MAR 19700011: NORTHEASTERN ALBERTA

Received date: Dec 31, 1970

Public release date: Jan 01, 1972

MIN 19700011

RECONNAISSANCE PROPERTY EXAMINATION

OF

MINERAL PERMITS NOS. 125, 126 & 137

NORTHEASTERN ALBERTA

UNITY RESOURCES LIMITED

R. K. Netolitzky, M.Sc., P.Geol.

Calgary, Alberta

November 15, 1970

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CERTIFICATE

I, the undersigned, R. K. Netolitzky, of the City of Calgary in the Province of Alberta, do hereby certify:

(1) that I am a Professional Geologist with an office mailing address at 4434 Namaka Crescent N.W., Calgary, Alberta,

(2) that I graduated from the University of Alberta, Edmonton, with a Bachelor of Science degree in 1964; and from The University of Calgary, with a Master of Science degree in 1967,

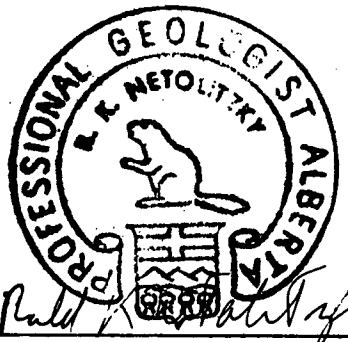
(3) that I am a registered Professional Geologist with the Association of Professional Engineers of Alberta,

(4) that I have been practicing my profession as a geologist for 3 years,

(5) that I have no interest, direct or indirect, in Unity Resources Limited, nor do I expect to receive any interest, either direct or indirect, in the properties or securities pertaining thereto,

(6) that I personally examined the properties mentioned herein between August 4, 1970, and August 19, 1970.

Dated at CALGARY, ALBERTA, this 15th day of November, 1970



R. K. Netolitzky, M.Sc., P.Geol.

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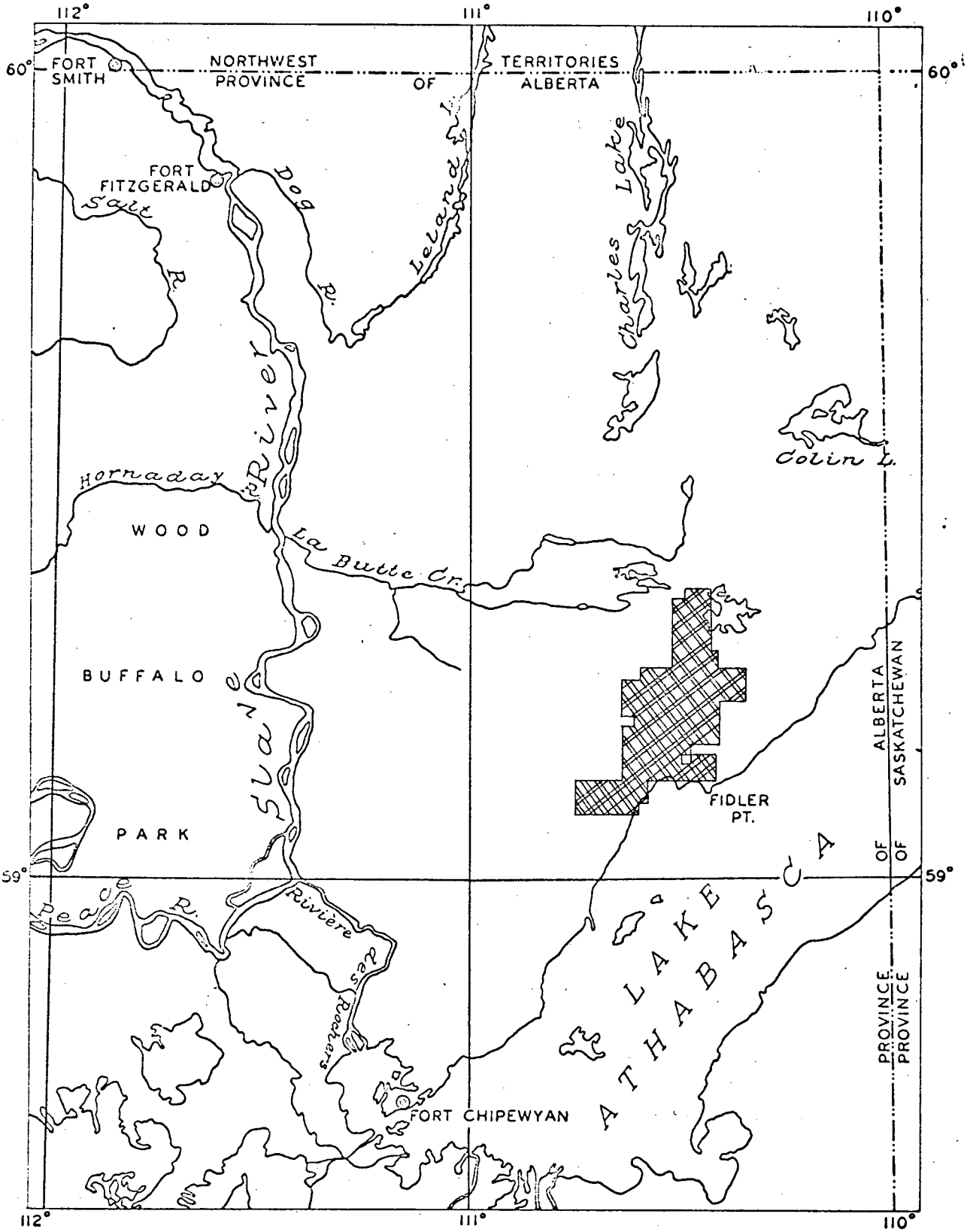

FIGURE 1

GENERAL LOCATION OF MAP AREA

SCALE IN MILES

4 0 4 8 12 16 20 24

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CONCLUSIONS

1. Approximately 30% of the total permit area received at least a cursory examination during the course of this survey. However, less than 10 of the airborne anomalies of greater than three standard deviations were not ground checked.
2. Greater than 80% of the airborne anomalies selected for follow-up examination (i.e., those greater than three standard deviations) were accurately located on the ground.
3. The vast majority of airborne anomalies were found to be associated with areas of high background radioactivity, in pegmatites or massive granite.
4. Similarly, the majority of ground anomalies were also associated with pegmatite bodies or massive granites. In addition, a significant number were related to narrow bands of porphyroblastic gneiss and granite gneiss.
5. A basic disadvantage of the airborne radiometric survey is its tendency to emphasize the high background granite areas. These areas appear further enhanced by their resistance to erosion. This results in prominent outcrop areas and ridges. Vein occurrences, on the other hand, tend to be present in tectonically weak areas (poor resistance to erosional effects). The veins themselves, if present, will also exhibit a poor resistance to erosion. The possibility of encountering vein structures which are exposed to surface over an extensive enough strike length to be

discernible by the flight spacing utilized in airborne surveys is poor.

6. The amount of anomalous radioactivity present in those areas examined may be considered as an indication of the presence of a favorable environment. However, the lack of concentrated radioactivity in or associated with defining structures is definitely detrimental to the potential of the area.

7. Although no encouraging indications of vein-type mineralization were encountered, the proximity and environment of the permit areas with respect to the Beaverlodge uranium province indicate a potential for an economic discovery of radioactive mineralization.

8. Trace amounts of sulphides (pyrite), predominantly in the more mafic gneisses, were observed throughout the permit areas. In the vicinity of Block Lake, pyrite is present in the leucocratic phases. No economic sulphides were observed, and the possibility of such a discovery is considered remote.

RECOMMENDATIONS

In the opinion of the writer, three areas warrant further consideration. In decreasing order of priority, these are:

(a) Southwest of Belinda Lake (Permit No. 125). The presence of interesting radioactivity in association with quartz veins and pegmatites requires further examination. If more ground work is undertaken in this area, the location of the radioactive quartzite boulder (southeast of the lake) should be examined in detail to ensure that the source of the boulder is not local.

(b) North of Block Lake (Permit No. 137). Anomalous radioactivity recorded in overburden is primarily interesting because it is higher than that of the surrounding outcrops and increases with depth. The source of the radioactivity should be ascertained.

(c) North of Big Bay (Fidler Point area, Permit No. 125). In this case, radioactivity may be associated with a lineament. The valley floor should be prospected in detail (probably by radon sampling) to check for anomalous zones.

Reconnaissance prospecting of other areas within the permits, in addition to a more extensive examination of the non-resistive quartzites, would provide a more lucid picture of the potential of the area.

A re-examination of the airborne data and a subsequent plot of all values above two standard deviations is suggested for those anomalies which occur isolated from high background areas.

In summary, selected samples from the eastern portion of Permit No. 125 should be assayed for niobium, tantalum, and rare earth content. If significant amounts of these elements are present, a reappraisal of the permit areas would be in order. Positive data in this field could present a most interesting exploration target.

LOCATION AND ACCESSIBILITY

Mineral permit nos. 125, 126, and 137 are located on the north shore of Lake Athabasca in the northeastern corner of Alberta (Location Map). The combined disposition area, which comprises 125 square miles, is further described below:

Permit	Township	Range (W4M)	Area
125	116-117	3-5	40,000 acres
126	117-118	3-4	30,000 acres
137	118-119	3-4	10,000 acres

The permit areas are accessible by float or ski-equipped aircraft from Fort Chipewyan, Alberta (approximately 35 air miles), from Uranium City, Saskatchewan (75 miles), or from Fort Smith, N.W.T. (75 miles). During the course of the property examination, the writer operated out of Uranium City, primarily because of the superior services available. Uranium City is accessible by regular scheduled airline service from Edmonton (Pacific Western Airlines) and Prince Albert (Norcanair). An alternate summer access could be provided by barge service from the railhead at Waterways, Alberta, to the southern limit of permit no. 125.

Numerous lakes within the three permit areas are suitable for float-equipped aircraft. The reader is also advised of an Alberta Government Forestry cabin which is located two miles west of Fidler Point on the shore of Lake Athabasca.

PHYSIOGRAPHY

Physiographically the area is part of the Canadian Shield. As such, the topography consists primarily of monotonous, low rounded ridges interspersed by numerous lakes, small areas of muskeg and a few broad sand plains. Maximum relief seldom exceeds 200 feet. Outcrop exposure, which varies from 5 to 40 per cent, is generally good, especially in those areas underlain by massive granite or granite gneiss.

Numerous prominent lineaments within the permit areas have been further emphasized by moderate differential weathering. Similarly those outcrops composed of Athabasca Formation have been intensely weathered.

Old strand-line beach deposits, evidenced by contouring gravel beds, are common in the southern portion of permit no. 125. Sand and clay lake deposits are present in several low-lying areas of all three permits.

The entire area has been glaciated. Within the permit boundaries the ice advance was from east to west at approximately 265°.

PERSONNEL

The field personnel employed during the examination of the permits and their subsequent time expenditures are detailed below:

R. K. Netolitzky, P.Geol. (party chief)	Aug. 4-Aug. 19 incl.	16 days
J. R. Allan, B.Sc. (geologist)	Aug. 4-Aug. 25 incl.	22 days
R. M. Blanchette (assistant)	Aug. 4-Aug. 25 incl.	22 days
R. M. Chrapko (assistant)	Aug. 4-Aug. 25 incl.	22 days
	Total	82 man days

METHOD OF SURVEY

An Otter aircraft was employed to facilitate camp moves during the course of the property examination. In all, four camp locations were used to cover the target areas. These were:

1. two miles west of Fidler Point, on the north shore of Lake Athabasca (permit no. 125);
2. the southwest corner of Belinda Lake (permit no. 126);
3. the west end of Florence Lake (permit no. 126); and
4. the southwest corner of Block Lake (permit no. 137).

A semi-freighter canoe with a motor was used to facilitate shoreline geology traverses and to permit access to some of the remote airborne anomalies.

Traverses were conducted by two-man parties consisting of a geologist and an assistant. Ground radiometric examinations were performed with SRAT SPP2-NF scintillometers (a non-differentiating gamma-ray spectrometer). The SPP2 is a lightweight instrument carried on a belt and shoulder strap and operated by one man. A five scale recording device with sensitivities of 150, 500, 1500, 5000, and 15000 counts per second is connected to a dial for a visual record of the incident radiation. The instrument is also equipped with a built-in sound alarm which is manually adjusted to each of the sensitivity scales and emits a sound proportional to the radiation encountered. This enables the operator to constantly record radioactivity between sampling stations. During all traverses the scintillometer was on and set at a scale reading which would draw attention to any anomalous

radioactivity passed over.

Traverses were planned to cover as many of the airborne anomalies as possible and to gather structural and lithological information pertinent to each area. Shoreline geology traverses at Block and Florence Lakes were utilized to gather lithological data because both lakes are oriented perpendicular to the regional strike of the country rocks. The shorelines provided a near continual exposure whereas outcrop in these vicinities amounted to less than 20 per cent.

All pertinent data has been plotted on the appropriate base maps. The main base map was prepared by tracing an uncontrolled photomosaic previously utilized in the airborne radiometric survey. An interpretation of the general geology and airborne radiometric anomalies selected by the computer program has been plotted separately on this base map.

The detailed geological and radiometric observations have been plotted on separate maps for the areas examined at a scale of 1/4 mile to the inch. These maps were produced in the field by enlarging by hand appropriate portions of the 1 mile to the inch base map.

In addition to standard distortion present in all aerial photographs, a number of joins between photographs in the mosaics were not good fits and have caused occasional inconsistencies in the base map. These inconsistencies have not put in doubt the location of recorded observations with regard to local topographic features. In light of the reconnaissance prospecting program conducted, the accuracy of the maps is considered adequate.

HISTORY

Published geological data on the area in the immediate vicinity of the permits are limited and are of a reconnaissance nature. The most recent G. S. C. map available is a preliminary series by G. C. Riley, 1959 (Map 12-1960, Fort Fitzgerald: 1" = 4 miles). Considerable detailed work has been done in the Andrew Lake area north of the permits and for a bibliography of this data the reader is referred to the "Report on Quartz Mineral Permits 125, 126, and 137 . . . for SUMMIT OILS LIMITED, by J. A. Greig and A. Rich, April 14, 1969."

During the past ten years extensive research has been undertaken on uranium mineralization in the Beaverlodge area of Northwestern Saskatchewan. A systematic and comprehensive study of the genesis, controls and geochronology of uranium deposits, plus a detailed description of all of the known radiometric occurrences, is presented by L. S. Beck of the Saskatchewan Department of Mineral Resources in his paper, "Uranium Deposits of the Athabasca Region" (Report no. 126, 1969). The reader is also referred to papers by L. P. Tremblay, particularly the advance edition of Memoir 367 (1968) for information pertinent to uranium exploration in the Precambrian Shield.

An aeromagnetic survey, which covers all three permit areas, was flown as a joint Federal and Alberta Government project in 1962. The data are represented on maps at a scale of one mile to one inch (refer to the Appendix, this report). Aerial

photographic coverage is also available at a scale of 1" to approximately 3300 feet (refer to Appendix, this report).

Three radioactive occurrences have been previously reported within or adjacent to the permit areas (Rich and Greig, 1969). These are:

1. Fishing Lake discovery; held under a group of 13 claims adjacent to the east side of permit no. 125. Reportedly, uranium mineralization is associated with an east-west trending fault. The fault is assumed to strike through permit 125.

2. The second occurrence is reportedly located about one-half mile inland from Lake Athabasca within the boundaries of permit 125 (Sec. 35, Twp. 116, Rge. 4, W4M). Unfortunately, the writer was not provided with a more accurate location. Nevertheless, one airborne anomaly and one ground anomaly were discovered in this vicinity.

3. A third occurrence has been reported on the west shore of Winnifred Lake, in permit no. 126.

   Scheduled camp moves during the course of the property examination and a pre-set budget prevented the writer from visiting this location.

RECENT EXPLORATION AND PROPERTY EVALUATION

The reader is referred to a previous evaluation report by Rich and Greig (April 14, 1969). No records of detailed field work by Rich and Greig or other persons are known to be available.

Subsequent to recommendations by Rich and Greig, SUMMIT OILS LIMITED undertook an airborne scintillometer survey of the three permits in 1969. The survey was performed by GEO-X SURVEYS LIMITED of Vancouver, British Columbia (refer to report by GEO-X, dated January 8, 1970.

The final report by GEO-X has since been evaluated by K. W. Campbell, P.Geol. His recommendations for a ground follow-up program were submitted to SUMMIT OILS LIMITED in correspondence dated February 27, 1970.

Because of the method of representation of the airborne radiometric data (a contoured map with no 'spot highs'), the writer undertook a re-evaluation of the GEO-X results. The method of evaluation is set out in a proposal to SUMMIT OILS LIMITED dated May 25, 1970 (R. K. Netolitzky, P.Geol.). The original data were treated statistically by computer to obtain the following:

(a) Maximum reading
(b) Minimum reading (arbitrarily set at 9 counts/second)
(c) Mean
(d) Mode
(e) One, Two and Three standard deviations
(f) Skewness
(g) Kurtosis
(h) Lambda

The final printout also contained the sequence number of each 'sample', the fiducial point, total count, bismuth reading (or

uranium equivalent), the standard deviation of the 'sample', the bismuth to potassium ratio, and the bismuth to total count ratio.

Two histograms of the final results were computed; the first as a 'normal' plot, and the second as a 'log normal' plot.

Of 13,655 'sample' readings from the three permits, 690 data points were in excess of two standard deviations, and 223 were in excess of three standard deviations.

Those sample data with readings greater than three standard deviations above the mode (10 counts/second) were chosen statistically, with a certainty of 99 per cent, as being significantly radioactive. That is, the radioactivity of the 'sample' location was significant with respect to the average background recorded over the permit areas.

Wherever possible, and with the assistance of the flight film strips, the bulk of the 223 anomalous readings were accurately located on the air photographs (scale: 1" = 3300'). These anomaly locations were then incorporated into the daily geological traverses.

FIDLER POINT - LAKE ATHABASCA

(Southern portion of Permit No. 125)

Field examinations in the Fidler Point area were conducted by R. Netolitzky and J. R. Allan, with R. Blanchette and R. Chrapko acting as assistants.

Personnel and field equipment were moved to Big Bay on Lake Athabasca by Otter and Cessna 180 aircraft from Uranium City on August 4.

Seven days of field work were completed with one day being lost due to poor radio communications (August 12). No time was lost due to weather.

On August 13, the camp was moved to Belinda Lake.

General Geology

The rocks encountered in this region have been grouped into six main units. A more intensive subdivision of rock types is not feasible at the scale of mapping conducted. Compositional changes noted traversing across strike are generally not correlatable between traverses.

In decreasing order of abundance, the rock units mapped are discussed below:

1. Granite gneiss

   These are generally medium grained, pink, quartzo-feldspathic gneisses containing accessory biotite. The metamorphic foliation varies from fair to good. The unit is commonly equigranular-granoblastic in texture. This map unit also contains bands of porphyroblastic gneisses, migmatitic gneisses, hornblende-biotite gneisses, and amphibolites. The presence of these

remnants in an essentially granitoid terrain suggests a complex metamorphic and structural history.

2. Granite

Two varieties of granitic rocks (a white granite and a red granite) are present. The granites have a massive equigranular to poorly foliated texture. The development of metamorphic foliation was the main criterion utilized in differentiating granites from granite gneisses. The contacts between these two rock units are commonly gradational.

Based on hand lense examination, the red varieties are generally richer in potassium feldspar, while the white varieties are richer in alkali feldspars. Many of the granites contain two feldspars and probably fall in the compositional field of granodiorite. The granites are also generally leucocratic, containing 3 to 5 per cent biotite as the accessory mafic.

The massive granites often have gradational contacts with irregular bodies of pegmatite. Grain size was utilized as the main criterion in differentiating pegmatite from massive granite.

3. Porphyroblastic biotite gneiss

A north-northeast trending band, commencing on the west shore of Big Bay, forms the only mappable unit in this area.

This unit contains the most divergent rock types in the area. Compositionally and texturally, large variations are present. The common characteristic utilized in differentiating this unit is the presence of feldspar porphyroblasts and a generally cataclastic texture.

The southern portion of the unit is generally a granite gneiss compositionally, whereas northwards a biotite gneiss appearance is more common.

4. Pegmatite

Pegmatites are present within all other rock units in varying amounts, and are generally present in all outcrops. The pegmatites only form a mappable unit in the northeast portion of the area. In this region they apparently form gently dipping to horizontal sills within a highly assimilated biotite gneiss. Their prevalence, possibly partially due to higher resistance to

weathering processes, has made them the predominant mappable unit of the area.

In other areas, pegmatites occur as: irregular masses, narrow lenses, dykes, and sill-like bodies (some of probably anatectic origin).

The vast majority of the anomalous radioactivity encountered was related to pegmatites and massive granite.

Both red feldspar variety and white feldspar variety pegmatites are common throughout the region. Radioactivity was noted in both types, but is apparently more common in the white varieties. Where present in red pegmatites, radioactivity may be associated with weak hematization.

No differentiation of the age of pegmatites was possible on the basis of coloration.

5. Quartzite

This rock type, although not extensive in area, is correlatable along strike in two instances. Outcrops of quartzite are generally recessive, contain abundant hematite, and are locally chloritic. The quartzite also exhibits a strongly sheared appearance, is fine to medium grained, and contains a considerable amount of impurities.

Aside from the development of shear foliation, little other criteria are present to differentiate it from the Athabasca Formation.

6. Athabasca Formation

The Athabasca Formation overlies a portion of the granitoid terrain along the northeast shore of Big Bay and the bay to the east of Fidler Point. The contact with the underlying gneisses, where exposed, forms a major unconformity. A substantial regolithic development is commonly observed (estimated to be in the order of 10 feet thick).

The Athabasca Formation is composed of a fine to medium grained leucocratic quartzite, quartz pebble horizons, and narrow conglomerate beds.

Well developed jointing is a common feature of this unit.

Exposures of the Athabasca Formation in the Big Bay area indicate possible faulting along the eastern contact. This would suggest that preservation of the normally highly recessive Athabasca Formation may possibly be related to local normal faulting. Insufficient time was available to further examine this possibility.

In addition to the units described above, varying amounts of other rock types have been observed throughout the gneissic terrain. In some instances these have been extensive enough to map as separate units. The more significant of these are listed below in their approximate order of relative abundance:

Biotite gneiss
Hornblende-biotite gneiss
Amphibolite
Chlorite-biotite schist
Hornblendite

Radiometric Anomalies (refer to radioactivity log and Ground Anomaly Map)

The majority of the airborne anomalies obtained occur in this area and are especially concentrated in the eastern portion (refer to 'Airborne Radiometric and Structure Map').

The ground examination indicated that the eastern portion contains extensive areas of high background values and associated secondary uranium stain. The lack of further concentrations into significant 'spot highs', or zones of significantly higher values, does not enhance the potential for outlining an economic uranium deposit.

Small areas of pegmatite often gave good 'spot highs', with the best reading recorded being in the range of 4,500 c.p.s.

Only one ground anomaly of any significant intensity may be related to structures or environments other than pegmatites and massive granites (refer to description of R.N. traverse, August 8, in radioactivity log). In this case, the development of anomalous radioactivity along the side of a northwest trending lineament may warrant further investigation.

Metamorphism

The regional metamorphic grade of the area approximates epidote-amphibolite. However, retrograde effects are quite common, especially in the porphyroblastic gneiss unit (chlorite locally replaces biotite as the principal mafic mineral). No garnet was observed in any of the rock types which would indicate that the upper temperature/pressure conditions never reached the garnet-amphibolite grade.

Amphiboles are quite common locally in rocks of mafic composition. Epidote, where observed, was usually in granitic rocks and was related to shearing and fracturing; this would indicate that its presence may be due to metasomatic and retrograde effects.

The only other significant metasomatic effect was the local occurrence of hematization (especially of the feldspars). Hematization was observed to be associated with shearing, fracturing, and epidotization.

Structural Geology

Most of the prominent lineaments present in this region are readily discernible on the aerial photographs. However, the metamorphic foliation is not as pronounced and is only rarely distinguishable in the photographs. The majority of the foliation measurements indicate a general north-northeast strike with a vertical to steep dip. The main divergence from this is found in the northeast portion of the area where an east-west strike with a shallow north dipping to horizontal foliation is present.

Small-scale fold structures were not common, except just south of the camp location in a narrow belt (refer to detailed geology map for camp location).

Other structures observed in outcrop worth noting are small shear zones and jointing. Much of the shearing parallels the metamorphic foliation.

Lineaments are developed in two principal directions. The most common is a north-northeast strike, with the other trending west to north 60° west. No evidence of displacement along these lineaments was observed.

BELINDA LAKE

(Southwest portion of Permit 126,
northwest portion of Permit 125)

Field exploration of the Belinda Lake area was conducted by R. K. Netolitzky and J. R. Allan, with R. Blanchette and R. Chrapko acting as assistants.

The personnel and field equipment were moved to Belinda Lake by float-equipped Otter aircraft on August 13. Three and one-half days of field work were accomplished. Portions of two days were lost due to heavy rain in the afternoons.

Poor radio reception hampered the operations by not being able to delay the aircraft arrival by one day. At least one further day should have been spent on the area to the south and east of Belinda Lake, and on shoreline examinations.

The camp was demobilized and moved to Florence Lake on August 17.

General Geology

Four principal rock types were mapped in this area. These units are discussed below in decreasing order of their apparent abundance:

1. Granite gneiss

   This unit, which is of granitic composition, varies from pink to red coloration and contains biotite as the principal mafic mineral. Narrow bands and inclusions of migmatite and biotite gneiss are present locally, as are narrow bands of porphyroblastic biotite gneiss.

As previously mentioned (Fidler Point area), the criterion utilized for differentiating the granites from the granite gneisses was the intensity of development of metamorphic foliation.

2. Granite

Irregular areas of red to pink granite are present within the granite gneiss unit. The more extensive of these areas are indicated on the general geology map. As in the Fidler Point area, the contacts with granite gneisses and pegmatites tend to be gradational.

3. Porphyroblastic biotite gneiss

Several bands of this rock type were extensive enough to form mappable units.

Compositionally and texturally, these rocks display a considerable variance within the definition of the unit. Biotite forms the principle mafic mineral, with hornblende being important locally and especially in the more mafic phases.

Once again, the common characteristic employed in mapping this unit is the presence of feldspar porphyroblasts.

4. Biotite gneiss

A band of quite divergent, predominantly metasedimentary gneisses and schists are grouped under this unit. The unit was mapped in the southern portion of Belinda Lake. Insufficient time was available to further define the extent and trend of the unit.

The structural setting suggests that the biotite gneiss extends along the trend of Belinda Lake. However, insufficient shoreline examinations were conducted to confirm this. The presence of porphyroblastic biotite gneiss in the central portion of this region may indicate that this unit becomes porphyroblastic in a northward direction.

Other rock types present in this area are not developed extensively enough to be mapped at this scale. Their location and presence is indicated on the detailed geological map, primarily in the form of subsidiary notes, and thus they will not be further discussed.

Radiometric Anomalies (Refer to radioactivity log and Ground Anomaly Map)

The most interesting anomalous values were obtained in this area. The best radiometric readings were obtained from a hematite-quartzite boulder which was found on a sand plain to the southeast of Belinda Lake. Radioactivity recorded from the boulder, which measures approximately 6"x6"x12", was off-scale; that is, greater than 15,000 c.p.s. Chemical assay of the boulder indicated 0.43 per cent U_3O_8 and nil ThO_2 (assay record, appendix).

The boulder is comprised of dark red, slightly hematitic, moderately welded quartz sandstone. The individual quartz grains are discernible, and the rock still displays a tendency to fracture along the grain boundaries. Portions of the boulder are moderately to intensely leached. These areas display a pale cream color. Cavities in the leached portions contain considerable incrustations of secondary uranium minerals on the quartz grains.

The textural and compositional appearance of the boulder is compatible with an Athabasca Formation source (Personal communications, Dr. J. D. Godfrey, Research Council of Alberta). With present knowledge, this would preclude a local source for the boulder. The nearest occurrence of Athabasca Formation on glacial strike with the boulder is the Maurice Point area (northwestern shore of Lake Athabasca, Saskatchewan). Conglomerate boulders, strongly hematized and displaying weak radioactivity, are present in this area.

The only other radioactive occurrences of significance observed in the area are located southwest of Belinda Lake

Traverse R.N., August 15). In this region, two quartz veins, apparently gradational to pegmatites, and one strongly radioactive pegmatite occur in close proximity. The best reading obtained in the pegmatite was in the order of 6,000 c.p.s. This area was encountered late in the day, and intensive examination of the surrounding area was not feasible. It is recommended that further prospecting be considered for this region.

Metamorphism

In general, the discussion on metamorphism in the Fidler Point area is applicable to this region. One noteworthy exception is that weakly developed garnet was observed in a mafic granulite in one location. This may indicate a local remnant which has not retrograded, or that locally, pressure-temperature conditions were sufficient for the formation of garnet.

Structural Geology

The more prominent of the lineations and foliation trends discernible on the aerial photographs have been plotted on the 'Airborne Anomaly and Structure Map'. The foliation measurements obtained in the field are plotted on the 'Detailed Geology Map'. The foliations to the east of Belinda Lake have a north-northeast trend with a vertical to a steep easterly dip. The foliation to the west of Belinda Lake generally trends north-northeast, and dip steeply to the west or vertically.

One major flexure is evident in this area; this is at the south end Belinda Lake where the foliation exhibits a broad 'Z' flexure which is reflected in the curvature of the lake.

FLORENCE LAKE

(northern sector, Permit No. 126)

Field examination of the Florence Lake area was conducted by R. K. Netolitzky and J. R. Allan, with R. Blanchette and R. Chrapko acting as assistants.

Personnel and field equipment were moved to Florence Lake by float-equipped Otter aircraft on August 17. Three and one-half days of field work were accomplished and one full day was lost to weather (August 18).

R. K. Netolitzky returned to Uranium City on the afternoon of the 19th and the remainder of the field work was directed by J. R. Allan.

The camp was demobilized and moved to Block Lake on August 22.

General Geology

Five main rock types, all of which are correlative with map units described elsewhere within the permit areas, have been mapped in the vicinity of Florence Lake. They are described below in decreasing order of their relative abundance.

1. Porphyroblastic biotite gneiss

   Medium to very coarse grained. Feldspar porphyroblasts vary from 20 to 30 per cent to greater than 80 per cent (by surface area). The texture of the unit often resembles that of a granite porphyry with a weakly imparted foliation. Biotite and hornblende are common accessory minerals.

   This unit invariably contains lenses, laminae and irregular inclusions of mafic material (biotite gneiss,

hornblende-biotite gneiss, and biotite schist) which are often porphyroblastic.

Pegmatite, present most often as sills, varies from 10 per cent to 40 per cent, by surface area.

2. Granite gneiss

Fine to medium grained, commonly brick-red to gray-pink weathering. Most often contains less than 5 per cent mafic minerals (biotite and hornblende most common). Unit contains minor inclusions of biotite gneiss and hornblende-biotite gneiss. Pegmatite is present in varying amounts, ranging from 5 per cent to 20 per cent, as sill-like bodies and irregular masses.

Foliation is weakly to moderately developed, and often is recognizable only on the weathered surface.

3. Pink granite

Fine to medium grained, commonly dark pink weathering. Contains less than 2 per cent mafic minerals. The granites are massive and equigranular. Contains inclusions of porphyroblastic biotite gneiss, 10 to 40 per cent pegmatite, very minor mafic bodies, and numerous quartz veins.

4. Migmatite

Exhibits very distinct mafic and leucocratic phases, both of which are characteristically porphyroblastic.

The mafic phase consists of biotite schist or hornblende-biotite schist, whereas the leucocratic phase consists of porphyroblastic quartz-feldspar gneiss (often very coarse grained).

5. Pegmatite

Present in all rock types observed in varying amounts, ranging from less than 5 per cent to greater than 40 per cent, as sill-like bodies, dykes and irregular masses. Most often contains less than 5 per cent mafic minerals. Unit defined on basis of grain size and lack of metamorphic foliation. Pegmatites seldom occur in large enough masses to be delineated as a separate unit on the accompanying map.

Inclusions of biotite schist and hornblende-biotite schist (which occur as laminae, lensoid shapes, and irregular masses) were observed in all of the aforementioned map units in varying quantities. The foliation trend within the inclusions normally parallels that of the enclosing rock type.

In the vicinity of the granite gneiss/porphyroblastic biotite gneiss contacts, interbanding of these two units (or inclusions) is not an uncommon feature. This feature may occur for up to several hundred feet across strike; hence, contacts designated on the accompanying map are often gradational and approximate, and are based on relative percentages of rock types.

Sulphide Mineralization

Trace amounts of finely disseminated pyrite were observed in two localities at the western end of Florence Lake. In both cases, the sulphides appeared to be localized by very weakly developed shear zones.

Radiometric Anomalies (refer to radioactivity log)

This area was selected for limited surface examination in part because of the intense fracturing exhibited in the aerial photographs. It was considered that although only two airborne anomalies are present in the area, structurally the area had promise of hosting vein-type mineralization.

Two airborne radiometric anomalies north of Florence Lake (#780 and #781, Line 30) were ground checked. No significant radioactivity was recorded in either locale. (Spot highs of

200 to 300 c.p.s. in a local background of 100 to 150 c.p.s. were found to occur in pegmatite veins and coarse grained phases of granite gneiss.)

Other spot highs are noted on the ground anomaly and traverse map of the area. However, the significance of these results is their association with granite gneiss (west portion of Florence Lake) as opposed to the more common association of radioactivity with the pegmatites.

Metamorphism

The general discussion of metamorphism pertaining to the Fidler Point area is also applicable to the Florence Lake region. A notable similarity is the presence of retrograde effects in the porphyroblastic gneiss unit.

Very weakly developed hematization, particularly in the granite gneiss and the massive pink granite, is common throughout the map area. Minor epidotization and chloritization were also observed in association with weakly sheared rocks.

Structural Geology

From west to east across the area, the metamorphic foliation changes from a north-northeast trend to a north 60° east and eastwest trend. The outcrops exhibit a strongly fractured appearance in the aerial photographs south of Florence Lake. This gives the impression of the development of an interference pattern between two zones of weakness of similar intensity.

One set of prominent lineations has a north 20° east to north 20° west strike from west to east along the lake. Another set of lineations in this general area has an approximate north 70° west trend.

A number of quartz veins have been mapped along the southwest side of Florence Lake. These commonly display good quartz crystal development in the vugs (occasionally filled with chlorite). The quartz veins are apparently associated with the north 70° west set of lineaments, and probably indicate the presence of later faulting in this direction.

The granite gneisses on the west side of Florence Lake have an intense shear foliation and are strongly jointed. This is best exemplified on a small reef just offshore where the rock approaches a mylonite texturally.

BLOCK LAKE

(northeast corner, Permit No. 137)

Field examination of the Block Lake area was performed under the direction of J. R. Allan, with R. Blanchette and R. Chrapko as assistants. One assistant traversed while the other remained in camp to cook.

Personnel and field equipment were moved to Block Lake by float-equipped Otter aircraft on the afternoon of August 22. Two full days of field work were accomplished (August 23 and 25) and one day was lost to weather (August 24). The camp was demobilized and moved to Uranium City on the evening of August 25.

General Geology

Five main rock types were encountered in this region. In decreasing order of their relative abundance, these were:

1. Porphyroblastic biotite gneiss (feldspar porphyroblasts)

   The feldspar laths and stubs varied from fine grained to greater than 3" in diameter, and were commonly about 1/4". The porphyroblasts most often exhibit some degree of preferred orientation parallel to the gneissic foliation. Bands of augen gneiss are not uncommon within this unit.

   Porphyroblasts ranged from less than 10 per cent to greater than 40 per cent of the rock volume, and commonly averaged 20 to 30 per cent.

   The unit commonly contains minor inclusions (parallel or sub-parallel to the gneissic foliation) of mafic biotite-hornblende schist. Bands of pegmatite and/or granite gneiss are present in varying amounts ranging from less than 10 per cent to greater than 50 per cent (in the latter case, the designation was changed to a migmatite). The pegmatite lenses are most often parallel to foliation, sometimes weakly foliated themselves, and may often be

traced for greater than 500 feet before pinching out or terminating beneath overburden.

The unit is commonly massive with weakly developed jointing rarely present.

2. Granite gneiss (and/or pegmatite)

Commonly medium to very coarse grained, and gray-pink to pink on fresh surface. Weathered surface is most often pink, except for the very coarse grained phases which weather light gray. The average composition would approximate: 70 per cent feldspar, 20 per cent quartz, and 10 per cent mafic minerals, predominantly pale green amphiboles (tremolite) and biotite. Muscovite is commonly present in the order of 1 to 2 per cent.

The development of foliation is variable and often observed on weathered surface only (i.e., thin laminae of mafic minerals). For the most part, however, foliation is imparted by mineral alignment.

Inclusions of porphyroblastic biotite gneiss and mafic biotite-hornblende schist are common, varying from less than 5 per cent to greater than 20 per cent. Most of the inclusions are approximately parallel to foliation, however some do occur as irregular masses and lense shaped bodies. Pinch and swell structure in the pegmatite is often reflected in the foliation of the enclosing gneiss.

Both the granite gneiss and the pegmatite are relatively massive with weakly developed, randomly oriented joint patterns.

3. Mafic biotite-hornblende schist

Very fine grained, dense, dark gray (both on weathered and fresh surface), hard, and with a composition approximating: 70 to 80 per cent mafic minerals and 20 to 30 per cent feldspar. Approximately half of the feldspar content occurs as fine grained disseminations while the remainder occurs as fine to medium grained pink laminae (most often discontinuous) and blebs. Fissility is poorly developed.

Pegmatite bands comprise from less than 5 per cent of the surface area to greater than 20 per cent.

Weakly developed jointing is a common feature.

4. Massive granite

Pink on weathered and fresh surface, fine to medium grained, and with a composition equivalent to that of unit 2. Foliation is almost non-existent. Contains only minor inclusions of mafic biotite-hornblende schist and porphyroblastic biotite gneiss. Inclusions are commonly lense shaped or irregular masses.

The granite is massive and rarely exhibits jointing.

5. Migmatite

Comprised of approximately equal portions of well defined mafic and leucocratic phases. For the most part, the bands maintain a relatively constant width. The composition of the bands is described by subsidiary notes on the geology map of the Block Lake area.

Structural Geology

A 2500' to 3000' wide belt of mafic biotite-hornblende schist, which strikes northeast and dips steeply to the west, is located on the southwest side of Block Lake. The trend of the foliation is closely conformable to the isomagnetic contours (airborne survey) of this area. (A linear magnetic high trending NNE through Block Lake probably reflects a higher magnetic content within the mafic schist.) On strike to the northeast of this belt, northeast of the lake, the schist grades to a migmatite. The migmatite is composed of about 50 per cent pegmatite and/or granite gneiss, and 50 per cent mafic-rich phases (which consists of both mafic biotite-hornblende schist and interbanded porphyroblastic biotite gneiss).

The western limit of the mafic schist belt is also characterized by a gradational change to a migmatite. However, in this case the migmatite is composed of 25 to 50 per cent leucocratic

rich phases with no porphyroblastic gneiss.

The eastern margin of the mafic schist belt is characterized by a relatively sharp contact on the southwest side of the lake, and a gradational contact on the northeast side of the lake.

Radiometric Anomalies (refer to radioactivity log)

Of seven airborne radiometric anomalies, six were ground checked. Of these, five are located in the 'mafic schist' belt; three in the mafic biotite-hornblende schist on the southwest side of the lake, and two in the mafic schist-migmatite on the northeast side of the lake. One airborne anomaly (#1316, line 38) is located to the east of the mafic schist belt in the porphyroblastic biotite gneiss.

Although some of the spot highs were located in lenses and inclusions of either granite gneiss or pegmatite, it is considered significant that the anomalous zones themselves extended into the mafic rich phases. In fact, one mafic rich band of biotite-hornblende schist yielded readings in the order of 250 to 300 c.p.s. (The average background recorded in the 'mafic schist' was in the order of 50 to 75 c.p.s.) In the vicinity of the three anomalies on the southwest side of the lake, the background increased to 200 c.p.s.

One anomalous zone that warrants further work in this area is location number 8, which is approximately 800 feet north of the northeast side of the lake. A background of 200 c.p.s. was recorded over an area of 20' x 20' on clay and gravel overburden.

Radioactivity recorded in a small test pit (approximately two feet deep) was in the order of 325 to 350 c.p.s. The overburden consisted of 6" of 'A' zone soils and organic matter, 4" to 6" of sand and gravel, and an indeterminate thickness of semi-consolidated clay. Overburden thickness in the vicinity of the anomaly is estimated to be between five and twenty feet. (Sand and clay overburden throughout this region is glacial-fluvial in nature.)

Background recorded elsewhere on overburden was in the order of 50 to 75 c.p.s. However, within a 50 foot radius of the anomaly, the background is quite erratic and varies from 75 to 150 c.p.s. The nearest outcrop, approximately 75 feet to the southeast, consists of porphyroblastic biotite gneiss with 20 to 30 per cent pegmatite. Background recorded over outcrop varied from 125 to 175 c.p.s. with no 'spot highs'.

Other Mineralization

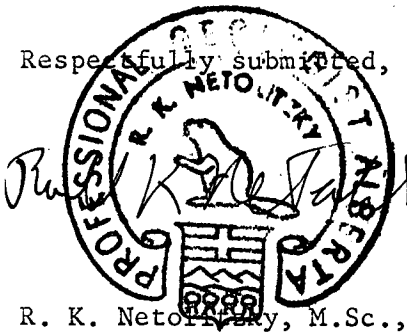
Trace amounts of pyrite (in all cases less than one-half per cent) are present in nearly every outcrop at the west end of Block Lake. The sulphides are commonly present in the leucocratic phases of the migmatite.

Metamorphism

Very minor hematization and epidotization are common in all the rock types encountered. Epidote stringers and coatings on fracture planes and minor hematization of the feldspars is most common along the western contact of the mafic schist belt, in the granite gneiss phase.

No large scale mylonites were observed, however the porphyroblastic gneiss and the mafic biotite-hornblende schist may be indicative of cataclastic rocks associated with the Allan Fault System.

Respectfully submitted,



R. K. Netolitzky, M.Sc., P.Geol.

APPENDIX

RADIOACTIVITY LOG - R. K. NETOLITZKY

5/8/70

(1)	Pegmatite boulder	750-1000 c/s
(3)	On middle of outcrop, one joint extending for 20 feet; maximum reading on joint of	250
(4)	White pegmatite, maximum count of	500
	Pegmatite to the east of cabin. Spot high	300-1000
	Biotite rich portion of the pegmatite gave the highest readings.	
(5)	Migmatite plus pegmatite, spot high in the pegmatite	750
(7)	Spot high in the pegmatite	600-700
	Weak secondary uranium stain present.	
(8)	Outcrop consists of 20 to 40% white pegmatite sills and lenses, some of which have localized radioactivity in the range of	250-400
	The pegmatite displays weak secondary uranium stain.	
(9)	General high background	200-300
	Moderate hematization is present in the pegmatite and granite gneisses. One area of	300-500+
	(taped with fluorescent ribbon). Ground location of airborne anomaly is Line 62, fiducial 3527.	
(11)	Spot high of 3' x 3' in pegmatite	400

6/8/70

Line 1: 775 paces

At edge of outcrop, 50' x 20' area of high background	300
Spot highs to	750

The granite gneiss displays slight hematization and minor epidote is present. The surrounding non-radioactive rocks have a similar appearance.

Line 1A: 58-70 paces

Massive pink granite with spot highs 300-400

Line 1A: 84 paces

Weak uranium stain. Spot highs to maximum of 400

(1)	(185 paces) Areas of high background	200-300 c/s
	One 3' x 30' area with minor secondary uranium stain (Sample R-3)	500-1000
	Most of the outcrop consists of leucocratic, pink massive granite. Inclusions of granite gneiss are also present. Airborne anomaly Line 45, fiducial 2524.	
	(418 paces) Pegmatite with a local background	300
Line 2:	368 paces	
	5' thick pegmatite with minor secondary uranium stain. Maximum reading	500
(3)	White pegmatite with maximum of	4500
	The pegmatite is medium-coarse grained and has minor secondary uranium stain. The radioactive zone is 3' to 4' wide and has a trend of N 40° E. Sample R-5.	
(4)	White pegmatite with spot high of	1000
	over an area of 4' x 10' background of	500
Line 4:	650-720 paces	
	Granite gneiss and pegmatite with high background	200-250
	At 720 paces, spot highs to	750
	The radioactivity tends to parallel the weak foliation in a granite gneiss.	
	(915-920 paces) Area of high background	150-250

7/8/70

(4)	Radioactivity in pegmatite traced for 300 feet.	
	Spot highs of	500-1500 c/s
	are common.	
	At the north end, scattered secondary uranium stain is present.	

8/8/70

(5) & (6)		
	Anomalous radioactivity is present along the cliff edge. 60 feet south of outcrop, background on overburden of	200
	A one foot deep hole dug in the overburden gave an increase in radioactivity to	350
	It is possible that this radioactivity is due to pegmatite boulders in the overburden.	
	The cliff edge is composed primarily of	

pink pegmatite. The bearing of the cliff is north 65° west. The edge of the cliff has consistently high readings of 200-300
Numerous areas are also present in the granite gneiss. One sample of slightly hematized pegmatite (R-8) was taken from an area of 500-1000 c/s

(8) Pink, weakly foliated pegmatitic granite with spot highs of 5000
Average background 200-300
One sample was taken (R-9).

(10) White, slightly sheared pegmatite on the east side of outcrop; has weak uranium stain over 4' x 4'. Maximum count of 500

(14) (513 paces)
A narrow (4") wide pegmatite vein, with one spot high of 1000

9/8/70

(2) 150 feet east of station (2). Massive pegmatite intruding migmatite gave readings over an area of 4' x 5' of 400

(5) (70 paces) Coarse grained Athabasca sandstone over an area of 2' x 20' gave readings of 200-500
(93 paces) Pink pegmatitic granite, in part weakly foliated, has a high background of greater than 200
Airborne anomaly on line 31, fiducial 3963.

(6) Portion of outcrop has background of 300-400
Outcrop consists primarily of massive pink granite with minor foliated portions.

(7) High background in mainly massive pink granite 200-400
Spot highs of 500

(8) High background of 200-300
Spot highs to 400-750
Massive to weakly foliated gray to gray-pink weathering leucocratic granite. Best radioactivity is with weakly developed uranium staining in spot highs and with pegmatitic grain size.

(9) High background of 200-300 c/s
Numerous spot highs to 300-500
Best radioactivity is associated with coarse grained phases. The 2 best spot highs were 1800 & 2000
The outcrop consists of relatively massive gray weathering, weakly foliated granite. Three areas of weakly developed, but fairly extensive stain were observed. Spot highs were developed over an area of 300' x 300'.

(10) High background over an area of approximately 200' x 500', trending northeast 200-300
Several dozen spot highs were observed, some up to several square feet in area of 400-750
One spot high of 1500
Secondary uranium stain is common.
The rock type consists of gray weathering, leucocratic massive granite.

10/8/70

(1) Area of 6' x 50' with high background of 200-300
The rock type consists of granite gneiss plus pegmatite.

Line 2:
-(63 paces) High background over an area of 10' x 20' of 200-300
-(229 paces) Spot high 350
-(237 paces) Spot high over 2'x2' area of 300
-(256-282) paces) Background of 200
Spot highs of 300
-(402 paces) Background of 180-200
in white massive granite.

(6) -(122 paces) Background over an area of 20' x 20' 200-300
-(203 paces) White leucocratic granite plus pegmatite. Weak uranium stain. Background 180
-(224 paces) White leucocratic granite and pegmatite with weak secondary uranium stain. Background values of 200-300
-(275 paces) Background of 200-300
-(291-355 paces) High background 200-300
-(455 paces) Coarse grained white pegmatite sills in leucocratic granite gneiss. Spot highs 500-2000
Sample R-18 from an area of 100-1500 c/s.

	-(575-580 paces) White pegmatite with spot highs	200-300
	-(619 paces) White pegmatite with spot highs	200-500
	-(717 paces) White pegmatite with background	200
	-(717-795 paces) White pegmatite sill inter-banded with gently dipping granite gneiss. Local spot highs to in the white pegmatite.	200-500
(8)	Some spot highs in the range of	300-500 c/s
	Background over an area of 25' x 25' of	180-200
(10)	Fair developed secondary uranium stain over an area of 2'x5' in white pegmatite. Lack of strong associated radioactivity. Maximum reading of	180
	-(25 paces) 2'x2' area of	500
(11)	-(185-200 paces) White pegmatite granite with a background of	200-300
	-(00-67 paces) White pegmatite granite with a background of	200-300
	-(155 paces) Shallow dipping pegmatite sill overlying granite gneiss. Pegmatite background	200-250
	-(194 paces) White pegmatite with background of	300+
	-(224 paces) 50' wide outcrop with a background of	300-400
	Sample R-19.	
	-(218-380 paces) Area of high background	200+
	from 224 to 267 paces	200-300
	At 290 paces	300+
	At 329 paces there is weak secondary uranium stain. Majority of area is white pegmatite.	
	At 350 paces the rock type is granite gneiss with a shallow dip and background of	200
(12)	-(380 paces) White pegmatite with background	200-300
	Maximum readings of	500
	Sample R-20.	
(12)	to (13) Area of high background of	200-300
	Localized spot highs of	400-500
	At 14 paces, patch of secondary uranium stain with background of	400-500
	At 30 paces, background of	300
	At 67 paces, background of	200-300

	At 154 paces, granite gneiss with background	200 c/s
	At 168 paces, white pegmatite with background	250
	At 212 paces, pink pegmatite with background	250
	At 245 paces, flat-lying granite gneiss with a background of	180
	At 282 paces, white pegmatite with background	200-300
	At 331 paces, white pegmatite plus horizontal dipping granite gneiss with background	200-300
	At 374 paces, granite gneiss and pegmatite with a background of	200-300
	At 455 paces, (13) white pegmatite with a background of	200-300
(13)	-(35 paces) White pegmatite with background	300
	-(50 paces) White pegmatite with spot highs to	500
	-(100 paces) White pegmatite with background	250-300
	-(146 paces) White pegmatite with background	200
	-(165 paces) Pink to red granite; background	220
	-(393 paces) White pegmatite with background	200
	-(444 paces) White pegmatite with background	200-300
	-(490 paces) Spot high to	500
	-(550 paces) White pegmatite with background	200
	-(573 to 604 paces) White pegmatite with weak secondary uranium stain. Background of	300
	-(632) paces) (14) Continuous outcrop of same rock type, with a background of	250-300
(14)	-(60-78 paces) Pegmatite with background of	200
	-(177 paces) White pegmatite with background	200
	-(223 paces) Background of	250
	-(248 paces) Background of	300
	-(276 paces) Weak secondary uranium stain. Background of	280

13/8/70 (Belinda Lake); shoreline results

(2)	Pegmatites with migmatitic biotite gneiss with general background of	50
	Spot highs to	1750 & 2500
(3)	Pegmatite lenses on east side of island with one spot high of	600
(6)	2' thick pegmatite in chlorite-biotite schist with a spot high of	600
	General background	50-100

14/8/70

Line 1:

-(397 paces) Pink pegmatite lenses within granite gneiss. Pegmatites have spot highs of 500-1000 c/s

-(402 paces) Massive quartz at edge of outcrop which is a segregation of biotite-feldspar quartz pegmatite. One spot high of 500

in biotite-feldspar pegmatite.
The feldspar displays a dark red coloration.

Sample R-21.

-(550 paces) Migmatitic granite gneiss and massive granite. The area has a generally higher background of 150-200
Spot highs to 300

-(606-700 paces) 60% massive granite, 20% migmatitic granite gneiss, 20% pegmatite.
High background of 200-250
Spot highs to 300-500
Airborne anomaly Line 79, fiducial 5279.

Line 2:

-(215-260 paces) Red granite and pegmatite with a background of 180-200

-(230 paces) Spot highs to 200

-(250 paces) Spot highs to 500

Rock type is a pegmatite intruding a granite.

Line 3:

-(280-320 paces) Granite gneiss and pegmatite. High background with spot highs to 750-1000

15/8/70

(1) Slightly hematized pegmatite and granite gneiss exposed in bottom of valley for 2'x3' areas, readings of 200-300

(10) Interbanded pink pegmatite and porphyroblastic biotite migmatite, across strike for 100' has a background of 250-300
Spot highs to 500
In contact with this unit to the north is a weakly foliated fine grained red granite and minor bands of mafic gneiss.
Granite has a background of (Sample R-22) 200

Line 1:

-(362 paces) Porphyroblastic biotite gneiss. Local background to 200 c/s

(14) Cream colored pegmatite and porphyroblastic biotite gneiss with minor granite gneiss. Background of 150-200
Spot highs of 300

(14) -(90 paces) Porphyroblastic biotite gneiss with local background of 200-300
-(102 paces) Porphyroblastic biotite gneiss with local background of 200-300
-(119 paces) Porphyroblastic biotite gneiss with local background of 200
-(160 paces) Red weathering, slightly hematized on joint surfaces, porphyroblastic biotite granite gneiss and massive red granite. Background of 200
-(223 paces) Red granite gneiss and massive red granite. Background of 200
-(250 paces) Porphyroblastic biotite gneiss. Local background of 200-250

(16) 6' wide band of porphyroblastic biotite gneiss with a background of 200-300

(15) -(14 paces) Granite gneiss and pegmatite with local background of 200
-(260 paces) Biotite granite gneiss and pink pegmatite with background of 150
Spot highs to 200
-(300 paces) Porphyroblastic biotite gneiss and pegmatite.
An area of 4'x4' 400

New Line:

-(152 paces) Pink leucocratic granite gneiss with local background of 200
-(157 paces) Gray quartzite with fine grained feldspar porphyroblasts. Local background 200
Sample R-27.

New Line:

-(371 paces) Feldspar quartz vein, 2' thick, intrudes a coarse grained biotite gneiss. Vein strikes at 155°. Spot highs to 1000 in vein. (Sample R-29).

-(386 paces) 2' quartz vein intruding a biotite schist with same trend as above vein.
Spot high in the vein of 500 c/s
Vein grades into a pink pegmatite with spot highs to 1000
-(400-420 paces) 75' long by 2 to 3' wide quartz-rich pegmatite with weak development of secondary uranium stain. In a number of locations along the pegmatite, there are spot highs of up to 6000
Sample R-30 taken from an area of 3000 to 5000 c/s.
-(468 paces) Pink pegmatite interbanded with hornblende gneiss. Weak uranium stain in pegmatite. Background of 200
Spot highs to 300-400
-(480-503 paces) Background of 300
Spot highs to 500
Weak secondary uranium stain.
-(575 paces) Porphyroblastic biotite gneiss with a background of 200
-(586 paces) Spot high of 500
-(745 paces) Slightly hematized quartz-feldspar pegmatite with spot highs to 500
-(780 paces) Spot highs to 300
-(1103 paces) Pink pegmatite with background 200-300
Spot highs to 500

16/8/70

Line 1:
-(454 paces) Red granite with spot highs to 1200
Local background of 200-300
-(915 paces) Radioactivity trending at N80°W for 50' (2'-5' wide). Spot highs to 600-700
Sample R-31. Rock types consist of slightly porphyroblastic biotite gneiss and cream colored pegmatite.
-(1022 paces) Cream colored pegmatite within a biotite gneiss in contact with red granite.
Background of 200-300
Spot highs to 400

(2) Outcrop of granite gneiss (8'x20') with narrow pegmatite veins. Spot highs 200-300

Line 2:
-(520 paces) Granite gneiss and pegmatite.
Area of 3'x5' has greater than 300
One spot high 750

Line 3:

-(535 paces) Pink pegmatite, background of for an area of 10'x10'.	200-300 c/s
-(545 paces) Pink pegmatite and granite gneiss with a background of	200

Line 4:

-(875 paces) Pegmatite in granite gneiss with a background of	200
-(913 paces) Pink granite and granite gneiss with a background of	200-300

19/8/70 Florence Lake

(4)	Spot high of in a 2' thick pegmatite sill.	750
(5)	On shoreline, granite gneiss plus minor pegmatite. Across strike for 15'	200+
	Across 2' of strike	300-500
(19)	Porphyroblastic gneiss with feldspars up to 1"x1/2". Pegmatite lenses with spot highs of	500 & 750
(22)	Cream colored pegmatite, maximum reading of	250

RADIOACTIVITY LOG - J. R. ALLAN

5/8/70

(1)	Average background of porphyroblastic gneiss	150-225 c/s
	Pegmatite veins	250-500
(2)	Average background of granite gneiss	200
	Spot highs within granite gneiss	300-500
(3)	Average background of feldspar augen gneiss	250-500
(4)	Average background of feldspar augen gneiss and porphyroblastic biotite gneiss	175-250
	Spot highs on hematized joint planes	up to 750
	Spot highs in coarse grained phases	500-600
(6)	Average background of feldspar augen gneiss	150-200

6/8/70

(7)	Average background of massive granite	150
	Average background of Athabasca sandstone in the vicinity of the sheared (or faulted) contact	50
#3955, Line 30	Coarse grained gray granite with a high background in the vicinity of the airborne anomaly	250-300
#3941, Line 29	Massive pink granite	150-200
#3476-#3482, Line 28	Average background of massive pink granite	125-200
	Ridge relief probably contributes to readings obtained by the airborne survey.	
#3030, Line 27	White granite; high background area with a few spot highs	300-500
#3034-#3038, Line 27	Migmatite; gray weathering gneissic granite interbanded with biotite gneiss; Average background	150-200
	Spot highs in the white, coarse grained phases (pegmatite)	300-500

#3043, Line 27	Ditto above	150-200 c/s
	Spot highs; identical to above	300-500
#2985, Line 26	Light gray weathering gneissic pegmatite plus coarse grained granite gneiss (both grade to syenite in places). Variable background	200-300
	Highs, covering up to 10'x10' in the coarse grained phases. No apparent trend to the high areas.	500-750
#2985A, 800' north of #2985.	Same rock type as above. Very variable background.	250-500
	Coarse grained pegmatites have highs covering an area of 10'x10' or greater.	750-1000
	Very few spot highs within these areas.	1250
	Very minor secondary uranium stain associated with those areas of greater than 500 c/s.	
(8)	Coarse grained white granite plus pegmatite.	200-300
	Sporadic spot highs up to	750
#2991, #2992, Line 26	Well banded migmatite, gray weathering granite plus biotite gneiss. Average background	150-200
	Small spot highs	300-500
#3026, #3027, Line 27	Gray weathering granite gneiss plus pegmatite. Average background	150-200
	Small sporadic spot highs	300-500

7/8/70

(9)	Same location as #2667, Line 57. Massive pink granite with an average background of	200-250
	Sporadic spot highs of less than 1 foot in diameter	400-500

8/8/70

(10)	Same location as #1196, 1998, Line 41 Massive pink weathering granite, slightly gneissic. Average background	150-200
	Relief of the ridge in the order of 150 feet. This and the high background may account for the airborne anomaly.	

#2035, Line 42	Migmatite; pink pegmatite and medium to coarse grained biotite gneiss. Average	175-225 c/s
	Sporadic spot highs	500-1500
	One small spot high (less than 1 foot in diameter); Sample RA-2	2000
#1545, Line 39	Massive pink weathering granite, coarse grained. Average background	75-125
	Relief of the ridge is in the order of 100'. This may be a contributing factor to the airborne results, as no ground radioactivity was recorded.	
(12)	Same as location of Anomalies #261, #262, Line 34. Gray weathering massive granite.	
	Average background	100-125
	Very small isolated spot highs	200
	R.K.N. traverse to immediate north; spot highs	200-300
#680, Line 35	Well foliated granite gneiss, gray weathering, coarse grained.	
	Average background	200-300
	Sporadic small patches over 175' N-S x 30' E-W	300-750
	One spot high of less than 1 foot in diameter	1000
	No determination of the control of spot highs.	

10/8/70

#3473, Line 28	Gray weathering, coarse grained granite with minor inclusions of biotite gneiss. High background area	200-225
	Sporadic spot highs	300-750
	Very weakly developed but extensive secondary uranium stain over an area of 50 feet square.	
#3052, Line 29; #3944, #3943, Line 30	Pink granite gneiss with minor inclusions of hornblende-biotite gneiss and biotite gneiss. High background area	200-250
	A few spot highs	300-500
	Several very weakly developed patches of secondary uranium stain.	

#3468- #3472, Line 28	Leucocratic, weakly foliated granite. Minor pink granite and inclusions of biotite gneiss and hornblende-biotite gneiss. Consistently high background	200 c/s
	Numerous spot highs	300-500
	A few sporadic highs	750-1000
	Very weakly developed, but widespread secondary uranium stain in patches up to 1' in diameter, but no associated high readings.	
#3467, Line 28	Same rock type as previous anomaly, but lower background	150-175
	Several small areas of less than 10'x10' with background in the range	200-225
	Spot highs in high background areas	300-350
	Traces of very weakly developed secondary uranium stain observed in the high background areas.	
#3940- #3941, Line 30 #3504, #3506, #3507, Line 29	Migmatite; banded leucocratic granite and biotite gneiss.	
	Background quite variable	100-175
	A few spot highs	200-300
#3475, #3476, Line 31	Well foliated granite gneiss with low background	100-150
	Small patches in vicinity of #3475	175-225
	A couple of very small spot highs also in the vicinity of #3475	300

<u>11/8/70</u>

(1)	Migmatite with a constant background	150
	Several large patches on scarp face	175-200
	A few spot highs on scarp face at S end	250

14/8/70

(25) Porphyroblastic hornblende-biotite gneiss with about 10% pegmatite. Average background 150 c/s
Sporadic spot highs 250-500

#2119, Line 42 Porphyroblastic hornblende-biotite gneiss with about 20% pegmatite.
Average background 100-125
No spot highs; probably an inaccurate ground location.

15/8/70

(2) Relatively massive, pink granite gneiss with about 40% hornblende-biotite gneiss.
Average background 150
Several small spot highs 300

(4) Pink granite gneiss with greater than 30% mafic minerals plus inclusions of hornblende schist. Average background 175-200
Several small spot highs 300-450

#4657, Line 70 Pink, slightly hematized massive granite. Average background 175-200
A few spot highs 300
Background of surrounding sand plain 25
Relief of granite knoll may contribute to the airborne results.

16/8/70

(1) 795 paces east of the shore of Belinda Lake. Quartzite glacial boulder, approx. 1' in diameter located at a depth of 18" in a sand plain. Greater than 15,000
Average background of sand plain 25-50
No other anomalous boulders in the area.
Very little glacial debris; (mostly granite gneiss and porphyroblastic hornblende-biotite gneiss).

#1309, Line 48 Quartz-feldspar gneiss with inclusions of hornblende-biotite schist and minor white pegmatite.
Average background 100-150
No spot highs in the area examined.
Location of airborne anomaly may be inaccurate.

19/8/70

(11)	White pegmatite inclusion in porphyroblastic hornblende-biotite gneiss. Average background	125 c/s
	Spot high in the pegmatite (1' x 3')	1000
(12)	Same as above. Spot high in the pegmatite	350-400
(17)	Very coarse grained porphyroblastic hornblende-biotite gneiss. Average background	50-75
	Spot highs in minor pegmatite inclusions	200-300
(19)	Same as above. Background of pegmatite	200-350

20/8/70

(25)	Very coarse grained porphyroblastic hornblende-biotite gneiss. Average background	75-100
	Spot highs in pegmatite inclusions	200-300

21/8/70

(7)	Porphyroblastic gneiss plus minor hornblende-biotite gneiss and pegmatite. Background	100-150
	Numerous spot highs	200-300
(8)	Biotite gneiss interbanded with hematized pegmatite and granite gneiss. Average background	150-175
	Numerous spot highs	200-250

#3780,
#3781, Line 30 Porphyroblastic biotite gneiss with minor pegmatite and granite gneiss. Average background 100-150
Spot highs primarily in pegmatite or coarse grained phases of granite gneiss. 200-300

(9)	Fine grained, hematized, granite gneiss with an average background of	125-150
	Several spot highs	200-300

23/8/70

(4)	Granite gneiss with about 20% combined white pegmatite and porphyroblastic gneiss.	
	Average background of the granite gneiss	75-100 c/s
	Average background of porphyroblastic gneiss	75-100
	Numerous spot highs in the granite gneiss and the pegmatite	200-250
(8)	White pegmatite and gneissic granite. Background	100
	Numerous patches of secondary uranium stain over an area of 75' N-S x 50' E-W. No associated anomalous radioactivity.	
#1316, Line 38	Very coarse grained porphyroblastic gneiss (some augen gneiss) with about 10% pegmatite and 10% hornblende-biotite gneiss. Mafic band of hornblende biotite schist 4' wide x greater than 100' long.	
	Disappears beneath overburden.	250-300
	Average background of porphyroblastic gneiss	75-100
	Numerous spot highs in pegmatite and coarse grained phases of the porphyroblastic gneiss	200-300
	Very extensive, although weakly developed secondary uranium stain. Stain most often in areas of less than 200 c/s.	
#1799, Line 41	Hornblende-biotite gneiss with 10 to 20% granite gneiss and/or pegmatite. Weakly hematized. Constant high background in vicinity of airborne anomaly.	200
	Average background in surrounding area	75-100
#1796, Line 41	Same as above except 20 to 40% leucocratic phases. Constant high background in the vicinity of airborne anomaly.	150-175
#1753, Line 40	Same as above. No spot highs. Background in vicinity of anomaly	175-225

25/8/70

(1)	Migmatite composed of about 75% hornblende-biotite schist and quartz-feldspar gneiss (coarse grained) or pegmatite. Average background of schist	50-75 c/s
	Average background of pegmatite	125-150
	Spot highs in the pegmatite	250
(8)	Background in clay overburden over an area of 20' x 20'	200
	Spot high in test pit approximately 2' deep	300-350
	Float in the vicinity composed of porphyroblastic hornblende-biotite gneiss with a background of	125-175
	Average background of overburden away from anomaly	50-75
#911, Line 37	Migmatite with an average background of	150
	No spot highs.	
(12)	Migmatite with an average background of	100-125
	20' wide band of granite gneiss with an average background of	200-225
	Spot highs in the granite gneiss	300

SAMPLE LOG - R. K. NETOLITZKY

R-1 Coarse grained hornblendite containing trace amounts of pyrite. Biotite schist, strongly sheared.

R-2 Fine grained amphibolite with accessory feldspars.

R-3 Medium grained, light gray biotite granite.

R-4 Hematized quartzite with development of strong shear foliation. Fine to medium grained with no primary structures.

R-5 White, quartz-rich pegmatite.

R-6 Mafic (hornblende?)-biotite schist. Strongly sheared appearance.

R-7 Mylonite, local brecciated appearance.

R-8 Sheared chlorite schist, slightly hematized.

R-9 Slightly hematized pegmatite.

R-10 Slightly chloritic, porphyroblastic biotite granite gneiss, medium grained, containing coarse grained feldspar porphyroblasts.

R-11 Hematitic quartzite, slight sheared appearance.

R-12 Banded chlorite-feldspar schist, with strongly banded appearance of feldspar.

R-13 Epidote vein in granite gneiss. Epidote vein contains fine disseminated pyrite in trace amounts. One face of sample exhibits excellent wind polishing.

R-15A Samples of hematitic Athabasca Formation, ranging from fine to coarse grained sandstones (West shore, Fidler Point).

R-15 Coarse grained, cream colored pegmatite. Feldspars are cream to red in color; quartz is light gray, and the rock contains accessory biotite. (August 9, station 9 or 10).

R-18 Pegmatite, slightly hematitic and containing pink feldspars, light gray quartz and books of biotite.

R-19 Cream colored biotite pegmatite.

R-20A Coarse grained, cream colored biotite pegmatite, containing minor brown and olive green minerals (?).

R-20 Shoreline of Belinda Lake. Fine grained, siliceous, chlorite-biotite schist, containing trace amounts of pyrite.

R-21 Pegmatite, contains biotite with deep red hematitic feldspars.

R-22 Red, leucocratic biotite granite.

R-23 Porphyroblastic biotite gneiss. Fine to medium grained pink granite gneiss.

R-24 Porphyroblastic biotite gneiss with bands of granite gneiss.

R-25 Sheared, medium grained biotite gneiss with slight hematization along joints.

R-26 Pale pink to cream colored leucocratic biotite gneiss.

R-27 Very fine grained dark gray, siliceous, biotite granulite. Scattered feldspar porphyroblasts.

R-28 Slightly gossaned garnet-hornblende granulite. Contains weakly disseminated sulphides.

R-29 Olive colored feldspar-quartz vein material. Contains 10% feldspar which are a green-brown color in fresh surface.

R-30 Pegmatite with red feldspar and accessory biotite.

R-31 Gray-green hornblende-biotite schist; fine to medium grained.

R-31A Gray biotite granite gneiss.

R-32 Mylonite, sheared, hematized granite gneiss.

R-33 Feldspar porphyroblasts in hornblende-biotite schist. Contains weakly disseminated pyrite.

R-34 Quartz vein; quartz crystals developed in vugs. Accessory gray-green chlorite.

R-35 Medium grained porphyroblastic biotite granite gneiss.

R-36 Porphyroblastic (two feldspars) biotite gneiss. Contains deep red-brown feldspar, and white feldspar.

R-37 (P-2) Sample of Athabasca Formation sandstone from Big Bay area.

SAMPLE LOG - J. R. ALLAN

RA-1 Fine to medium grained, leucocratic, light cream colored biotite granite.

JR-10 Pink, medium grained biotite granite; slightly sheared appearance.

JR-11 Strongly sheared, chlorite-quartz-feldspar schist (granite gneiss).

JR-12 Strongly sheared, foliated, quartzo-feldspathic biotite schist.

JR-13 Medium grained, banded, pink and gray biotite gneiss.

JR-14 Porphyroblastic gray, chlorite-biotite schist.

JR-15 Porphyroblastic chlorite-biotite gneiss. Pink feldspar porphyroblasts with a gray-green, fine grained matrix.

JR-16 White colored, quartz-plagioclase granite.

JR-17 Porphyroblastic gray-green biotite gneiss. Cream colored feldspar porphyroblasts.

JR-18 Pink, weakly foliated biotite granite.

JR-19 Dark red, slightly hematitic, moderately welded, quartz sandstone. Individual quartz grains discernible, and the rock still displays a tendency to fracture along the grain boundaries. Portions of the boulder are moderately to intensely leached. These areas display a cream color. Cavities in the leached portions contain considerable incrustations of secondary uranium minerals on the quartz grains. Assay: 0.43% U_3O_8, nil ThO_2 (chemical). Reading of greater than 15,000 c/s.

JR-20 Light brown, porphyroblastic biotite schist. White feldspar porphyroblasts.

JR-21 Biotite granulite with pink leucocratic granite veins. Porphyroblastic biotite granite with quartz veins.

JR-22 Fine grained, mafic biotite schist.

JR-23 Medium grained, poikioblastic biotite gneiss. Pink feldspars weather red. Mafic matrix.

JR-24 Porphyroblastic coarse grained biotite gneiss.

JR-25 Coarse grained porphyroblastic biotite gneiss.

JR-26 Green-gray colored, medium grained porphyroblastic biotite gneiss. Gray feldspar porphyroblasts with a mafic matrix.

JR-27 Amphibolite; accessory pink feldspar. Poor disseminated pyrite.

JR-28 Medium grained pink biotite granite gneiss.

JR-29 Deep red weathering porphyroblastic biotite gneiss. Pink feldspar porphyroblasts with a gray-green mafic matrix.

JR-30 Fibrous tremolite(?) schist with accessory diopside(?). Pink, leucocratic hornblende granite in contact with hornblende gneiss.

JR-31 Light gray, slightly porphyroblastic biotite granite gneiss. Characterized by pronounced lineations.

JR-32 Fine to medium grained hornblende(?)-biotite gneiss.

JR-33 Quartz-sericite schist with feldspar nodules (porphyroblasts 1" x 2") with weakly developed secondary uranium staining. Probably should be assayed.

JR-34 Fine grained amphibolite with 10 to 20% red feldspar.

JR-35 Medium grained porphyroblastic biotite gneiss with pink feldspar porphyroblasts.

JR-36 Mafic biotite schist with pink leucocratic feldspar bands. Biotite gneiss with strongly sheared appearance. Pink feldspars weather red.

JR-37 Interbanded biotite gneiss and pink granite gneiss. Hematitic red weathering.

JR-38 Cherty quartz with minor accessory hematite and chlorite. Biotite-hornblende gneiss, strongly sheared appearance. Pink feldspars slightly hematized(?).

JR-39 Fine grained biotite schist. Black fresh surface and a tan colored weathered surface.

CREST LABORATORIES LTD.

7911 ARGYLL ROAD
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PHONE 469-2391

CREST LABORATORIES (B.C.) LTD.
1068 HOMER STREET
VANCOUVER 3, B.C.
PHONE 688-8586

CERTIFICATE OF ASSAY

TO Mr. R.K. Netolitsky, P. Geol.

8358 - 80 Avenue

EDMONTON, Alberta

September 23, 1970

Lab No. 1000

cc: Dr. J. Godfrey, P. Geol.
8208 - 139 Street, Edmonton

I hereby certify THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	GOLD		SILVER	U_3O_8	ThO_2						TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Chemical Percent	Percent	Percent	Percent	Percent	Percent	Percent	
#1 JR - 19				0.43	Nil						

NOTE:
Rejects retained one month.
Pulps retained three months unless otherwise arranged.

Gold calculated at $..... per ounce

[redacted]
Registered Assayer, Province of British Columbia

AERIAL PHOTOGRAPHS - GOVERNMENT OF ALBERTA

Scale: Approximately 3300 feet = 1 inch.

		Flight Line	Photo. Number
160	5902	1774	163-170 inclusive
160	5903	1792	37- 43 inclusive
160	5904	1792	81
160	5904	1831	120-125 inclusive
160	5905	1831	136-142 inclusive
160	5906	1664	89- 94 inclusive

MAGNETIC SURVEY MAPS

Scale: 1 mile = 1 inch

Winnifred Lake, Alberta	(Map No. 2876G)	Sheet 74M/1
Fletcher Lake, Alberta	(Map No. 2877G)	Sheet 74M/2
Wylie Lake, Alberta	(Map No. 2884G)	Sheet 74M/8
Turtle Lake, Alberta	(Map No. 2885G)	Sheet 74M/7

LEGEND (For Maps 4 to 9 inclusive)

AMPH.	AMPHIBOLITE
B.G.	BIOTITE GNEISS
H.B.G.	HORNBLENDE-BIOTITE GNEISS
PEG.	PEGMATITE
MY. B. SCH.	MYLONITIC BIOTITE SCHIST
G.G.	GRANITE GNEISS
WT.GR.	WHITE GRANITE
R.GR.	RED GRANITE
B.	BIOTITE
CHLOR.	CHLORITE
FLD.	FELDSPAR
EP.	EPIDOTE
GAR.	GARNET
HEM.	HEMATITE
H.	HORNBLENDE
MT.	MAGNETITE
PY.	PYRITE
QTZ.	QUARTZ
DIS.	DISSEMINATED
F.G.	FINE GRAINED
LEUCO.	LEUCOCRATIC
MIG.	MIGMATITE
MY.	MYLONITE
P.	PORPHYROBLASTIC
PK.	PINK
INC.	INCLUSION
TR.	TRACE
R-6	SAMPLE NUMBER

Legend (continued)

—■—	JOINTING
<—+—>	MINERAL FOLIATION
<—+—>	SHEAR FOLIATION
~~	SHEAR ZONE
═ Qtz.	QUARTZ VEIN
═ Peg.	PEGMATITE DIKE
RN AUG 16	TRAVERSE, R. NETOLITZKY
JA AUG. 16	TRAVERSE, J. R. ALLAN
×	GROUND ANOMALY LOCATION (MAPS 5, 7, AND 9)
×	TRAVERSE STATION LOCATION (MAPS 4, 6, AND 8)
	AREA OF ANOMALOUS VALUES
B.	RADIOACTIVE BACKGROUND
250	SCINTILLOMETER READING

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BIBLIOGRAPHY

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BIG BAY

LAKE ATHABASCA

LAPWORTH POINT

FIDLER POINT

BIG BAY FORESTRY CABIN

CAMP

GEOLOGY MAP
FIDLER POINT AREA
UNITY RESOURCES LIMITED
MINERAL PERMITS
125, 126 & 137
ALBERTA

SCALE 1 INCH = 1/4 MILE

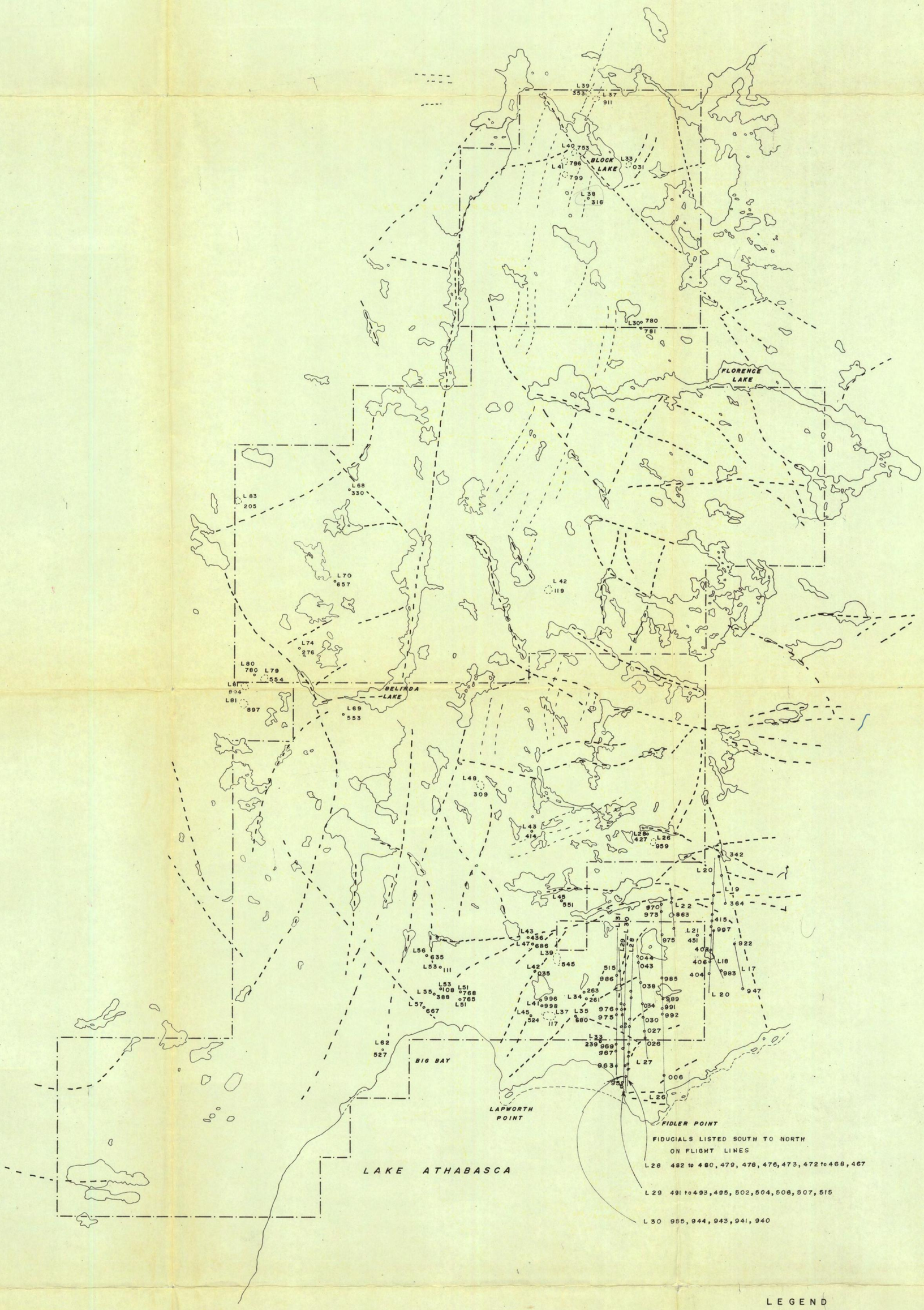
PREPARED BY
R.K. NETOLITZKY P.GEOL.

AUGUST, 1970

(Map #5)

MAP 5

19700011



FIDUCIALS LISTED SOUTH TO NORTH
ON FLIGHT LINES

L 28 482 to 480, 479, 478, 476, 473, 472 to 468, 467

L 29 491 to 493, 495, 502, 504, 506, 507, 515

L 30 955, 944, 943, 941, 940

LEGEND

- LOCATION OF AIRBORNE ANOMALY
- APPROXIMATE LOCATION OF AIRBORNE ANOMALY
- L62 FLIGHT LINE NUMBER
- 527 LAST THREE DIGITS OF FIDUCIAL NUMBER
- PRINCIPLE LINEAMENTS
- PARALLEL LINEAMENTS, POSSIBLY REFLECTING METAMORPHIC FOLIATION

AIRBORNE ANOMALY AND STRUCTURAL MAP

UNITY RESOURCES LIMITED

MINERAL PERMITS

125, 126 & 137

ALBERTA

SCALE 1 INCH = 1 MILE

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AUGUST, 1970

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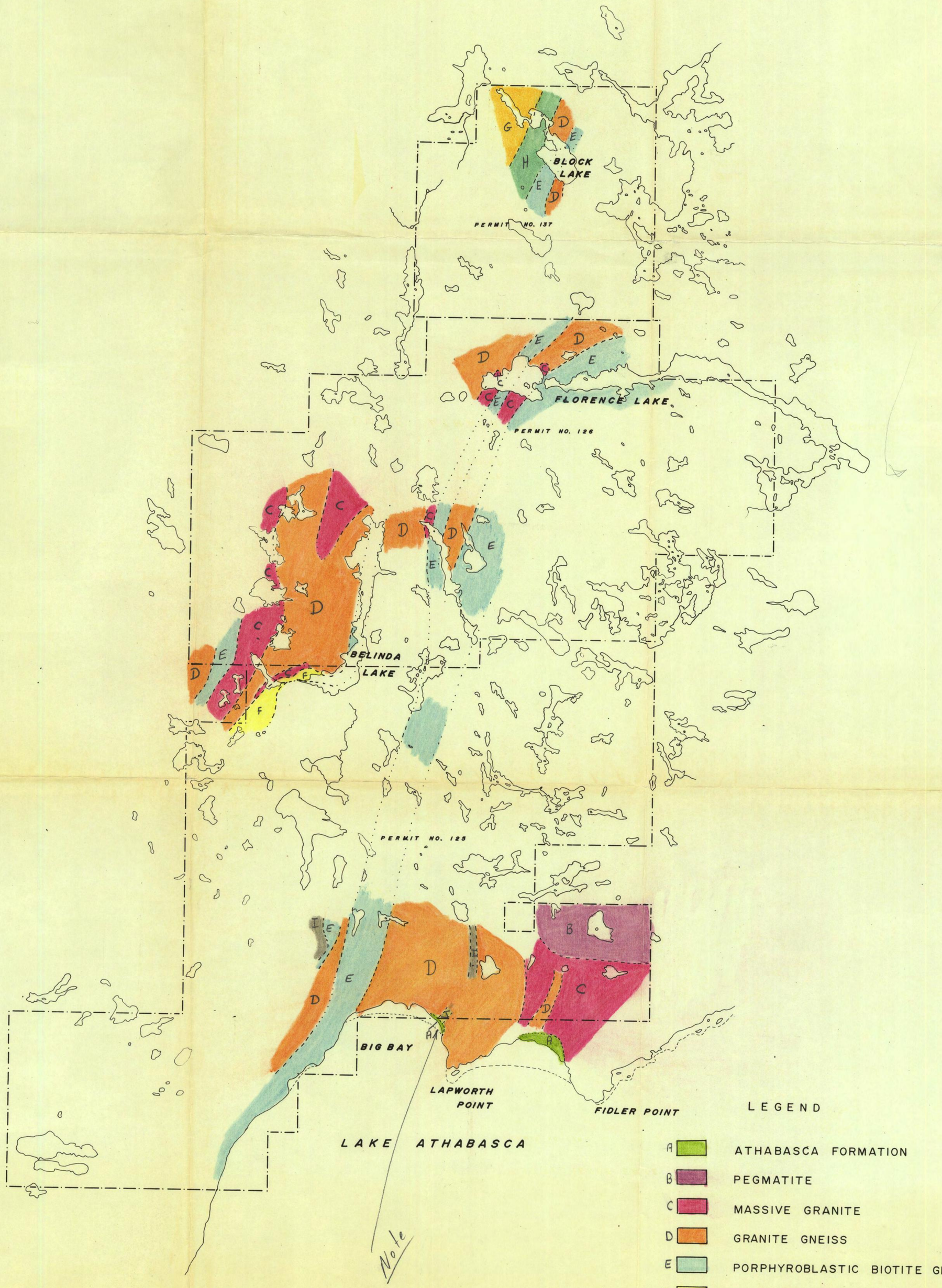
MAP 2



GENERAL GEOLOGY MAP

UNITY RESOURCES LIMITED

MINERAL PERMITS

125, 126 & 137

ALBERTA

SCALE 1 INCH = 1 MILE

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19700011 MAP 3

BIG BAY

LAPWORTH POINT

FIDLER POINT

LAKE ATHABASCA

GROUND ANOMALY AND TRAVERSE
MAP OF
FIDLER POINT AREA
UNITY RESOURCES LIMITED
MINERAL PERMITS
125, 126 & 137
ALBERTA

SCALE 1 INCH = 1/4 MILE

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AUGUST, 1970

1970011
(Map #4)

MAP 4

PROFESSIONAL GEOLOGIST ALBERTA R.K. NETOLITZKY

(Map #6)

GROUND ANOMALY AND TRAVERSE MAP OF BELINDA LAKE AREA

UNITY RESOURCES LIMITED

MINERAL PERMITS 125, 126 & 137

ALBERTA

SCALE 1 INCH = 1/4 MILE

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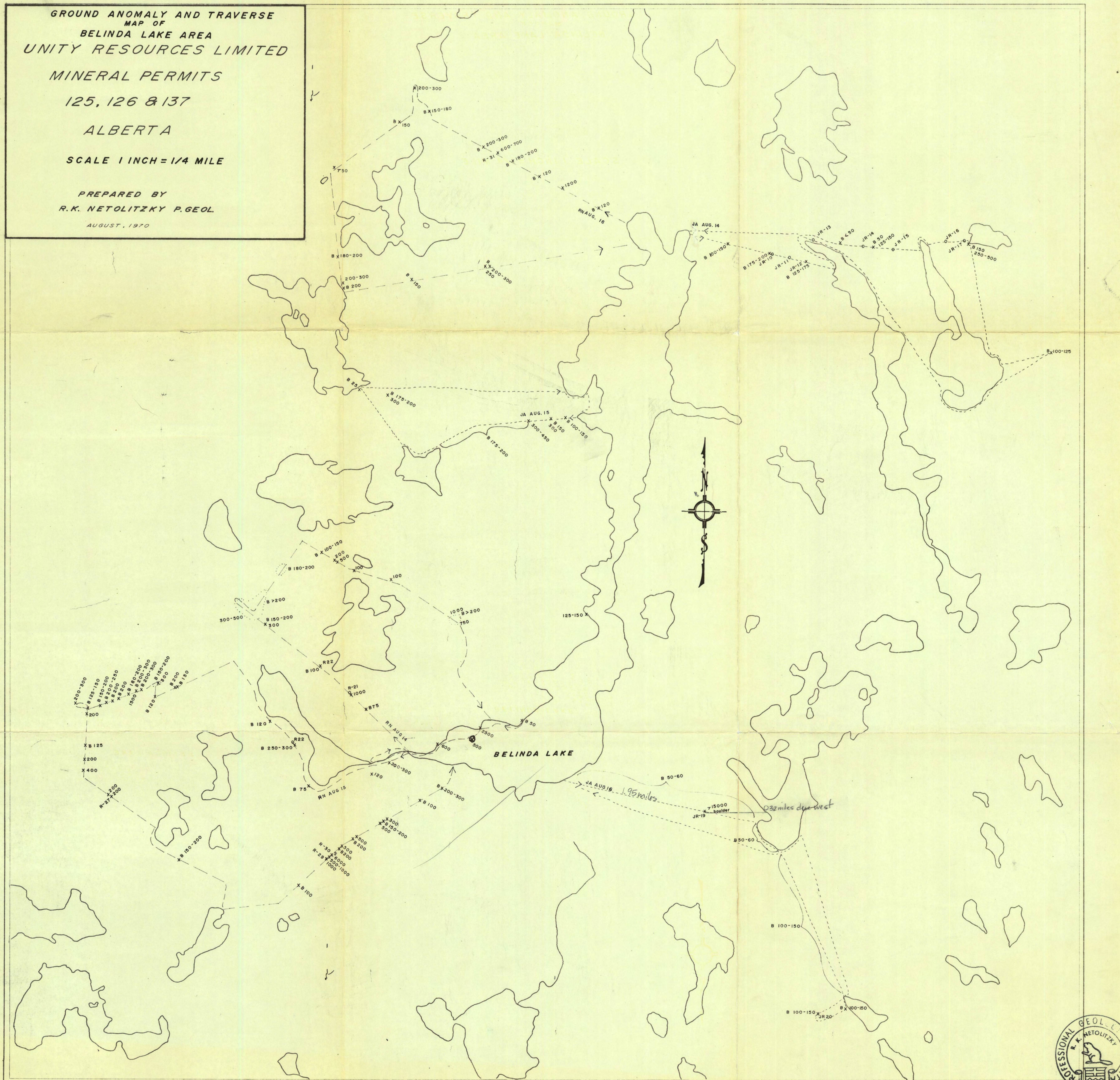

MAP 6

1970011

19700011
(Map #7)

GEOLOGY MAP
BELINDA LAKE AREA
UNITY RESOURCES LIMITED
MINERAL PERMITS
125, 126 & 137
ALBERTA

SCALE 1 INCH = 1/4 MILE

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AUGUST, 1970

BELINDA LAKE

SAND PLAIN
NO OUTCROP

MAP 7

19700011
(Map #8)

GROUND ANOMALY AND TRAVERSE MAP
FLORENCE AND BLOCK LAKE AREAS
UNITY RESOURCES LIMITED
MINERAL PERMITS
125, 126 & 137
ALBERTA

SCALE 1 INCH = 1/4 MILE

PREPARED BY
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AUGUST, 1970

JR-36A
B 50-75
125-250

B 100-125
200-300

JR-39

B 50-75
200-350
overburden

B 150

B 100-125

JR-31
B 50-75

JR-38

JA AUG. 25

B 175-225
JR-36

B 150-175

BLOCK LAKE

B 200
JR-35

B 50-75
JR-34

B 150-200

JR-31

JA- AUG. 23

B 50-75

B 75-100

B 75-100
200-250

B 100

B 50-75

B 75-100
200-300

JR-32, JR-33

B 125-150

B 100-150
200-300

JR-27

B 100-150
200-250

B 150-175
200-250

JR-28

B 125-150
200-300

B 50-75

B 75

B 75-100

B 75-100

JR-30
B 50-75
150-175

JR-29
B 100-125

JA AUG. 22

750

B 80

B 100

JA AUG. 19

B 75

RN AUG. 19

R-330

300-500

JR-34

JR-21
B 50-60

B 50

JA AUG. 21

B 50-75

B 75-100

JR-22

B 125
350-400

B 50

1000

B 150-200

JR-24

B 50-75
200-300

FLORENCE LAKE

B 100-150
200-350

B 75-100

B 100

750

75

B 80

250

B 80

JA AUG. 20

B 75-100
200-300

JR-26

B 100-125

JR-35

MAP 8

PROFESSIONAL GEOLOGIST ALBERTA
R.K. NETOLITZKY

19700011

(Map #9)

GEOLOGY MAP
FLORENCE & BLOCK LAKE AREAS
UNITY RESOURCES LIMITED
MINERAL PERMITS
125, 126 & 137
ALBERTA

SCALE 1 INCH = 1/4 MILE

PREPARED BY
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AUGUST, 1970

BLOCK LAKE

FLORENCE LAKE

CAMP

MAP 9

PROFESSIONAL GEOLOGIST ALBERTA
R. K. NETOLITZKY