L.A.Johannsen Baikal Homestead PMB 41 ALICE SPRINGS NT 0872



MR. Chris Smith Principal Registrar Titles Administration Branch DEPT OF MINES AND ENERGY GPO Box 2901 DARWIN NT 0801

(Ref SEL(A) 8493)

Dear Mr Smith

Please find enclosed The First Annual Report for SEL(A) 8493.

I wish to advise that for simplicity, this report was compiled in anticipation of the granting of the SEL Application. As the date for lodgement of the First Annual Reports for the Exploration Licences comprising the SEL Application is nigh, and this has not eventuated, I would with respect seek to have you accept this report in their stead, it being a fair and accurate account of our exploration activities and expenditure on the SEL(A) area.

Yours faithfully

Lindsay Johannsen

21st March, 1994.

M2-3.94

CR 94/429

SEL(A) 8493.

(Incorporating Exploration Licences 7696, 7960, 7971, 7998, 8006, & 8103.)

WEST MOUNT BLEECHMORE PROJECT.

FIRST ANNUAL REPORT to 25th FEB, 1994.

ALCOOTA 1:250 000 Map, Section 70/5

Tenement Holder: L.A.Johannsen,

Baikal Homestead,

PMB 41,

ALICE SPRINGS, N.T.

0872.

(Compiled by L.A.Johannsen, 18 March, 1994.)

SUMMARY.

An exploration program aimed at testing certain areas for economic mineralisation was conducted, with particular emphasis on identifying deep seated ultrabasic intrusive occurrences. The program involves ground magnetic surveys and drilling, and a total of \$43 924 was spent on the SEL area in the anniversary year.

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PROJECT AIMS

The aims of the project are to identify and test intrusive structures of a type which might carry economic mineralisation of, (for example), Diamond, Platinum Group Metals, Gold, Niobium, Rare Earth Elements, or other minerals in economic quantities, such as Apatite, Vermiculite, etc.

LOCALITY

The project area is located to the west of the Mount Bleechmore complex, (ALCOOTA Geological 1:250 000, 70/5), and is accessed via station roads from the Plenty Highway, (Fig 1).

This area was selected because of the possibility of tectonic similarities to the Mud Tank locality, where a deeply sourced magmatic intrusion, (the Mud Tank Carbonatite), outcrops adjacent to a deep seated crustal structure known as the Woolanga Lineament. (Alice Springs 1:250 000 Geological, and Strangways 1:100 000 special geological maps.)

The hypothesis is substantiated to a degree by the identification of some thoroughly lateritised carbonatitic material a similar distance and direction from the Woolanga strike trend as the Mud Tank intrusion, at about 19 km NNW from that feature. (EL 7696, First Annual Report to 11/5/93, Fig. 6.)

HISTORY

Most mineral exploration of similar aim in the area has been concentrated where the Woolanga lineament and its influence are more evident. This can be described approximately as being from where the strike trend would intersect the Plenty Highway, (at about the Alcoota/Bushy Park boundary grid), south south easterly past Woolanga bore and through The Garden station, to the Mordor complex, (a large kimberlite related intrusion in the eastern MacDonnell Ranges).

EXPLORATION PHILOSOPHY

The occurrence of the carbonatite on the northern end of the mapped Woolanga structure has given earlier explorers some encouragement to search for other deep seated magmatic intrusions south of the Plenty Highway, in the zone influenced by the structure.

The identification of the smaller Lexandra carbonatite on EL7696 has encouraged the author to explore the flat country north of the highway, between where the two regions of the Mt. Bleechmore unit outcrop.

EXPLORATION TECHNIQUES

Stream sediment sampling and soil gechemistry have been considered as inappropriate for this project due to a generous cover of quaternary backfill over most of the project area.

Targets were identified using airphoto, geological and magnetic map research, followed up with ground reconnaissance to confirm the geology of features of interest. Ground reconnaissance was also used to search those areas where photo and map detail was poorly defined because of scale or contrast deficiencies.

The target features each had one or more vertical percussion RAB holes drilled, to where the water table started to create problems with the sample return, usually about 21m to 24m.

Selected targets had follow up drilling after this problem had been addressed, though certain problems with the samples themselves were becoming evident.

A diamond drilling program was then commenced to overcome these difficulties, the first hole being drilled before the end of the field season.

MAGNETIC SURVEY METHODS

Magnetic reconnaissance was conducted where surface definition of target features was poor or nonexistant. In such areas where magnetic variation was observed a survey was conducted for orientation purposes and to assist with drillhole siting. Each survey was done using an appropriate level of formality depending on the requirements and conditions of the locality.

The instrument used is a Geometrics G836 Proton Magnetometer, giving a reading of local field intensity rounded to the nearest ten. Several readings were taken at each station to guarantee field stability, and thus reasonable accuracy. No correction for diurnal variation was applied.

WORK COMPLETED

MAGNETIC SURVEYS

GREAT NORTHERN prospect.

A prominent magnetic anomaly located at about Lat 134:13:30 x Long 22:47:30 on the Alcoota 1:250 000 Regional Magnetic Contour Map. It shows as a sharp compact dipole due to one of the north/south flight lines of the survey passing over it near to the point with the greatest values for the high and low elements. Adjacent flight lines are nominaly 1600 meters away, and indicate little in related variation values.

Ground reconnaissance showed that the anomaly is situated in an area of mulga scrub with wide bare laneways running east/west across it. There is no outcrop at the anomaly itself, however some 300m to 500m south of the feature is a broad low outcrop of the Mt. Bleechmore unit with complex magnetic variations.

Because of the thickness of the scrub a control grid was marked out comprising two baselines in adjacent laneways, designated 9000 north and 8600 north. These were tied by a control line at 2500 east across what was estimated to be the approximate center of the anomaly. Traverse line stations were measured at 100 meter intervals along these lines, and magnetic intensity readings were taken at 50 meter intervals along the traverse lines.

From these data a magnetic variation contour map and profiles were drafted, and these were used in siting exploratory drill holes. (Figs. 5, 6, 7, & 8.)

WEBBS FLAT prospect.

A low circular outcrop of iron laterite situated at about Lat. 134:12:45 x Long 22:49:45, on an almost treeless plain. It is associated with a broad magnetic feature on the Alcoota regional contour map.

An informal magnetic survey was conducted over the locality for orientation purposes. (Fig. 9, line data and contour.)

GYPSY prospect.

Located at about Lat 22:50:00 x Long 134:11:40, this feature shows as a broad magnetic high on the regional contour map, and locally as a flat area adjacent to the Muller Ck. It is a hard clay area with scattered laterite residue, and is free of vegetation exept for a little grass.

An informal magnetic survey was conducted over the locality for orientation purposes. (Fig 10, line data with contour.)

BENNETT VALLEY prospect.

A large essentially flat bottomed valley in the south west section of the Mount Bleechmore complex, containing several iron laterite outcrops.

A broad informal mag reconnaissance was conducted through the valley, but no anomalous features were identified. (Fig. 13, station data overlay, and FIG. 14, indicated contour.)

OTTILIE prospect.

An area of laterite outcrop at the boundary of a section of the Strangways unit and an extensive region of quaternary landform.

An informal magnetic survey was carried out for orientation purposes. (Fig. 15, Mag contour, and Fig. 16, line data.) The contour seems to conform to the relevant section of the regional magnetic contour, being on the south east gradient of a prominent regional high about 6 Kms to the north west.

DRILLING PROGRAM

A total of 754 meters was drilled on the SEL area during the anniversary year to explore the nature of the various target features identified during the reconnaissance stage of the project. (See figs. 2, 3, &4, showing geology of northern, central, and southern sections of the SEL area, and location of the target sites.) This was done in three stages, which are detailed as follows:

FIRST PROGRAM, (RAB percussion).

```
Great Northern magnetic anomaly (Figs. 2, 5, & 6.)
                                  21 meters
      NTH 1.
      NTH 2.
                                  21 meters
      NTH 3.
                                  18 meters
      NTH 4.
                                  18 meters
      NTH 5.
                                  15 meters
                          (Total, 93 meters)
Vincent, (Fig. 2.)
       VIN 1.
                                  21 meters
Fenchurch, (Fig. 2.)
      FEN 1.
                                  21 meters
Webbs Flat, (Fig. 2.)
      WFL 1.
                                  24 meters
      WFL 2.
                                  20 meters
Gypsy, (Fig. 3.)
      GYP 1.
                                  16.5 meters
      GYP 2.
                                  12 meters
Central Premier magnetic anomaly, (Figs. 3 & 11.)
      PUB 15 b.
                                 45 meters
Rowell, (Fig. 3.)
      ROW 21.
                                  21 meters
Kilmot, (Fig. 3.)
      KUB 1.
                                  30 meters
Bennet Valley, (Fig. 3.)
      BVW 1.
                                  14 meters
      BVC 1.
                                  24 meters
Andreas, (Fig. 4.)
      AND 1.
                                  34.5 meters
Ottilie, (Fig. 4.)
      OTT 1.
                                  21 meters
```

Total, first program, RAB percussion: 397 meters. 18 Lis

(Common drill section, Fig. 17, page 1; PUB 15b page 2; KUB 1 page 3.)

Problems were encountered with first program because of the very clayey nature of the weathering profile at all of the target areas, particularly below the water table. To overcome this the drill was adapted to use diamond drill rods and a tricone roller bit, improving the sample return and open hole maintenance in the wet clay sections.

SECOND PROGRAM, rotary.

Great Northern magnetic anomaly, (Figs. 2, 5, & 6.) NTH 6. 38 meters

Central Premier magnetic anomaly, (Figs. 3 & 11.)

 PUB 15 c.
 42 meters

 PUB 24.
 52 meters

 PUB 25.
 34.5 meters

 PUB 26.
 51 meters

Southern Star magnetic anomaly, (Figs. 3 & 12.)

SUB 6. 50 meters SUB 7. 39 meters

Total, second program, rotary: 306.5 meters.

(Drillhole sections, Fig. 17, pages 3 to 10.)

[For Central Premier & Southern Star magnetic data, see EL 7696, First Annual Report, 1993/94.]

Following this program my associate and co-operator (Dr. S.K.Dobos, previously of the University of Queensland, now a consultant geologist), made a visit to the project area. During this visit we discussed the problems associated with the samples, particularly those to do with the chemistry of the deeply weathered material recovered from most holes, and the relevance of any analytical data derived from them.

In his comments on the major element data of Sample Run 3, (Exploration Results, interp. and conclusions, Page 14.), he states, "It is most likely that the bulk of these residual materials arise principally from the breakdown of feldspar and biotite, common phases in the Mt. Bleechmore Complex. At this stage, there is little to be gained from further major element analyses of all but the freshest samples from the bottom of drill holes. It would appear here that [chemical]* weathering residues all tend to saprolitic compositions, regardless of initial source rock composition". (* His bracket.)

It was decided that the most appropriate way to overcome any deficiencies in the sampling procedure would be by switching to diamond drilling. This would allow the opportunity to recover deeper less weathered sample material, with the rock textures preserved.

It was also decided to drill the first diamond drill hole at Lexandra, the small carbonatite outcrop. This feature is the only deep seated magmatic intrusion identified in the SEL area so far, and as such could provide us with a control for the weathering profile of this type of unit.

On this occasion it was not successful, for apart from a couple of meters of redish laterite? at the surface, the drill penetrated a unit of extremely weathered vermiculite to where the hole was terminated at 50.5 meters due to the hole walls collapsing. (See LEX 2. drillhole section and core log, Fig. 17, pages 11 and 12.)

THIRD PROGRAM, diamond drill coring.

Lexandra
LEX 2. 50.5 meters

TOTAL DRILLED.......754 meters.

DRILLING EQUIPMENT

First program

The drillrig used was an Ingersol-Rand ECM 350 air track machine, mounted along with an I-R 900cfm compressor on a semi-trailer. It has a boom mounted air hammer and is probably best described as a percussion RAB drill.

Second program

The same machine was used after being converted to rotary, using BQ diamond drill rods and a 75mm tricone roller bit.

Third program

For this part of the project a Jacro series 200 diamond drill was used, with a BQ drill string.

SAMPLES

All RAB samples were collected by three meter intervals, and either retained in full or reduced to about 5 kg. Diamond drill core samples were collected and stored in the usual fashion.

Appropriate samples from each locality were forwarded to either Dr. S.K.Dobos or Analabs Brisbane for analysis. (Details Figs. 18, 19, 20, & 21.) An interpretation of these data have been provided by Dr. Dobos, (pages 14, 15, & 16.).

ENVIRONMENTAL CONSIDERATIONS

No trees were cut to gain access to drill sites, no earthworks of any kind were needed to reach the drill sites, and no preparation of any site prior to drilling was necessary.

In particular, no settling pit was excavated for the diamond drill return water in that part of the program. Instead, two plastic lined 1200 litre rubber walled tanks were set on the ground and simply rolled up when the hole was completed.

All drill holes were backfilled to ground level before vacating the site. Little compaction of the ground occurred when shifting the drillrig due to the mostly hard clay surface of the whole locality, and the comparative lightness of the plant.

No permanent markers such as steel pickets were used, and all flagging and temporary pegs were removed.

All rubbish was carried out, (not buried), and the drilling and camp sites were left free of any litter.

ABORIGINAL CEREMONIAL AND SIGNIFICANT SITES

Following granting of the Exploration Licences comprising the SEL, direct contact was made with the specific Senior Traditional Owners for the exploration area, who shortly after this became the owners of the Alcoota Pastoral Lease.

As a result of this meeting an excursion to the prospective areas with one of their number was conducted, resulting in the target areas being declared as not in conflict with any Aboriginal Site.

(A copy of my letter of reply to a query by Mr. Austin Sweeny of the Central Land Council is included.)

EXPENDITURE

This involved ten field trips to the work area in connection with Aboriginal Site clearance, magnetic surveys and reconnaissance, drilling programs, and a site inspection by the project geologist, Dr. S.K.Dobos. (General work details, Fig. 22.)

Other items include sample handling and preparations, analytical and interpretation costs, plus research and reporting expenses, etc.

Expenditure details are as follows:

DRILLING, Programs 1 and 2, (703 meters @ \$35.00/meter)	\$24,622.50
DRILLING, Diamond core, (50.5 meters @ \$50-00/meter)	\$2,525.00
PERCUSSION RAB DRILL RIG, Mob/demob, (96km @ \$6.00/km)	\$576.00
DIAMOND DRILL RIG, Mob/demob, (530km @ \$2.50/km)	\$1,325.00
TOYOTA LAND CRUISER Field vehicle, (5376km @ \$1.00/km)	\$5,376.00
TIME ENGAGED in exploration activities,	
(other than drilling),(181.5 hours @ \$35.00/hour)	\$6,352.50
PROJECT GEOLOGIST, (Dr. S.K.Dobos), Site visit (costs)	\$1,625.00
ANALYTICAL EXPENSES	\$1,110.00
ANALYTICAL INTERPRETATION COSTS, (SKD)	\$430.00

TOTAL EXPENDITURE \$43,942.00

EXPLORATION RESULTS

INTERPRETATION AND CONCLUSIONS

(By Dr.S.K.Dobos, 6 Pandian Cr. BELBOWRIE, QLD.)

As part of the overall geological strategy for diamond exploration in an area which according to conventional wisdom is non-prospective, it was decided to analyse the bulk rock composition of the most mineralogically or physically unique samples from each of the major drill holes in the area. This was done to establish the compositional range of the rocks and residual materials in the area, and to provide data for the interpretation of the mobility of elements during the weathering process. At the same time any suspected [relatively] unaltered lamproitic or kimberlitic rocks might become obvious, especially if the major element data are combined with trace element data.

Our exploration strategy revolves in part around the fact that any igneous rock now present at or near the surface of the earth, but which originated under depth/pressure conditions within the thermodynamic stability field of diamond, is itself potentially diamondiferous, (especially if the bulk rock composition had a sufficiently high chemical potential of C), or may have picked up diamonds (as xenocrysts) from deep-seated rocks (also within the P/T constraints) through which it passed on its way to the crust.

This model is not nearly so restrictive as the Kimberly- and Argyle-related models, both of which require specific host rocks, but of course does include them. It does, however, require geochemical signatures and/or mineralogical compositions indicative of the required P/T conditions for diamond stability, such as high Na pyroxenes, high Mg and/or high Na \pm Ti garnets, high Mg ilmenites and so on.

With respect to bulk rock analyses, the above apply in terms of separating out the (regional high-grade metamorphic) country rocks from those igneous rocks which have the potential to have been derived from depths exceeding 150km. Carbonatites, kimberlites, lamproites and other ultrapotassic rocks, certain anorthosites, and ultramafic/ultrabasic rocks are all geochemical targets which warrant further mineralogical attention.

With regard to the major elements, the data reflect the range of initial source or "country" rocks modified by different degrees of weathering. At the outset, it should be noted that lateritisation tends to increase Al_2O_3 along with Fe_2O_3 but tends to decrease Na, K, and Ca, along with Si. With this in mind, it is obvious that none of the analyses represent laterites alone, and all of the relatively high alumina samples are clay rich, which agrees well with visual observation of the samples.

If the raw analyses are considered as fresh rock analyses, for the sake of argument, and using the Al_2O_3 value as a discriminant, only sample WFL 1 qualifies as at best a possible lamprophyre, and none as lamproite or kimberlite [since these generally have $Al_2O_3 < 10\%$]. WFL 1 in any case cannot be ultrapotassic, and must comprise a mixture of quartz, kaolinite, iron oxides/oxyhydroxides and minor chlorite. Furthermore the low MgO values of all the samples preclude any as even leucitite, let alone lamproite or kimberlite.

Now in fact all[?] these samples are residual materials after one or more parent rocks. Their analyses, with the possible exception of AND 1 and SUB 6 & 7, are remarkably similar to typical saprolite analyses, yet these materials did not form in a wet tropical environment. The question as to whether residual clay-rich materials derived from lamproite or kimberlite source rocks would have markedly more magnesian and/or potassic analyses in this climate setting remains unanswered. Chemical analyses of weathered materials from the Argyle deposit are not available for comparison.

It is most likely that the bulk of these residual materials arise principally from the breakdown of feldspar and biotite, common phases in the Mount Bleechmore Complex. Opaques and garnet appear to resist weathering better, and appear to be transported away rather than weathered in situ.

At this stage, there is little to be gained from further major element analyses of all but the freshest samples from the bottom of drill holes. It would appear that here [chemically] weathering residues all tend to saprolitic compositions, regardless of initial source rock composition.

There is a further layer of haziness cast on the trace element data. Insofar as the majority of materials analysed are partly or completely altered, the chemical data reflect a range of values, of which some are relatively "mobile" (Sr), through to "immobile" (Zr). Our interpretation of the data accounts for the possibility of selective removal/enrichment of the elements.

PUB 13, AND 1, & OTT 1.

These data are not very "lively" but AND 1 and PUB 13 should receive a closer look in terms of chemical discriminant functions and possible mineralogical analysis of grain seperates.

ROW 1, NTH 6, BVC1, KUB 1, & GYP1.

These are not very "lively" data, despite the elevated La, Ce, Nd, and Ba. Samples NTH 6 and BVC 1 have miserably low values of Y, Nb, Zr, and Sr, with low Ni and Cr. Grain separates of these samples should be examined, and possibly analysed via microprobe.

FEN 1, SUB 1, WFL 1, VIN 1, and NTH 2.

These too are almost dead. FEN 1's grain separates should be examined, but like NTH 6 and BVC 1 above, probably represent nothing more than residual concentration of monazite.

LEX 2.

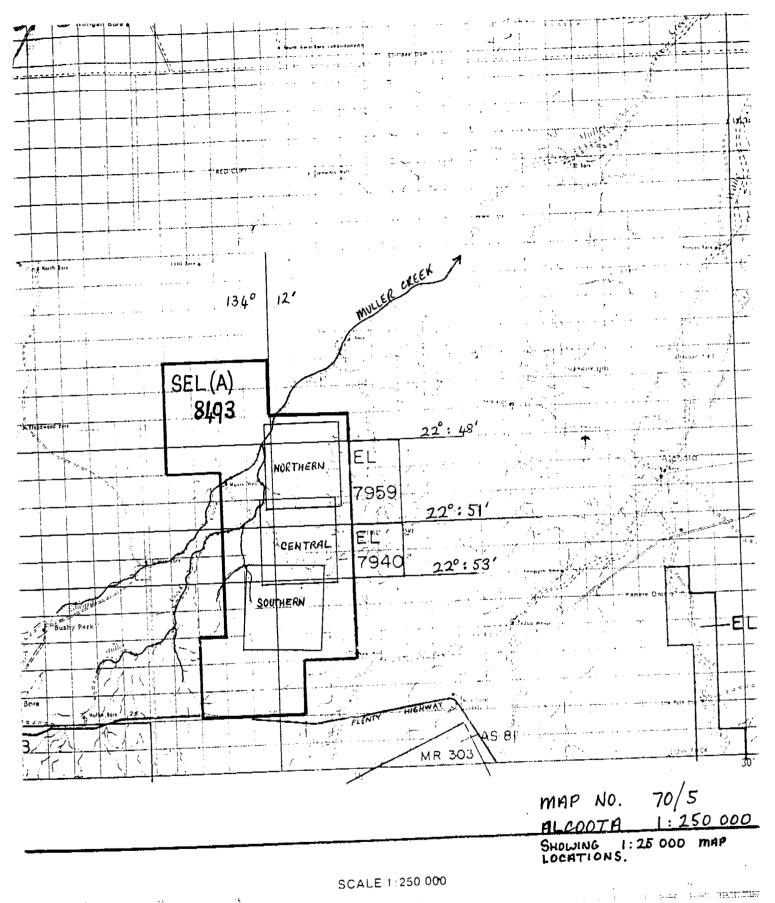
This is intriguing, and in fact looks quite promising. The heavy grains should be separated for examination and perhaps microprobe analysis. In the interim a full blown discriminant analysis of the chemical data may shed further light on the potential of this horizon.

PROPOSED PROGRAM AND EXPENDITURE FOR 1994/95

The exploration program for the current anniversary year will be directed to an assessment by diamond drill of selected features which were drilled by other methods during the previous year, as described in the foregoing report. (These details are mentioned in the information provided with the SEL application.)

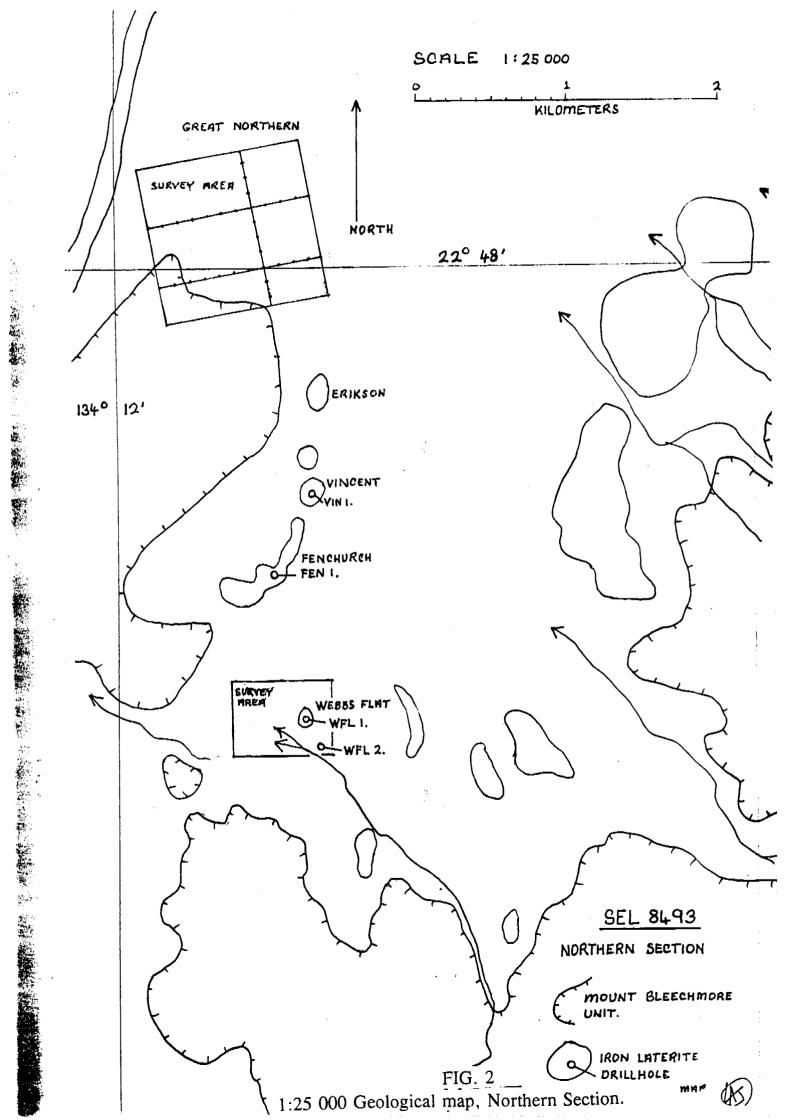
The project estimates are:

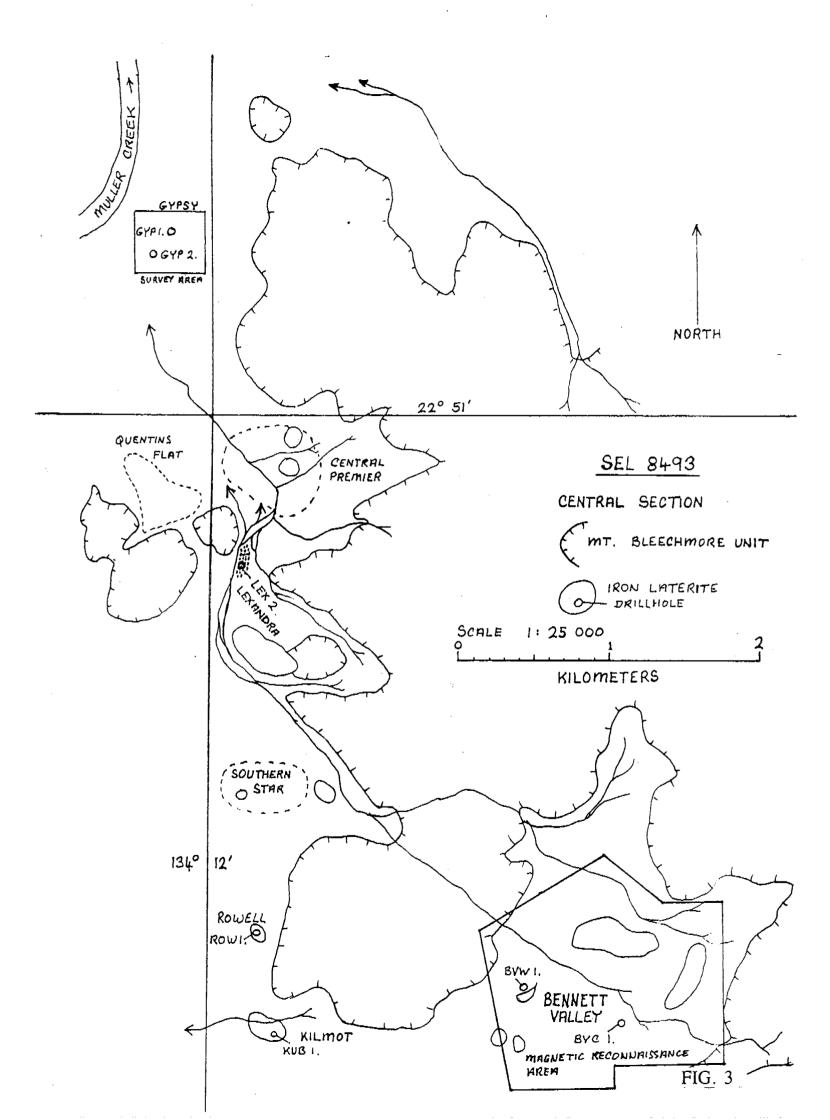
Drilling, (600 meters @ \$45.00/meter)	\$27 000.00
Rig location and set up costs,	\$2 500.00
Sample cutting, preps, and handling charges	\$500.00
Analytical costs	\$500.00
Project geologist, (costs incl. site visit,)	\$3 700.00
Report compilation, library and research costs,	\$600.00
Stationery, correspondence, phone and fax,	\$200.00
Total	.\$35.000.00

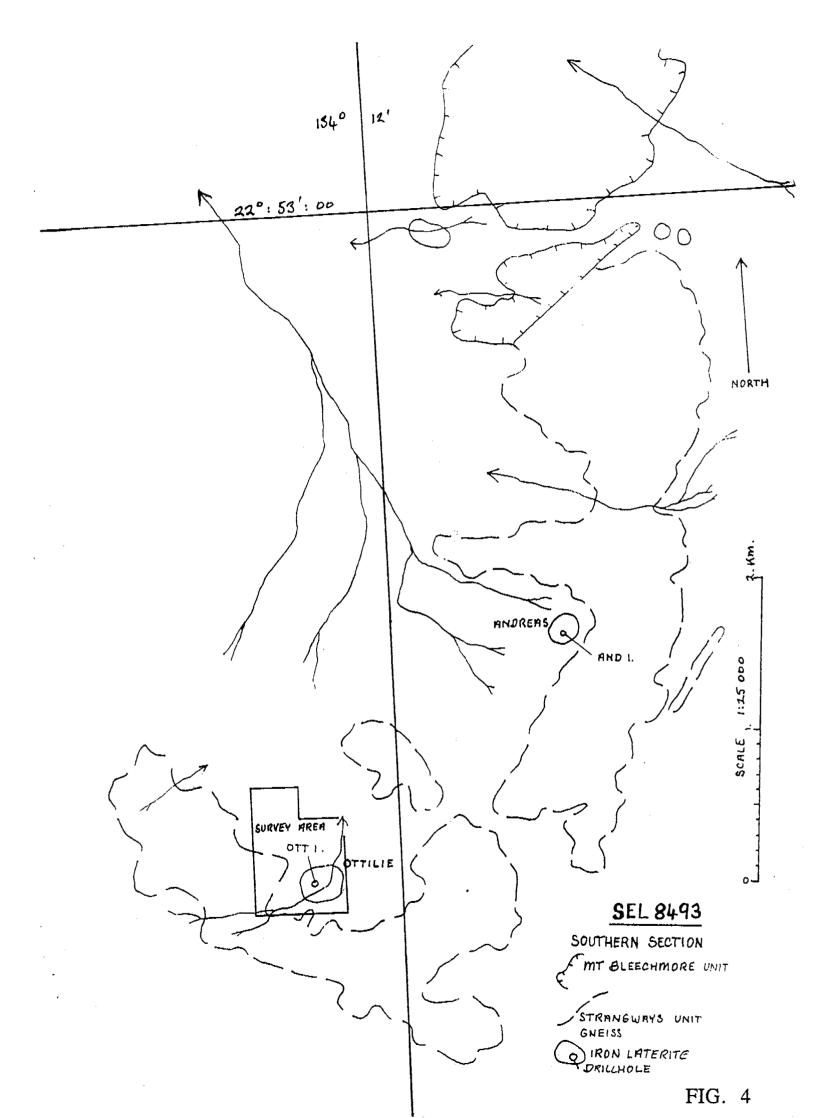


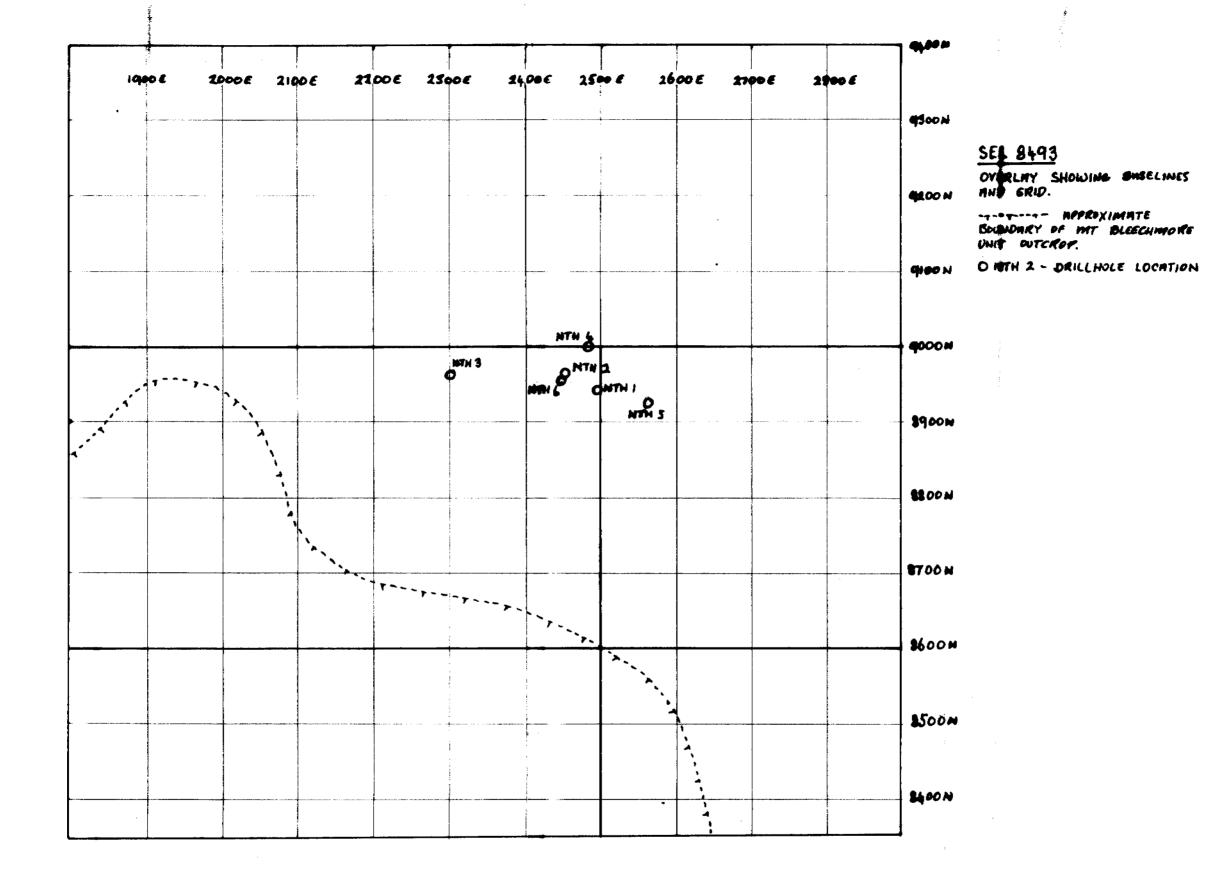
FULL LATITUDE AND LONGITUDE VALUES ARE SHOWN AT THE SHEET COPINERS, WITH EVERY IS, VALUE BEING LABELLED AROUND THE NEATLINE.

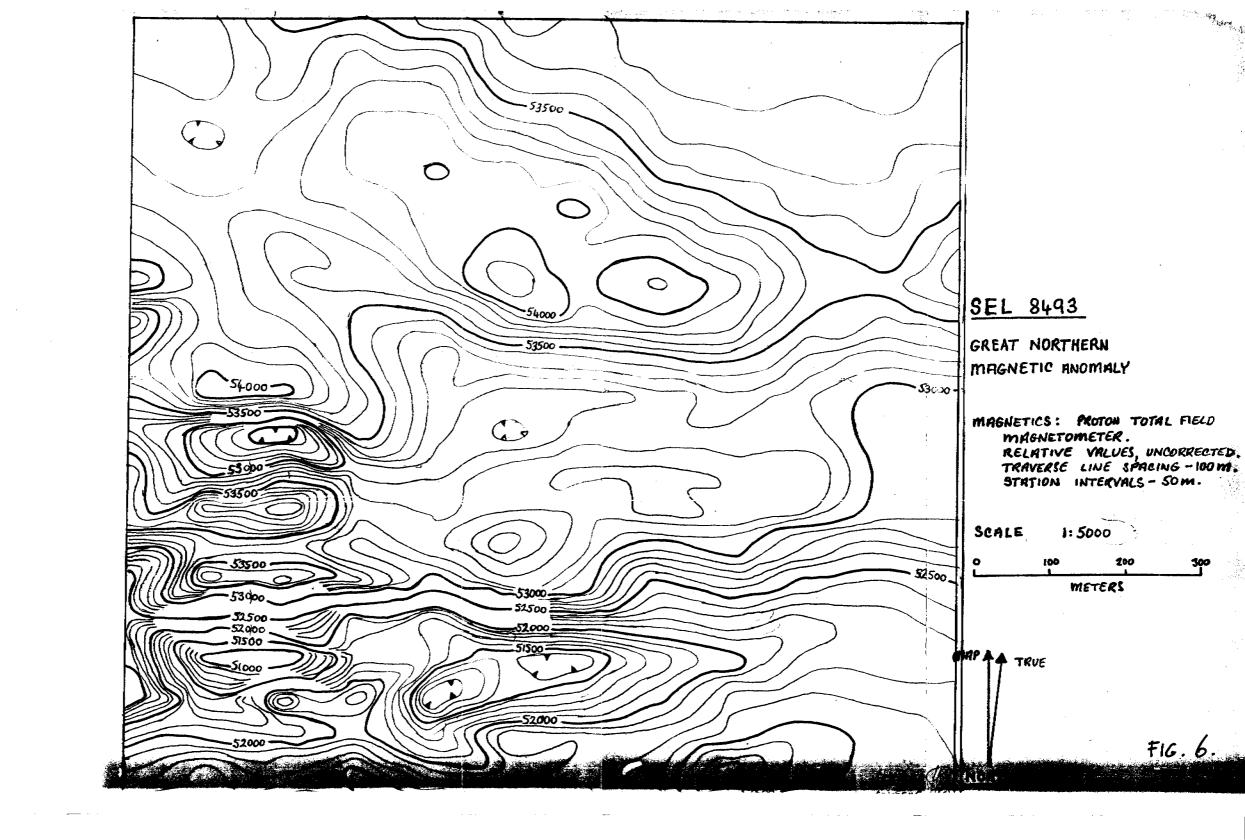
gergate recar is unds. granday biga inal route marker Mallmery Lease nighway: Road bridge ... Exportagon Color (a) gramed: Compact dan : 94 Missing Reserve ęλ ti neras Lease FIG. 1 Business Area 20 Oreoging Claim Prospecting Area la.lway bridge .. ERL Exploration Retention Lease in line; Fence s Wij Beigery Area Extractive Mineral Lease droll aye Sussignmen Area



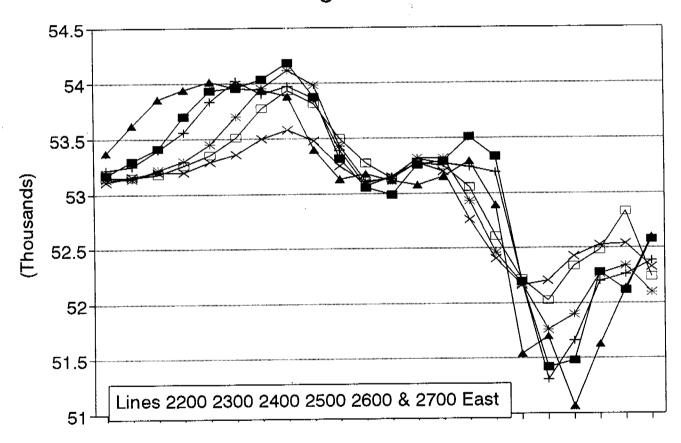








GREAT NORTHERN prospect Magnetic line data



SEL 8493

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54100 53820 53600 53630 53880 54180 53970 5310 53980 53810 53480 53390 53490 N 900 53210 53820 53710 53430 53400 53870 53860 53980 53810 53450 53250 53110 53200 53630 53940 53860 53470 53130 53320 53390 53430 53500 53250 53110 53200 53630 53940 53660 53470 53180 53060 53070 53110 53280 53100 52920 52970 N 890 53230 52730 52330 53550 53120 52990 53150 53140 53140 53150 52890 52920 53630 52910 53210 53090 53080 53260 53310 53320 53280 52970 52870 N 880 53680 53920 54080 53280 53150 53290 53270 53320 53250 53200 52930 52910 52470 53360 53320 53090 53290 53510 53240 52930 53060 52760 52630 52790 N 870 52470 53780 53710 53410 52890 53330 53190 52460 52610 52410 52340 52480 52470 53780 53710 53410 52890 53330 53190 52460 52610 52410 52340 52480 52430 50950 50780 51770 51700 51420 51310 51760 52030 52210 52250 52250 52880 51520 52330 52250 51060 51480 51660 51900 52340 52430 52380 52390 52480 52570 52570 52550 52140 52120 52260 52340 52830 52540 52460 52410 N 840 52480 52510 52660 52480 52600 52580 52390 52100 52240 52330 52470 52480		53940	53770	53540	53700	53940	54030		-	_				
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53630 52910 53210 53090 53080 53260 53310 53320 53280 53280 52970 52870 N 870 53680 53920 54080 53280 53150 53290 53270 53320 53250 53200 52930 52910 52470 53360 53320 53320 53290 53510 53240 52930 53060 52760 52630 52790 N 870 52470 53780 53710 53410 52890 53330 53190 52460 52610 52410 52340 52480 52470 52570 52570 51840 51540 52200 52200 52180 52220 52170 52260 52330 N 860 52430 50950 50780 51770 51700 51420 51310 51760 52030 52210 52250 52250 52880 51520 52330 52250 51060 51480 51660 51900 52340 52430 52480 52390 52880 51920 51860 52020 51630 52280 52280 52200 52270 52480 52530 52480 52390 52200 52470 52270 52550 52140 52120 52260 52340 52830 52540 52460 52410 N 840 52480 52510 52660 52480 52500 52600 52480 52500 52240 52330 52470 52480		(* ¥		52330	53550	53120	52990	53150	53140	53140				N 0000
53680 53920 54080 53280 53150 53290 53270 53320 53250 53200 52930 52910 52470 53360 53320 53090 53290 53510 53240 52930 53060 52760 52630 52790 N 870 52470 53780 53710 53410 52890 53330 53190 52460 52610 52410 52340 52480 52470 53780 53710 53410 52890 53330 53190 52460 52610 52410 52340 52480 52470 53780 53710 53410 52890 53330 53190 52460 52610 52410 52340 52330 N 860 52470 52570 52570 51840 51540 52200 52200 52180 52220 52170 52260 52330 N 860 52430 50950 50780 51770 51700 51420 51310 51760 52030 52210 52250 52250 52880 51520 52330 52250 51060 51480 51660 51900 52340 52430 52380 52360 N 850 51870 51920 51860 52020 51630 52280 52200 52270 52480 52530 52480 52390 52200 52470 52270 52550 52140 52120 52260 52340 52830 52540 52460 52410 N 840 52480 52510 52660 52480 52600 52580 52390 52100 52240 52330 52470 52480				53210	53090	53080	53260	53310	53320	53280	53280			N 8800
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60 m 52570 52570 51840 51540 52200 52200 52180 52220 52170 52260 52330 N 860 52430 50950 50780 51770 51700 51420 51310 51760 52030 52210 52250 52250 52880 51520 52330 52250 51060 51480 51660 51900 52340 52430 52380 52360 N 850 51870 51920 51860 52020 51630 52280 52200 52270 52480 52530 52480 52390 52200 52470 52270 52550 52140 52120 52260 52340 52830 52540 52460 52480 52480 52510 52660 52480 52580 52390 52100 52240 52330 52470 52480	•	1	-		53410		53330	53190	52460	52610	52410			
52430 50950 50780 51770 51700 51420 51310 51760 52030 52210 52250 52250 52250 52880 51520 52330 52250 51060 51480 51660 51900 52340 52430 52380 52380 52360 N 850 51870 51920 51860 52020 51630 52280 52200 52270 52480 52530 52480 52390 52200 52200 52470 52270 52550 52140 52120 52260 52340 52830 52540 52460 52410 N 840 52480 52510 52660 52480 52600 52580 52390 52100 52240 52330 52470 52480		/ W						52200	52180	52220	52170	52260		N 8600
52430 50530 50760 51760 51480 51660 51900 52340 52430 52380 52360 N 850 52880 51520 52330 52250 51060 51480 51660 51900 52340 52480 52530 52480 52390 51870 51920 51860 52020 51630 52280 52200 52270 52480 52530 52480 52390 52200 52270 52480 52530 52460 52410 N 840 52200 52470 52550 52140 52120 52260 52340 52330 52540 52460 52410 N 840 52480 52510 52660 52480 52600 52580 52390 52100 52240 52330 52470 52480								51310	51760	52030	52210	52250	52250	
5280 51520 5230 5220 5700 5710								51660	51900	52340	52430	52380	52360	N 8500
51870 51920 51660 52200 51660 52250 51600 52250 52260 52340 52830 52540 52460 52410 N 840 52200 52470 52270 52550 52140 52120 52260 52340 52330 52470 52480 52480 52510 52660 52480 52600 52580 52390 52100 52240 52330 52470 52480								= :	52270	52480	52530	52480	52390	
52200 52470 52270 52330 52140 52120 52200 52330 52470 52480 52480 52510 52660 52480 52600 52580 52390 52100 52240 52330 52470 52480										52830	52540	52460	52410	N 8400
52480 52510 52660 52460 52600 52500 52500 52500 F 2600 F 2700 F 2800 F 2900								-		52240	52330	52470	52480	
		52480	52510	52000	52460	32000	32300	32000						
		E 1800	E 1900	E 2000	E 2100	E 2200	E 2300	E 2400	E 2500	E 2600	E 2700	E 2800	E 2900	

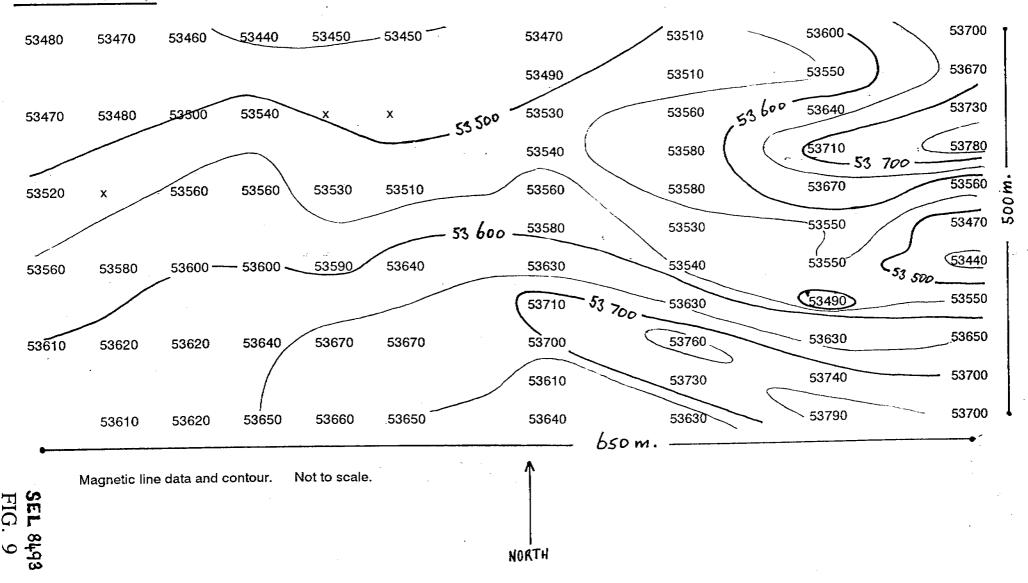
GREAT NORTHERN prospect

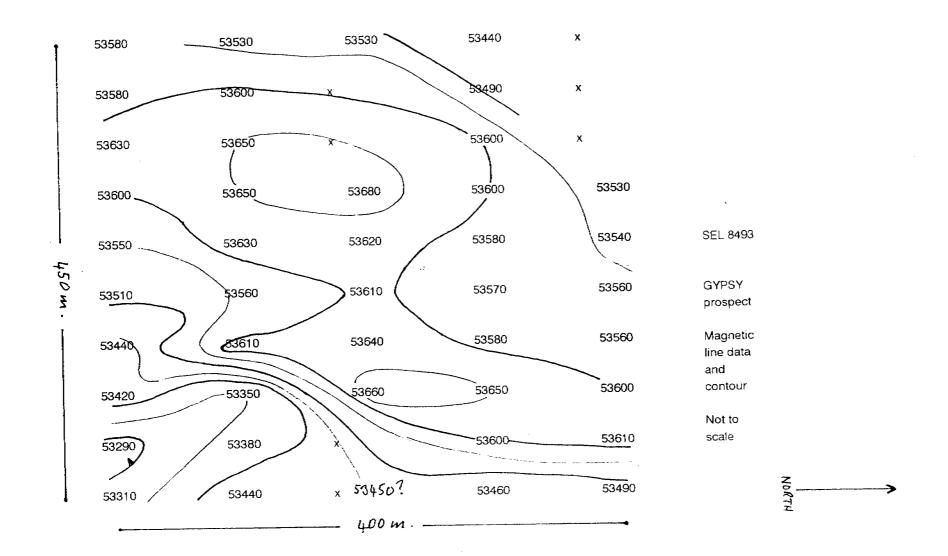
Magnetic line data

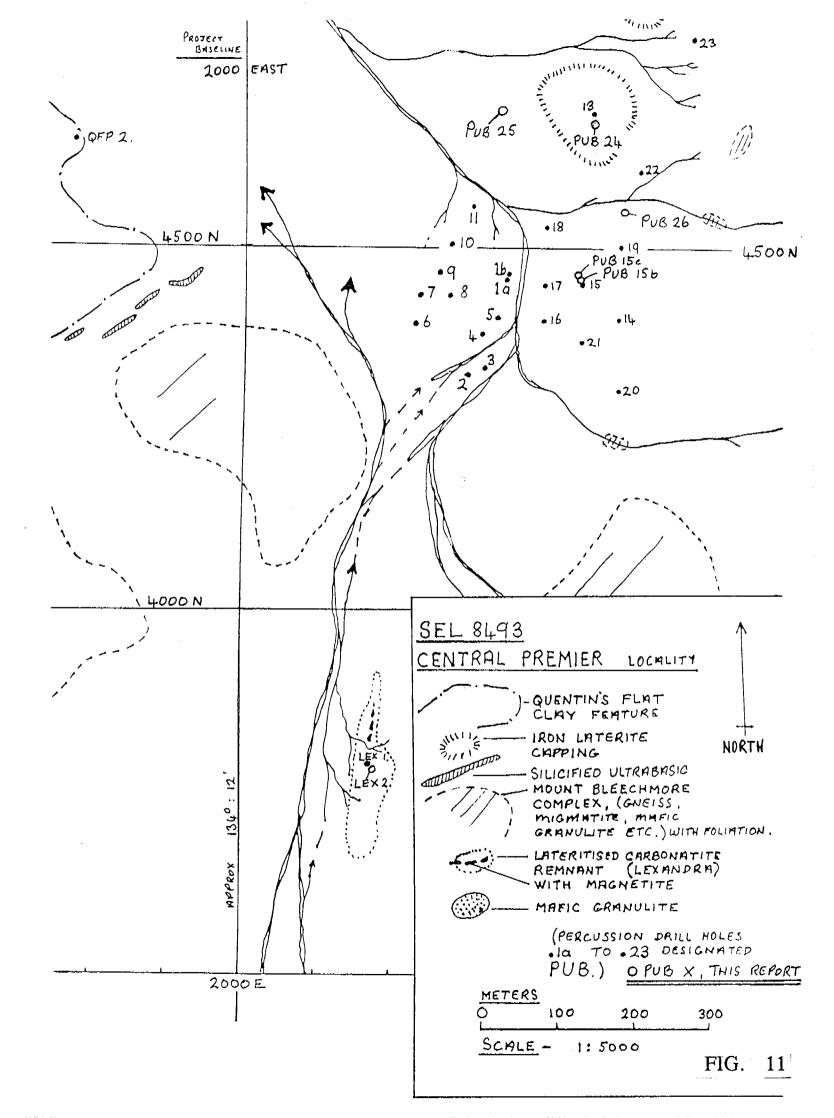
Line spacing, 100m.

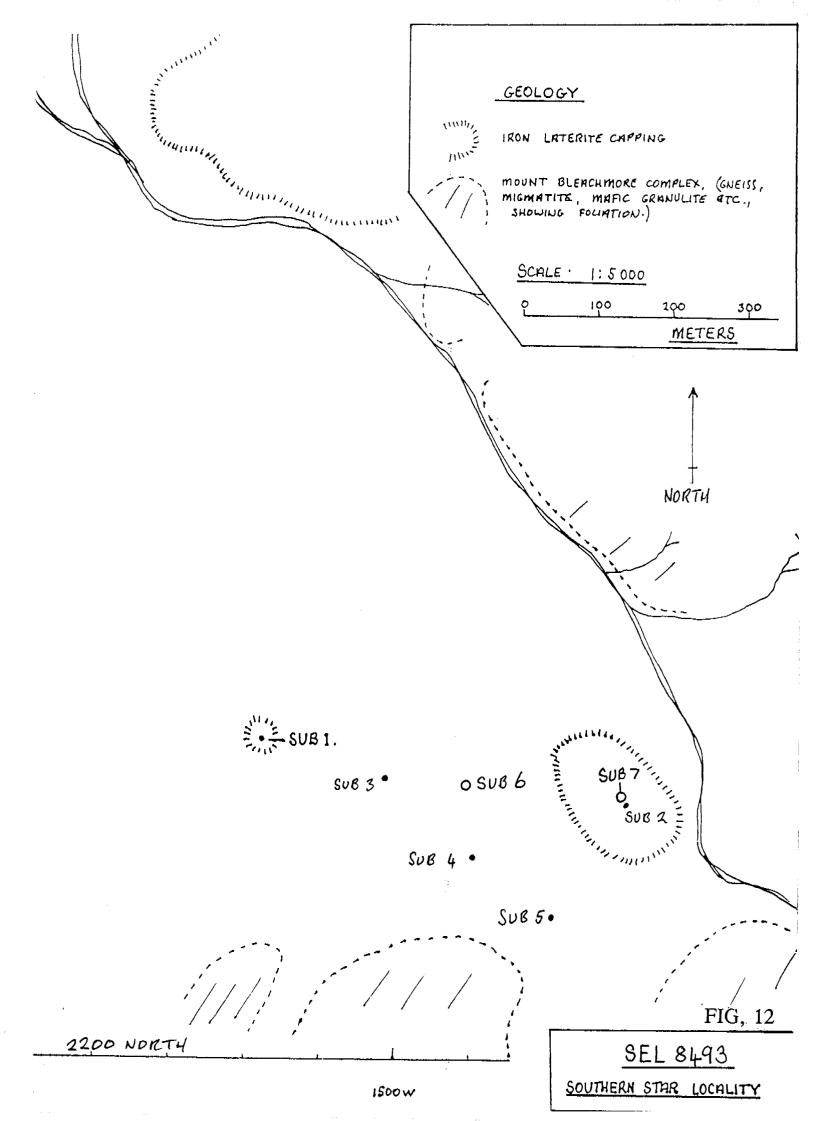
Stations at 50m.

WEBBS FLAT prospect









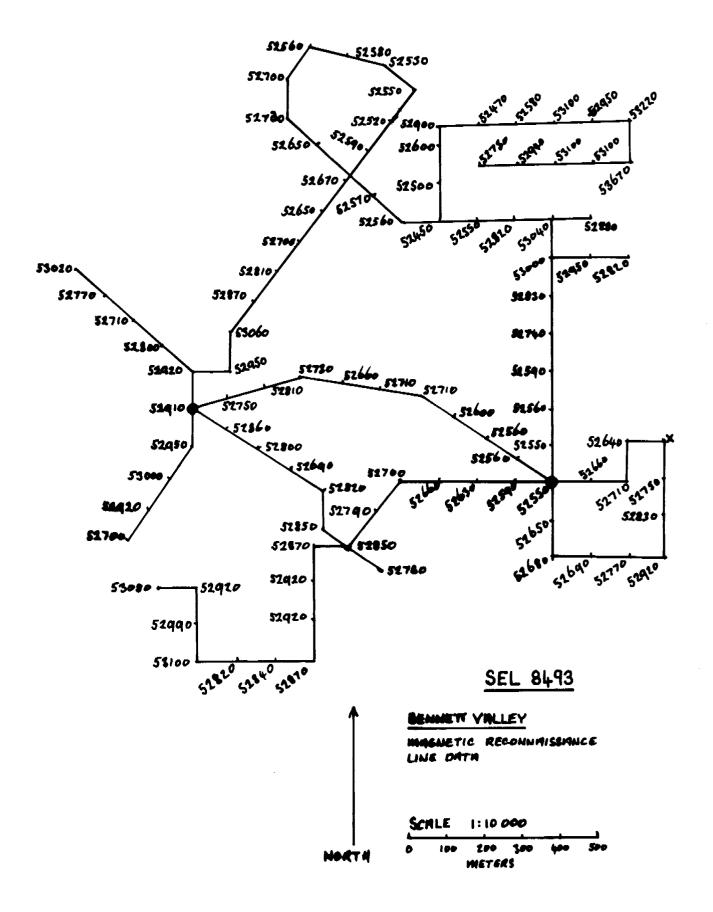
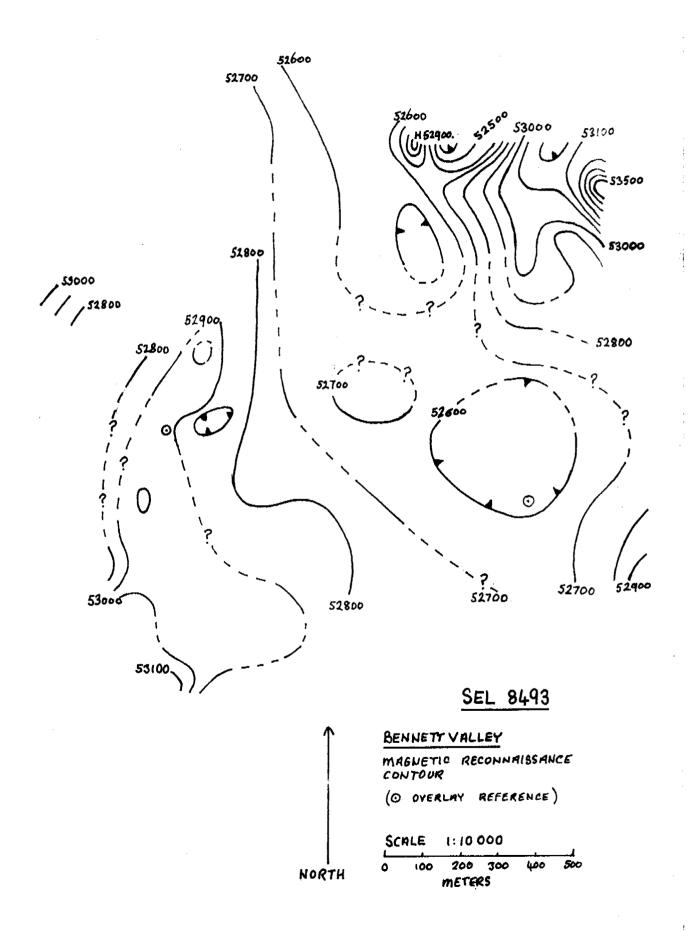
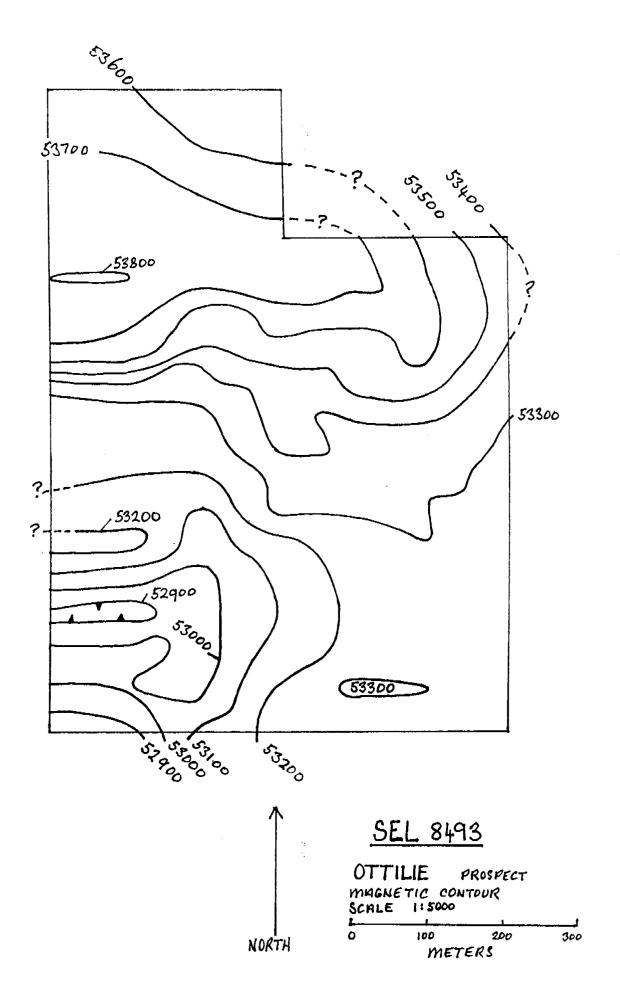


FIG. 13





	53610					
	53640	53570	53530			
	53710		53610			
53700	53700	53720	53670			
53700	53700	53740	53750	53740	53580	53400
53800	53800	53740	53790	53740	53610	53440
53750	53750	53550	53620	53650	53630	53450
53680	53690	53480	53570	53530	53620	53400
53330	53370	53330	53420	53500	53510	53340
53180	53180	53240	53430	53380	53400	53290
53250	53250	53210	53370	53390	53350	53260
	53050	53100	53310	53330	53300	53250
53250	53250	53060	53180	53250	53300	53220
53080	53030	52970	53110	53250	53270	53240
52850	52850	52970	53100	53230	53290	53230
53030	53030	52970	53130	53240	53240	53260
53000	53000	52980	53230	53310	53100	53240
52860	52860	53140	53220	53260	53230	

Line spacing 100m. Stations at 50m.

SEL 8493

OTTILIE Prospect.
Magnetic line data.
(Not to scale.)

NORTH

FIRST DRILL PROGRAM

Typical drillhole section

HOLE N	1Os
OTT 1	21M
AND 1 3	1.5M
ROW 1	21M
GYP 1 1	6.5M
GYP 2	12M
WFL 1	24M
WFL 2	20M
VIN 1 2	21M
NTH 1	21M
NTH 2	21 M
NTH 3	18M
NTH 4	18M
NTH 5	15M
FEN 1 2	21M
BVW 1	14M
BVC 1 2	24M

BANDED

CLAYS

SEL 8493

FIRST DRILL PROGRAM PUB 15b

Sand and rubble, 0-3m Clay, 3-5m

Fine grained Qtz Biotite, 5m-14m.

Vermiculite, 14m-45m.

END

SEL 8493 PUB 15b Drill Section

FIRST DRILL PROGRAM KUB 1

Iron laterite, 0-2m.

Yellow clay, 2m-26.5m.

Granulite? 26.5m-30m.

END

SEL 8493 KUB 1 Drill Section

SECOND DRILL PROGRAM NTH 6

Topsoil clay, 0-1m.

Sandy Iron Laterite, 1m-9m.

Yellow Clays , 9m-36m.

Grey clay and Qtz Magnetite,36-38

END

SEL 8493 NTH 6 Drill Section

SECOND DRILL PROGRAM PUB 15c

Sand and rubble, 0-4m.

Vermiculite and fine Qtz-Biotite, 4m-24m.

Vermiculite, 24m-36m.

Mostly Vermiculite, with fine Qtz-Biotite bands, 36m-42m END

> SEL 8493 PUB 15c Drill Section

SECOND DRILL PROGRAM PUB 24

Iron Laterite, 0-3m.

White, yellow, brown, and red Clays, 3m-30m.

Grey clay and Vermiculite,30m-51m Granulite?, 51m-52m. END

> SEL 8493 PUB 24 Drill Section

SECOND DRILL PROGRAM PUB 25

White, yellow, brown, and red clays, 0-30m.
Brown clay with Qtz Garnet, 30-33
Granite Gneiss, 33m-34.5m.
END

SEL 8493 PUB 25 Drill Section

SECOND DRILL PROGRAM PUB 26

Soil and Calcrete, 0-3m.

Weathered Vermiculite, 3m-20m. Fine Quartz Biotite, 20m-22m.

Vermiculite, 22m-26m. Fine Quartz Biotite, 26m-27m.

Vermiculite, 27m-51m.

SEL 8493 PUB 26 Drill Section

SECOND DRILL PROGRAM SUB 6

Iron Laterite, 0-12m.

Banded clays, 12m-40m

Calcsilicate Granofels?, 40m-50m END

SEL 8493 SUB 6 Drill Section

SECOND DRILL PROGRAM SUB 7

Banded Clays 0-22.5m.

Vermiculite? (very fine), 22.5m-36m Granulite, 36m-39m. END

> SEL 8493 SUB 7 Drill Section

THIRD DRILL PROGRAM LEX 2 (DDH)

Red Laterite

Thoroughly altered Vermiculite, 2m-15m. Yellow FeO and Magnetite, 15m -15.1m.

Weathered and altered vermiculite,
with soft clay bands and yellow
ferruginous bands, and occasional
veins of Magnetite, 15.1m-49m.
Weathered Vermiculite, 49m-50.5m.
END

Hole terminated due to wall erosion and caving.

SEL 8493 LEX 2 Drill Section

LEXANDRA CARBONATITE

LEX 2 DIAMOND DRILL HOLE

CORE LOG

0 - 2m Red laterite?

2m - 15m Thoroughly altered vermiculite.

15m - 15.1m Yellow FeO clay + magnetite.

15.1m - 15.4m Weathered vermiculite and clay.

15.4m - 18.5m Soft yellow FeO clay and thin veins of magnetite.

18.5m - 19.5m Mostly clay, some vermiculite.

19.5m - 21m Soft yellow FeO clay.

21m - 47m Weathered vermiculite with clay bands.

47m - 49m Weathered vermiculite.

49m - 50m Weathered vermiculite with green secondary mineral.

50m - 50.1m Ferruginous vein with quartz.

50.1m - 50.5m Weathered vermiculite.

SAMPLE	Zr	Y	Sr	U	Rb	Th	Pb	Nb	
QF Clay	138	64	56	1	167	36	23	16	
QFP 1	1	397	49	1	141	10	19	20	
QFP 2	173	42	89	**	83	12	73	10	
QFP 3	8	20	625	1	1	14	51	15	
LEX G1	451	12	195	**	3	33	1	104	
LEX G1/b	1512	80	1290	3	69	42	54	95	
LEX G2	219	27	873	**	1	56	93	123	
LEX G3	**	**	8	**	**	24	40	108	
LEX G4	79	7	120	5	**	24	**	55	
LEX G5	64	18	1052	3	**	34	62	63	
LEX G5/b	166	68	1150	2	22	46	74	149	
LEX G6	12	107	1685	**	**	37	90	54	
LEX G8	721	54	766	1	45	43	78	155	
			,						SEL 8493
	075	_	4.4	**	4.00	**	18	7	SAMPLE RUN I.
NTH G1	275	8	44	**	189 160	8	12	7 7	QUENTINS FLAT clay feature.
NTH G2	228	6	38 18		52	70	6	28	RAB and surface clay samples.
NTH G3	290	22 3	4	3 **	⊃∠ **	14	9	20	hab and surface day samples.
NTH G4	377	3	4			, 4	3	2	LEXANDRA carbonatite.
A.,									Grab samples.
Average Kimberlite	250	22	740	3.1	65	16		110	Grab samples.
Kimbenite	230	22	740	0,1	00	, 0		710	GREAT NORTHERN mag anomaly.
Average									Grab samples.
Lamproite	922	27	1530	4.9	272	46		95	arab samples.
Lamproite	922	21	1500	4.5		, 0			Deep crustal intrusives, (averages).
Average									
L'prophyre	350	36	1010	5	115	24		83	(By XRF-Compton Scatter.) SKD-U/Q, 7/93.

SAMPLE ID			=======================================		
MINFORM -			SION 1.50 - RUI		ZAFcorr
ELEMENT	ANALYSIS	IDEAL	100% ANHYD	3 OXYGS	CATS=2
Si02	. 0670	. 0718	.0718	.0018	.0018
TiO2	52.1250	55.8496	55.8496	1.0385	1.0604
A1203	. 0390	.0418	.0418	.0012	.0012
Cr 203	.0400	. 0429	. 0429	.0008	.0009
FeO	37.7170	40.4121	40.4121	. 8355	. 8531
MnO	2.9510	3.1619	3.1619	. 0662	.0676
NiO	.0170	.0182	.0182	.0004	.0004
MgO	. 3370	. 3611	. 3611	. 0 1 33	. 0 1.36
CaO	. 0380	. 0407	.0407	. 0011	. 0 0 1 1
TOTAL	93.3310	100.0000	100.0000	1.9587	2.0000

Partly altered - lenascher?

1) No verl providmente (ii. significant Glikielite Mg TiO3)

4 Chargan @ ~ 3 % mg O;

2) Low bo + Ni

SEC 8493 SAMPLE FROM SOUTMERN STAR PROSPECT, HOLE NO. SUB 6 (BY ROTARY) 40-50 m. FIG 19 RUNZ PI.

28 % Py 56 % Alm 13 % Grass

SAMPLE ID: (SKDJ1) GARNET CORE IN APPARENT CALCSIL GRANOFELS2 MINFORM - RMB 5.1 - SKD/91 VERSION 1.50 - RUN: SKD 5-9-93 ZAFCO CATS=8 12 OXYGS ELEMENT ANALYSIS IDEAL 100% ANHYD 39.2680 38.6355 2.9814 2.9832 Si02 38,6352 2.0478 A1203 22.8710 22.5028 22,5026 2.0465 .0008 .0140 8000. Cr203 .0138 .0138 26.0586 26.0584 1.6816 1.6827 FeO 26.4850 .0439 MnO .6830 . 6720 .6720 .0439 NiO .0120 .0118 .0118 .0007 .0007 7.5080 7.3871 7.3871 MaO .8498 .8503 CaO 4.7960 4.7188 4.7188 .3901 .3904 TOTAL 101.6370 100.0000 100.0000 7.9950 8.0000

SAMPLE I	D: SKDJ1 AMP	HIBOLE ADJ	ACENT TO GARNET	, 3UB 6.	
MINFORM		SKD/91 VER		4: SKD 5-9-93	ZAFcorr
ELEMENT	ANALYSIS	IDEAL	100% ANHYD	23 OXYGS	CATS=15
Si02	45.2170	45.7077	46.6766	6.6049	6.4000
TiO2	.9060	. 9158	. 9352	. 0995	. 0965
A1203	12.3190	12.4529	12.7166	2.1208	2.0550
Cr 203	.0370	.0374	.0382	. 0043	.0041.
FeO	11.4690	11.5936	11.8392	1.4010	1.3576
MnO	. 0830	. 0839	. 0857	.0103	. 0 1 0 0
NiO	.0470	. 0475	. 0485	. 0 0 55	.0054
MgO	13.7570	13.9065	14.2011	2.9957	2.9028
CaO	11.1420	11.2631	11.5017	1.7438	1.6897
Na20	1.4570	1.4728	1.5040	. 4126	. 3998
K20	. 4390	. 4438	. 4532	.0818	. 0793
TOTAL	96 8730	97 9251	100 0000	15 4803	15.0000

SAMPLE ID: SKDJ1 AMPHIBOLE ADJACENT TO GARNET MINFORM - RMB 5.1 - SKD/91 VERSION 1.50 - RUN: SKD 5-9-93 ZAFcorr !!!! FEZ/FE3 RECALCULATED TO YIELD TARGET CATIONS PER #OXYGNS !!!! 100% ANHYD 23 OXYGS CATS=15 ELEMENT ANALYSIS IDEAL 45.2170 45.0971 46.0693 6.4097 6.4000 Si02 Ti02 .9060 . 9036 . 9231 .0966 .0965 A1203 12.3190 12.2865 12.5512 2.0581 2.0550 Fe203 12.7459 12.7123 12.9861 1.3596 1.3575 .0369 Cr203 .0370 . 0377 .0041 .0041 .0001 FeO .0001 .0001 0.0000 0.0000 MnO .0830 .0828 .0846 .0100 .0100 0 i.M .0470 .0469 .0479 .0054 .0054 13,7207 13.7570 14.0163 2.9071 2.9028 MaO CaO 11.1420 11.1126 11.3520 1.6923 1.6897

1.4845

100.0000

. 4473

SUBG, 40-50m SAMPLE F PROSPECT, FROM

.3998

.0793

15.0000

CATS=2

SAMPLE ID: SKDJ1 CLEAN ILMENITE? MINFORM - RMB 5.1 - SKD/91 VERSION 1.50 - RUN: SKD 5-9-93 ZAFCORE RUNZ F

1.4570

98.1500

. 4390

Na20

TOTAL

K20

ANALYSIS IDEAL 100% ANHYD ELEMENT

1.4532

97.8904

. 4378

3 OXYGS

.4004

.0794

15.0227

13% by 3% Spus 61% Slam

SAMPLE ID	: SKDJ2 GAR	NET PAIR C	ORE IN CALCS	IL GRANDFELS?	
MINFORM -	RMB 5.1 -	SKD/91 VER	SION 1.50 -	RUN: SKD 5-9-93	ZAFcorr
ELEMENT	ANALYSIS	IDEAL	100% ANHYD	12 OXYGS	CATS=8
Si02	38.4160	38,1119	38.1122	3.0071	3.0098
Ti02	.0120	. 0119	. 0119	. 0007	.0007
A1203	21.6640	21,4928	21.4927	1.9987	2.0004
FeO	27.9640	27.7430	27.7429	1.8306	1.8323
MnO	1.4220	1.4108	1.4108	. 0943	. 0944
MqO	3.4150	3.3880	3.3880	. 3985	. 3989
CaO	7.9040	7.8415	7.8415	. 6629	. 6635
TOTAL	100.7970	100.0000	100.0000	7.9928	8.0000

13 % Ph 63 % Alm 21 % Gross

SAMPLE ID	: SKDJ2 ANO	THER GARNE	T CORE IN CAL	.CSIL	
MINFORM -	RMB 5.1 -	SKD/91 VER	SION 1.50 - R	UN: SKD 5-9-93	ZAFcorr
ELEMENT	ANALYSIS	IDEAL	100% ANHYD	12 OXYGS	CATS=8
Si02	38.3770	37.9437	37.9441	3.0028	3.0034
Ti02	.0910	. 0900	. 0900	.0054	.0054
A1203	21.5380	21.2951	21.2950	1.9861	1.9866
Cr 203	.0210	.0208	.0208	.0013	.0013
FeO	28.6800	28.3566	28.3565	i .8766	1.8771
MnO	1.4840	1.4673	1.4673	. 0983	. 0984
NiO	.0310	.0307	.0307	.0020	.0020
MgO	3.3620	3.3241	3.3241	. 3922	. 3922
CaO	7.5570	7.4718	7.4717	. 6335	. 6337
TOTAL	101.1410	100.0000	100.0000	7.9982	8.0000

SEL 8493 SAMPLE FROM SOUTHERN STAR PROSPECT, HOLE NO. SUB. 7, 36-39m (BY ROTARY) FIG 19 RUN2 P.3.

SAMPLE II MINFORM -				EARING CLAST RUN: SKD 5-9-93	ZAFcorr	
ELEMENT	ANALYSIS	IDEAL.	100% ANHYD	23 OXYGS	CATS=15	ı
Si02	41.9480	43.2098	44.0917	6 . 4797	6.2158	Son
Ti02	1.5000	1.5451	1.5767	. 1743	. 1672	/W. W
A1203	11.3320	11.6730	11.9111	2.0630	1.9790	1 / h
Cr 203	.0580	. 0597	.0610	.0071	.0068	J. Y. Y.
FeO	17.0090	17.5209	17.8782	2.1972	2.1078	the Maria
MnO	. 0660	.0680	. 0694	. 0086	.0083	100 %
MgO	9.6430	9.9332	10.1358	2.2206	2.1301	1120
CaO	11.0860	11.4196	11.6525	1.8348	1.7601	, Jr
Na20	1.5580	1.6049	1.6376	. 4666	. 4476	
K20	. 9380	. 9662	. 9859	. 1848	. 1773	
TOTAL	95.1380	98.0005	100.0000	15.6367	15.0000	

SAMPLE ID MINFORM - !!!! FE2/		SKD/91 VER	BOLE IN GT- SION 1.50 - IELD TARGET	BEARING CLAST RUN: SKD 5-9-93 ZAF CATIONS PER #OXYGNS	corr : !!!!
ELEMENT	ANALYSIS	IDEAL	100% ANHYD	23 OXYGS	CATS=1.5
SiO2 TiO2 Al2O3 Fe2O3 Cr2O3 FeO MnO MgO	41.9480 1.5000 11.3320 16.7980 .0580 1.8940 .0660 9.6430	42.4381 1.5175 11.4646 16.9945 .0587 1.9162 .0668 9.7558	43.3253 1.5493 11.7041 17.3495 .0599 1.9562 .0682 9.9596	6.2158 .1672 1.9790 1.8731 .0068 .2347 .0083 2.1301	6.2158 .1672 1.9790 1.8731 .0068 .2347 .0083 2.1301
CaO Na2O	11.0860 1.5580	11.2157	11.4500 1.6092	1.7601 .4476	1.7601 .4476
K20	. 9380	. 9490	. 9688	. 1773	. 1773
TOTAL	96.8210	97.9529	100.0000	15.0000	15.0000

SAMPLE ID	: SKDJ2 ADJ	ACENT PLAG			
MINFORM -	RMB 5.1 -	SKD/91 VER	SION 1.50 -	RUN: SKD 5-9-93	ZAFcorr
ELEMENT	ANALYSIS	IDEAL	100% ANHYD	8 OXYGS	CATS=5
Si02	62.8520	63.0382	63.0386	2.7866	2.7936
A1203	23.3040	23.3734	23.3732	1.2177	1.2207
FeO	. 1730	. 1735	. 1735	.0064	.0064
CaO	4.4400	4.4532	4.4532	.2109	.2114
Na 20	8.8620	8.8884	8.8883	. 7618	. 7637
K20	.0730	.0732	. 0732	.0041	.0041
TOTAL	99.7040	100.0000	100.0000	4.9875	5.0000

SAMPLE FROM SOUTHERN STAR, SUB 10 - 36-39m

76 % Ab 21 % Am

SEL 8493 FIG 19 RUNZ P4.

LOCATION	SAMPLE	SiO2	TiO2	Al2O3	Tr. Fe2O3	FeO	MnO	MgO	CaO	Na2O	K2O	P2O5	H2O	TOTAL
ANDREAS	AND 1	63.58	0.66	16.28	7.78	0	0.01	1.68	0.03	О	2.99	0.04	6.04	99.09
BENNETT VALLEY Central	BVC1 /1	62.4	1.84	18.53	6.8	0	0.01	0.43	0.61	0	0.54	0.04	7.88	98.82
BENNETT VALLEY Central	BVC1 /2	62.61	1.94	13.01	12.73	0	0.02	0.18	0.1	0	0.61	0.02	7.58	98.8
BENNETT VALLEY West	BVW1	70.28	0.54	16.29	4.85	0	0	0.17	0.09	0	0.49	0	6.6	99.31
FENCHURCH	FEN 1	53.4	0.84	14.24	18.9	0	0.02	0.61	1.33	0	0.32	0.09	9.49	99.24
	GYP1 /2	41.34	2.62	24.51	18.74	0	0.02	0.37	0.34	0	0.04	0.02	10.16	98.16
GYPSY	GYP1 /2	35.57	2.21	24.04	26.7	0	0.02	0.24	0.29	0	0.03	0.03	10.11	99.25
GYPSY GREAT NORTHERN	NTH 1	41.25	1.79	24.62	18.56	0	0.02	0.59	0.45	0	0.02	0.01	12.41	99,99
	OTT 1	52.65	1.17	20.67	11.26	0	0.02	0.27	0.96	0	0.4	0	10.04	97.46
OTTILIE	ROW 1	51.44	1.54	20.14	15.58	0	0.02	0.13	0.05	0	0.07	0.04	10.06	99.07
ROWELL	SKD J1	53.91	1.17	14.83	11.24	0	0.18	3.3	4.86	0.43	0.9	0.06	8.18	99.06
SOUTHERN STAR, SUB 6	SKD J1/d	48.98	1.27	13.55	14.63	0	0.37	6.21	7.38	0.04	0.55	0.06	4.82	97.86
SOUTHERN STAR, SUB 6	SKD J1/g	46.43	1.04	14.45	11.58	0	0.05	2.69	2.67	0	0.13	80.0	19.83	98.95
SOUTHERN STAR, SUB 6	SKD J1/g SKD J2	48.98	1.38	14.29	14.39	0	0.45	4.97	7.81	1.64	0.99	0.14	9.8	98.85
SOUTHERN STAR, SUB 7		45.55	1.55	13,07	15.4	0	2.26	6.6	9.12	1.75	0.59	0.1	2.59	98.58
SOUTHERN STAR, SUB 7	SKD J2/d		1.55	9,11	18.98	0	0.07	2.22	2.88	0	0.54	0.31	19.4	98.58
SOUTHERN STAR, SUB 7	SKD J2/g	43.67		23.54	8.72	0	0.07	0.3	0.2	0	1.01	0	8.39	100.35
VINCENT	VIN 1	57.25	0.94			0	0.03	0.14	0.09	0	0.03	0.07	8.22	99.76
WEBBS FLAT	WFL 1	. 44.87	2.97	11.44	31.9	U	0.03	_ U. 1~	0.00	•				

d = selected dark fraction

g = selected light green fraction

SKD-U/Q, 10/93

OTHERS, by percussion.

SEL 8493
(VV) 3
SOUTHERN STAR samples by rotary.

(By XRF-Lithium tetraborate fused glass disks.)

SAMPLE	Sc	Cr	Ni	Cu	Zn	Sr	Υ	Nb	Zr	Ва	La	Се	Nd
C/Prem PUB 13	37	160	45	89	100	23	6	14	15	452	60	180	47
ANDreas	30	83	20	24	104	112	8	59	26	1090	55	80	39
OTTilie	12	114	33	27	250	48	10	16	11	597	71	114	62
ROWell	35	271	61	60	123	10	18	14	15	61	12	<15	<10
G/Nth'n NTH 6	19	120	112	49	211	347	66	<10	18	1390	141	363	100
Ben't Val Cent.	21	151	52	46	189	35	61	10	27	335	114	269	105
Kilmot KUB 1	57	116	63	130	240	26	7	29	5	511	<5	<15	<10
GYPsy 1	11	143	36	28	342	48	1	40	37	62	<5	<15	<10
FENchurch	24	107	61	75	147	26	34	<10	18	102	161	229	153
Sthn Star SUB 1	12	112	10	9	50	17	2	23	21	420	8	22	<10
Webbs FLat 1	24	101	26	62	48	20	2	23	8	41	<5	<15	<10
VINcent	42	179	47	76	186	40	7	12	<5	445	54	29	<10
G/NTHn NTH 2	21	85	42	35	84	54	3	12	17	159	33	22	<10
LEXandra 2 DDH	257	93	66	70	161	998	78	151	68	3650	312	869	397

Au (PPM). Ali samples <0.02.

ANALABS/SKD 2/94

SEL 8493 RNN 4

Trace Element Data (except gold) were determined by ICPOES, after total dissolution of 0.5gm in Aqua Regia + Perchloric Acid + Hydrofluoric Acid.

Gold determination by AAS after 30gm sample treated in Aqua Regia.

	ITEM	DRILLING	DRILL	TOYOTA	TRAVEL	PREPS	MAG	FIELD	SAMPLES	CLEAR AB.	REPORT &	SKD
		Meters	Kms	Kms.	Hours	Hours	Hours	Hours	Hours	SITES, Hours	research	Expense
1	CLEARING ABORIGINAL SITES			650						17		
2	GREAT NORTHERN Mag Survey			550	6	3						
3	RESEARCH, Alice Springs										3	
4	FIELD RECONNAISSANCE			300				18				
5	GYPSY, OTTILIE Mag. surveys			250	3	2	8					
6	PERCUSSION DRILLING PROGRAM	397	48	1048	12	7			4			
7	WEBBS FLAT Mag. Survey						3					
8	ROTARY DRILLING PROGRAM	306.5	48	1048	12	5			2			
9	PROJECT GEOLOGIST Site Trip			650	9	4		6				
	(COSTS, DR.S.K.DOBOS)	147				· · · · · · · · · · · · · · · · · · ·						1625.0
	(TRAVEL, ASP-BAIKAL-MT.ISA)			880	10.5							
10	DIAMOND DRILL PROGRAM	50.5	530			7			1			
11	SAMPLES; Preps, Handling etc.								7			
12	REPORT; compilation, etc.										32	
13	ANALYTICAL COSTS											1110.0
14	ANALYTICAL INTERP. COSTS (SKD)											430.0
	DRILLING, percussion & rotary	703.5	96		•							
	DIAMOND DRILLING	50.5	530	1								1
	TOTALS	754	626	5376	52.5	28	11	24	14	17	35	1

L.A.JOHANNSEN
Baikal Homestead
P.M.B. 41
ALICE SPRINGS, N.T.
0872

AUSTIN SWEENY Legal Officer Central Land Council P.O. Box 3321 ALICE SPRINGS, N.T. 0871.

Dear Mr. Sweeny,

Thank you for your letter of November 5, 1993, (your Ref. AS 93 180), regarding Exploration Licences in the West Mount Bleechmore area of Alcoota Station, and the Aboriginal sacred sites located within those E.Ls.

For your records, E.Ls. 7696, 7960, 7971, 7998, 8006, and 8103 are in my name, and E.Ls. 7940, and 7959 are held jointly by Mr. Tom Webb and myself.

Firstly let me say that with regard to my prospecting activities I am acutely aware of and respect Aboriginal sensitivities relating to sacred sites, something which has come about as a result of being involved with Aboriginal people most of my working life.

In early discussions about the exploration project with Mr.Tom Webb, (then owner of Alcoota Station), it was brought to my attention that there were a number of highly sensitive localities within the areas I was proposing to explore.

At a convenient time I took him to the proposed work areas and described the nature of the work involved. We agreed that I should resolve the possibility that some of my planned work areas may conflict with a sacred site.

Following granting of the applications I contacted Mr. Dick Purvis at Engawala, and together we went to Mulga Bore for talks with Mr. Ken Tilmouth and others. It was agreed that Mr. Purvis would accompany me on an excursion to the proposed work areas, as Mr. Tilmouth had prior commitments.

> SEL 8493 ENCL PI.

As we travelled about and visited the various localities Mr. Purvis indicated a number of places to me that were strictly "no go". In each case I was able to reassure him that the area indicated did not form any part of my exploration plans, or conflict with my program in any way. Valso gave him an undertaking to respect his instructions, and the information given.

All areas were talked about as we visited them, and I carefully described to Mr. Purvis the ideas and methods I proposed to use as we travelled about.

Briefly, they are as follows.

The exploration is centered on the flat land around and away from the hills and rocky country. Air photo reconnaissance is used to identify points of interest for informal magnetic surveys, (no clearing of lines, no permanent markers). Samples are taken with a small diameter drill,(75mm). After sampling, collars are removed and holes backfilled to ground-level before vacating the site. No earthworks are required and no timber has to be cleared to gain access to sites. No site preparation is necessary. I do all the work myself, though sometimes I have a helper. All rubbish is carried away on departing the locality.

Since receipt of your letter I have again spoken with Dick Purvis. He has reassured me that all "no go" areas were indicated to me, and I renewed my undertakings concerning them. He knew nothing about the letter and was as puzzled as myself about any reasons for it.

I would be pleased to talk to Rodger Barnes, your Mining Section Co-ordinator at some time in the future, and though my visits to Alice Springs can be somewhat infrequent, I do expect to be in sometime before Christmas.

Yours Faithfully

Lindsay Johannsen.

24/11/93

SEL 8493 ENCL PZ.