

Figure 3 Dog River Linear - traversing in the Fred Area

PLATES

Figure 4 Dog River Linear - traversing in the "Riversedge" area.

9 Certification

I, Adrian Gardiner MANN, undersigned, certify that:

9.1 I am a graduate of the Universities of London, England and Witwatersrand, South Africa;

9.2 I hold the degrees of:
Ph.D.,
M.B.A.,
B.Sc. (General Honours) in chemistry and geology,
B.Sc. (Special Geology)(Honours);

9.3 I am a member in good standing of:
Society of Economic Geologists,
Geological Society of South Africa,
Institution of Mining and Metallurgy,
Canadian Institute of Mining, Metallurgy and Petroleum;

9.4 I am registered:
in Alberta as a Professional Geologist,
in Britain as a Chartered Engineer;

9.5 I have practised continuously as a geologist since first I graduated in 1965. My experience was gained in central and southern Africa, south and north America;

9.6 The work presented in this report is a fair and honest reflection of the geology of the permits and their immediate surrounds;

9.7 The data on which opinions expressed in this report are made derive from:
9.7.1 Examination of the reference material cited;
9.7.2 Examination of data furnished by the company;
9.7.3 One field visit when certain exposures were sketch mapped and spot sampled;

9.8 I have a one third interest in these properties.

Adrian G. Mann Ph.D., P.Geol.,
[redacted]
Calgary, Alberta T2W 1A1.
11 August 1995

10 Figures

Figure 1 Rev. 1

E.J. FRIESEN & ASSOCIATES INC.
FITZGERALD EXPLORATION PROJECT - NORTHEAST ALBERTA

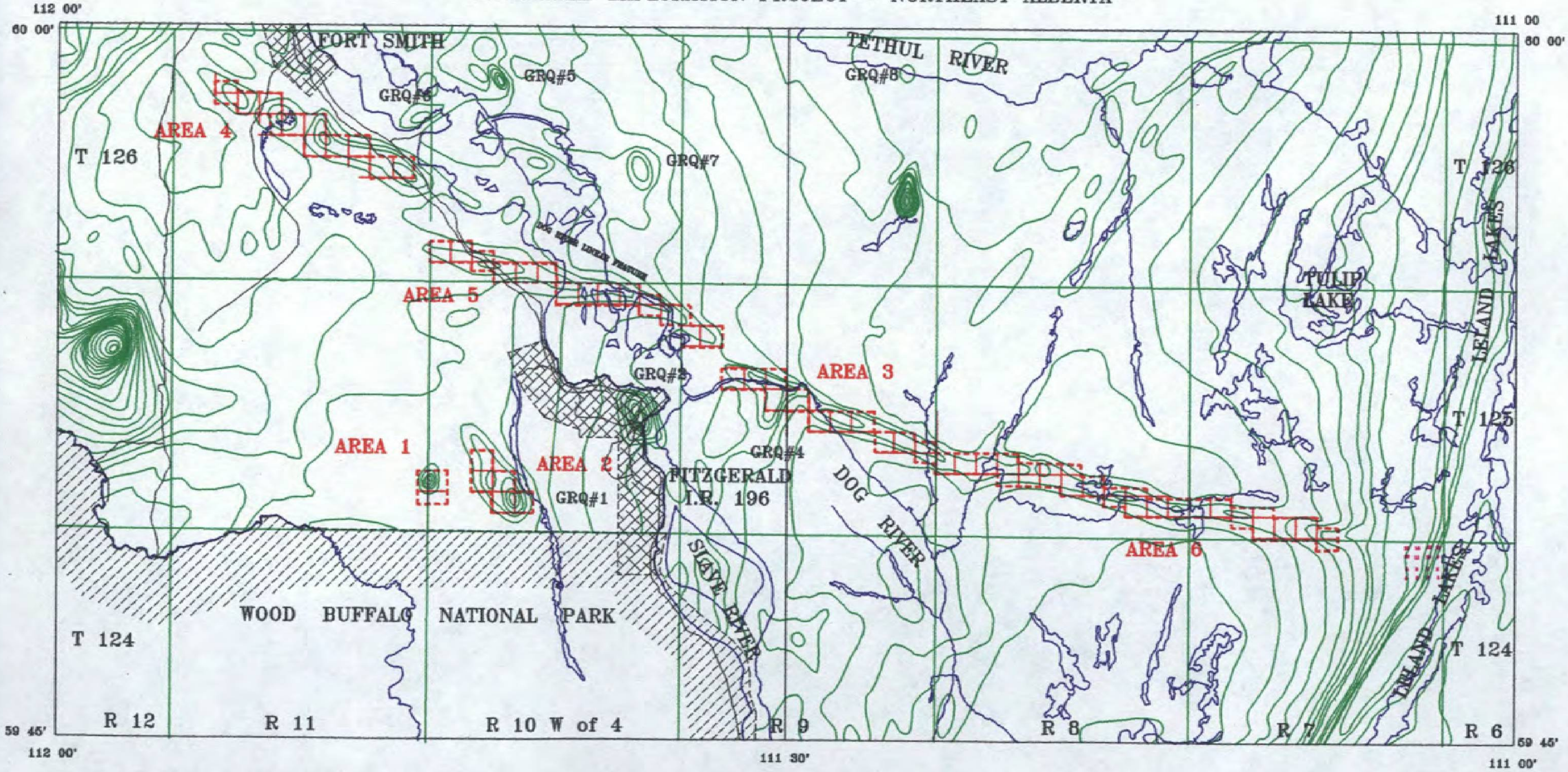


Figure 2

AEROMAGNETIC MAP OF THE FITZGERALD AREA, NORTHEAST ALBERTA

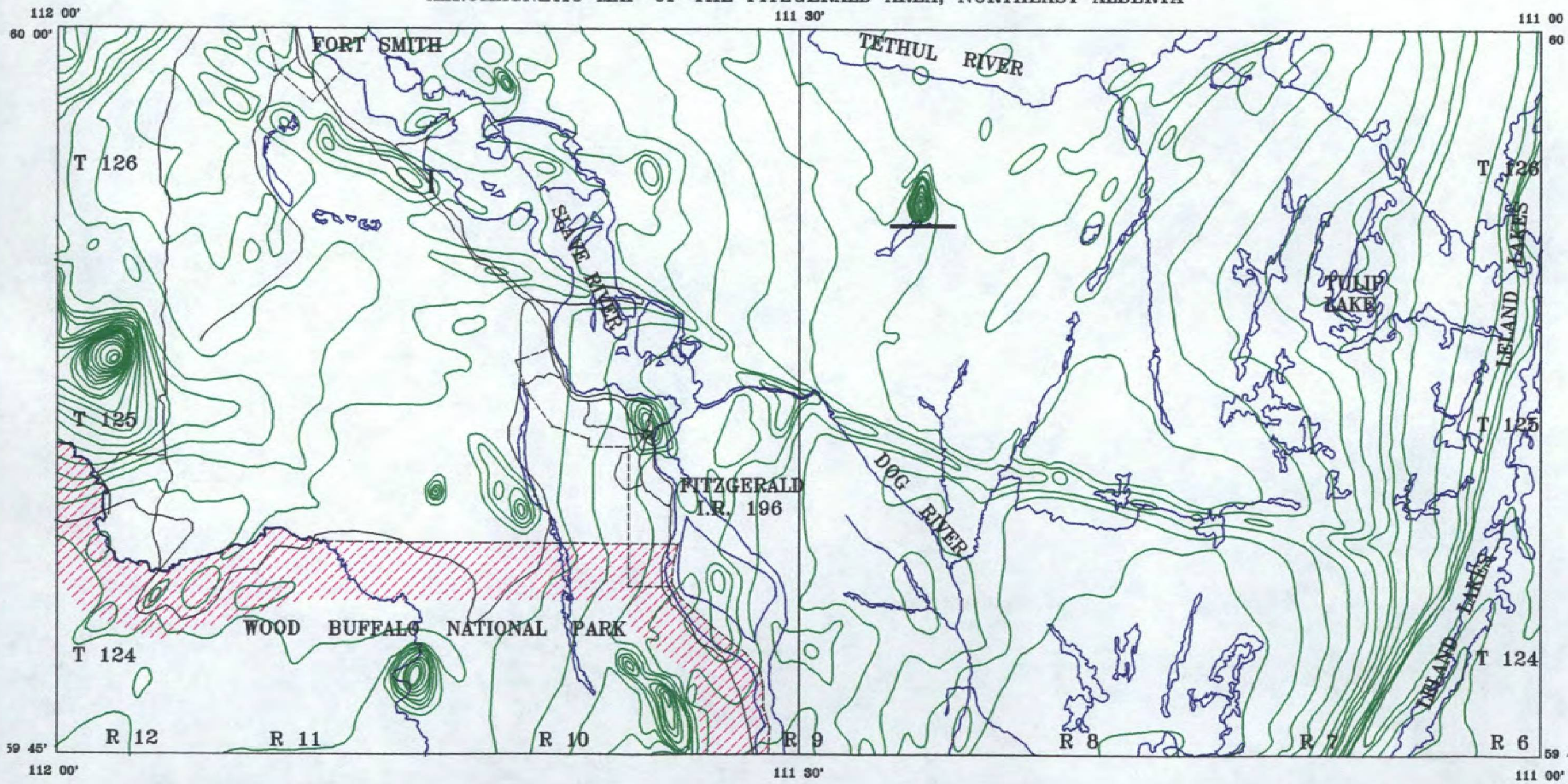


Figure 3

MAGNETIC FEATURES IN THE FITZGERALD AREA, NORTHEAST ALBERTA

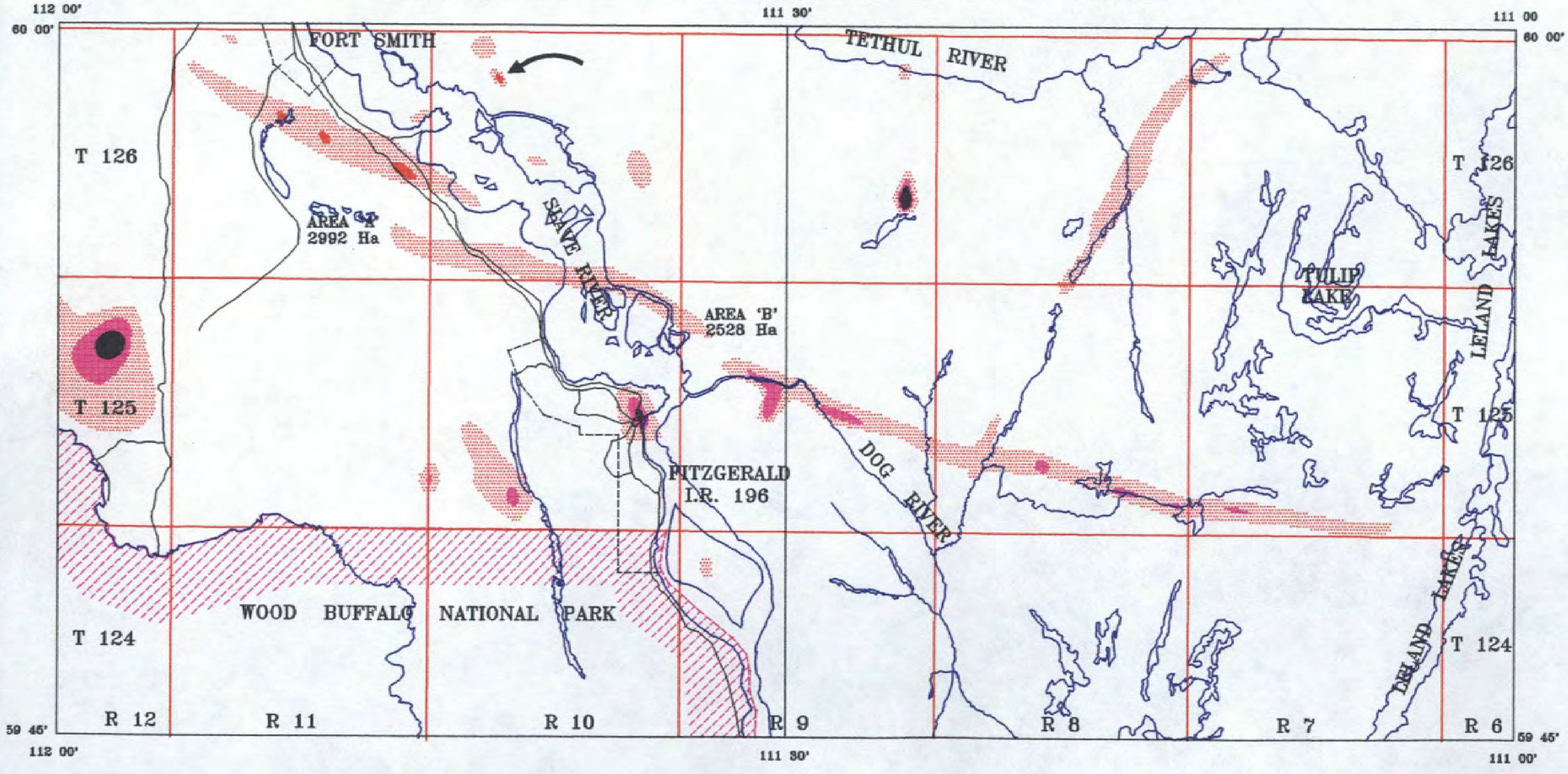


Figure 4 Rev. 1

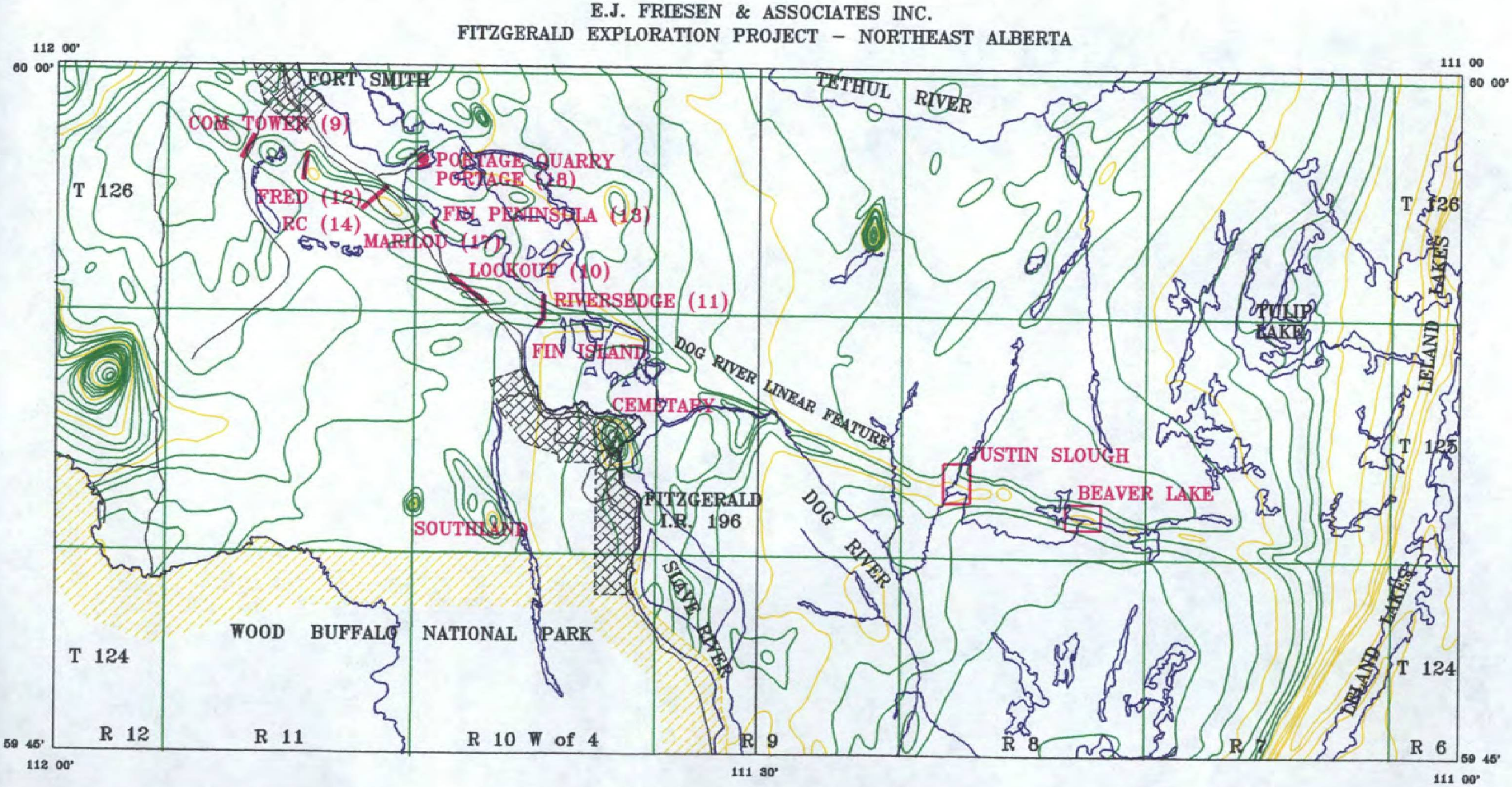


Figure 5A

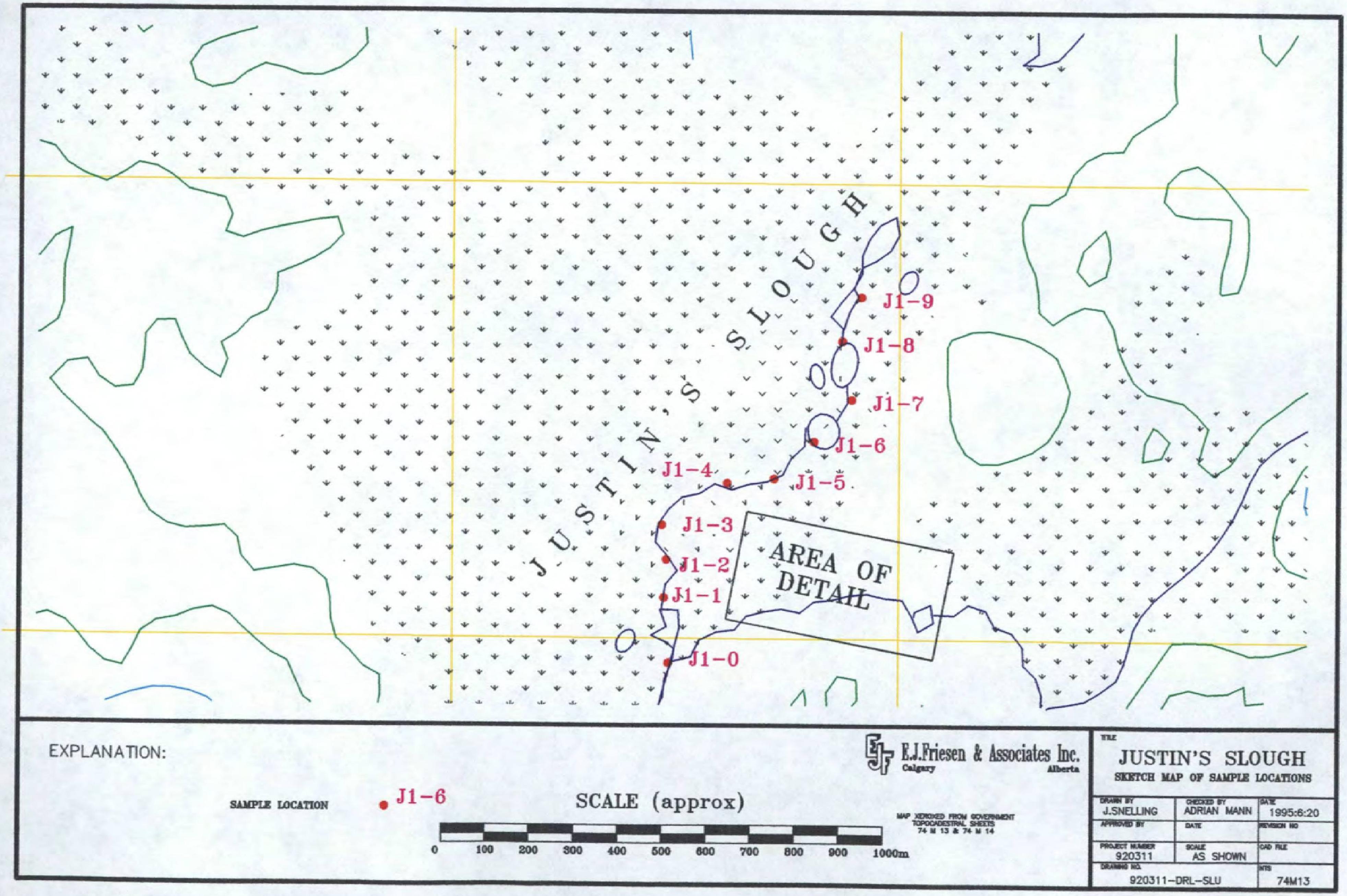

JUSTIN'S SLOUGH
J1-9
J1-8
J1-7
J1-6
J1-5
J1-4
J1-3
J1-2
J1-1
J1-0
AREA OF DETAIL
EXPLANATION:
SAMPLE LOCATION
J1-6
SCALE (approx)
0 100 200 300 400 500 600 700 800 900 1000m
E.J.Friesen & Associates Inc.
Calgary
Alberta
MAP XEROXED FROM GOVERNMENT TOPOCADESTRAL SHEETS 74 M 13 & 74 M 14
TITLE
JUSTIN'S SLOUGH
SKETCH MAP OF SAMPLE LOCATIONS
DRAWN BY
J.SNELLING
CHECKED BY
ADRIAN MANN
DATE
1995:6:20
APPROVED BY
DATE
REVISION NO
PROJECT NUMBER
920311
SCALE
AS SHOWN
CAD FILE
DRAWING NO.
920311-DRL-SLU
NTS
74M13

Figure 5

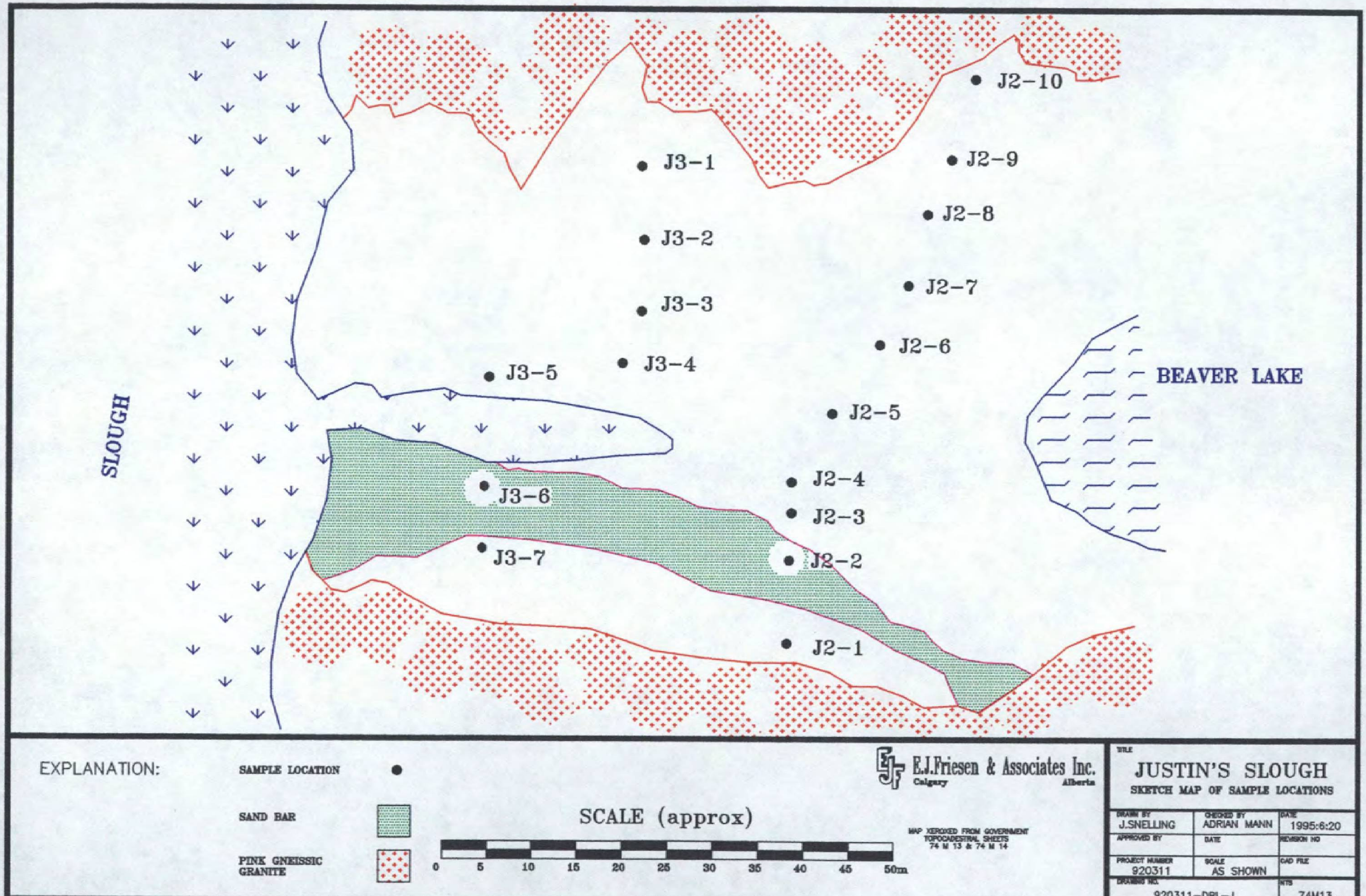

SLOUGH
BEAVER LAKE
J2-10
J2-9
J2-8
J2-7
J2-6
J2-5
J2-4
J2-3
J2-2
J2-1
J3-1
J3-2
J3-3
J3-4
J3-5
J3-6
J3-7
EXPLANATION:
SAMPLE LOCATION
SAND BAR
PINK GNEISSIC GRANITE
SCALE (approx)
0 5 10 15 20 25 30 35 40 45 50m
E.J.Friesen & Associates Inc.
Calgary
Alberta
MAP XEROXED FROM GOVERNMENT TOPOCADESTRAL SHEETS 74 M 13 & 74 M 14
JUSTIN'S SLOUGH
SKETCH MAP OF SAMPLE LOCATIONS
DRAWN BY J.SNELLING
CHECKED BY ADRIAN MANN
DATE 1995:6:20
APPROVED BY
DATE
REVISION NO
PROJECT NUMBER 920311
SCALE AS SHOWN
CAD FILE
DRAWING NO. 920311-DRL-J
NTS 74M13

Figure 6

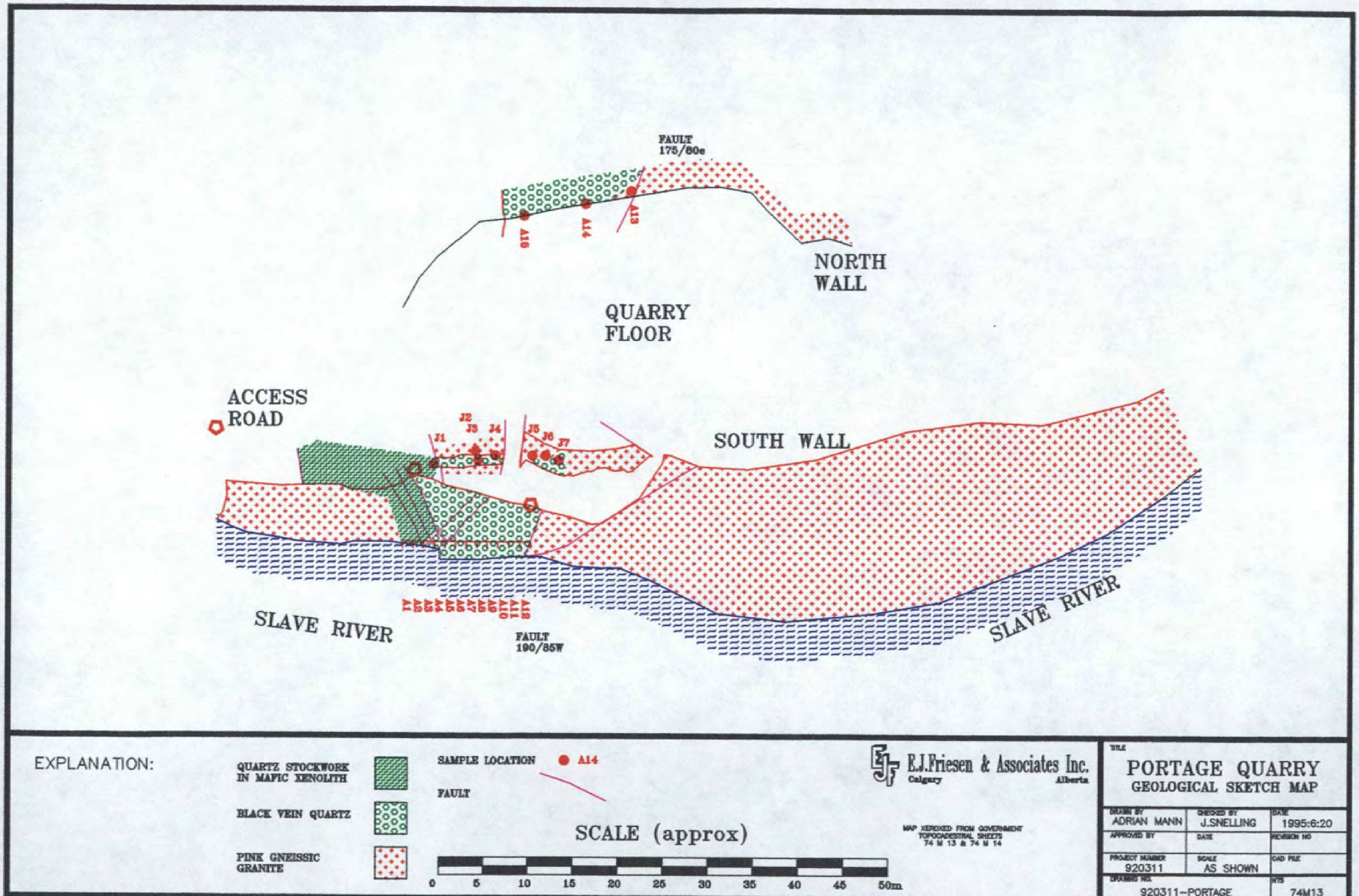
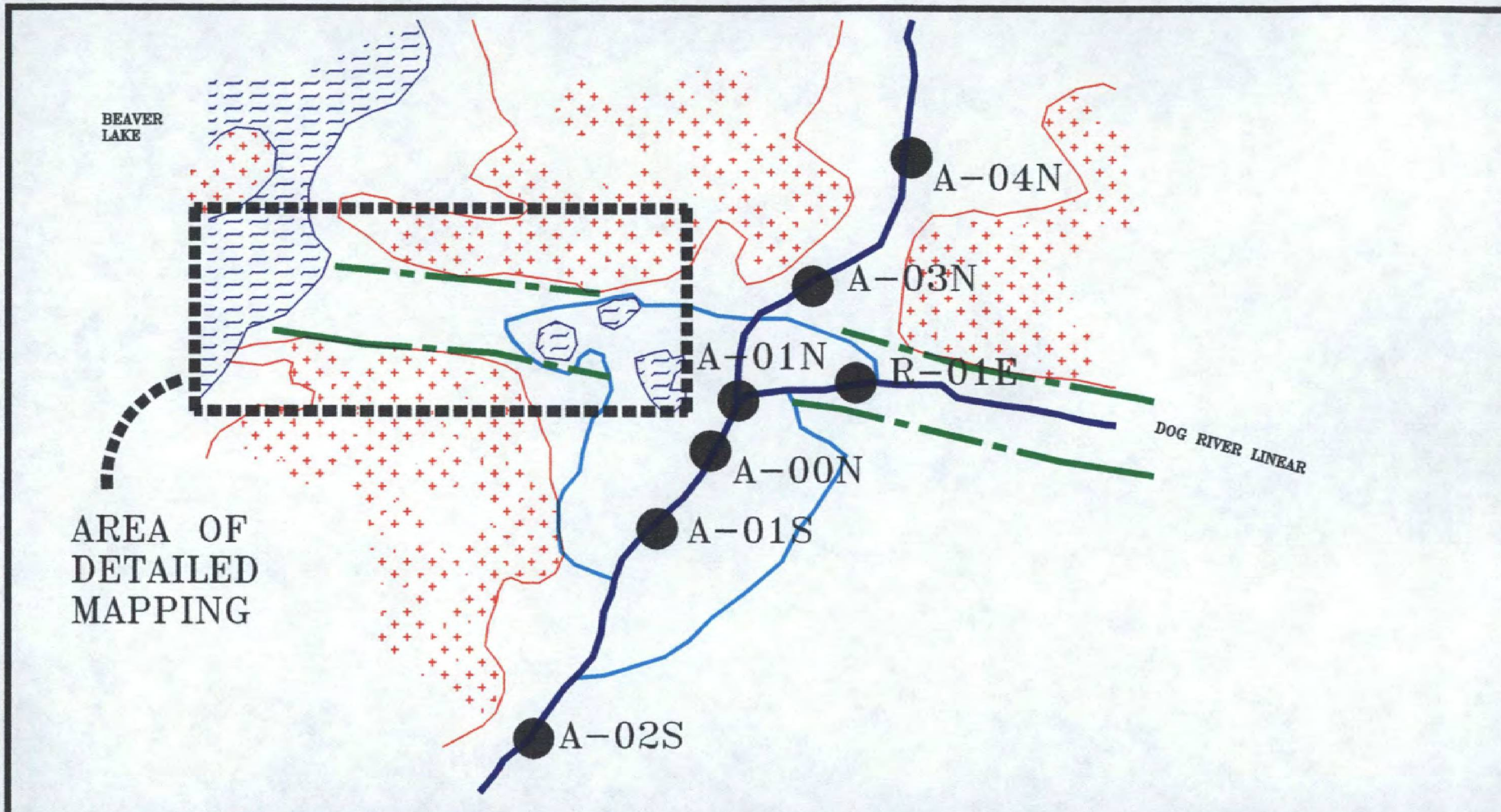

FAULT
175/80e
A16
A14
A13
NORTH
WALL
QUARRY
FLOOR
ACCESS
ROAD
J1
J2
J3
J4
J5
J6
J7
SOUTH WALL
SLAVE RIVER
FAULT
190/85W
SLAVE RIVER
EXPLANATION:
QUARTZ STOCKWORK
IN MAFIC XENOLITH
BLACK VEIN QUARTZ
PINK GNEISSIC
GRANITE
SAMPLE LOCATION
A14
FAULT
SCALE (approx)
0
5
10
15
20
25
30
35
40
45
50m
E.J.Friesen & Associates Inc.
Calgary
Alberta
MAP XEROXED FROM GOVERNMENT
TOPOCADESTRAL SHEETS
74 M 13 & 74 M 14
TITLE
PORTAGE QUARRY
GEOLOGICAL SKETCH MAP
DRAWN BY
ADRIAN MANN
CHECKED BY
J.SNELLING
DATE
1995:6:20
APPROVED BY
DATE
REVISION NO
PROJECT NUMBER
920311
SCALE
AS SHOWN
CAD FILE
DRAWING NO.
920311-PORTAGE
NTS
74M13

Figure 7



EXPLANATION:

PINK GNEISSIC GRANITE

SAMPLE LOCATION

A-01S

SCALE (approx)

0 50 100 150 200 250m

E.J.Friesen & Associates Inc.
Calgary Alberta

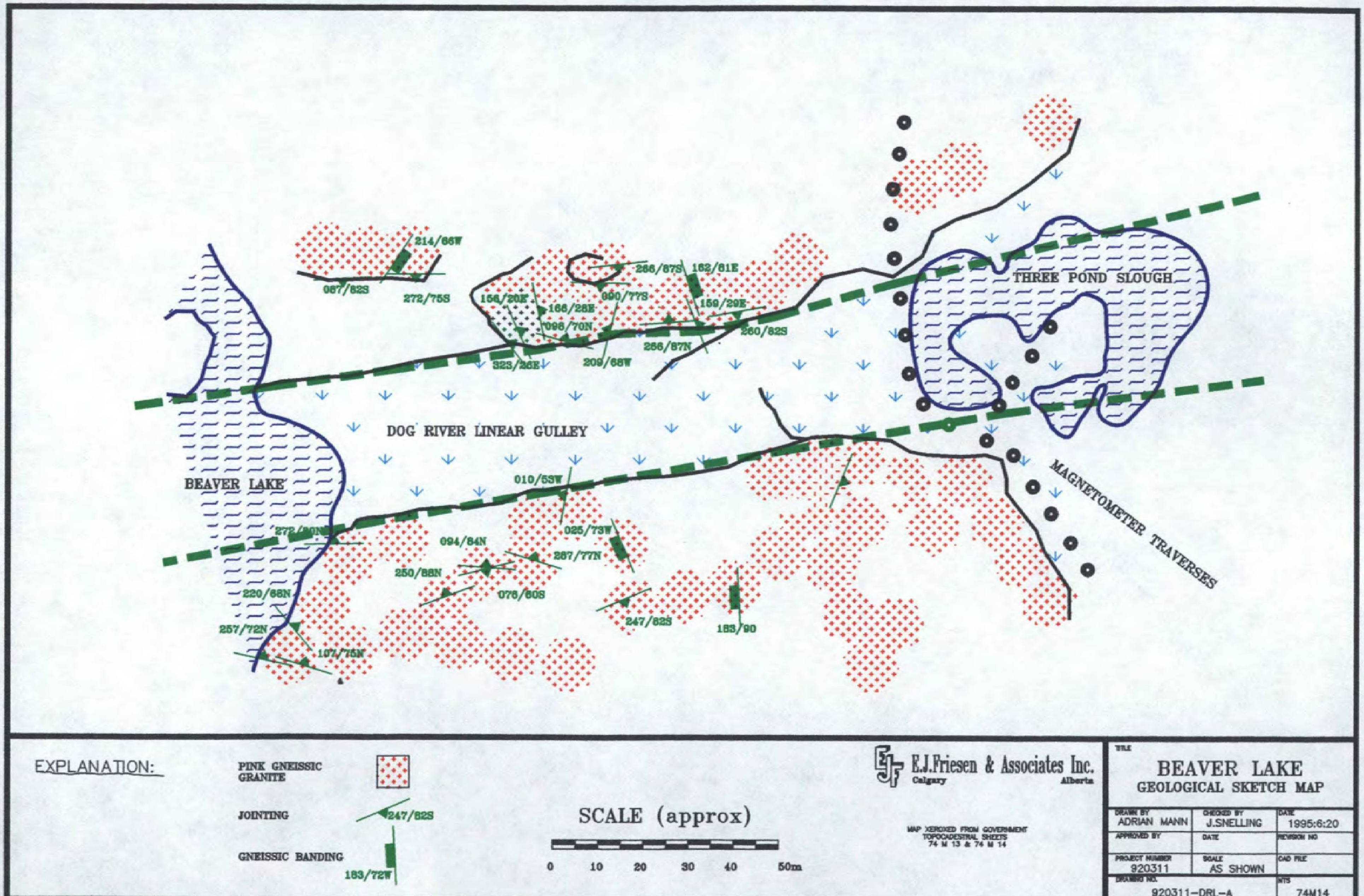
MAP XEROXED FROM GOVERNMENT
TOPOCADESTRAL SHEETS
74 M 13 & 74 M 14

TITLE

BEAVER LAKE
STREAM SEDIMENT SAMPLING

DRAWN BY	CHECKED BY	DATE
ADRIAN MANN	J.SNELLING	1995:6:20
APPROVED BY	DATE	REVISION NO
PROJECT NUMBER	SCALE	CAD FILE
920311	AS SHOWN	
DRAWING NO.		NTS
920311-DRL-B		74M14

Figure 8



214/66W
067/82S
272/75S
156/20E
166/28E
096/70N
090/77S
266/87S
162/61E
159/29E
260/82S
256/87N
323/26E
209/68W
THREE POND SLOUGH
DOG RIVER LINEAR GULLEY
BEAVER LAKE
010/53W
272/80N
094/84N
025/73W
287/77N
250/88N
076/60S
220/88N
247/82S
183/90
257/72N
107/75N
MAGNETOMETER TRAVERSES
EXPLANATION:
PINK GNEISSIC GRANITE
JOINTING
247/82S
GNEISSIC BANDING
183/72W
SCALE (approx)
0 10 20 30 40 50m
E.J.Friesen & Associates Inc.
Calgary Alberta
MAP XEROXED FROM GOVERNMENT TOPOCADESTRAL SHEETS 74 M 13 & 74 M 14
TITLE
BEAVER LAKE
GEOLOGICAL SKETCH MAP
DRAWN BY
ADRIAN MANN
CHECKED BY
J.SNELLING
DATE
1995:6:20
APPROVED BY
DATE
REVISION NO
PROJECT NUMBER
920311
SCALE
AS SHOWN
CAD FILE
DRAWING NO.
920311-DRL-A
NTS
74M14

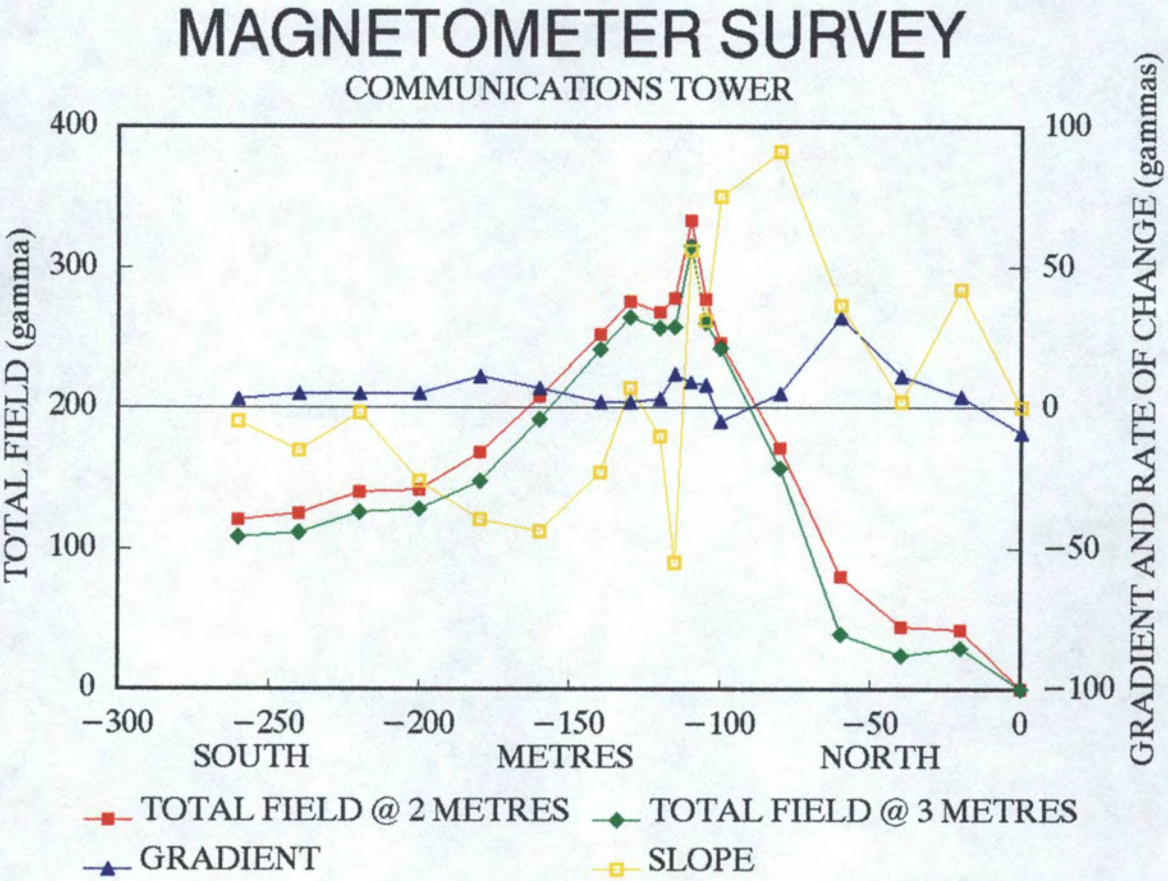

MAGNETOMETER SURVEY
COMMUNICATIONS TOWER
TOTAL FIELD (gamma)
GRADIENT AND RATE OF CHANGE (gammas)
400
300
200
100
0
100
50
0
−50
−100
−300
−250
−200
−150
−100
−50
0
SOUTH
METRES
NORTH
TOTAL FIELD @ 2 METRES
TOTAL FIELD @ 3 METRES
GRADIENT
SLOPE

Figure 9

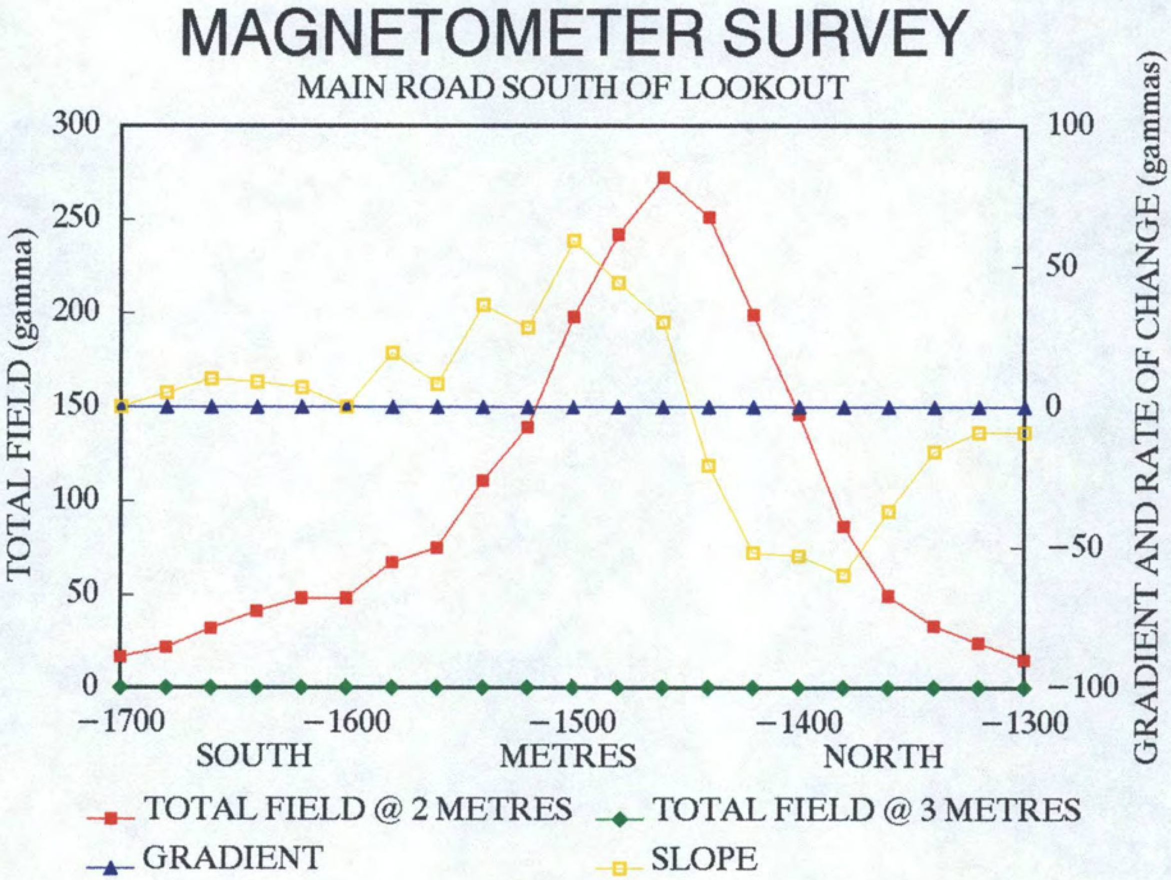

MAGNETOMETER SURVEY
MAIN ROAD SOUTH OF LOOKOUT
TOTAL FIELD (gamma)
GRADIENT AND RATE OF CHANGE (gammas)
300
250
200
150
100
50
0
100
50
0
−50
−100
−1700
−1600
−1500
−1400
−1300
SOUTH
METRES
NORTH
TOTAL FIELD @ 2 METRES
TOTAL FIELD @ 3 METRES
GRADIENT
SLOPE

Figure 10

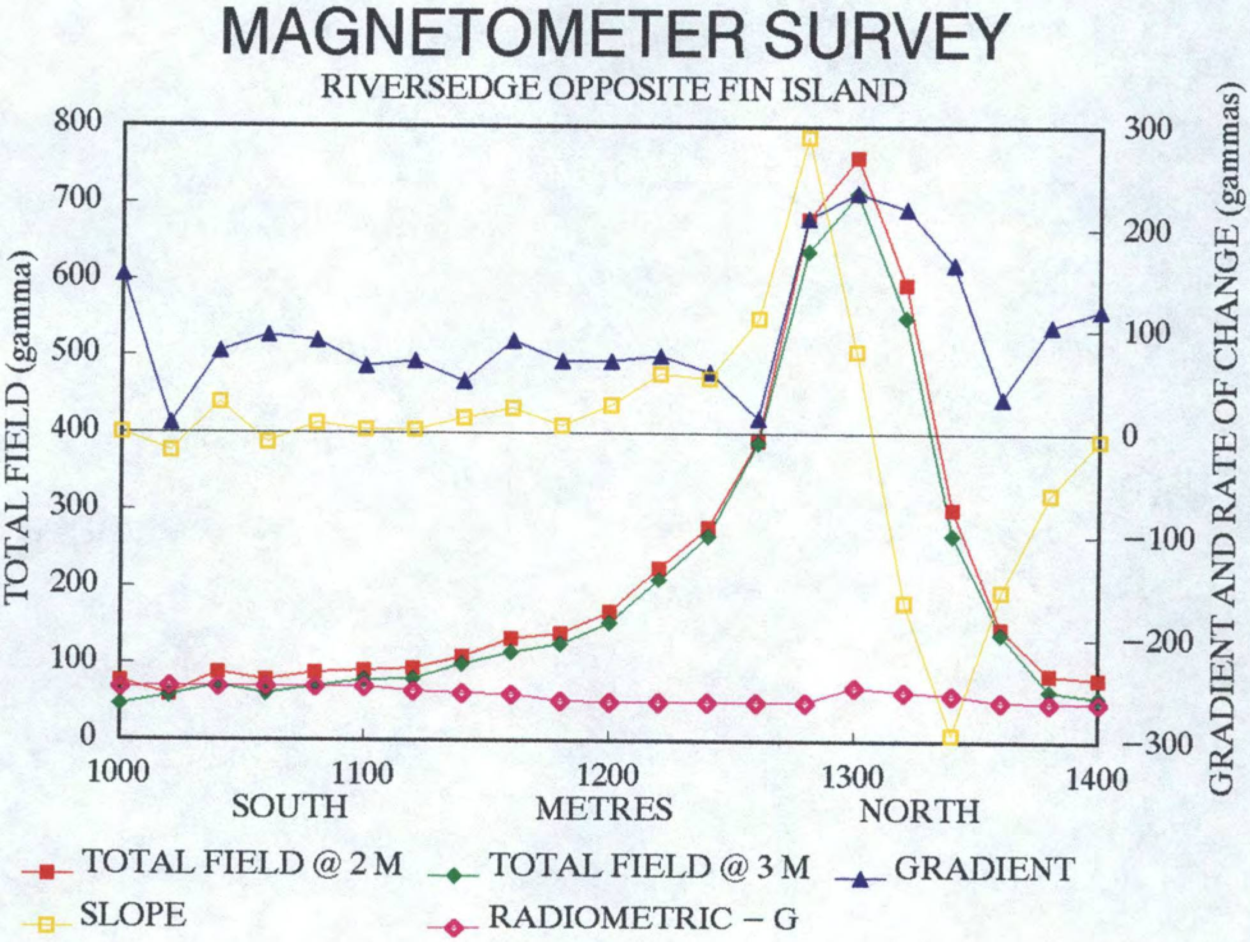


Figure 11 Rev. 1

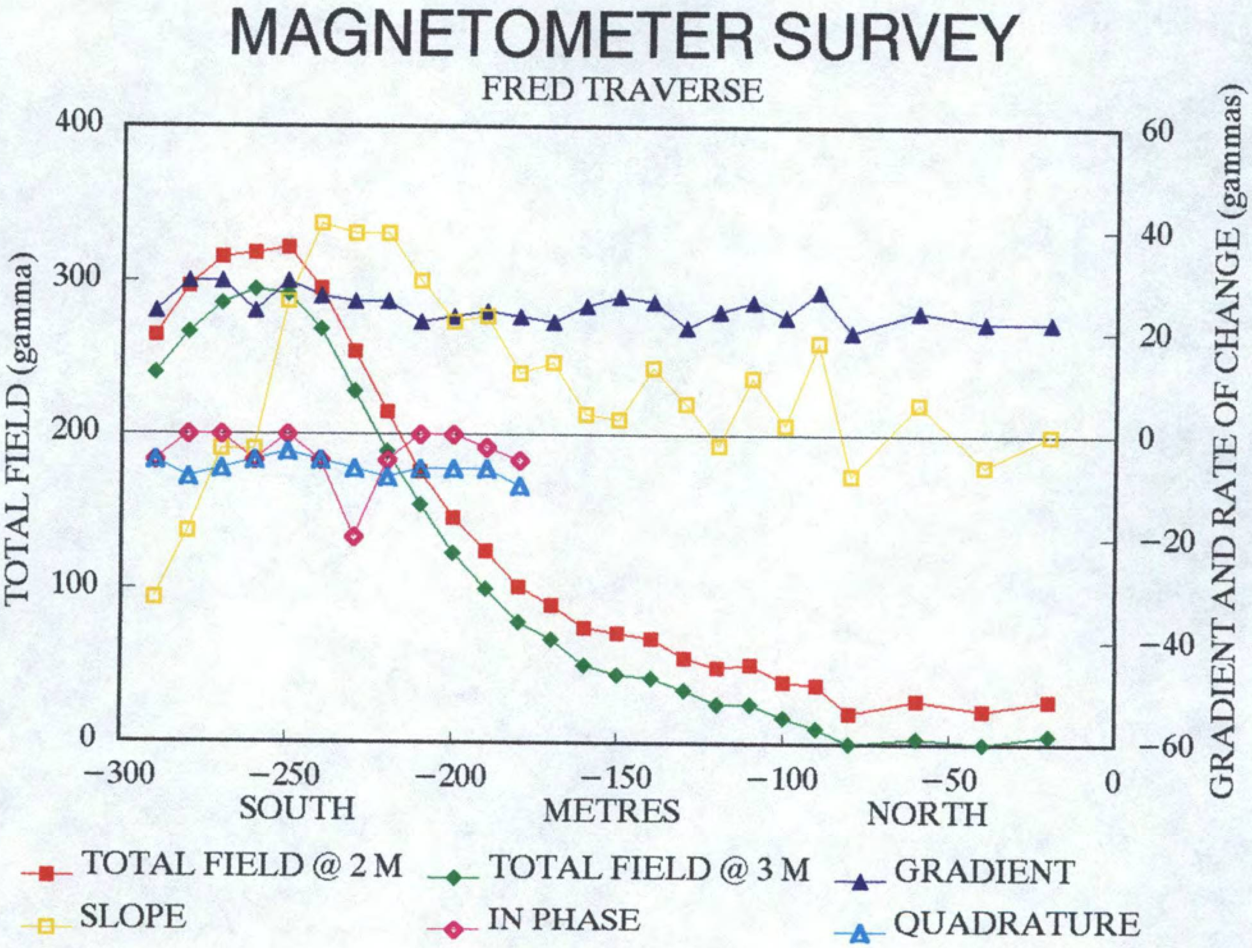
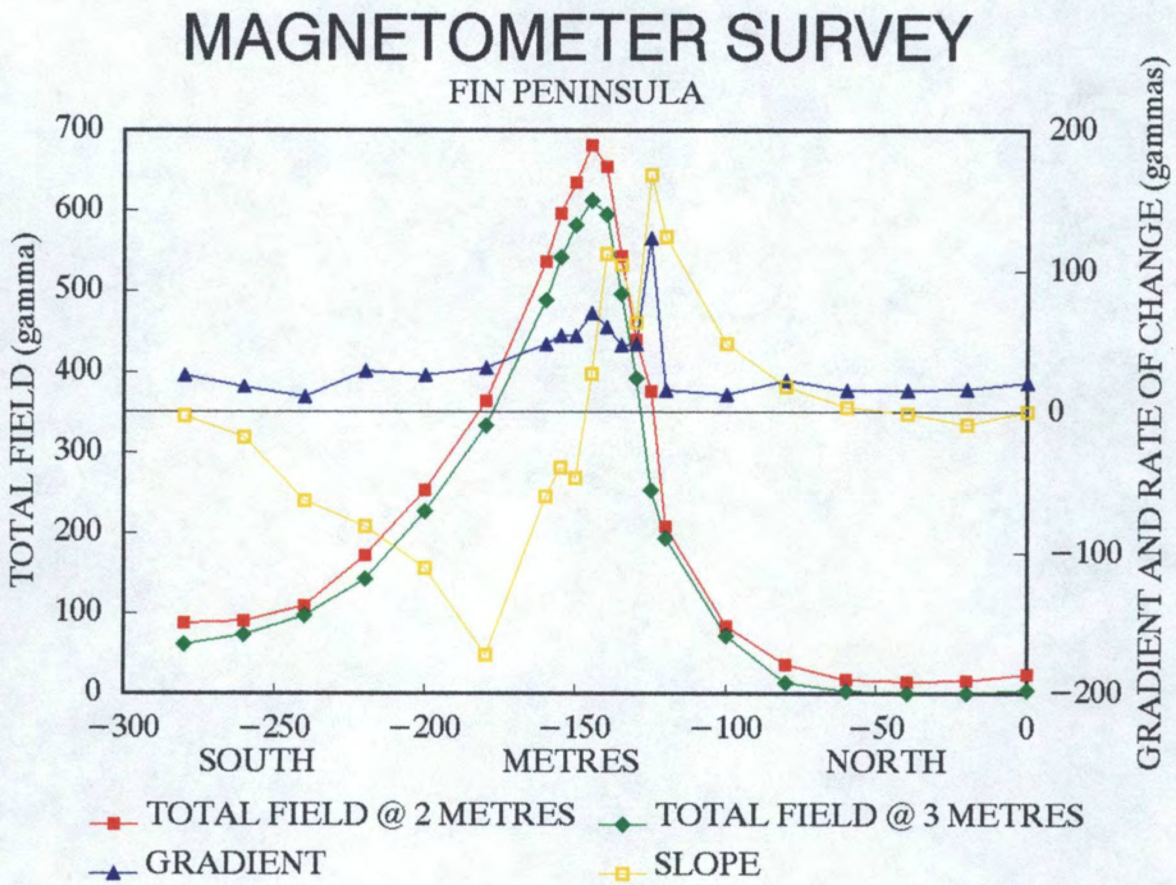


Figure 12 Rev. 1



MAGNETOMETER SURVEY
FIN PENINSULA
TOTAL FIELD (gamma)
GRADIENT AND RATE OF CHANGE (gammas)
700
600
500
400
300
200
100
0
200
100
0
−100
−200
−300
−250
−200
−150
−100
−50
0
SOUTH
METRES
NORTH
TOTAL FIELD @ 2 METRES
TOTAL FIELD @ 3 METRES
GRADIENT
SLOPE

Figure 13

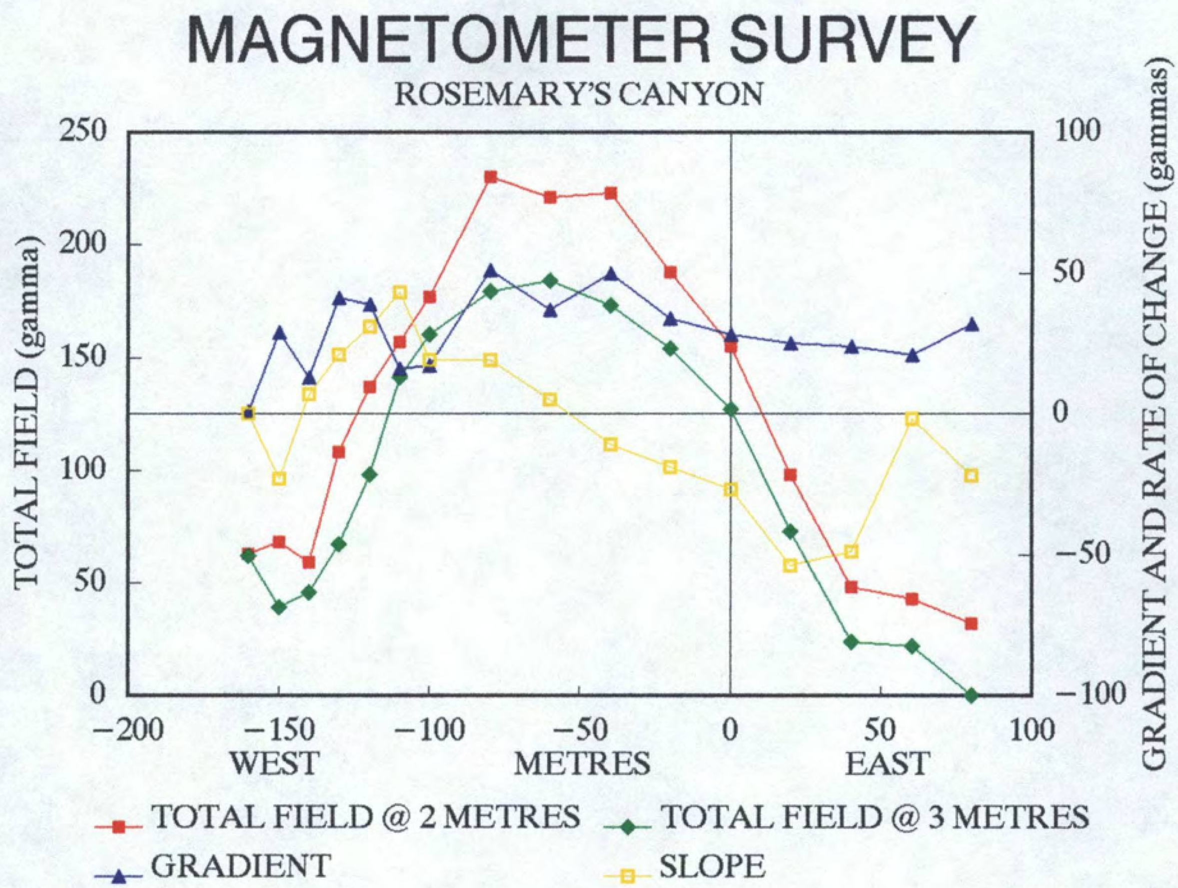

MAGNETOMETER SURVEY
ROSEMARY'S CANYON
TOTAL FIELD (gamma)
GRADIENT AND RATE OF CHANGE (gammas)
250
200
150
100
50
0
100
50
0
−50
−100
−200
−150
−100
−50
0
50
100
WEST
METRES
EAST
TOTAL FIELD @ 2 METRES
TOTAL FIELD @ 3 METRES
GRADIENT
SLOPE

Figure 14

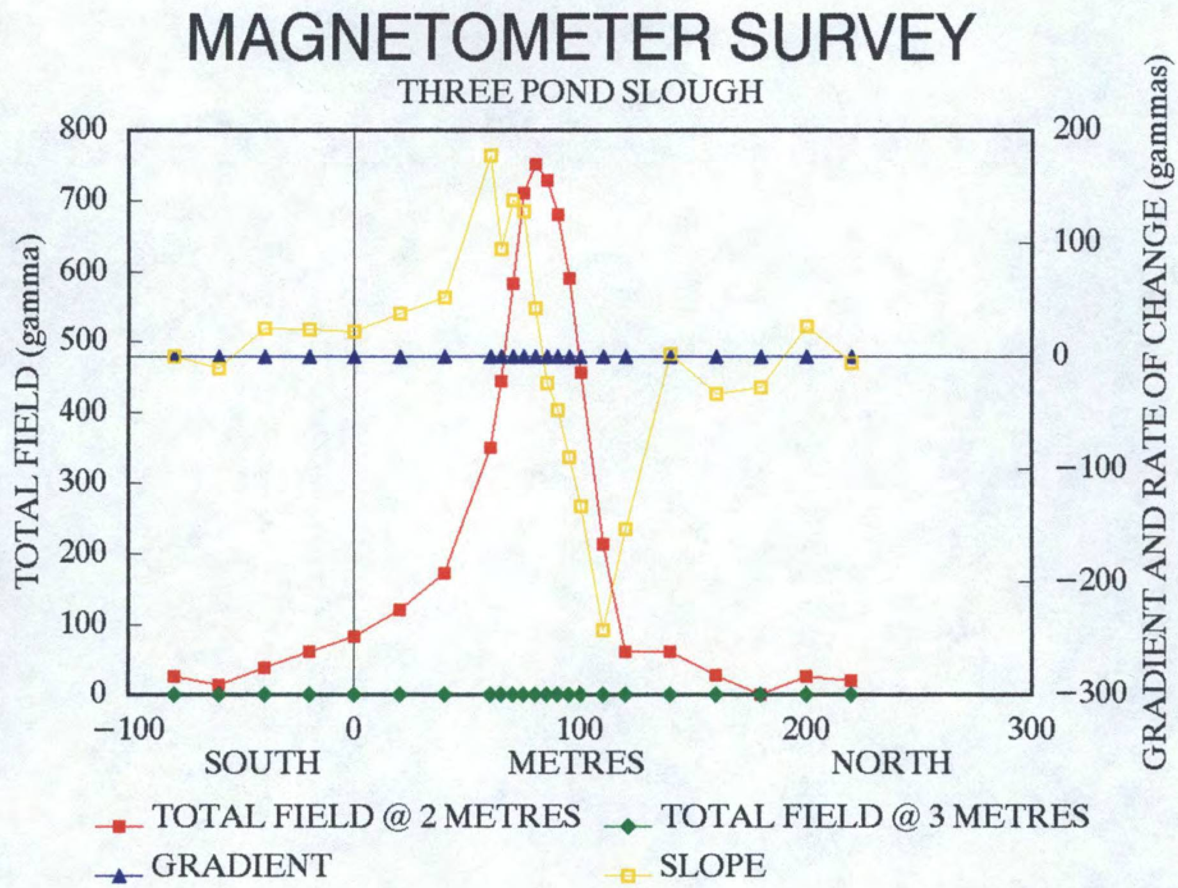

MAGNETOMETER SURVEY
THREE POND SLOUGH
TOTAL FIELD (gamma)
GRADIENT AND RATE OF CHANGE (gammas)
800
700
600
500
400
300
200
100
0
200
100
0
−100
−200
−300
−100
0
100
200
300
SOUTH
METRES
NORTH
TOTAL FIELD @ 2 METRES
TOTAL FIELD @ 3 METRES
GRADIENT
SLOPE

Figure 15

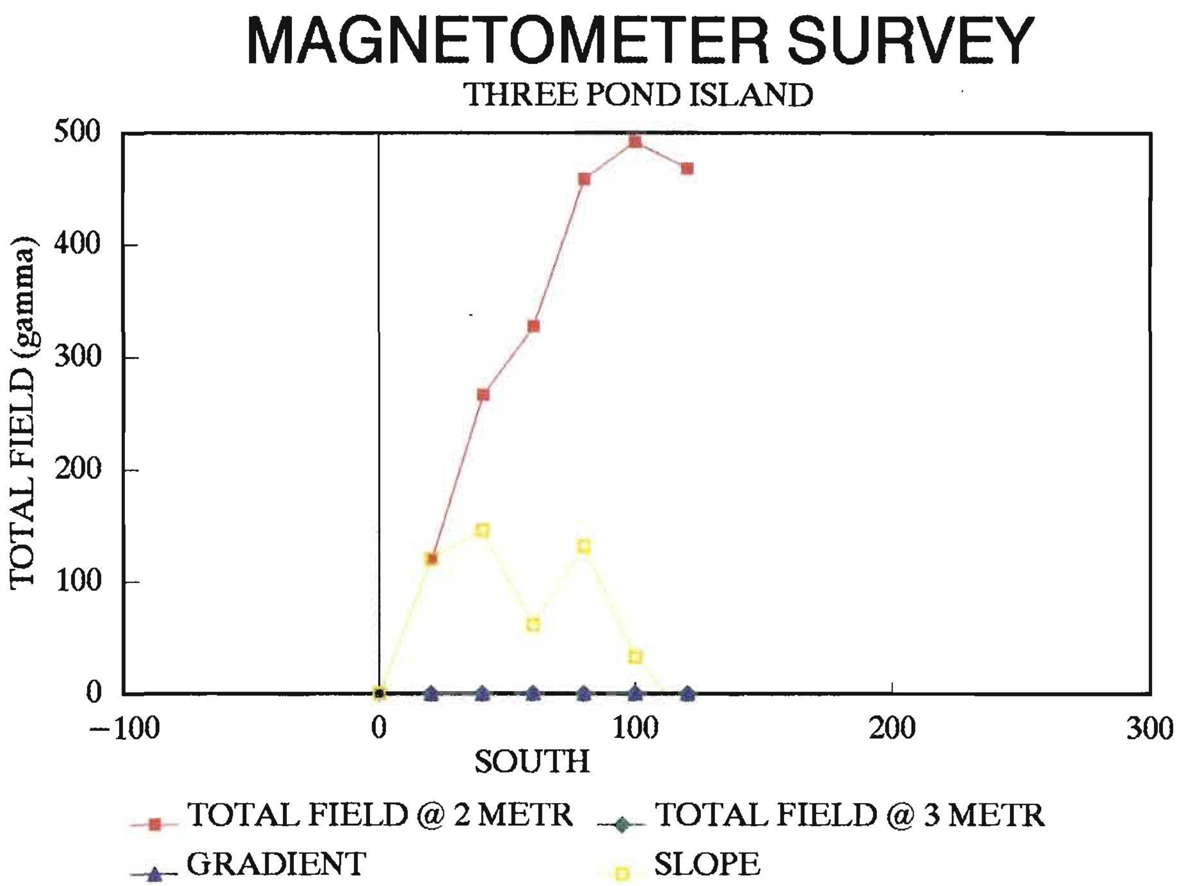

MAGNETOMETER SURVEY
THREE POND ISLAND
TOTAL FIELD (gamma)
500
400
300
200
100
0
−100
0
100
200
300
SOUTH
TOTAL FIELD @ 2 METR
TOTAL FIELD @ 3 METR
GRADIENT
SLOPE

Figure 16

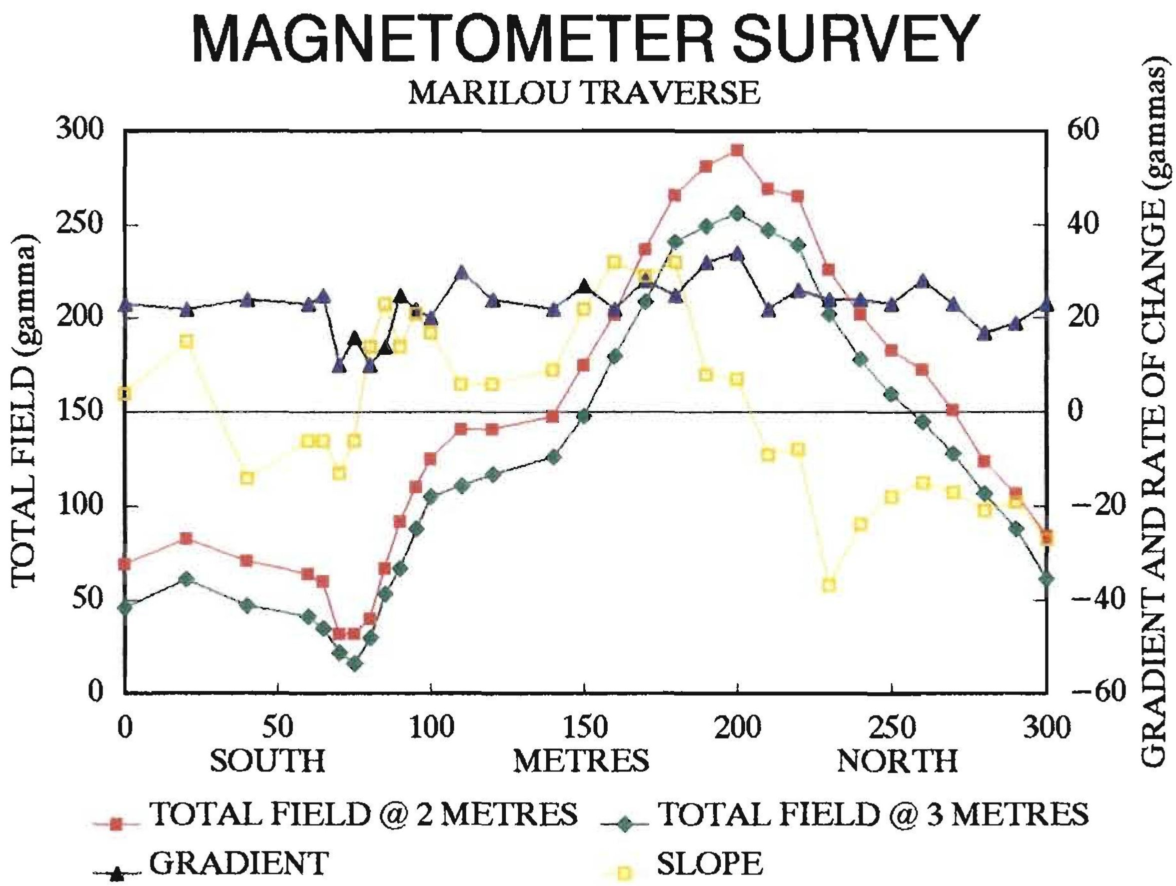

MAGNETOMETER SURVEY
MARILOU TRAVERSE
TOTAL FIELD (gamma)
GRADIENT AND RATE OF CHANGE (gammas)
300
250
200
150
100
50
0
60
40
20
0
−20
−40
−60
0
50
100
150
200
250
300
SOUTH
METRES
NORTH
TOTAL FIELD @ 2 METRES
TOTAL FIELD @ 3 METRES
GRADIENT
SLOPE

Figure 17

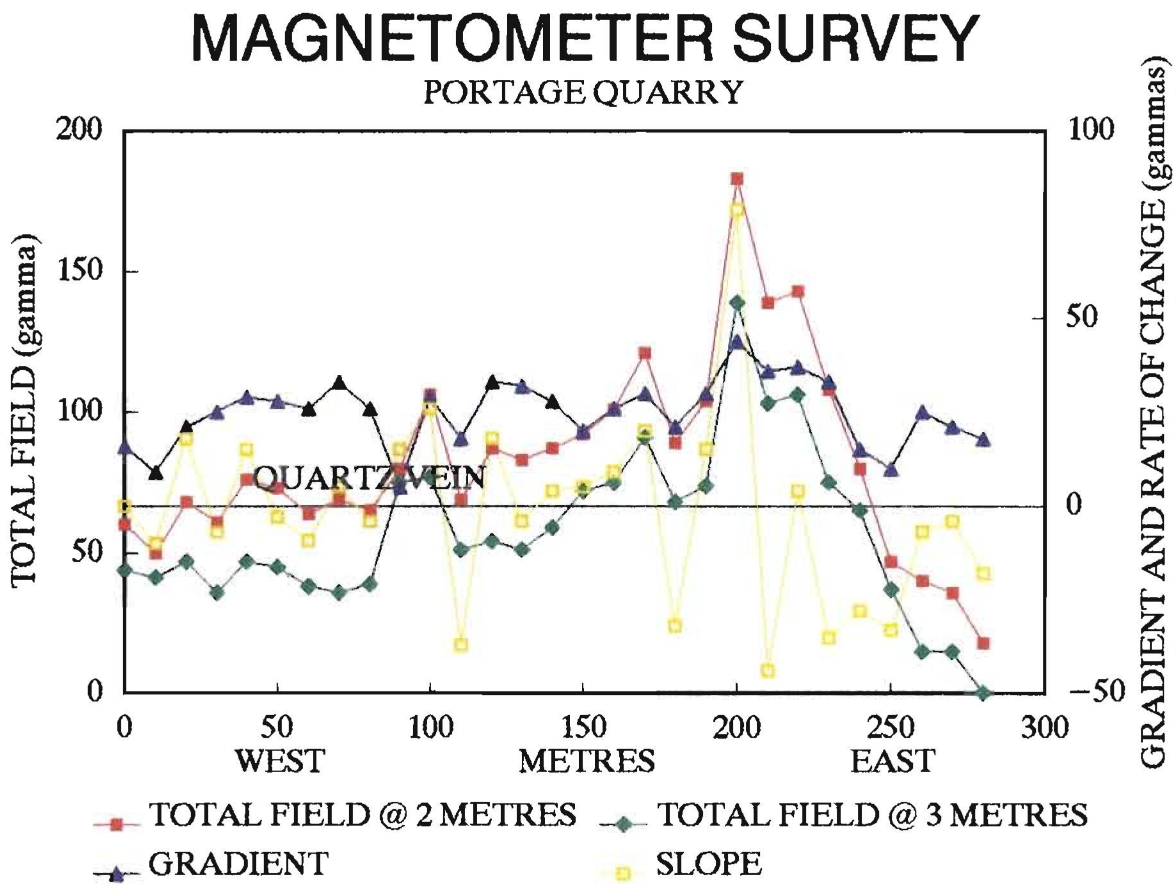

MAGNETOMETER SURVEY
PORTAGE QUARRY
TOTAL FIELD (gamma)
GRADIENT AND RATE OF CHANGE (gammas)
200
150
100
50
0
100
50
0
−50
QUARTZ VEIN
0
50
100
150
200
250
300
WEST
METRES
EAST
TOTAL FIELD @ 2 METRES
TOTAL FIELD @ 3 METRES
GRADIENT
SLOPE

Figure 18

11 Appendices

11.1 Analytical Certificates

PORTAGE QUARRY – RIVER EDGE

No	ID	ST	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sm	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
1	A15	1	3	0	2.1	110	0	0	0	210	0	6.62	1	0	0	0	2.79	0	250	0	0.6	0	0	0	0	1.3	1.7	0	52	2.7	7	0	0.3	0.0	0.0	0.6	0.1
2	A15	2	0	0	0.0	77	0	0	0	200	0	0.37	0	0	0	3	2.93	0	240	0	0.4	0	0	0	0	0.3	0.0	0	127	7.3	11	0	0.5	0.0	0.0	0.2	0.0
3	A15	3	0	0	1.0	78	0	0	0	200	0	1.48	2	0	0	21	1.97	0	150	0	3.2	0	0	0	0	2.4	4.2	0	137	4.3	12	0	0.6	0.0	0.0	2.2	0.4
4	A15	4	0	0	1.8	0	0	0	0	220	1	8.48	2	0	0	290	2.36	0	300	0	0.7	0	0	0	0	6.6	6.2	0	0	6.3	12	0	1.1	0.0	0.0	1.1	0.2
5	A15	5	0	0	0.9	120	0	0	0	190	0	0.40	2	0	0	3	2.22	0	230	0	0.8	0	0	0	0	4.1	4.4	0	0	4.7	10	0	0.7	0.0	0.0	1.4	0.2
6	A15	6	0	0	0.0	0	0	0	0	230	0	0.83	1	0	0	0	2.05	0	250	0	0.9	0	0	0	0	0.0	1.2	0	0	2.8	4	0	0.2	0.0	0.0	0.6	0.1
7	A15	7	0	0	0.0	0	0	0	0	170	0	0.64	1	0	0	0	2.01	0	220	0	1.0	0	0	0	0	1.1	1.7	0	0	5.7	11	0	0.6	0.0	0.0	0.6	0.1
8	A15	8	0	0	0.0	79	0	0	2	130	1	1.42	2	0	0	2	1.96	0	300	0	1.9	3	0	0	0	0.0	1.7	0	59	1.7	5	0	0.2	0.0	0.0	1.1	0.1
9	A15	9	0	0	0.0	0	1.3	0	2	200	0	0.43	0	0	0	0	1.64	0	290	0	0.7	0	0	0	0	0.0	0.0	0	0	3.1	7	0	0.1	0.0	0.0	0.0	0.0
11	A15	10	0	0	0.7	200	0	0	0	170	0	0.32	3	0	0	0	2.16	0	290	0	0.7	0	0	0	0	2.8	3.6	0	0	6.0	15	6	0.6	0.0	0.0	0.6	0.2
12	A15	11	0	0	0.0	0	0.9	0	1	230	0	0.34	1	0	0	21	1.22	0	170	0	0.8	0	0	0	0	1.9	3.1	0	0	1.6	9	0	0.4	0.0	0.0	0.8	0.1
13	A15	12	0	0	0.0	0	1.3	0	0	180	1	0.34	2	0	0	120	1.61	0	250	0	0.6	0	0	0	0	4.1	5.7	0	0	4.6	10	5	0.7	0.0	0.0	1.0	0.1

PORTAGE QUARRY – NORTH FACE

No	ID	ST	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sm	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
14	A15	13	0	0	0.0	790	0.9	0	3	170	0	1.40	4	0	0	0	1.89	0	170	0	4.1	0	0	0	0	14.0	2.9	0	0	16.0	31	12	1.9	0.5	0.0	1.4	0.2
15	A15	14	2	0	0.0	650	0	0	4	170	0	1.50	3	0	0	0	2.08	0	170	0	4.7	0	0	0	0	17.0	4.2	0	0	24.0	50	12	2.6	0.7	0.0	1.0	0.2
16	A15	15	0	0	0.0	260	1.2	0	0	170	0	0.45	0	0	0	0	1.62	0	320	0	1.1	0	0	0	0	0.3	0.0	0	0	2.5	4	0	0.2	0.0	0.0	0.5	0.1

PORTAGE QUARRY – SOUTH FACE

No	ID	ST	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sm	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
17	J15	1	0	0	0.0	180	0	0	0	210	0	0.83	7	0	0	0	2.42	0	130	0.2	4.0	0	0	0	0	22.0	3.6	0	0	26.0	59	23	3.8	0.3	0.0	2.0	0.3
18	J15	2	3	0	0.0	180	0	0	3	280	0	4.81	5	0	0	4	1.31	0	210	0	18.0	0	0	0	1.3	1.1	2.5	0	60	3.4	13	7	0.3	0.0	0.6	7.2	1.1
19	J15	3	0	0	0.0	0	0	0	0	160	0	0.60	0	0	0	0	2.07	0	220	0	1.4	0	0	0	0	0.0	0.0	0	0	3.7	7	0	0.3	0.0	0.0	0.8	0.1
21	J15	4	0	0	1.3	130	1.3	0	2	160	0	0.49	2	0	0	30	2.05	0	220	0	0.9	0	0	0	1.3	4.7	2.4	0	63	5.0	11	5	0.7	0.0	0.0	1.1	0.2
22	J15	5	0	0	0.0	260	0	0	0	200	0	0.36	0	0	0	0	2.16	0	230	0	1.3	0	0	0	0	0.0	0.0	0	0	5.6	9	0	0.4	0.0	0.0	0.8	0.1
23	J15	6	0	0	0.0	510	0.9	0	3	200	0	1.42	3	0	0	2	2.40	0	140	0	3.6	0	0	0	0	9.0	3.1	0	83	21.0	40	14	2.2	0.5	0.0	1.4	0.2
24	J15	7	0	0	0.0	460	1	0	2	220	0	0.66	0	0	0	0	1.73	0	310	0	1.3	0	0	0	0	1.4	0.0	0	0	5.5	9	5	0.4	0.0	0.0	0.2	0.0
25	J15	8	0	0	0.0	700	0	3	19	260	3	7.31	3	0	0	2	1.29	0	360	0	23.0	0	0	0	3.2	2.4	1.4	0	313	37.0	110	49	11.0	0.7	3.1	7.3	1.0
26	J15	9	0	0	0.0	170	1.3	0	2	220	0	1.69	0	0	0	0	1.68	0	250	0	9.6	0	0	0	0	1.0	2.6	0	0	4.6	10	0	0.4	0.0	0.0	4.9	0.7

FORT FITZGERALD – CEMETARY SAMPLES

No	ID	ST	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sm	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
27	FG	1	0	0	0.9	430	0	0	2	180	0	1.13	3	0	0	0	2.21	96	180	0.2	6.6	0	0	0	0	16.0	4.9	0	76	32.0	70	26	4.3	0.8	0.0	3.2	0.5
28	FG	2	0	0	0.0	300	0	0	2	140	0	0.57	3	0	0	3	2.38	0	180	0	1.6	0	0	0	0	13.0	2.8	0	0	29.0	56	20	3.2	0.6	0.0	0.3	0.1
29	FG	3	0	0	0.0	330	0	0	0	270	0	0.66	0	0	0	2	0.69	0	130	0	3.4	0	0	0	0	3.5	1.3	0	0	10.0	24	9	1.6	0.5	0.0	1.2	0.2

JUSTIN'S SLOUGH – SWAMP GEOCHEMICAL SAMPLE SURVEY
START AT RIVER CONFLUENCE WORKING NORTH TO DOG RIVER LINEAR

No	ID	ST	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sm	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
31	J1	0	5	0	5.9	310	32	0	5	26	0	1.20	2	0	0	0	0.30	0	0	0.3	3.3	0	0	0	0	3.5	1.6	0	100	12.0	18	0	1.8	0.0	0.0	0.8	0.1
32	J1	1	0	0	3.3	460	15	0	4	57	2	1.45	6	0	0	0	0.69	0	59	0.2	6.6	0	0	0	0.9	6.5	4.3	0	107	28.0	53	23	3.2	1.0	0.0	2.1	0.4
33	J1	2	0	0	6.7	400	30	2	5	31	2	1.73	4	0	0	3	0.45	0	35	0.2	5.5	3	0	0	0	7.4	4.4	0	197	22.0	44	21	2.9	0.8	0.0	1.3	0.3
34	J1	3	0	0	6.4	350	49	0	5	36	3	2.66	3	0	0	0	0.40	0	0	0.4	5.9	0	0	0	0	8.8	5.2	0	73	20.0	40	0	2.5	0.5	0.0	1.3	0.2
35	J1	4																																			
36	J1	5	2	0	6.3	620	7.7	0	9	86	3	2.43	9	0	0	0	0.86	0	60	0.6	11.0	0	0	0	0	19.0	12.0	0	173	58.0	120	47	7.3	2.0	0.9	3.5	0.8
37	J1	6	0	0	6.0	270	86	0	5	17	0	1.07	0	0	0	0	0.08	0	0	0	1.7	0	0	0	0	2.4	2.9	0	138	6.8	20	9	0.9	0.3	0.0	0.0	0.0
38	J1	7	0	0	4.6	460	56	0	7	83	3	1.78	6	0	0	0	0.41	0	61	0.3	5.9	0	0	0	0	13.0	6.6	0	86	26.0	61	16	3.3	0.7	0.0	1.3	0.2
39	J1	8	0	0	7.4	230	86	0	6	10	0	1.13	0	0	0	0	0.08	0	0	0	1.5	0	0	0	0	1.5	4.7	0	263	7.0	14	7	0.9	0.2	0.0	0.5	0.0
41	J1	9	0	0	7.8	200	90	0	5	19	0	1.28	0	0	0	0	0.86	0	0	0	1.4	0	0	0	0	2.9	3.6	0	173	5.9	12	6	1.0	6.3	0.0	0.5	0.4

JUSTIN'S SLOUGH – EAST TRAVERSE ACROSS GULLEY GOING NORTH

No	ID	ST	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sm	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
42	J2	1	3	0	2.6	1900	3.2	1	6	56	3	2.16	7	0	0	0	0.75	110	120	0.3	9.0	0	0	0	0	15.0	5.8	0	366	45.0	100	36	5.6	1.3	0.0	2.6	0.4
43	J2	2	0	0	3.5	650	6.2	0	7	63	3	2.43	6	0	0	0	0.75	0	94	0.5	9.1	0	0	0	1.1	16.0	10.0	0	124	45.0	91	36	5.7	1.4	0.0	2.5	0.4
44	J2	3	0	0	4.0	870	13	0	10	69	3	2.61	6	0	0	0	0.71	0	56	0.3	9.1	0	0	0	2.3	16.0	9.7	0	350	55.0	110	44	6.7	1.6	1.0	2.3	0.4
45	J2	4	3	0	5.7	720	10	0	7	67	3	2.86	6	0	0	0	0.74	0	64	0.3	10.0	0	0	0	0	23.0	15.0	0	86	100.0	190	78	12.0	2.5	1.7	3.0	0.4
46	J2	5	0	0	11.0	700	5.2	0	12	61	3	5.33	6	0	0	4	0.79	0	56	0.4	9.3	0	0	610	2	21.0	7.0	0	93	110.0	230	84	13.0	2.7	1.4	3.3	0.6
47	J2	6	2	0	12.0	690	3	0	6	57	2	7.23	7	0	0	5	1.05	0	65	0.4	8.5	0	0	0	1.3	19.0	5.1	0	60	66.0	130	52	8.0	1.6	1.2	2.7	0.4
48	J2	7	4	0	6.0	720	4.2	0	5	35	0	4.48	7	0	0	4	1.60	0	76	0	6.6	0	0	0	0	12.0	3.5	0	0	47.0	69	35	5.6	1.4	0.0	1.6	0.3
49	J2	8	5	0	3.1	620	2.6	0	4	26	0	2.09	7	0	0	1	1.77	0	110	0	6.3	0	0	510	0	9.2	1.5	0	0	29.0	66	22	3.5	1.1	0.0	1.4	0.3
51	J2	8	6	0	2.1	660	0	2	4	26	0	1.62	9	0	0	0	1.56	0	83	0.2	7.1	0	0	0	0	8.5	1.9	0	0	24.0	51	15	3.1	0.9	0.7	1.8	0.3
52	J2	10	0	0	2.6	1100	0	0	0	34	1	1.50	14	0	0	0	2.21	0	120	0	8.0	0	0	0	0	10.0	0.0	0	0	30.0	63	27	3.7	1.4	0.0	1.8	0.4

JUSTIN'S SLOUGH – WEST TRAVERSE ACROSS GULLEY GOING SOUTH

No	ID	ST	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sm	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
53	J3	1	0	0	5.5	690	4	0	6	73	5	4.24	8	0	0	5	1.13	0	130	0.4	12.0	0	0	0	0	14.0	2.3	6	165	40.0	87	32	4.4	1.5	0.0	2.2	0.4
54	J3	2	2	0	10.0	1100	6.6	0	17	100	7	5.31	9	0	0	1	6.84	0	184	0.6	15.0	0	0	0	0	28.0	6.2	0	194	61.0	170	65	6.8	2.4	0.0	3.5	0.6
55	J3	3	4	0	10.0	1000	5.6	0	12	73	4	7.39	8	0	0	5	1.22	0	190	0	12.0	0	0	0	2.3	21.0	6.7	0	0	72.0	140	56	6.6	2.2	0.0	3.2	0.5
56	J3	4	2	0	15.0	1200	30	0	13	110	3	8.82	7	0	0	0	0.78	0	40	0	14.0	0	0	0	0	32.0	16.0	0	181	120.0	210	67	15.0	3.3	0.0	3.9	0.7
57	J3	5	0	0	11.0	1300	14	0	11	150	6	10.10	8	0	0	0	0.90	0	94	0	21.0	0	0	0	0	71.0	4.9	0	243	430.0	750	350	53.0	10.0	5.7	9.5	1.5
58	J3	6	0	0	6.5	940	14	0	9	89	5	3.41	9	0	0	0	0.93	0	140	0.6	14.0	0	0	0	0	28.0	23.0	0	136	110.0	220	100	14.0	9.0	1.5	4.1	0.7
59	J3	7	0	0	6.7	1000	7.6	0	14	96	6	4.23	7	0	0	0	0.62	0	130	1.3	15.0	0	0	0	0	22.0	10.0	0	160	61.0	156	64	10.0	2.7	0.0	4.2	0.6

ED FRIESEN **JUNE 12, 1995**
W.O. 9532-95
SAMPLE TYPE: Rock + Soil

SAMPLE #	SAMPLE ID	SAMPLE #	SAMPLE ID
1	A15-1	31	J1-0
2	A15-2	32	J1-1
3	A15-3	33	J1-2
4	A15-4	34	J1-3
5	A15-5	35	J1-4
6	A15-6	36	J1-5
7	A15-7	37	J1-6
8	A15-8	38	J1-7
9	A15-9	39	J1-8
11	A15-10	41	J1-9
12	A15-11	42	J2-1
13	A15-12	43	J2-2
14	A15-13	44	J2-3
15	A15-14	45	J2-4
16	A15-15	46	J2-5
17	J15-1	47	J2-6
18	J15-2	48	J2-7
19	J15-3	49	J2-8
21	J15-4	51	J2-9
22	J15-5	52	J2-10
23	J15-6	53	J3-1
24	J15-7	54	J3-2
25	J15-8	55	J3-3
26	J15-9	56	J3-4
27	FG-1	57	J3-5
28	FG-2	58	J3-6
29	FG-3	59	J3-7

Note: Insufficient sample for analyses on
Sample # 35, Sample ID J1-4.

Fort Smith
May/95

CanTech Laboratories Inc.

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Work Order: 9532-95

Sample description	AU PPB	AG PPM	AS PPM	BA PPM	BR PPM	CA %	CO PPM	CR PPM	CS PPM	FE %	HF PPM	HG PPM	IR PPB	MO PPM	NA %	NI PPM	RB PPM	SB PPM	SC PPM	SE PPM	SN PPM	SR PPM	TA PPM	TH PPM
1	3	<5	2.1	110	<0.5	<1	<1	210	<1	0.62	1	<1	<5	<1	2.79	<22	250	<0.1	0.8	<3	<100	<500	<0.5	1.3
2	<2	<5	<0.5	77	<0.5	<1	<1	200	<1	0.37	<1	<1	<5	3	2.93	<23	240	<0.1	0.4	<3	<100	<500	<0.5	0.3
3	<2	<5	1.0	78	<0.5	<1	<1	200	<1	1.48	2	<1	<5	21	1.97	<21	150	<0.1	3.2	<3	<100	<500	<0.5	2.6
4	<2	<5	1.8	<50	<0.5	<1	<1	220	1	0.48	2	<1	<5	290	2.36	<20	300	<0.1	0.7	<3	<100	<500	<0.5	6.6
5	<2	<5	0.9	120	<0.5	<1	<1	190	<1	0.40	2	<1	<5	3	2.22	<20	230	<0.1	0.8	<3	<100	<500	<0.5	4.1
6	<2	<5	<0.5	<50	<0.5	<1	<1	230	<1	0.83	1	<1	<5	<1	2.05	<20	250	<0.1	0.9	<3	<100	<500	<0.5	<0.2
7	<2	<5	<0.5	<50	<0.5	<1	<1	170	<1	0.64	1	<1	<5	<1	2.31	<21	220	<0.1	1.0	<3	<100	<500	<0.5	1.1
8	<2	<5	<0.5	79	<0.5	<1	2	190	1	1.42	2	<1	<5	2	1.96	<20	300	<0.1	1.9	3	<100	<500	<0.5	<0.2
9	<2	<5	<0.5	<50	1.3	<1	2	200	<1	0.43	<1	<1	<5	<1	1.84	<20	290	<0.1	0.7	<3	<100	<500	<0.5	<0.2
11	<2	<5	0.7	200	<0.5	<1	<1	170	<1	0.32	3	<1	<5	<1	2.10	<20	290	<0.1	0.7	<3	<100	<500	<0.5	2.8
12	<2	<5	<0.5	<50	0.9	<1	1	230	<1	0.34	1	<1	<5	21	1.22	<20	170	<0.1	0.8	<3	<100	<500	<0.5	1.9
13	<2	<5	<0.5	<50	1.3	<1	<1	180	1	0.34	2	<1	<5	120	1.81	<20	250	<0.1	0.6	<3	<100	<500	<0.5	4.1
14	<2	<5	<0.5	790	0.9	<1	3	170	<1	1.40	4	<1	<5	<1	1.89	<20	170	<0.1	4.1	<3	<100	<500	<0.5	14
15	2	<5	<0.5	680	<0.5	<1	4	170	<1	1.50	3	<1	<5	<1	2.08	<20	170	<0.1	4.7	<3	<100	<500	<0.5	17
16	<2	<5	<0.5	260	1.2	<1	<1	170	<1	0.45	<1	<1	<5	<1	1.82	<20	320	<0.1	1.1	<3	<100	<500	<0.5	0.3
17	<2	<5	<0.5	180	<0.5	<1	<1	210	<1	0.83	7	<1	<5	<1	2.42	<21	130	0.2	4.0	<3	<100	<500	<0.5	22
18	3	<5	<0.5	180	<0.5	<1	3	280	<1	4.81	5	<1	<5	4	1.31	<22	210	<0.1	18	<3	<100	<500	1.3	1.1
19	<2	<5	<0.5	<50	<0.5	<1	<1	160	<1	0.60	<1	<1	<5	<1	2.07	<20	220	<0.1	1.4	<3	<100	<500	<0.5	<0.2
21	<2	<5	1.3	130	1.3	<1	2	180	<1	0.49	2	<1	<5	30	2.05	<20	220	<0.1	0.9	<3	<100	<500	1.3	4.7
22	<2	<5	<0.5	280	<0.5	<1	<1	200	<1	0.36	<1	<1	<5	<1	2.16	<20	230	<0.1	1.3	<3	<100	<500	<0.5	<0.2
23	<2	<5	<0.5	510	0.9	<1	3	200	<1	1.42	3	<1	<5	2	2.40	<20	140	<0.1	3.6	<3	<100	<500	<0.5	9.0
24	<2	<5	<0.5	460	1.0	<1	2	220	<1	0.86	<1	<1	<5	<1	1.73	<20	310	<0.1	1.3	<3	<100	<500	<0.5	1.4
25	<2	<5	<0.5	700	<0.5	3	19	260	3	7.31	3	<1	<5	2	1.29	<27	360	<0.1	23	<3	<100	<500	3.2	2.4
26	<2	<5	<0.5	170	1.3	<1	2	220	<1	1.89	<1	<1	<5	<1	1.68	<20	250	<0.1	9.6	<3	<100	<500	<0.5	1.0
27	<2	<5	0.9	430	<0.5	<1	2	180	<1	1.13	3	<1	<5	<1	2.21	98	180	0.2	6.8	<3	<100	<500	<0.5	16
28	<2	<5	<0.5	300	<0.5	<1	2	140	<1	0.57	3	<1	<5	3	2.38	<20	180	<0.1	1.6	<3	<100	<500	<0.5	13
29	<2	<5	<0.5	330	<0.5	<1	<1	270	<1	0.86	<1	<1	<5	2	0.89	<20	130	<0.1	3.4	<3	<100	<500	<0.5	3.5
31	5	<5	5.9	310	32	<1	5	28	<1	1.20	2	<1	<5	<1	0.30	<31	<15	0.3	3.8	<3	<100	<500	<0.5	3.5
32	<2	<5	3.3	480	15	<1	4	57	2	1.45	6	<1	<5	<1	0.69	<20	59	0.2	6.8	<3	<100	<500	0.9	8.5
33	<2	<5	6.7	400	30	2	5	51	2	1.73	4	<1	<5	3	0.45	<21	35	0.2	5.5	3	<100	<500	<0.5	7.4
34	<2	<5	6.4	350	49	<1	5	36	3	2.68	3	<1	<5	<1	0.40	<28	<15	0.4	5.0	<3	<100	<500	<0.5	8.6
36	2	<5	8.3	680	7.7	<1	9	86	3	2.43	9	<1	<5	<1	0.86	<23	60	0.6	11	<3	<100	<500	<0.5	19
37	<2	<5	6.0	270	86	<1	6	17	<1	1.07	<1	<1	<5	<1	0.08	<28	<15	<0.1	1.7	<3	<100	<500	<0.5	2.4
38	<2	<5	4.8	480	56	<1	7	53	3	1.78	4	<1	<5	<1	0.41	<31	61	0.3	5.9	<3	<100	<500	<0.5	13
39	<2	<5	7.4	270	86	<1	6	10	<1	1.13	<1	<1	<5	<1	0.08	<30	<15	<0.1	1.5	<3	<100	<500	<0.5	1.5
41	<2	<5	7.8	280	90	<1	5	10	<1	1.28	<1	<1	<5	<1	0.08	<32	<15	<0.1	1.4	<3	<100	<500	<0.5	2.9
42	3	<5	2.8	1000	3.2	1	8	58	3	2.18	7	<1	<5	<1	0.75	110	120	0.3	9.0	<3	<100	<500	<0.5	15
43	<2	<5	3.5	650	8.2	<1	7	63	3	2.43	6	<1	<5	<1	0.75	<20	94	0.5	9.1	<3	<100	<500	1.1	16
44	<2	<5	4.0	870	13	<1	10	60	3	2.81	6	<1	<5	<1	0.71	<20	56	0.3	9.1	<3	<100	<500	2.3	16
45	3	<5	5.7	710	10	<1	7	67	3	2.88	6	<1	<5	<1	0.74	<21	64	0.3	10	<3	<100	<500	<0.5	23
46	<2	<5	11	700	5.2	<1	12	61	3	8.33	6	<1	<5	4	0.79	<24	68	0.4	9.3	<3	<100	610	2.0	21
47	2	<5	12	690	3.0	<1	8	57	2	7.23	7	<1	<5	5	1.05	<20	65	0.4	8.6	<3	<100	<500	1.3	19
48	4	<5	6.0	720	4.2	<1	5	35	<1	4.48	7	<1	<5	4	1.60	<20	76	<0.1	6.8	<3	<100	<500	<0.5	12
49	5	<5	3.1	620	2.6	<1	4	28	<1	2.09	7	<1	<5	1	1.77	<20	110	<0.1	6.3	<3	<100	610	<0.5	9.2
51	6	<5	2.1	660	<0.5	2	4	28	<1	1.62	9	<1	<5	<1	1.56	<20	83	0.2	7.1	<3	<100	<500	<0.5	8.5

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Work Order: 9532-95

Sample description	U PPM	W PPM	ZN PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	TB PPM	YB PPM	LU PPM	Mass g
1	1.7	<1	52	2.7	7	<5	0.3	<0.2	<0.5	0.6	0.07	20.00
2	<0.5	<1	127	7.3	11	<5	0.5	<0.2	<0.5	0.2	<0.05	20.00
3	4.2	<1	137	4.3	12	<5	0.6	<0.2	<0.5	2.2	0.35	20.00
4	8.2	<1	<50	6.3	12	<5	1.1	<0.2	<0.5	1.1	0.21	20.00
5	4.4	<1	<50	4.7	10	<5	0.7	<0.2	<0.5	1.4	0.22	20.00
6	1.2	<1	<50	2.8	4	<5	0.2	<0.2	<0.5	0.6	0.06	20.00
7	1.7	<1	<50	5.7	11	<5	0.4	<0.2	<0.5	0.6	0.06	20.00
8	1.7	<1	59	1.7	5	<5	0.2	<0.2	<0.5	1.1	0.14	20.00
9	<0.5	<1	<50	3.1	7	<5	0.1	<0.2	<0.5	<0.2	<0.05	20.00
11	3.0	<1	<50	8.0	15	8	0.6	<0.2	<0.5	0.8	0.18	20.00
12	3.1	<1	<50	3.8	9	<5	0.4	<0.2	<0.5	0.8	0.14	20.00
13	5.7	<1	<50	4.6	10	5	0.7	<0.2	<0.5	1.0	0.19	20.00
14	2.9	2	<50	16	31	12	1.9	0.5	<0.5	1.4	0.24	20.00
15	4.2	<1	<50	24	50	12	2.8	0.7	<0.5	1.0	0.17	20.00
16	<0.5	<1	<50	2.5	4	<5	0.2	<0.2	<0.5	0.5	0.11	20.00
17	3.8	<1	<50	26	59	23	3.8	0.3	<0.5	2.0	0.34	20.00
18	2.5	<1	60	3.4	13	7	0.3	<0.2	0.6	7.2	1.06	20.00
19	<0.5	<1	<50	3.7	7	<5	0.3	<0.2	<0.5	0.8	0.11	20.00
21	2.4	<1	63	5.0	11	5	0.7	<0.2	<0.5	1.1	0.20	20.00
22	<0.5	<1	<50	5.6	9	<5	0.4	<0.2	<0.5	0.6	0.09	20.00
23	3.1	<1	83	21	40	14	2.2	0.5	<0.5	1.4	0.23	20.00
24	<0.5	<1	<50	5.5	9	<5	0.4	<0.2	<0.5	0.2	<0.05	20.00
25	3.4	<1	313	37	110	49	11	0.7	3.1	7.3	1.04	20.00
26	2.8	<1	<50	4.6	10	<5	0.4	<0.2	<0.5	4.9	0.74	20.00
27	4.9	<1	76	32	70	26	4.2	0.6	<0.5	3.2	0.45	20.00
28	2.8	<1	<50	29	58	20	3.2	0.6	<0.5	0.3	0.05	20.00
29	1.3	<1	<50	10	24	9	1.6	0.5	<0.5	1.2	0.19	20.00
31	1.6	<1	130	12	19	<5	1.8	<0.2	<0.5	0.8	0.14	2.285
32	4.3	<1	107	26	53	23	3.2	1.0	<0.5	2.1	0.37	20.00
33	4.4	<1	197	22	44	21	2.9	0.8	<0.5	1.5	0.27	10.00
34	5.2	<1	73	20	40	<5	2.6	0.5	<0.5	1.3	0.23	6.000
36	12	<1	173	58	120	47	7.3	2.0	0.9	3.5	0.59	15.00
37	2.9	<1	138	6.8	20	9	0.9	0.3	<0.5	<0.2	<0.05	4.000
38	6.6	<1	95	26	61	16	3.3	0.7	<0.5	1.3	0.20	5.000
39	4.7	<1	263	7.0	14	7	0.9	<0.2	<0.5	0.5	<0.05	3.000
41	3.8	<1	173	5.9	12	6	1.0	0.3	<0.5	0.5	0.06	3.000
42	5.8	<1	386	45	100	36	5.6	1.3	<0.5	2.6	0.41	20.00
43	10	<1	124	45	91	38	5.7	1.4	<0.5	2.6	0.40	20.00
44	9.7	<1	350	55	110	44	6.7	1.6	1.0	2.3	0.42	20.00
45	15	<1	88	100	190	78	12	2.5	1.7	3.0	0.44	20.00
46	7.0	<1	93	110	230	84	13	2.7	1.4	3.3	0.60	20.00
47	5.1	<1	80	66	130	52	8.0	1.8	1.2	2.7	0.43	20.00
48	3.5	<1	<50	47	89	35	5.6	1.4	<0.5	1.8	0.29	20.00
49	1.5	<1	<50	29	66	22	3.5	1.1	<0.5	1.4	0.26	20.00
51	1.8	<1	<50	24	51	15	3.1	0.9	0.7	1.8	0.30	20.00

CanTech *Laboratories Inc.*

42008 - 10 Street N.E.
Calgary, Alberta, Canada
T2E 6K3
Tel (403) 250-1901
Fax (403) 250-8265

Work Order: 9532-95

Sample description	AU PPB	AG PPM	AS PPM	BA PPM	BR PPM	CA %	CO PPM	CR PPM	CS PPM	FE %	HF PPM	HG PPM	IR PPB	MO PPM	NA %	NI PPM	RB PPM	SB PPM	SC PPM	SE PPM	SN PPM	SR PPM	TA PPM	TH PPM
52	<2	<5	2.6	1100	<0.5	<1	<1	34	1	1.50	14	<1	<5	<1	2.21	<29	120	<0.1	8.0	<3	<100	<500	<0.5	10
53	<2	<5	5.6	890	4.0	<1	8	73	5	4.24	8	<1	<5	5	1.13	<30	130	0.4	12	<3	<100	<500	<0.5	14
54	2	<5	10	1100	6.6	<1	17	100	7	5.31	9	<1	<5	<1	0.84	<32	180	0.6	15	<3	<100	<500	<0.5	28
55	4	<5	10	1000	5.6	<1	12	73	4	7.39	8	<1	<5	5	1.22	<33	100	<0.1	12	<3	<100	<500	2.3	21
56	2	<5	15	1200	30	<2	13	110	3	8.82	7	<1	<5	<1	0.78	<73	40	<0.2	14	<3	<100	<500	<0.9	32
57	<3	<5	11	1300	14	<2	11	150	6	10.1	8	<1	<5	<1	0.90	<58	94	<0.1	21	<3	<100	<500	<0.9	71
58	<2	<5	6.5	940	14	<1	9	89	5	3.41	9	<1	<5	<1	0.93	<32	140	0.8	14	<3	<100	<500	<0.5	28
59	<3	<5	8.7	1000	7.4	<1	14	98	6	4.23	7	<1	<5	<1	0.82	<32	130	1.3	15	<3	<100	<500	<0.5	22

Sample description	U PPM	W PPM	ZN PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	TB PPM	YB PPM	LU PPM	Mass g
52	<0.5	<1	<50	30	63	27	3.7	1.4	<0.5	1.8	0.35	20.00
53	2.3	6	109	40	87	32	4.4	1.5	<0.5	2.2	0.37	20.00
54	8.2	<1	194	81	170	69	8.8	2.4	<0.5	3.5	0.58	20.00
55	6.7	<1	<50	72	140	58	8.6	2.2	<0.5	3.2	0.53	20.00
56	16	<2	181	120	210	87	15	3.3	<0.5	3.9	0.68	5.000
57	49	<2	243	430	790	350	53	10.0	5.7	9.5	1.54	15.00
58	23	<1	136	110	220	100	14	3.0	1.5	4.1	0.70	20.00
59	10	<1	160	81	150	66	10	2.7	<0.5	4.2	0.64	20.00

LAKEFIELD RESEARCH

A Division of Falconbridge Limited

185 Concession Street
Postal Bag 4300
Lakefield, Ontario
Canada K0L 2H0
Tel: (705)-652-2038
FAX: (705)-652 6365

To:	Ed Friesen	Company:	Friesen and Assoc.
From:	Nicki McKay	Fax No:	403-278-2638
Date:	June 28/95	Reference:	8900-922

This transmission consists of 17 page(s) including this one.

Ed:

Please find enclosed the results of indicator mineral analysis of your seven panned concentrates.

No chrome pyropes or chrome diopsides were found. At least 10 orange garnets (possible eclogitic almandine) were selected from each sample. Crustal garnets can also be orange in colour. Electron microprobe analysis (EMPA) is required to distinguish crustal from mantle-derived garnets.

At least 8 oxide grains (tentatively identified as ilmenite) were selected from each sample. One black octahedron (tentatively identified as chromite/chrome spinel) was selected from Sample A 01S. These minerals can also occur in crustal rocks. Kimberlitic affinity of these grains can only be determined by EMPA.

I am enclosing a copy of a paper by Dan Schulze of the University of Toronto discussing the recognition and significance of indicator minerals. A good reference list is in the back. Needless to say there is much written on this subject.

I called Chicoutimi, and my friend there who handles the analyses (less expensive ones) will be out of the office until Tuesday. Our other contact in London, Ontario (more expensive analyses) is on holiday for another week and a half. I will contact you next week when I have more information. I won't be in the office until Wednesday, but Greg will be here and is familiar with your results.

Regards......

Project: 8900-922 June 28, 1995

Indicator Minerals

Sample #	Indicator Minerals					
	Chrome Pyrope		Orange Garnet (poss. eclogitic)	Chrome Diopside	Ilmenite	Cr spinel/ Chromite
	Purple	Red				
A 0 0 N	-	-	10 (>15)	-	9	-
A 0 1 N	-	-	10 (>15)	-	7	-
A 0 3 N	-	-	10 (>50)	-	10 (>50)	-
A 0 4 N	-	-	10	-	9	-
A 0 1 S	-	-	10 (>15)	-	9	1
A 0 2 S	-	-	10 (>15)	-	10 (>15)	-
R 0 1 E	-	-	10 (>15)	-	8	-

Note: 20 (>100) - indicates 20 grains were selected, but >100 were present in sample.

LAKEFIELD RESEARCH

A Division of Falconbridge Limited
185 Concession Street, Postal Bag 4300
Lakefield, Ontario, Canada K0L 2H0
Tel: (705) 652-2000 Fax: (705) 652-6365

July 24, 1995

E.J. Friesen and Associates Inc.
#8 Lake Placid Rise S.E.
Calgary, Alberta
CANADA T2J 5B5

Attention: Mr. Ed Friesen

Re: ***LR Project No. 8900-922 Indicator Mineral Analysis***

Dear Ed:

Please find enclosed the results of the quantitative electron microprobe analysis of selected oxides and garnets from your seven panned concentrates (12 grains total).

Mineral compositions of ilmenite and magnesian almandine garnet were typical of crustal derivation. No grains of kimberlitic affinity were identified.

The six orange garnets were high in iron, and too low in magnesium, calcium and titanium to be classified as eclogitic almandine-pyrope.

The five ilmenite grains were low in magnesium (0.07 to 0.14% MgO); ilmenites associated with kimberlites typically measure 4-15% MgO. Two additional oxide grains (from samples A02S and A04N) were identified as rutile (TiO_2) and detailed analyses were not performed. The single octahedral grain (possible chromite/chrome spinel) from sample A01S was determined to be a zinc spinel.

The analyses are attached. If you have any questions, do not hesitate to call me. I wish you luck in your further exploration efforts!!

Best regards,
LAKEFIELD RESEARCH

[redacted]

N.A. McKay, M.Sc.,
Mineralogist

8900-922 Electron Microprobe Analyses - Friesen and Associates

Sample	Grain	SiO2	TiO2	AL2O3	Cr2O3	FeO	MgO	MnO	CaO	ZnO	SUM	Identification
A00N	Garnet	37.58	0.09	22.23	0.00	33.08	5.02	0.56	1.93		100.49	Magnesian Almandine
	Oxide	0.01	51.32	0.00	0.00	47.28	0.12	0.43	0.00	0.00	99.16	Ilmenite
A01N	Garnet	37.45	0.06	21.30	0.00	31.73	4.84	1.11	2.45		99.57	Magnesian Almandine
	Oxide	0.00	50.45	0.00	0.00	42.95	0.11	5.25		0.01	98.77	Ilmenite
A03N	Garnet	38.18	0.05	22.77	0.01	28.67	7.76	1.13	1.24		99.81	Magnesian Almandine
	Oxide	0.02	50.19	0.00	0.00	47.11	0.14	1.87		0.00	99.33	Ilmenite
A04N	Oxide											Rutile
A01S	Garnet	37.46	0.08	22.54	0.00	30.72	6.47	0.51	2.19		99.97	Magnesian Almandine
	Oxide	0.00	50.56	0.00	0.00	47.59	0.07	1.07		0.02	99.31	Ilmenite
	Spinel	0.00	0.00	57.41	0.15	28.90	3.16	0.03		8.57	98.22	Zinc Spinel
A02S	Garnet	37.53	0.09	22.36	0.00	32.00	5.10	0.82	2.11		100.01	Magnesian Almandine
	Oxide											Rutile
R01E	Garnet	36.85	0.09	21.85	0.01	32.51	4.66	0.79	2.81		99.57	Magnesian Almandine
	Oxide	0.00	51.83	0.00	0.00	46.74	0.08	0.37		0.05	99.07	Ilmenite

11 Appendices

11.2 Personnel Involved

The following personnel were involved

Name and address	Position
Ed Friesen [redacted] Calgary AB T2J 5B5	party chief
Adrian Mann [redacted] Calgary, AB T2W 1A1	chief geologist
Justin Snelling [redacted] Okotoks, AB T0L 1T2	geologist
Rudy Friesen [redacted] Okotoks, AB T0L 1T2	worker
John Martinuk [redacted] Englewood, Colorado 80111	worker

11 Appendices

11.3 Detail of Expenditures

Fort Fitzgerald Expedition Expences

Summary

Dates Wednesday May 10 to Monday May 15

Fort Fitzgerald - Fort Smith - May 95

		Days	Position	Rate $ / Day	Costs
Personnel involved	[redacted]	6	party chief	$400.00	2400
		5	worker	$200.00	1000
		6	geologist	$400.00	2400
		6	geologist	$400.00	2400
		6	worker	$200.00	1200
Preparation	[redacted]	5	party chief	$400.00	2000
		2	worker	$200.00	400
		2	geologist	$400.00	800
		2	geologist	$400.00	800
		2	worker	$200.00	400
Office		12	project manager	$400.00	4800
		20	geologist	$400.00	8000
Office equipment	computers plotters photocopy				1500
Expences (see sheet attached)					12514.5
				Total	40614.5

Fort Fitzgerald Expedition Expences

May-95

Pelical Rapids Inn Ft Smith	1369.6
Visa Truck Rentals	641.73
Canadian freight	170
Great Slave Helecopters	1928.23
Park and Jet	25.68
Costco photo	15.08
Pine Crest Restaurant	90.37
Portage Restaurant	43.32
Northern Fort Smith	32.09
North of 60 books	16.48
Bakery	23
safeway photo	6.84
Greens pan	14.45
Bakery	21.75
Bakery	25.35
Portage Restaurant	102.45
Bakery	12.5
Bakery	26.25
Bakery	26.25
Bakery	44.95
Bakery	81.37
Bakery	7.25
Portage Restaurant	149.34
Wally's Drug Ft Smith	19.56
Northern Fort Smith	96.73
Costco bars	20.82
Shell Ft Smith	48
Revy	19.8
Canadian Tire	42.05
Revy	97.3
Ribtor	41.62
Campers Village	45.47
Ft Smith	41.3
Link Hdwre	11.75
chest waders	200
CanTech Lab	1138.69
Lakefield Research	774.5
long distance phone calls	25
magnetomrter	214
scintelometer	100
VLF-EM	100
Airline ticket 5 @ 912.71	4563.55
travel to airport / return	$40.00
Total	12514.5