

GEOLOGY, SCINTILLOMETER SURVEY, ROCK GEOCHEMISTRY,
AIRBORNE RADIOMETRIC SURVEY AND TRENCHING On The
Friday 1, 2, 3, 5, 6, and the Cran 1, 2, 3, 4, 5

Mineral Claims Located at

Co-ordinates $50^{\circ}47'N$ and $118^{\circ}02'W$
82L/10E
in the Revelstoke Mining Division

BY

Brian B. Hughes and J.T. Walker

NORANDA EXPLORATION COMPANY, LIMITED
(NO PERSONAL LIABILITY)

September 29 to June 30, 1978

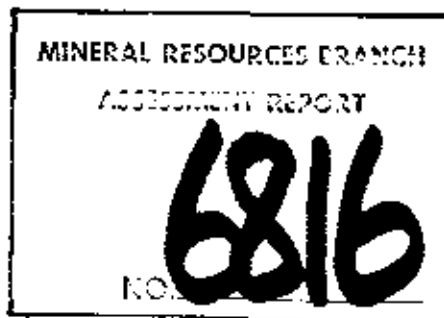


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INTRODUCTION

The mineral claims referred to in this report are located in the eastern edge of the Monashee Range of Southern British Columbia, 30 kilometers south of the town of Revelstoke.

To the authors knowledge there have been no recorded work or written reports on this uranium prospect which was discovered by Cajac Exploration Limited during the spring of 1977.

During September, October and November 1977, a program of airborne radiometrics and ground scintillometer prospecting was completed on the claims to delineate the character and size of the uranium bearing pegmatites.

Geological mapping, scintillometer prospecting and sampling was done by G.L. Fenton, B.B. Hughes, P.M. McAndless and I.A. Saunders, all employees of Noranda Exploration Company, Limited.

An airborne radiometric survey was done by J.T. Walker and L.C. Reinertson, also Noranda Exploration Company, Limited personnel.

During May and June of 1978, a program was undertaken to follow up airborne anomalies during 1977 field work on the property. Blasting was done to expose fresh rock on several interesting anomalies.

Follow up prospecting, blasting and sampling was done by B.B. Hughes and I.A. Saunders.

LOCATION AND ACCESS

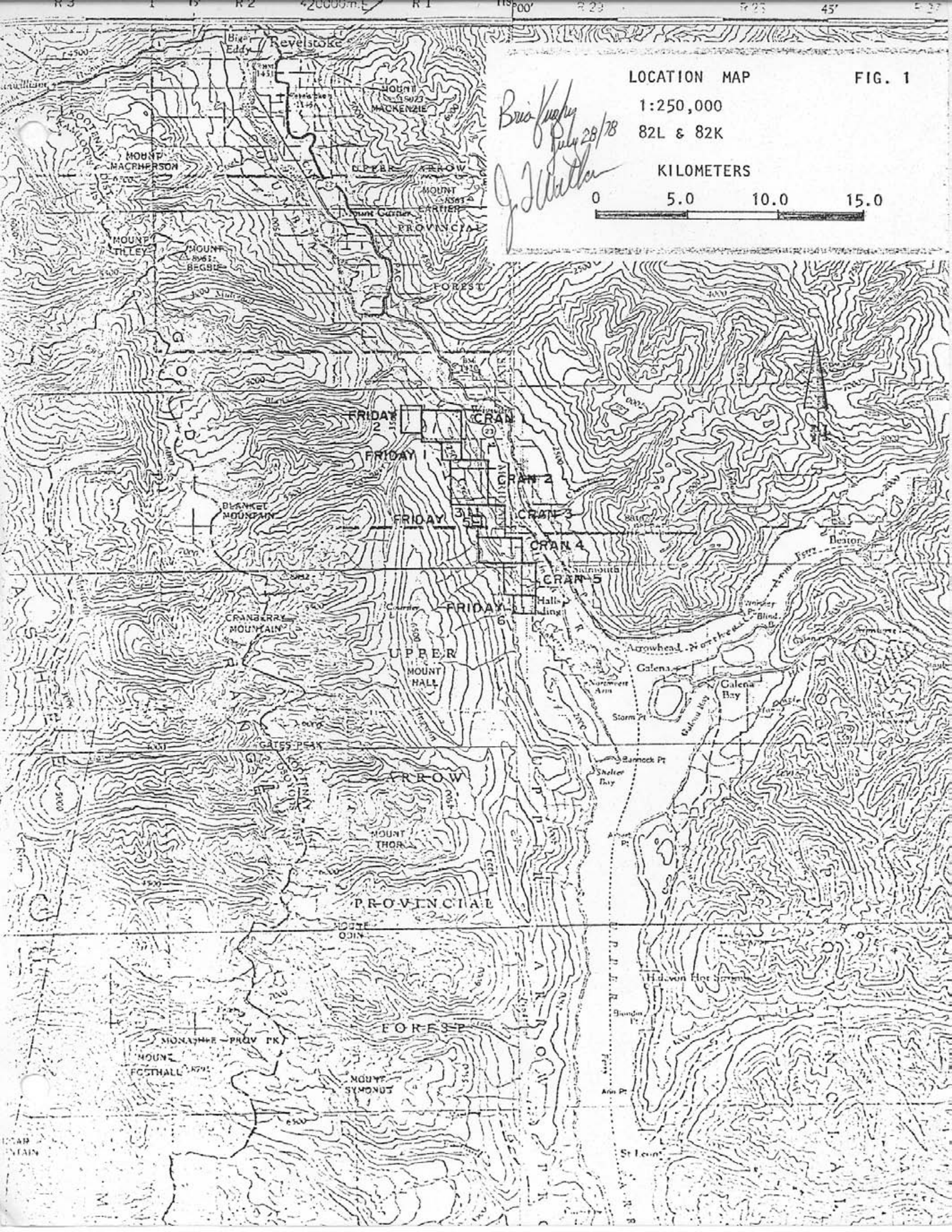
The Friday 1, 2, 3, 5, & 6 and Cran 1 - 5 mineral claims are situated east of highway 23 between approximately 25 and 38 kilometers south of Revelstoke. The claims cover most of the ridge flanked on the east by the Columbia River flood plain and on the west by Cranberry Creek. The center of the property is located at co-ordinates $50^{\circ}47'N$ and $118^{\circ}2'W$. (See figure 1).

Access to the property from highway 23 is by a logging road that is parallel and east of the highway. A 4-wheel drive road has been constructed for access to the center of the grid by Chabot & Levesque Logging, Limited of Revelstoke for Noranda Exploration Company, Limited. The road construction entailed repairing an old skid trail and construction of a new road to the base line (See drawing 2).

From Cranberry Creek at elevation 610 meters a.s.l. the topography rises to approximately 915 meters a.s.l. over the center of the property. Further to the east the topography drops off steeply down to the Columbia River flood plain at 490 meters. a.s.l.

CLAIMS AND OWNERSHIP

The property described herein consist of the Friday 1, 2, 3, 5, 6 and Cran 1, 2, 3, 4, 5 mineral claims recorded in the name of Cajac Exploration Limited of P.O. Box 1879 Revelstoke, B.C., V0E 2S0. All claims recorded in the Revelstoke Mining Division (Drawing 1).



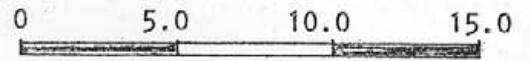
LOCATION MAP

FIG. 1

1:250,000

82L & 82K

KILOMETERS



*Brian Kuehly
July 28/78
J. J. Walker*



CRANBERRY MOUNTAIN

UPPER MOUNT HALL

GALENA BAY

ARROW

MOUNT THOR

PROVINCIAL FOREST

MONASTER PROV PK

MOUNT FOOTHALL

MOUNT SIMONIS

Hid. von Hor

St Leon

<u>Claim Name</u>	<u>Record Number</u>	<u>Number of Units</u>	<u>Record Date</u>
Friday 1	375 (7)	4	July 22, 1977
Friday 2	376 (7)	6	July 22, 1977
Friday 3	378 (7)	1	July 27, 1977
Friday 5	379 (7)	1	July 27, 1977
Friday 6	385	4	Aug. 26, 1977
Cran 1	387	12	Sept. 8, 1977
Cran 2	388	20	Sept. 8, 1977
Cran 3	389	12	Sept. 8, 1977
Cran 4	390	12	Sept. 8, 1977
Cran 5	391	12	Sept. 7, 1977

TABLE 1

Noranda Exploration Company, Limited (N.P.L.) optioned the property from Cajac Exploration Limited on the 29th of September, 1977.

CONTROL GRID

The property grid covers an area from highway 23 east to the Columbia River flood plain and some 4400 meter parallel and east of the highway. Scope Exploration Services, Limited of Box 1101 Merritt, B.C. established the grid using chain and compass and correcting for topography with inclinometers.

The base line 100+00E runs at 155° azimuth from 76+00N to 120+00N. Lines run at 65° and 245° azimuth from 100+00E base line are at 100 meter spacing over the center third of the property, lines 92+00N through 108+00N and at 200 meter spacings over the rest of the grid. Stations were established every 25 meters along blazed and flagged lines.

A total of 51 kilometers of grid lines have been established. (See drawing 2).

GEOLOGY

The regional geology consists of the Selkirk Geological Division to the east of the Columbia River and the Monashee Group, part of the Shuswap terrane, to the west of the Columbia River. Regionally the Monashee group carries only a few kinds of minerals but differences in the amounts of these minerals and changes in their grain size, and difference in the texture, size and colour of layers give an infinite variety of rocks. With a few local exceptions, these rocks exhibit metamorphism of uniformly high grade. Gneiss forms the bulk of the assemblage, but schist, quartzite, calcareous gneiss, and marble are common and are locally abundant. Contrary to popular beliefs, normal granite is not an important part of the terrane but pegmatite is. The amount of pegmatite in wisps, lenses, discontinuous layers, small sills, and dykes varies greatly from place to place. Locally it may be the dominant type of rock but the amount of pegmatite present has no direct relationship to the grade of metamorphism within the areas of generally high-grade metamorphosed strata. (From GSC Memoir 296).

The Cranberry property is located just west of the Columbia River within the Monashee Group of the Shuswap terrane. The general composition of the Shuswap gneiss is a fine to medium grained biotite-quartz-feldspar gneiss with lesser amounts of sericite and garnets. Interlayered with the gneiss are fine to medium grained quartz-feldspar granitic pegmatites with subordinate amounts of biotite and locally, garnets. Over the property, interlayered pegmatites may comprise up to 80% of the outcrops mapped. Foliation attitudes of the gneiss are striking 80° to 100° and dipping 10° to 30° to the north. Pegmatite lenses are commonly conformable with the foliation, locally however, dykes and sills are noted crosscutting the gneiss. Largest pegmatites mapped appear to be conformable lenses with thicknesses to 5 meter and strike lengths observed up to 70 meters.

Exposure of rock varies in abundance over the property as seen on drawing 2. Several areas have good exposure and the pegmatite-gneiss relationship was noted. Although outcrop maybe abundant, continuous clean exposures are sparse due to heavy undergrowth and thick moss coverings, making total lengths and thicknesses difficult to estimate.

Radioactivity, where detected on the property, is associated with the granitic pegmatites. Although many pegmatites have a higher total count background than the surrounding gneissic rock, anomalous radioactive zones of interest are sparse and have very small dimensions. Scintillometer prospecting on the property has delineated most of the anomalous zones as being less than a decimeter in diameter. A couple of anomalous zones checked have a more lenticular nature, with lengths up to several meters but widths less than a decimeter. Upon close examination of specimens from several anomalous zones, small amounts of uraninite are seen intergrown within the quartz and feldspar of the pegmatites. These uraninite crystals are sub-cubic, usually less than 0.5mm in size and accompanied by a thin orange halo. Uraninite appears to be a primary mineral in the pegmatite and no joint or fracture controlled mineralization has yet been noted.

SAMPLING

Using McPhar TV-1 model scintillometers, outcrops were checked for anomalous radioactivity. After several days on the property and some assay results, it was decided that outcrops would be sampled wherever the 20,000 cpm threshold on the total count position was exceeded. Using a heavy hammer and metal punch, samples were chipped out of the competent rock faces. All samples were sent to Loring Laboratories, Limited of Calgary, Alberta. Chip sample assays were given as chemical assays in parts per million (ppm) of U_3O_8 . (Appendix 11).

AIRBORNE RADIOMETRIC SURVEY

The radiometric airborne survey was flown on October 3 and October 4, 1977 by Noranda Exploration Company, Limited. The survey was flown over the claims listed in this report and an adjacent area as indicated on the Radiometric Contour Map Drawing No. 3.

Sixteen lines were flown at a line spacing of 400 meters. A total of 290 kilometers were flown covering an area of 116 square kilometers.

A Bell 206B Helicopter, operated by Highland Helicopters, Vancouver, B.C., was employed to fly the survey.

SURVEY PERSONNEL

Pilot	D. Broder
Navigator	L. Reinertson
Operator	T. Walker
Data Reduction	G. Fenton & T. Walker
Drafting	G. Fenton

All personnel are employees of Noranda Exploration Company, Limited with the exception of D. Broder, a pilot for Highland Helicopters.

NAVIGATION AND FLIGHT LINE PATTERN

The flight line base map at a scale of 1:25,000 is a blow-up of the N.T.S. 1:50,000 topographic map compiled by Surveys and Mapping Branch, Department of Energy, Mines and Resources.

The flight line pattern with topographically located control points was plotted prior to flying the survey. During the survey the navigator, where necessary, corrected flight line and control point locations on the base map.

AIRCRAFT INSTRUMENTATION AND DATA RECORDING

The radiometric survey instrumentation consisted of a gamma ray spectrometer, Model GR-410 and a crystal detector, Model GPX-21 manufactured by Geometrics/Exploranium Company, Downsview, Ontario.

The spectrometer was operated in the integral mode measuring all gamma radiation between 0.5 M.e.v. & 3.0 M.e.v. energy levels. The range switch was set to provide an analogue output measuring a maximum of 400 counts per second for a full scale reading.

A Hewlett Packard strip chart recorder (Model 7155 B) was used to record the radiometric data during flight. A manually controlled event marker pen on the recorder provided fiducial marks correlating the recorded data with flight line control points.

DATA COMPILATION AND PRESENTATION

The radiometric data are presented on a plan map together with flight lines at a scale of 1:25,000. (Drawing No. 3). The outline of the mineral claims is shown along with the location of the Columbia River as an aid in correlating with the topography shown on the claims location map. (Drawing No. 2).

The radiometric data, measured as counts per second, in the total count mode is presented in contour form and labelled as a percentage of the full scale reading.

(100% equals 400 counts per second). The contour interval is 10% of full scale equalling 40 counts per second.

DISCUSSION OF RESULTS

The background gamma radiation is 30% - 40% of 400 counts per second. One significant anomaly is indicated on flight lines No. 1, 2 and 3 in the south east of the survey area. This anomaly is underlain by a sand and gravel outwash from Cranberry Creek. Several small anomalies greater than 50% (200 cps) are indicated. These small anomalies can generally be attributed to areas of abundant outcrops and do not appear to be associated with significant mineralization. Known prospects containing uranium mineralization were not detected by this airborne survey.

J. J. Walker
July 29, 1978

PETROGRAPHIC STUDY OF MINERALIZATION

Analysis of selected uranium bearing samples in handspecimen, thin section and polished section.

The radioactive pegmatites are characteristically of granitic composition, comprised of 40 to 80% potassic feldspars, 0 to 30% sodic plagioclase, 10 to 40% quartz and lesser amounts of biotite, usually 5 to 25%. The rock is commonly medium grained (4-7mm) with medium grained books and laths of biotite. In handspecimen, small (<.5mm) opaque, sub-metallic, cubic grains are noted locally. These grains commonly have a thin orange-red halo and appear brittle when scratched. Specimens with abundant opaque grains often have a high radioactive count on a TV-1 model scintillometer. One picked sample of feldspar grains containing the maximum number of opaque grains ran approximately 25% U_3O_8 in a 3mm x 3mm x 3mm sample.

In thin section, the feldspars range from clean unaltered to heavy sericitic and with clay alteration, the biotite from fresh laths to bent and totally chloritized, and the quartz grains show shattering and strain shadows. The opaque mineral in cubic to sub-cubic form appears intergrown with feldspars, quartz and biotite. Some discolouration and destruction of the biotite lattice are noted adjacent to the opaque minerals as well as an orange fracture filling immediately surrounding the opaque grains.

In polished section the opaque mineral commonly has a clear, light grey colour. It is found to be very hard and not easily scratched. One specimen showed a shattered sub-cubic mass with a pitted surface, not unlike pitchblende. The opaque mineral appears to be the uranium source, most likely one of the uraninite minerals.

Sample Number	Location	TV-1 cpm Handspecimen
6412 J	87+50N, 106+80E	5500 cpm

Medium grained granitic pegmatite, grain sizes 5-6mm. Sample is comprised of 70% potassic feldspars, whitish coloured due to weathering and approximately 30% clear quartz grains. 2% biotite is also present. Several black, cubic to sub-cubic grains less than .5mm in diameter are noted. These cubes commonly have an orange halo staining the surrounding quartz and feldspar grains.

In thin section, the rock is made up of mainly potassic feldspar grains with lesser amounts of quartz grains surrounded by a fine grained (<.1mm) matrix of quartz. The black, opaque mineral appears to be uraninite and is found intergrown with grains of quartz and feldspar. Two of the grains observed were 6mm in diameter. In polished section, these opaques have a grey colour and are not easily scratched.

6440 J	89+57N, 106+75E	7000 cpm
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Medium to coarse grained pegmatite, grain sizes from 5 to 13mm. In handspecimen, perthitic potassic feldspar comprises 60% of the rock, clear to grey grains of quartz comprise up to 20% and books of brown to black biotite comprise 20% of the sample. Biotite books up to 1.5cm in diameter are present. One small (<.5mm) black cube was noted intergrown with a feldspar grain. Again a thin orange halo was noted around the black cube.

Sample Number	Location	TV-1 cpm Handspecimen
6480 J	112N, 100+15E	18,000 cpm

Fine to medium grained, (1 - 2mm), granitic gneiss. Interlayered quartz, K-feldspar and quartz-K-feldspar plus biotite bands are noted in handspecimen. White feldspars and glassy reddish stained quartz comprise most of the sample. The quartz-K-feldspar band contains 60% feldspar and 40% quartz, the other layers containing biotite are comprised of 45% feldspar, 15% quartz and 40% brown to black biotite.

In thin section up to 15% of the feldspar present is sodic plagioclase. The red colour of the handspecimen is due to red-orange staining between most mineral grains in thin sections. No apparent evidence of any uraniferous minerals was noted in either handspecimen or thin section.

6462 J	96N, 99E	7,000 cpm
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Fine to medium grained (1 - 2mm) granitic pegmatite. In the handspecimen the sample is comprised of 55% potassic feldspar, 40% reddish stained glassy quartz and 5% biotite. Black, brittle cubes are noted in the handspecimen, less than .5mm in size and <<.1% of the sample. Before the black cubes are scratched they have a sub-metallic, glassy luster.

In thin section a framework of quartz and potassic feldspar is surrounded by a finer matrix of granular quartz, potassic and sodic feldspars and biotite. No opaques were noted in thin section.

6457 J	98N, 94+65E	5,000 cpm
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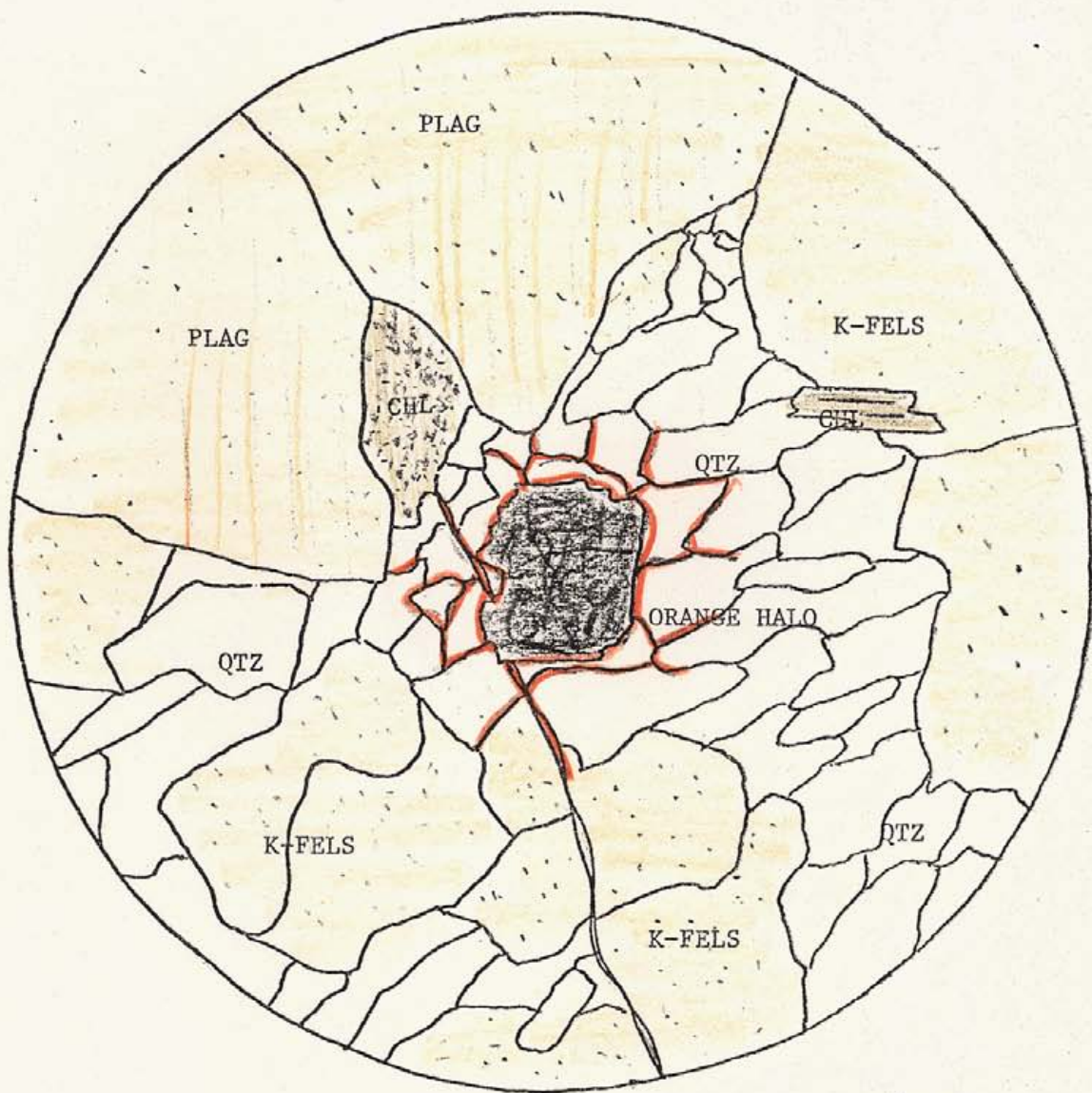
Fine to medium grained (1 - 2mm) granitic pegmatite. In the handspecimen, potassic feldspar comprises 75% of the total rock, quartz 20% and brown to black biotite 5%. Several small masses of a sub-cubic, steely grey mineral, commonly with biotite books. Narrow red rusty haloes around the masses are also evident.

In thin section, a framework of potassic feldspar and shattered quartz grains is surrounded locally by fine quartz, feldspar and chlorite grains. Most of the biotite has been altered to chlorite. One black, .5mm, sub-cubic, opaque mineral is noted intergrown with the quartz and feldspar grains. An orange stain is noted filling fractures around the grain up to 1mm away. In polished section, the opaque mineral is light grey in colour and pitted. Within the sub-cubic outline of the mineral it is fractured and granular in appearance, resembling pitchblende.

8781 M	97+50N, 95+00E	6,000 cpm
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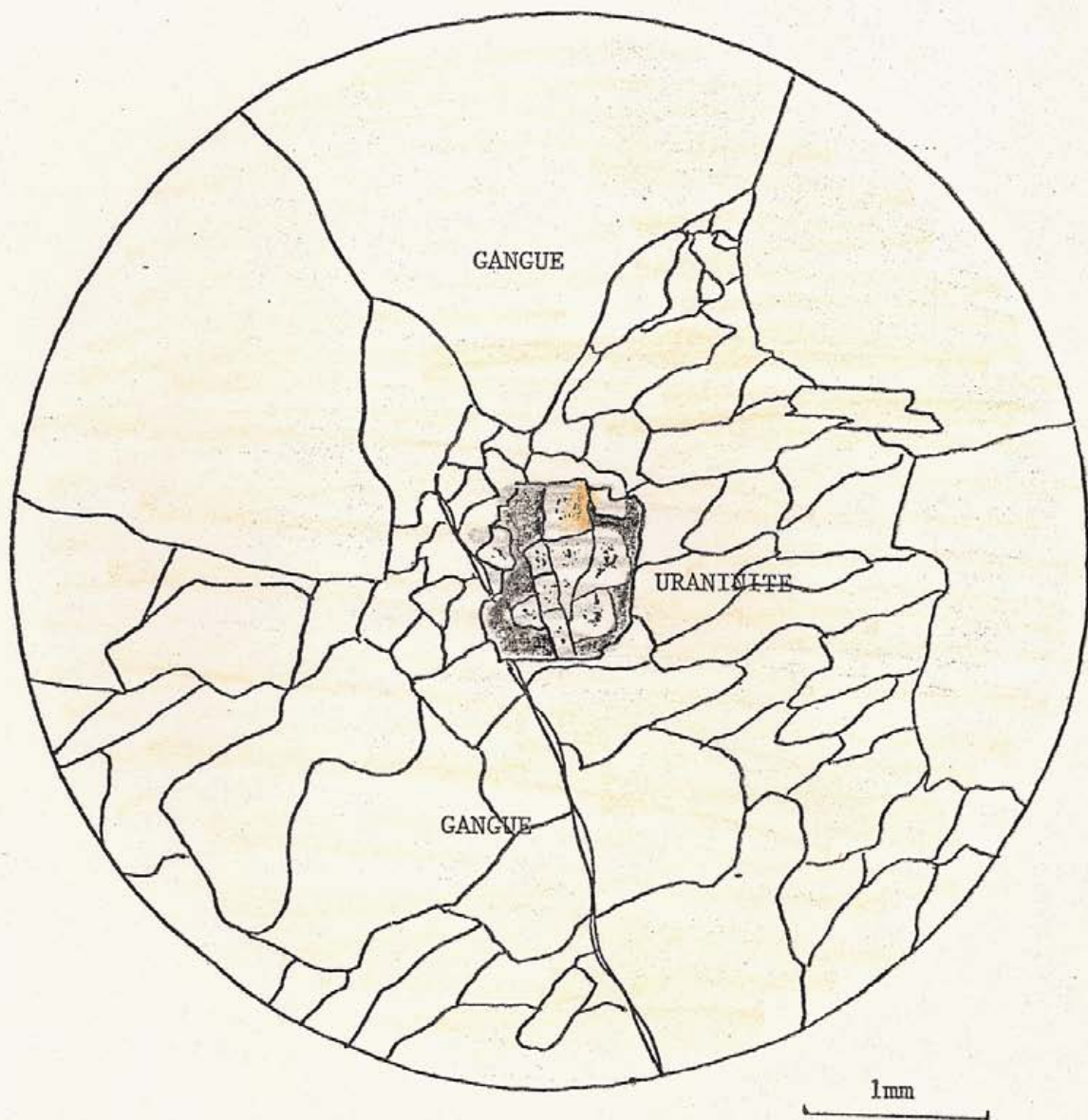
Medium grained (1 - 3mm) granitic pegmatite. Potassic feldspar 85% of the total rock, quartz 5% and biotite clots 10%. Opaques were noted in handspecimen comprising <.5% of the total rock. These dark, glassy, sub-cubic to cubic grains are usually .5mm in size and also have an orange halo in the handspecimen.

No opaques were noted in the thin sections and the rock was comprised of altered potassic feldspar grains with minor grains of shattered and stressed quartz.



1mm

6457 J TRANSMITTED LIGHT



6457 J REFLECTED LIGHT

Sample Number	Location	TV-1 cpm Handspecimen
6486 J	120+25N, 100+50E	5,000 cpm

Medium grained (1 - 3mm) granitic pegmatite. In the handspecimen, feldspars comprise 70% of the sample, quartz 20% and biotite 8% with 2% muscovite. Micas occur in clots and along poorly developed foliations, muscovite is only noted in one small area of the sample. Several opaque grains are noted in handspecimen with the characteristic orange haloes. These grains are coincident with the mica rich areas.

In thin section, 15% sodic plagioclase is noted intergrown with the potassic feldspars and minor quartz grains. No opaque minerals were noted in this thin section.

M 8779	97+50N, 95+75E	5,000 cpm
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Coarse grained (4 - 9mm) granitic pegmatite. In handspecimen, potassic feldspar makes up 60% of the rock, plagioclase 15%, quartz 10% and biotite 15%. No opaques were noted in the handspecimen.

In thin section, potassic feldspars, plagioclase and quartz are intergrown along with biotite, which is partly altered to chlorite. No opaques were noted in thin section.

6453 J	98+25N, 95E	5,000 cpm
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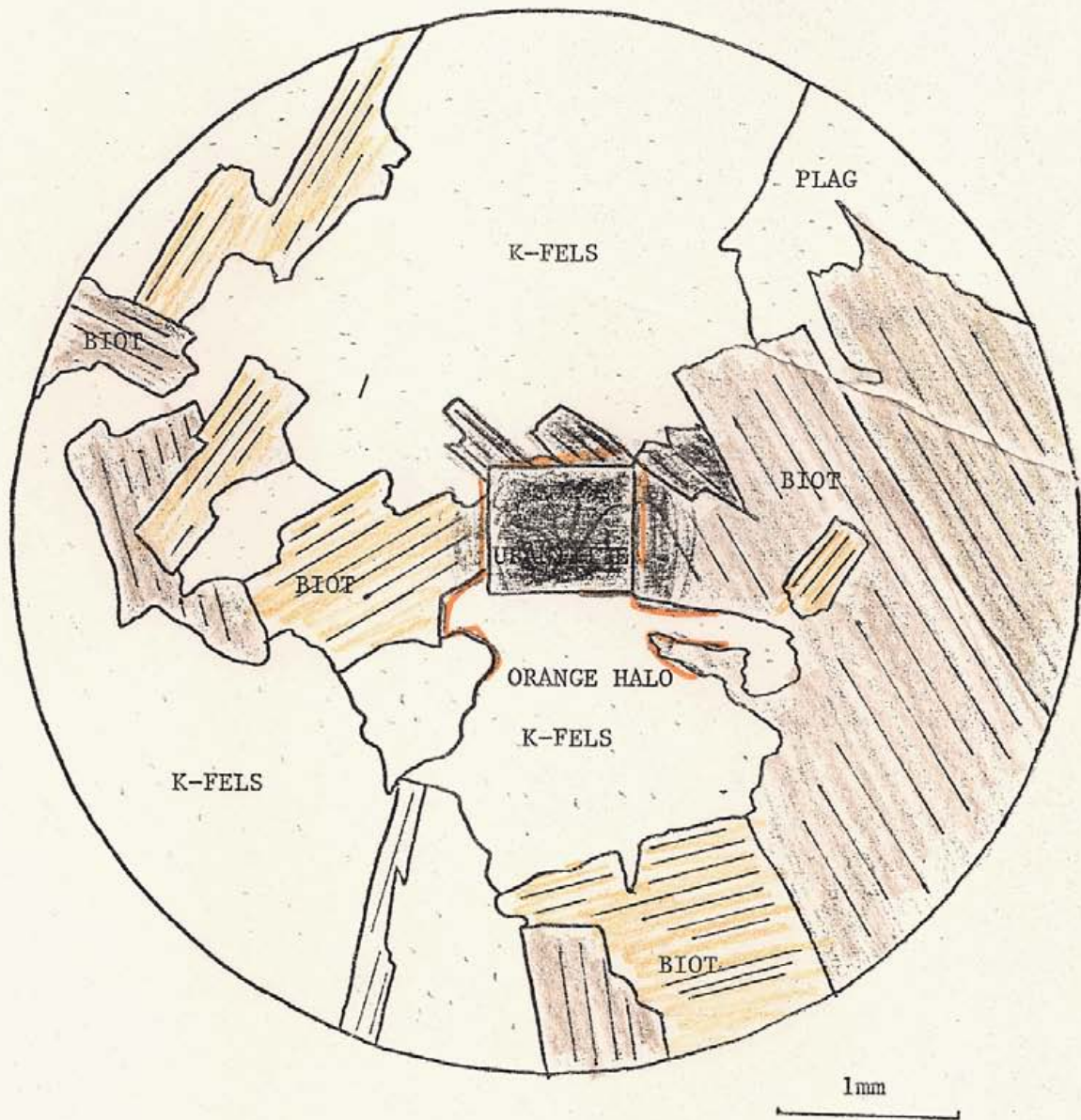
Medium grained pegmatite, in the handspecimen comprised of potassic feldspar, up to 90% with minor amounts of glassy quartz and biotite. Some plagioclase was also noted. Several small (<.5mm) grains of a cubic, black and glassy opaque mineral with thin orange halo stains are noted.

In thin section, the feldspars are highly altered to sericite and clays. Relict albite twinning was noted in a few grains. Locally, a matrix of altered potassic and sodic feldspars and quartz grains surrounds the framework grains of feldspars and quartz. No opaques were noted in thin section.

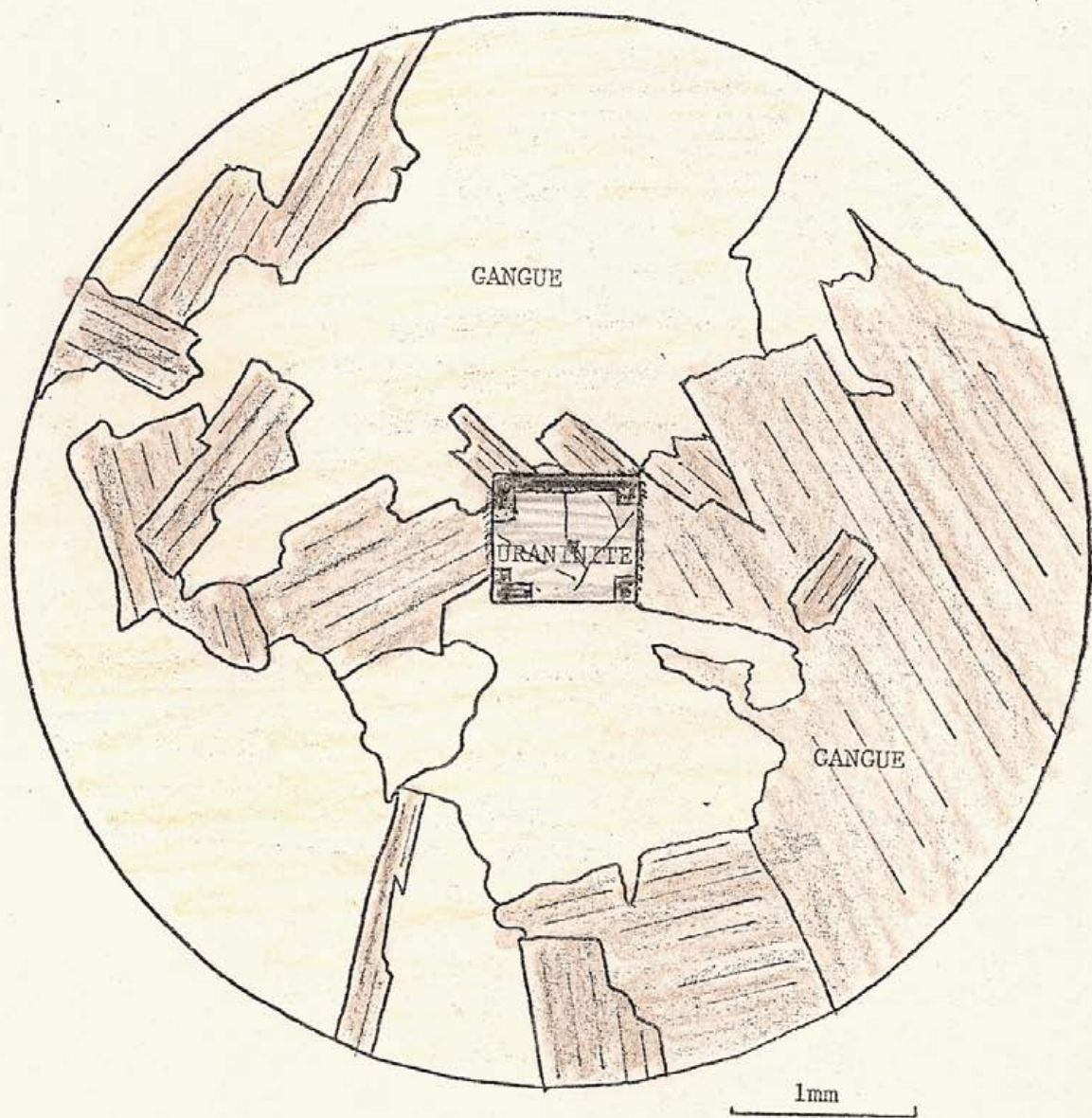
6456 J	96+75N, 96+25E	10,000 cpm
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Medium grained (4 - 7mm) granitic pegmatite. In handspecimen, potassic feldspars form 20% of the rock, plagioclase 50%, glassy, clear quartz 15%, (as irregular masses within the feldspar rich areas and also noted as well formed tabular hexagonal crystals within the biotite rich areas), biotite 15% as books and irregular masses. Orange-red staining noted along many grain contacts. Several opaque grains <.5mm in diameter were noted along with the characteristic orange haloes.

In thin section, several cubic, opaque minerals are noted intergrown with biotite within the framework of feldspars and quartz. Fission track evidence from the opaques is noted as discolouration haloes in the adjacent biotite grains and laths. Subordinate amounts of orange fracture filling were also noted.



6456 J TRANSMITTED LIGHT



6456 J REFLECTED LIGHT

The opaque mineral has a cubic crystal form, grey colour in reflected light and is not easily scratched. Sharp, clean contacts are noted with the surrounding mica and feldspars. This mineral appears to be uraninite.

Sample Number	Location	TV-1 cpm Handspecimen
6406 J	91+60N, 105+50E	17,000 cpm

Medium grained (4 - 8mm) granitic pegmatite . Feldspars make up 85% of the handspecimen with potassic feldspar plagioclase. 10% quartz is present as irregular grains and eyes, biotite is locally 20%, but overall 5%. No apparent opaque minerals were noted.

In thin section the rock is comprised of fairly fresh potassic and sodic feldspars, shattered quartz grains and irregular to tabular bent biotite grains. No opaque minerals were noted.

Beaughes July 28/78

1978 GRID SAMPLE ASSAY FOLLOW UPS

Follow ups on several of the more anomalous 1977 grid sample assay results was done by blasting to expose fresh rock surfaces. This allowed for better samples and assessment of the mineralization present on the Cranberry Property

Follow up ground scintillometer prospecting was done on all the airborne anomalies on the property and, where warranted, anomalous areas were blasted.

Two men spent 14 days on the property prospecting, trenching and sampling from May 25 to June 7, 1978.

Prospecting was done using a hand held McPhar model TV-1 scintillometer. Trenching was done using an Atlas Copco gas powered backpack Cobra percussion drill to drill holes for blasting. Gelex 70% dynamite was the explosive used in all pits. Blast holes were usually 0.7 to 1.2 meters deep and 0.7m apart. This gave good fragmentation of the pegmatite for easy mucking. All the loose rock from the pits was hand mucked to expose clean, open faces for sampling.

The first follow up zone was in the area of sample number M8778, located at grid co-ordinates 97+50N and 96+30E, where a pegmatite chip sample ran 0.0919% U_3O_8 . The pegmatite has generally a $70^\circ/25-30^\circ$ NW attitude, with one pronounced set of fractures, showing some fault movement, at $90-95^\circ$ /vertical. Radioactivity can be detected over 10m along the surface expression of the pegmatite, with several meters of over 60,000 cpm total count. Blasting of a line of 14 drill holes opened up about 6 meters of the pegmatite. Two more blasts were made to open up a highly radioactive zone in the western extent of the pit. This added another 2 meters to the exposed length of the pegmatite. The pegmatite varied in width from less than 5cm to a maximum of 45cm. Radioactivity is generally 3 to 4 times background in the eastern half of the pit and up to 20 times or 50,000 cpm in the western half. These higher radioactive areas are usually associated with 1mm uraninite crystals and fluorescent lemon-yellow to green autunite smears on fractures.

Upon exposure to air the autunite soon lost its fluorescent nature and became a dull earthy yellow colour suggesting conversion to meta-autunite.

The fine grained quartz (40%), biotite (45%), feldspar (15%) gneiss below the pegmatite is well foliated and commonly iron stained. The gneiss contains up to 4% pyrite and minor amounts of pyrrhotite. The pegmatite appears to have intruded the gneiss along foliation planes and locally has a slight crosscutting nature. The pegmatite may contain xenoliths of the gneiss.

The volume of rock removed after three blasts in Pit 1 is approximately 11 m^3 . Pit dimensions are approximately 4 meters long, 3 meters wide and 0.6 meters deep in the eastern section, and 4 meters long, 1.6 meters wide, and 0.6 meters deep in the western section. See Figure 2.

Rock sampling was done across and along the pegmatite as seen in Figure 2. Sample descriptions and assay results are presented in Appendix III.

The second follow up, Pit #2, is located 30 meters grid west of Pit #1, at 97+50N and 96+00E. At this locality a pegmatite with minor biotite clots gave a chip sample assay of 0.0946%U₃O₈. Attitude of the pegmatite is 50-60°/20-30° NW with some slumping noted in the western extent of the pit. Fracturing, as in Pit #1, is 90°/vertical. The pegmatite is comprised of coarse grained quartz, feldspar and biotite with several biotite clots. Several areas within the pegmatite contain a visible sub-cubic radioactive mineral associated with an orange halo. This mineral is thought to be uraninite. No autunite was recognized in the field but under the ultra violet lamp it was evident in several specimens.

Overlying and underlying the pegmatite is fine grained, foliated, mafic gneiss comprised of quartz (40%), biotite (40%) and feldspar (20%). Silicification, noted in some parts of the gneiss, is often associated with pyrite and minor amounts of chalcopyrite.

The pegmatite in Pit #2 has intruded along the foliation planes of the gneiss and, as in Pit #1, has a crosscutting nature, on a local scale.

Radioactivity is generally 10,000 to 30,000 cpm (4 to 11 times background) along the total length of the pegmatite, with some more intensely radioactive areas associated with biotite clots noted predominantly along the lower contact between the pegmatite and the gneiss.

The volume of rock removed after three sets of blasts in Pit #2 is approximately 8.6m³. The pit dimensions are approximately 4 meters long, 1.8 meters wide and 1.2 meters deep. See Figure 3.

Rock sampling was done across and along the strike of the pegmatite as seen in Figure 3. Sample descriptions and assays are presented in Appendix III.

A follow up was also conducted on sample number 6286J located at grid co-ordinates 120+25N and 100+50E. See Drawing 4. This sample assayed 0.315%U₃O₈. Upon examination it was determined that the sample had come from a radioactive biotite clots in an 8cm wide pegmatite.

Assays of chip samples taken above, within and below the pegmatite (Appendix III) show the narrowness of the mineralization. No anomalous radioactivity was detected along the strike of the pegmatite away from the biotite clots.

1978 AIRBORNE ANOMALY FOLLOW UPS

Airborne Anomaly A

This anomaly is located between 1 and 2km south and east of the Cranberry grid. No particular explanation could be found for this broad, low order anomaly, except that it does coincide with an old burn which is now a thick second growth area.

One pegmatite outcrop that was discovered within the area of the broad airborne anomaly exhibited radioactivity measuring off scale on the TV-1 scintillometer over approximately 5m². Several other, smaller radioactive areas also occur on the same outcrop. This radioactive outcrop was not reflected

in the airborne survey. It appears to have been between flight lines and was therefore missed.

The pegmatite outcrop is situated on a conspicuous hill standing out well above the surrounding topography. The pegmatite is comprised of coarse grained quartz flooded areas (20 - 40%) with large intergrown graphic-like feldspars (40 - 70%), 0 - 10% muscovite and biotite, and minor amounts of pink garnet. This large pegmatitic body is exposed over 50 meter along strike, has a thickness of at least 10 meters and is traceable down dip for 50 meters before being obscured by overburden and vegetation.

The main area of interest is on the summit of the hill where an area 5 meters long and a meter wide is highly radioactive.

Two blasts opened up a good face for sampling. A horizontal and a vertical interval were sampled at the pit face. Radioactivity was found in several 20 x 20cm zones and over a 4 meters by 0.5 meters area on the pit wall. Radioactivity increased over the fresh rock as compared to the initial readings on the weathered surface. These radioactive zones are associated with small cubic uraninite minerals and autunite smears on fractures.

The dimensions of Pit #3 are 6 meters long, 1.8 meters wide, and at least 0.5m deep which gives a minimum volume of 6.5m³. See Figure 4.

Rock sample locations are shown in Figure 4. Sample descriptions and assays are presented in Appendix III.

Airborne Anomaly B

Located at approximately 90 to 92N and 106 to 108E on the Cranberry grid.

This area is characterized by dip slope pegmatites up to several meters thick and exposed over lengths of up to 50 meters. Strikes range from 60° to 90° and dips from 15° to 30° to the N and NE. These attitudes are similar to those in the area of Pits #1 and 2. Only small radioactive zones, located sporadically within many of the pegmatites, were noted.

Airborne Anomaly C

This area, just to the NW of the Cranberry grid, follows the break in slope along the base of Cranberry Ridge. The anomaly appears to be due to uncovered pegmatites on cliff faces, and the boulder talus slope below. Several boulders have anomalous radioactivity 3 to 4 times background.

Airborne Anomaly D

Located approximately 1km north of the Cranberry grid on the eastern flank of the ridge above the Columbia River valley. This situation has the same explanation as anomaly 'C' where there is a good cliff exposure of pegmatite and a boulder talus slope below. The background is generally 2 to 3 times the normal background, with several localized, slightly more radioactive spots noted as well.

Airborne Anomaly E

A few narrow pegmatites are exposed in several small road cuts along the highway and along the logging road to the east. Readings of 2 to 3 times background were noted in the road cuts. Again, the rock being exposed appears to be the reason for the small anomaly.

Airborne Anomaly F

This anomaly is centered around Cranberry Creek, paralleling the highway for nearly the whole length of the Cranberry grid. Upon examination with a TV-1 it was evident that the anomaly is due to uncovered creek sand banks and sand bars. Counts of up to 3 and 4 times background (6,000 - 9,000 cpm) on total count were detected.

Assays from samples 6289J through to 6293J from creek sands showed no anomalous uranium values. Radioactivity may be due to thorium which is known to occur north of the property along the highway.

Airborne Anomaly G

This anomaly covers the large delta area at the confluence of Cranberry Creek and the Columbia River. Prospecting on the ground with the TV-1 detected radioactive sand bars throughout the delta with values of 3 to 4 times background. Assays of samples taken did not reveal any anomalous uranium values. The explanation is possibly identical to that of Airborne Anomaly F.

DISCUSSION AND RESULTS

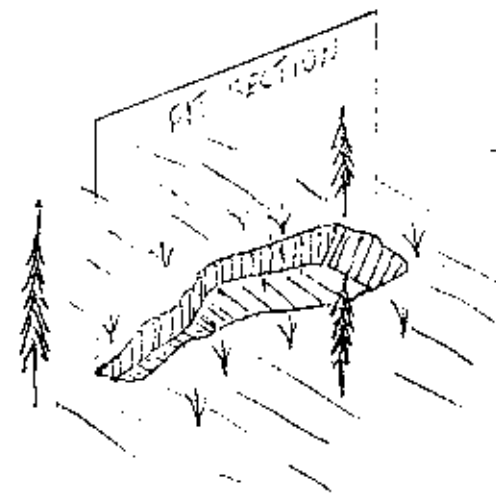
Mineralization on the Cranberry property occurs in the form of a uraninite mineral and minor secondary autunite. Although the mineralization is interesting, it appears to occur only in small pegmatite zones and lenses.

From surface exposures and assays obtained in the area of Pits # 1 and 2 and further to the east towards the Columbia River, uranium mineralization does not appear to be continuous and the anomalous radioactivity noted is commonly associated with small high grade pods of uranium mineralization, often less than a decimeter in any dimensions. A higher concentration of pegmatites and more continuous mineralization than found in surface exposures is necessary for the area to be of economic interest.

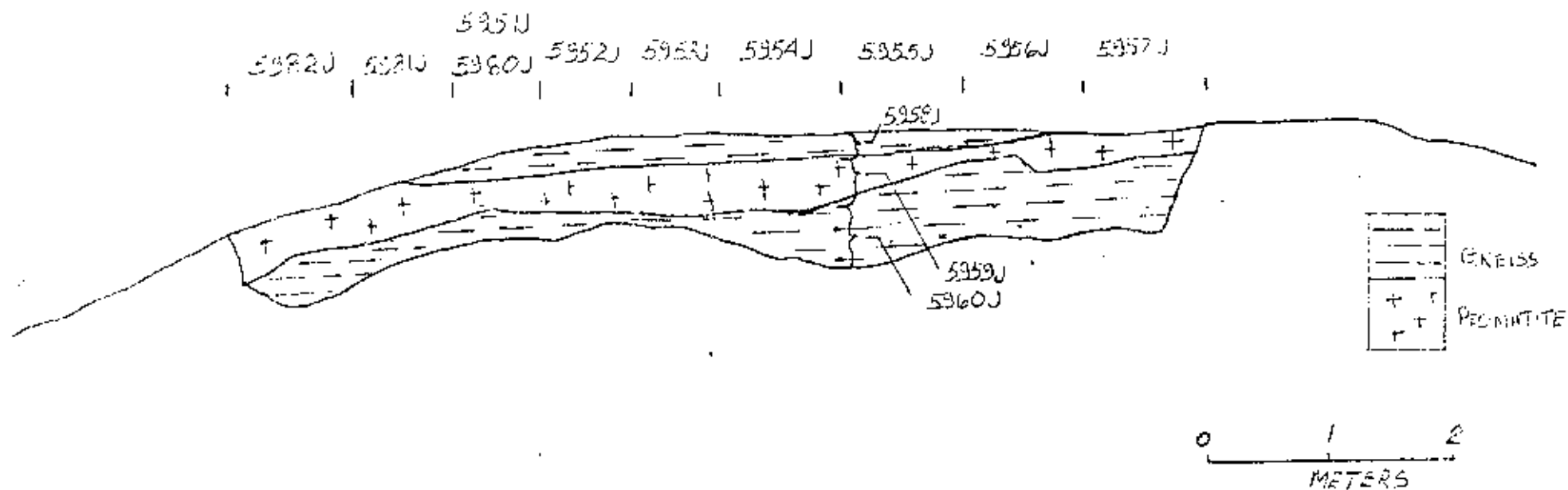
In the area of Pit #3, the size of the pegmatite is encouraging but from surface exposures prospected and assay results obtained, the mineralization on surface appears to occur only in small pods and lenses. Again, continuity of mineralization is lacking.

Eric J. ... July 28/78

WEST

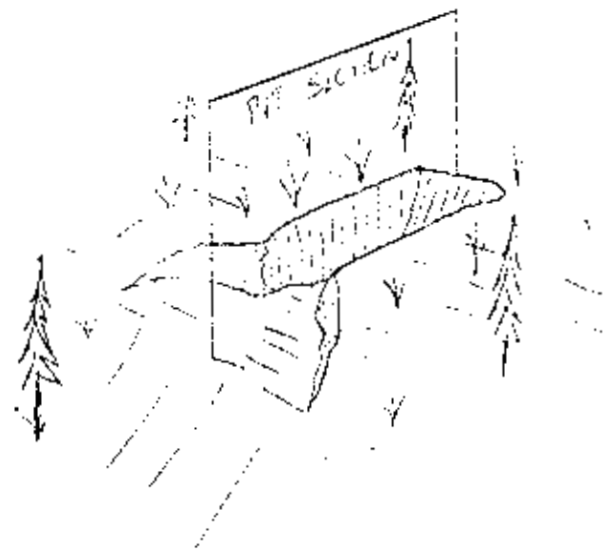


EAST



PIT # 1
FIGURE 2

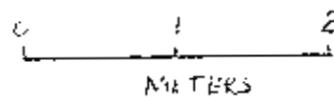
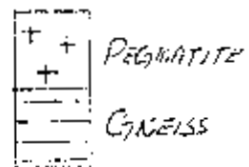
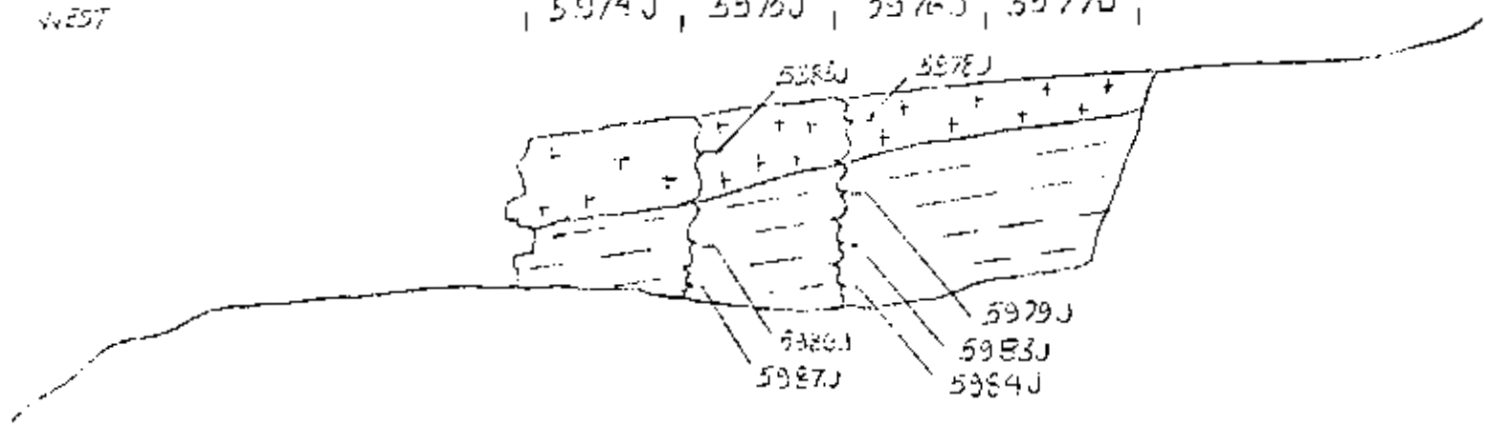
Barfield July 28/78



WEST

5974J, 5975J, 5976J, 5977J

EAST

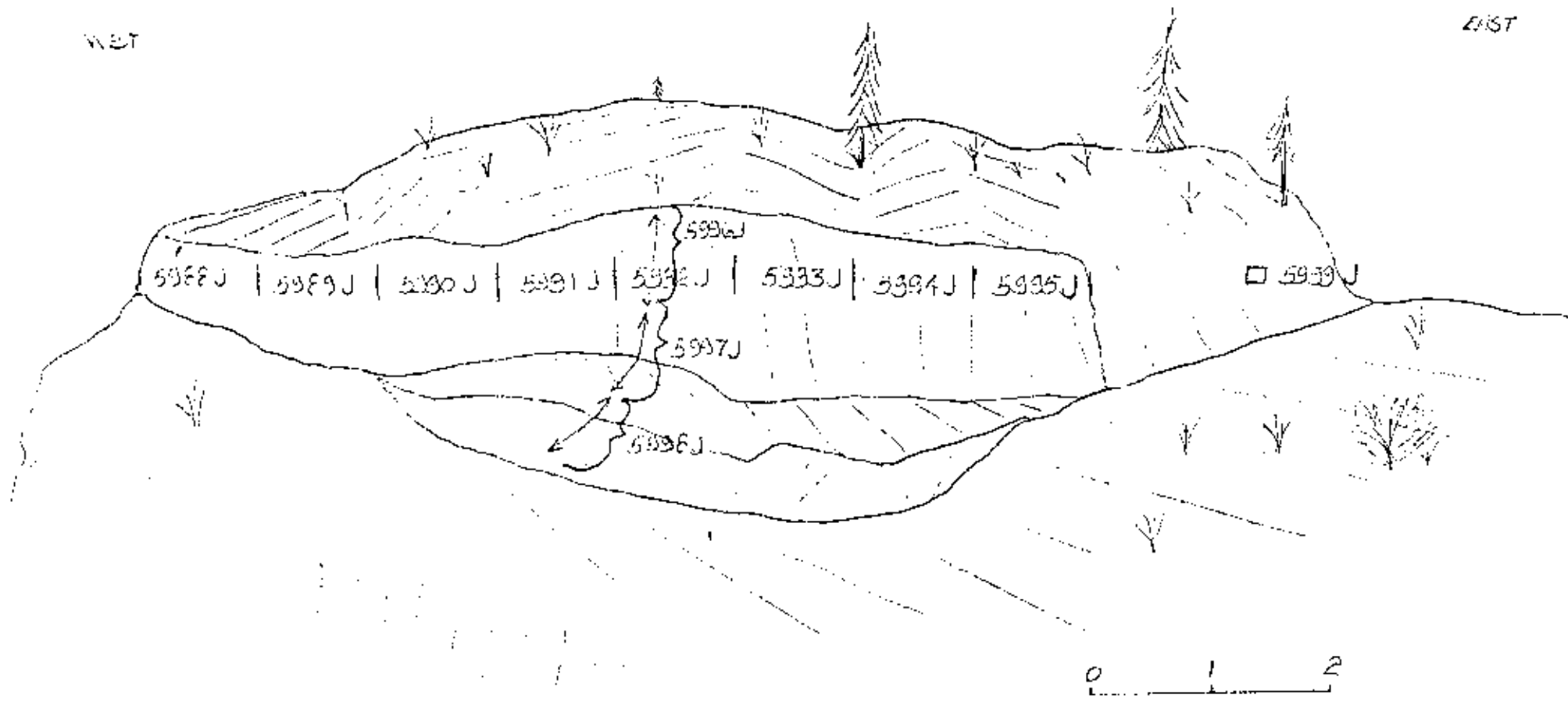


PIT # 2
FIGURE 3

Beidinger July 28/78

WEST

EAST



PIT # 5 PEGMATITE OUTCROP

FIGURE 4

Brigley July 28/78

APPENDIX 1
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Brian B. Hughes of the City of Vancouver, Province of British Columbia, do certify that:

1. I have been employed as a geologist by Noranda Exploration Company, Limited since April 1976.
2. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology (1974)
3. I am a member of the Canadian Institute of Mining and Metallurgy.

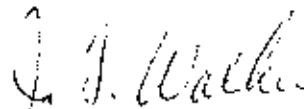
Brian B. Hughes July 28/78

Brian B. Hughes
Geologist
Noranda Exploration Company, Limited
(No Personal Liability)

STATEMENT OF QUALIFICATIONS

I, James T. Walker of the City of Vancouver, Province of British Columbia do certify that:

1. I have been an employee of Noranda Exploration Company, Limited since May, 1958.
2. I have held the position of Geophysicist for Noranda Exploration Company, Limited, British Columbia since June, 1965.
3. I am a member of the Canadian Institute of Mining and Metallurgy.
4. I am a member of the Canadian Exploration Geophysical Society.
5. I am a member of the British Columbia Geophysical Society.



J.T. Walker
Geophysicist
Noranda Exploration Company, Limited

APPENDIX II
ASSAY CERTIFICATES

To: NORANDA EXPLORATION CO.,
201 - 156 Victoria St.,
Kamloops, B.C. V2C 1Z7



File No. 14262
Date: October 17, 1977
Samples: Chip
Project # 58

ATTN: L. Reinertson

Certificate of
ASSAY of
LORING LABORATORIES LTD.

Page # 2

SAMPLE No.	Chemical PPM H303
"Chip Samples"	
M-8776	79.3
M-8777	78.2
M-8778	919.0
M-8779	946.0
M-8780	243.0
M-8781	1789.
M-8782	48.0
M-8783	28.5
M-8784	67.0
M-8785	97.0
J-6476	77.2
J-6477	61.6
J-6479	72.2

I Herby Certify THAT THE ABOVE RESULTS ARE THOSE
ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Reprints Retained until 2010
Pulps Retained one month
unless special arrangements
made in advance

L. Reinertson

To: NORANDA EXPLORATION CO., LTD.,
 201 - 156 Victoria St.,
 Nanaimo, B.C. V2C 1Z7



File No: 14313
 Date: October 26, 1977
 Samples: Chip

ATTN: L. Reinertson

Certificate of
 ASSAY of
 LORING LABORATORIES LTD.

SAMPLE No.	Chemical PPM U308	Chemical % U308
<u>"Chip Samples"</u>		
6401-J	41.3	.0041
6402-J	38.2	.004
6403-J	289.0	.029
6404-J	362.0	.036
6405-J	20.8	.002
6406-J	559.0	.056
6407-J	258.0	.026
6426-J	334.0	.033
6427-J	92.8	.009
6451-J	16.6	.002
6452-J	24.7	.002
6480-J	2920.0	.292
6481-J	105.0	.010

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Results returned one month.
 Delayed one month
 unless specified otherwise
 in the order form.

L. Reinertson

To: NORANDA EXPLORATION CO.,
 291 - 156 Victoria St.,
 Kamloops, B.C. V2C 1Z7
 ATTN: I. Reinertson
 cc: Dr. Heim



File No. 14367
 Date November 4, 1977
 Samples Chips & Sand
 Property # 66

CERTIFICATE OF
 ASSAY

NOV 29 1977

LORING LABORATORIES LTD.

Page # 1

SAMPLE No.	PIH U308
<u>"Chips & Sand"</u>	
6408 J	22.4
6409 J	70.1
6410 J	70.1
6411 J	726.
6412 J	359.
6413 J	67.3
6414 J	25.2
6415 J	57.3
6416 J	293.
6417 J	17.2
6418 J	117.
6420 J	34.4
6421 J	37.3
6422 J	18.1
6423 J	35.7
6424 J	45.5
6425 J	642.
6428 J	17.0
6429 J	81.2
6430 J	50.0
6431 J	41.1
6432 J	24.6
6433 J	131.
6434 J	8.8
6435 J	1453.
6436 J	113.
6437 J	66.7
6438 J	100.
6439 J	131.
	86.6

I Herely Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Reports prepared and printed
 by LORING LABORATORIES LTD.
 Kamloops, B.C. V2C 1Z7
 Canada

William J. ...

TO: NORANDA EXPLORATION CO.,
 201 - 156 Victoria St.,
 Nanloops, B.C. V2C 1Z7
 ATTN: L. Reinertson
 cc: Dr. Heim



File No. 14367
 Date November 4, 1977
 Samples Chips & Sand
 Property # 44

Certificate of
 ASSAY OF
 LORING LABORATORIES LTD.

Page # 2

SAMPLE No.	PPM U308
6440 J	1600.
6441 J	168.
6442 J	444.
6443 J	93.3
6233 J	276.
6264 J	101.
6235 J	24.9
6236 J	101.
6287 J	285.
6238 J	220.
6453 J	339.
6454 J	79.3
6455 J	47.9
6456 J	729.
6457 J	758.
6458 J	21.8
6459 J	23.3
6460 J	18.6
6461 J	121.
6462 J	674.
6463 J	392.
6463 J	40.3
6489 J	22.4
6492 J	112.
6493 J	82.0
6434 J	25.6
6485 J	15.8
6486 J	3151.
6487 J	71.7

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HEREBY DESCRIBED SAMPLES

William J. ...

Form 1. Revised 1977
 Loring Laboratories Ltd.
 Nanloops, B.C. V2C 1Z7
 Canada

To: NORANDA EXPLORATION COMPANY LTD.,

O. Box 2380,

Vancouver, B.C. V6B 3T5

ATTN: Dr. Heim

cc: L. Reinertson



File No. 15232

Date June 1, 1978

Samples Chips

Property # 44

Certificate of
ASSAY of
LORING LABORATORIES LTD.

SAMPLE No.	Chemical % U308
<u>"Chip Samples"</u>	
5951-J	.062
5952-J	.003
5953-J	.006
5954-J	.003
5955-J	.003
5956-J	.003
5957-J	.001
5958-J	.001
5959-J	.005
5960-J	.001
5961-J	.002
5962-J	.413 ✓
5963-J	.009
5964-J	.005

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Repeats Retained one month.

Duplicates Retained one month
unless specific arrangements
made in advance.

John McFoad

To: NORANDA EXPLORATION COMPANY LTD.,
 P.O. Box 2380,
 Vancouver, B.C. V6B 3T5
 ATTN: Dr. Heim
 cc: L. Reinertson



File No. 15251
 Date June 6, 1978
 Samples Chip

Certificate of
 ASSAY OF
 LORING LABORATORIES LTD.

Page # 1

SAMPLE No.	OZ./TON GOLD	OZ./TON SILVER	Chemical % U3O8	% Cu	% NoS2
<u>"Chip Samples"</u>					
5965-J	-	-	.145	-	-
5966-J	-	-	.068	-	-
5967-J	-	-	.023	-	-
5968-J	-	-	.028	-	-
5969-J	-	-	.041	-	-
5970-J	-	-	.008	-	-
5971-J	-	-	.014	-	-
5972-J	-	-	.011	-	-
5973-J	-	-	.011	-	-
5974-J	-	-	.018	-	-
5975-J	-	-	.020	-	-
5976-J	-	-	.042	-	-
5977-J	-	-	.019	-	-
5978-J	.005	.10	.022	Trace	.002
5979-J	.005	.18	.004	.01	.002
5980-J	-	-	.003	-	-
5981-J	-	-	.004	-	-
5982-J	-	-	.007	-	-
5983-J	.005	.04	.002	.01	.002

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Rejects Retained one month.
 Pulps Retained one month
 unless specific arrangements
 made in advance.

L. Heim
 Licensed Assayer of British Columbia

To: NORANDA EXPLORATION COMPANY LTD.,
 P.O. Box 2380,
 Vancouver, B.C. V6B 3T1
 ATTN: Dr. Heim
 cc: L. Reinertson



File No. 15251
 Date June 6, 1978
 Samples Chip

Certificate of
 ASSAY OF
 LORING LABORATORIES LTD.

Page # 2

SAMPLE No.	OZ./TON GOLD	OZ./TON SILVER	Chemical % U308	% Cu	% MoS2
5984-J	.005	Trace	.002	Trace	.003
5985-J	Trace	Trace	.012	Trace	.003
5986-J	Trace	.04	.002	.01	.004
5987-J	Trace	.02	.003	.005	.006

I Herby Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HERFIN DESCRIBED SAMPLES

Rejects Retained one month.
 Pulp Retained one month
 unless specific arrangements
 made in advance.

C. M. Jones

LORING LABORATORIES LTD.

To: NORANDA EXPLORATION COMPANY LTD.,
 P.O. Box 2380,
 Vancouver, B.C. V6B 3T5
 ATTN: Dr. Heim
 c/o: L. Reinert on



File No. 15266
 Date June 8, 1978
 Samples Chip
 Property # 44

Certificate of
 ASSAY of
 LORING LABORATORIES LTD.

SAMPLE No.	Chemical % U308
<u>"Chip Samples"</u>	
5988-J	.007
5989-J	.005
5990-J	.025
5991-J	.047
5992-J	.021
5993-J	.029
5994-J	.043 ✓
5995-J	.018
5996-J	.010
5997-J	.006
5998-J	.010
5999-J	.007

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Rejects Retained one month.

Refusals Retained one month
 unless special arrangements
 made in advance.

L. M. J. J. J.

TO: NORANDA EXPLORATION COMPANY LTD.,
 P.O. Box 2380,
 Vancouver, B.C. V6B 3T5
 ATTN: Dr. Heim
 cc: L. Reinertson



File No. 15285
 Date June 13, 1978
 Samples Chip

Certificate of
 ASSAY of
 LORING LABORATORIES LTD.

SAMPLE No.	Chemical % U308	Chemical PPM U308
<u>"Chip Samples"</u>		
6000 J	.006	5.7
5926 J	.005	4.6
5927 J	.004	4.0
<u>"Chip Dust"</u>		
Pit-3-1	.051	51.1
Pit-3-2	.046	46.3

I Herby Certify THAT THE ABOVE RESULTS ARE THOSE
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES

Repts Retained one month.
 Plus Retained one month
 unless specific arrangements
 made in advance.

L. M. L. Jones
 LORING LABORATORIES LTD.

APPENDIX III

SAMPLE LOCATIONS AND DESCRIPTIONS

APPENDIX III

Sample No.	Sample Description	Sample Interval	Pegmatite Thickness	TV-1 cpm T.C.	Assay %U ₃ O ₈
<u>Pit #1</u>					
Horizontal Section					
5951J	Along Strike of Pegmatite	1m	12cm	25,000	0.062
5952J	" " "	1m	15cm	4,000	0.003
5953J	" " "	1m	30cm	6,000	0.006
5954J	" " "	1m	40cm	7,000	0.003
5955J	" " "	1m	20cm	7,000	0.003
5956J	" " "	1m	8cm	6,000	0.003
5957J	" " "	1m	20cm	6,000	0.001
Vertical Section					
5958J	Sample across hanging wall: fine grained quartz biotite, feldspar gneiss.	30cm		3,000	0.001 0
5959J	Sample across pegmatite at sample interval 5954J.	34cm		7,500	0.005
5960J	Sample across foot wall section of fine grained quartz biotite feldspar gneiss, minor pyrite and pyrrhotite.	35cm		4,000	0.001
Second Phase Horizontal Section					
5980J	Along Strike of Pegmatite roughly equivalent to pre-blast sample 5951J	1m	40cm	17,000	0.003
5981J	Along Strike of Pegmatite	1m	25cm	10,000	0.004
5982J	Along Strike of Pegmatite	1m	30cm	20,000	0.007
<u>Pit #2</u>					
Horizontal Section					
5974J	Along Strike of Pegmatite	1m	50cm	20,000	0.018
5975J	" " "	1m	40cm	35,000	0.020
5976J	" " "	1m	30cm	30,000	0.042
5977J	" " "	1m	20cm	30,000	0.019
Vertical Section (a)					
5978J	Sample across pegmatite at 5975 & 5976J contact	40cm		30,000	0.022
5979J	Footwall sample of fine grained quartz biotite gneiss	50cm		10,000	0.004
5983J	Second footwall sample of fine grained quartz biotite gneiss, minor pyrite and chalcopyrite	30cm		20,000	0.002

Sample No.	Sample Description	Sample Interval	Pegmatite Thickness	TV-1 cpm T.C.	Assay %U ₃ O ₈
5984J	Third footwall sample, gneiss.	40cm		10,000	0.002
	Vertical Section (b)				
5985J	Vertical sample across pegmatite through 5983J.	40cm		25,000	0.012
5986J	Footwall gneiss, minor pyrite.	60cm		11,000	0.002
5987J	Second footwall gneiss sample.	30cm		8,000	0.003
	<u>Pit #3</u>				
	Vertical Section Before Blasting				
5968J	Footwall to highly radioactive area. Pegmatite	1m		20,000	0.028
5969J	Highly radioactive area of Pegmatite	1m		>100,000	0.041
5970J	Hanging wall to highly radioactive area Pegmatite	1m		30,000	0.008
5971J	3 meter to east along strike of pegmatite	10cm		>100,000	0.014
	Horizontal Sample line in Pit #3 West to East				
5988J	Coarse grained Pegmatite	1m	>10m	10,000	0.007
5989J	" " "	1m	>10m	8,000	0.005
5990J	" " "	1m	>10m	70,000	0.025
5991J	" " "	1m	>10m	>100,000	0.047
5992J	" " "	1m	>10m	>100,000	0.021
5993J	" " "	1m	>10m	>100,000	0.029
5994J	" " "	1m	>10m	80,000	0.043
5995J	" " "	1m	>10m	30,000	0.008
	Vertical Section through Pit #3				
5996J	Hanging wall pegmatite to highly radioactive area	1m		25,000	0.010
5997J	Highly radioactive area of Pegmatite; as sample 5992J	1m		90,000	0.006
5998J	Lowest section of Pegmatite exposed in Pit	1m		60,000	0.019

Sample No.	Sample Description	Sample Interval	Pegmatite Thickness	TV-1 cpm T.C.	Assay %U ₃ O ₈
Pit 3-1	Drill cutting from blast hole approx. through 5990J	0.6		70,000	0.051
Pit 3-2	Drill cutting from blast hole approx. through 5991J	0.6		70,000	0.046
	Follow up on sample #6486J located at grid co-ordinates 100+50E & 120+25N				
5961J	Hanging wall gneiss	40cm		2,500	0.002
5962J	Pegmatite with biotite clots same location as #6486J	8cm	8cm	>100,000	0.413
5963J	Footwall gneiss	40cm		3,000	0.009
5964J	On corner of road north of grid. See Drawing 4	20cm	>1.5m	20,000	0.005
5965J	Pegmatite, south of grid See Drawing 4	10cmx 4cm	?	25,000	0.145
5966J	" " " " "	10cm		60,000	0.068
5967J	" " " " " 10cm up cliff from 5966J	10cm		35,000	0.023
5999J	2 meters east of Pit #3 on strike with radioactive zone See Figure 4	10cm		22,000	0.007
	Vertical Sample Section across large Pegmatite face adjacent to access road to Columbia River delta south of Cranberry Ridge. See Drawing 4				
6000J	Upper most sample of Pegmatite	1m		30,000	0.006
5926J	Middle sample	1m		50,000	0.005
5927J	Lower sample	1m		20,000	0.006
5972J	50 meter to east of Pit #3 See Drawing 4	0.7		70,000	0.011
5973J	" " " " "	0.5		25,000	0.011

APPENDIX IV
COST STATEMENTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST P. /

PROJECT Cajac Option - Cranberry Property

DATE July 1978

TYPE OF REPORT Geology and Prospecting

a) Wages:

No. of Days 210

Rate per Day \$ 80.8646

Dates: from Oct. 11/77 to June 30, 1978

Total Wages 210 x \$ 80.8646 16,981.57

b) Food and Accomodation:

No of days 210

Rate per day \$ 15.3635

Dates: from Oct. 11/77 to June 30, 1978

Total Cost 210 x \$ 15.3635 3,226.34

c) Transportation:

No of days 210

Rate per day \$ 20.8890

Dates: from Oct. 11/77 to June 30, 1978

Total Cost 210 x \$ 20.8890 4,386.69

d) Instrument Rental:

Type of Instrument TV 1

No of days 6

Rate per day \$ 5

Dates: from Oct. 11/77 to June 30, 1978

Total Cost 6 x \$ 5.00 30.00

Type of Instrument

No of days

Rate per day \$

Dates: from to

Total Cost x \$

f) Analysis 2,259.15
 (See attached schedule)

g) Cost of preparation of Report

Author	5 @ 80.8646	404.32	
Drafting	10 @ 135.00	1,350.00	
Typing	5 @ 100.00	500.00	2,254.32

h) Other:

Field & Camp Supplies	210 @ 8.2587	1,734.33	
Line Cutting: Scope Exploration Services	51Km @ 128.0427	6,350.18	
Supervision R.C. Heim P.Eng., PhD. and G.E. Dirom P. Eng.	24 days @ 180	4,320.00	

12,404.51

Total Cost 41,542.58

Division of Costs: Cajac Beta Group 20,771.29
 Cajac Charlie Group 20,771.29
41,542.58

e) Unit costs for Line Cutting

No of days			
No of units	51 Km		
Unit costs	128.0427 / Km.		
Total Cost	51 Km x \$ 128.0427	6,350.18	

Unit Costs for Employee days

of Days: 254

Dates from: Oct. 11/77 to June 30, 1978

No. of Units 254

Unit Costs: 138.5527

Total Cost 35,192.40

41,542.58

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT Cajac Option - Cranberry Pty.
TYPE OF REPORT Airborne Geophysics

DATE July 1978

a) Wages:

No. of Days 20

Rate per Day \$ 116.41

Dates: from 26 Sept. 77 to 31 Dec. 1977

Total Wages 20 x \$ 116.41 2,328.20

b) Food and Accomodation:

No of days

Rate per day \$

Dates: from to

Total Cost x \$

c) Transportation:

No of days 20

Rate per day \$ 112.61

Dates: from 26 Sept. 77 to 31 Dec. 1977

Total Cost 20 x \$ 112.61 2,252.20

d) Instrument Rental:

Type of Instrument Airborne System

No of days 20

Rate per day \$ 38.50

Dates: from 26 Sept. 77 to 31 Dec. 1977

Total Cost 20 x \$ 38.50 770.00

XXXXXXXXXXXXXXXXXXXX Patent Royalty
XXXXXXXXXXXXXXXXXXXX

No of XXXXX 290 Km

Rate per day \$,41706

Dates: from to

Total Cost x \$ 120.95

f) Analysis
(See attached schedule)

g) Cost of preparation of Report

Author	2 @ 116.41	232.82	
Drafting	3 @ 135.00	405.00	
Typing	3 @ 100.00	300.00	937.82

h) Other: Supervision

R.C. Heim, P.Eng., PhD,	G.E. Dirom		
3 @ 180.00	540.00		

540.00

Total Cost

6,949.17

e) Unit costs for Airborne Survey

No of days	20	
No of units	290 Km	
Unit costs	23.9627 /Km.	

Total Cost	\$23.9627 X 290 Km.	
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\$6,949.17

NORANDA EXPLORATION COMPANY, LIMITED
(WESTERN DIVISION)

July 1978

DETAILS OF ANALYSES COSTS

LORING LABORATORIES LTD. - CALGARY

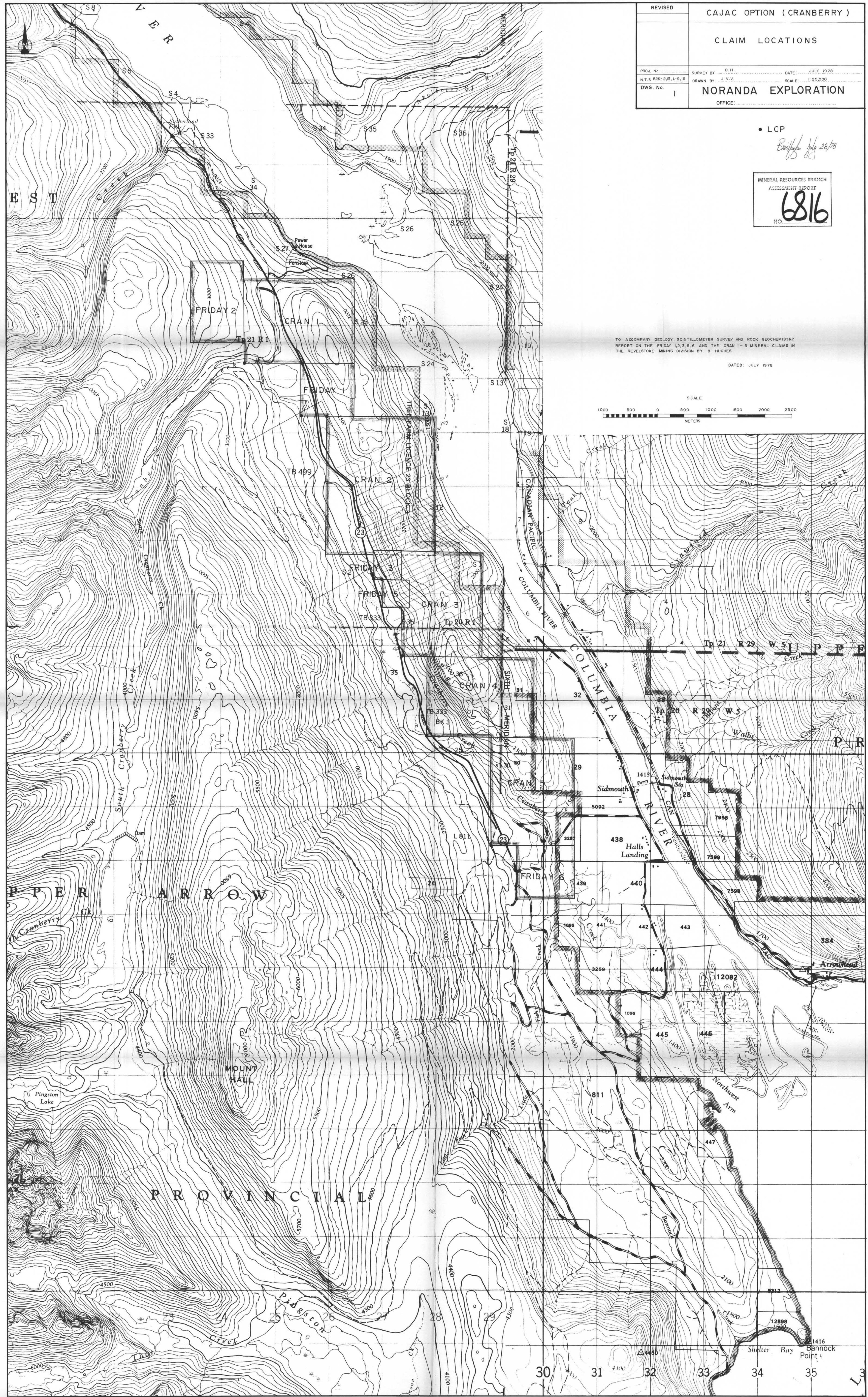
PROJECT: Cajac Option - Cranberry - Property

<u>ELEMENT</u>	<u>NO. OF DETERMINATIONS</u>	<u>COST PER DETERMINATION</u>	<u>TOTAL</u>
U ₃ O ₈	161 Chem.	\$ 11.00	1,771.00
ThO ₂	10 Chem.	17.00	170.00
U ₃ O ₈	10 Radiometric Equi	7.00	70.00
ThO ₂	10 Radiometric Equi	7.00	70.00
Hu & Ag	7	8.00	56.00
Cu	7	4.50	31.50
Mo	7	7.00	49.00

Miscellaneous lab services

41.65

2,259.15



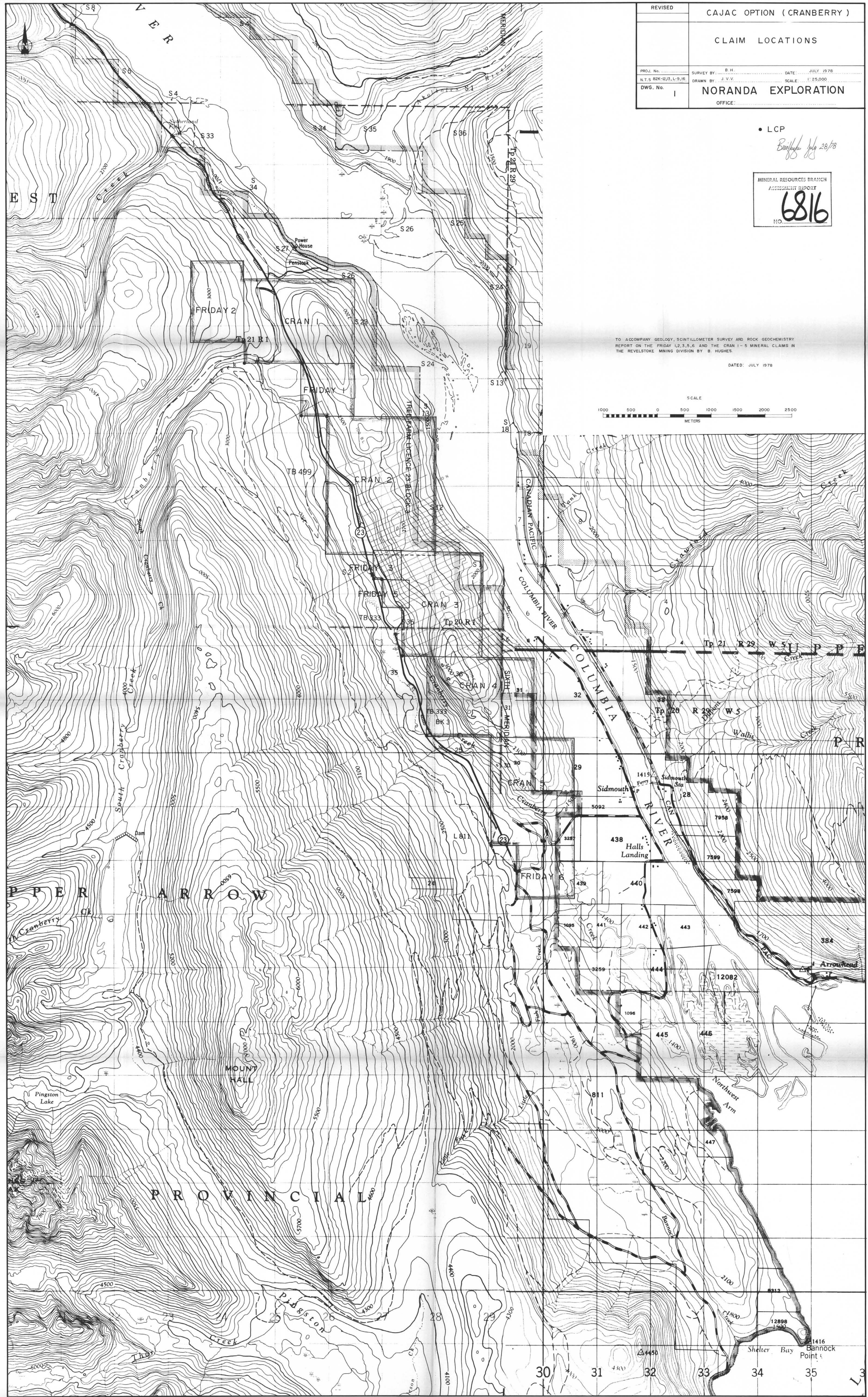
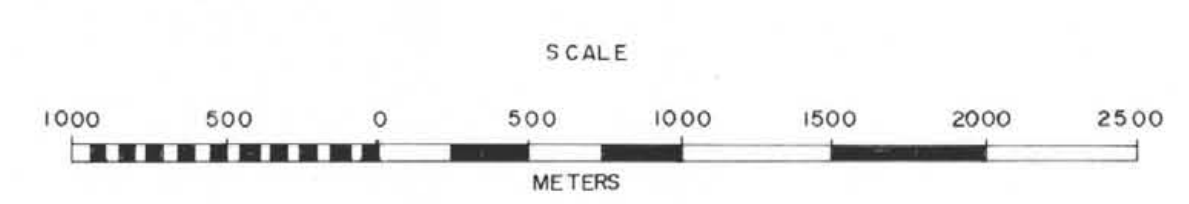
REVISED	CAJAC OPTION (CRANBERRY)	
	CLAIM LOCATIONS	
PROJ. No. _____	SURVEY BY: B.H.	DATE: JULY 1978
N.T.S. 82K-12,3, L-9,16	DRAWN BY: J.V.V.	SCALE: 1:25,000
DWG. No. 1	NORANDA EXPLORATION	
	OFFICE: _____	

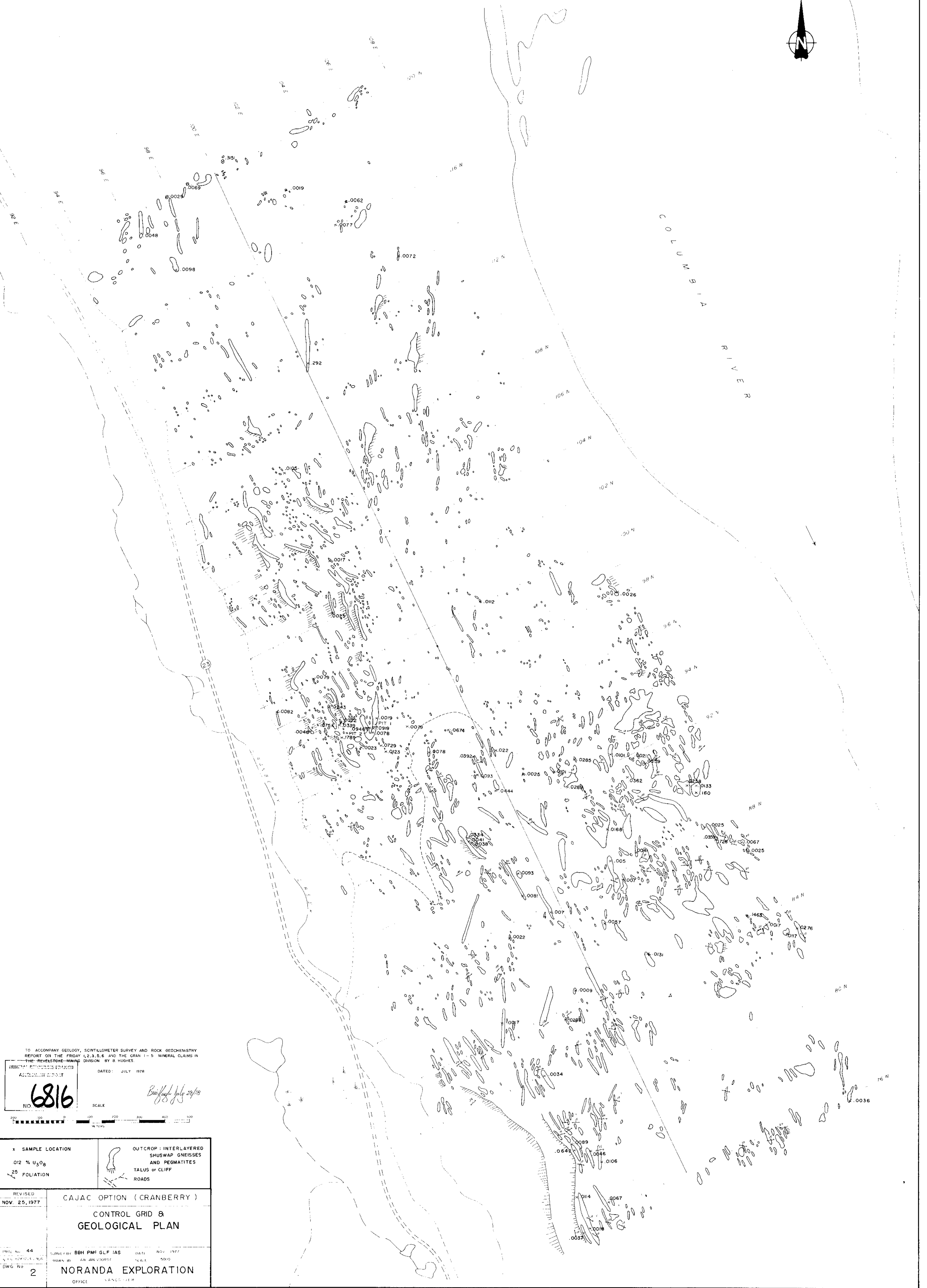
• LCP
Briefing July 28/78

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
6816
 NO.

TO ACCOMPANY GEOLOGY, SCINTILLOMETER SURVEY AND ROCK GEOCHEMISTRY REPORT ON THE FRIDAY 1,2,3,5,6 AND THE CRAN 1-5 MINERAL CLAIMS IN THE REVELSTOCK MINING DIVISION BY B. HUGHES.

DATED: JULY 1978





TO ACCOMPANY GEOLOGY, SCINTILLOMETER SURVEY AND ROCK GEOCHEMISTRY REPORT ON THE FRIDAY 1,2,3,5,6 AND THE GRAN 1-5 MINERAL CLAIMS IN THE REVELSTOCK-MINING DIVISION BY B. HUGHES.

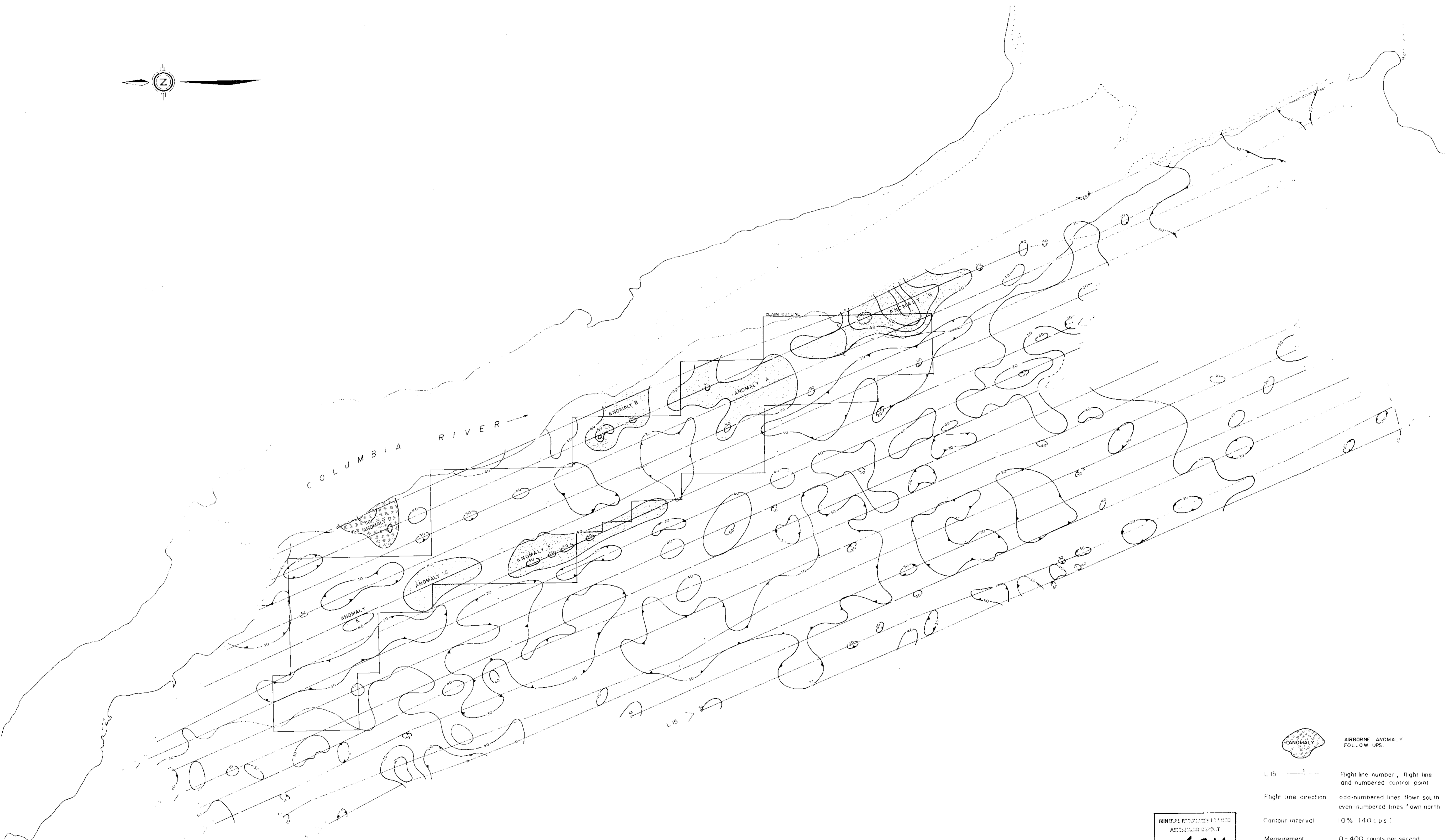
LABORATORY REPORT NO. 6816 DATED: JULY 1978

NO. 6816 SCALE 1:5000

x SAMPLE LOCATION
0.12 % U₃O₈
25 FOLIATION
OUTCROP: INTERLAYERED SHUSWAP GNEISSES AND PEGMATITES
TALUS or CLIFF
ROADS

REVISED NOV. 25, 1977
CAJAC OPTION (CRANBERRY)
CONTROL GRID & GEOLOGICAL PLAN

PROJ. NO. 44
SUBV. BY: BBH PMC GLF IAS
DRAWN BY: AN JEN COURSE
DWG. NO. 2
NORANDA EXPLORATION
OFFICE: VANCOUVER



AIRBORNE ANOMALY FOLLOW UPS

- L 15 — Flight line number, flight line and numbered control point
- Flight line direction — odd-numbered lines flown south even-numbered lines flown north
- Contour interval — 10% (40 cps)
- Measurement — 0-400 counts per second

Boyle July 29/70

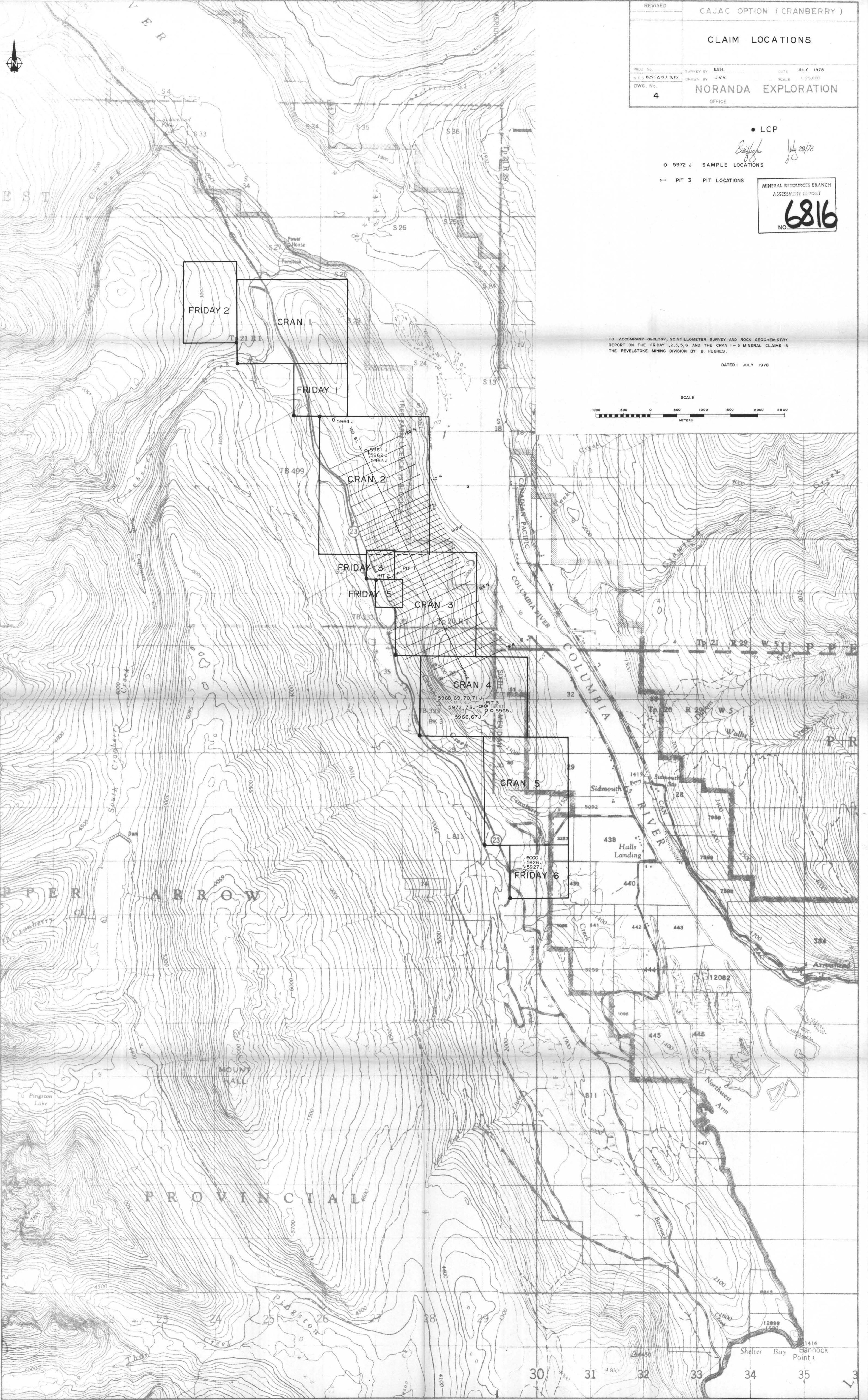
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
6816

TO ACCOMPANY AIRBORNE RADIOMETRIC SURVEY REPORT
BY J. T. WALKER, GEOPHYSICIST ON THE FRIDAY 1, 2, 3,
5, 6 AND THE CHAN 1-5 MINERAL CLAIMS AND ADJACENT
AREA LOCATED IN THE REVELSTOCK MINING DIVISION.

DATED: JULY 1970
J.T. Walker July 29, 70

SCALE 1:20000
0 1000M 2000M

REVISED	CRANBERRY CREEK AREA
	AIRBORNE RADIOMETRIC SURVEY
	MEAN TERRAIN CLEARANCE (Helicopter) 60 M
	MEAN FLIGHT LINE SPACING 500M
PROJ No	SURVEY BY J. T. WALKER DATE JULY 1970
N.T.S. 8 1/2" x 11" SCALE 1:20,000	DRAWN BY
DWG No 3	NORANDA EXPLORATION
	OFFICE



REVISED	CAJAC OPTION (CRANBERRY)	
	CLAIM LOCATIONS	
PROJ. No.	SURVEY BY BBH.	DATE JULY 1978
N.T.S. 82K-12,13,14,16	DRAWN BY J.V.V.	SCALE 1:25,000
DWG. No. 4	NORANDA EXPLORATION OFFICE	

• LCP

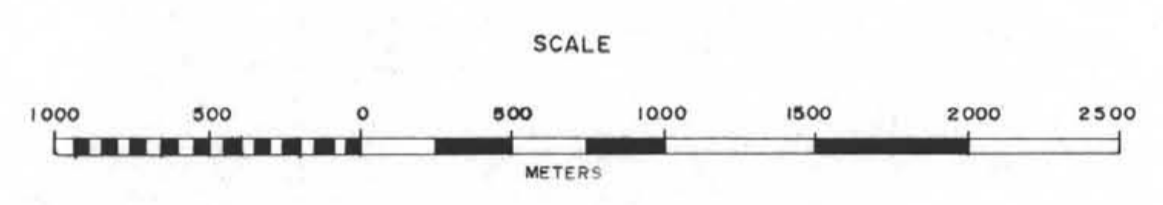
B. Hughes July 28/78

○ 5972 J SAMPLE LOCATIONS
 × PIT 3 PIT LOCATIONS

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
6816
 NO.

TO ACCOMPANY GEOLOGY, SCINTILLOMETER SURVEY AND ROCK GEOCHEMISTRY REPORT ON THE FRIDAY 1,2,3,5,6 AND THE CRAN 1-5 MINERAL CLAIMS IN THE REVELSTOKE MINING DIVISION BY B. HUGHES.

DATED: JULY 1978



VER
 EST
 FRIDAY 2
 CRAN 1
 FRIDAY 1
 CRAN 2
 FRIDAY 3
 FRIDAY 5
 CRAN 3
 CRAN 4
 CRAN 5
 FRIDAY 6
 COLUMBIA RIVER
 Halls Landing
 MOUNT HALL
 BANNOCK POINT
 PROVICIAL
 30 31 32 33 34 35