EL7705 FRANCES CREEK
FINAL REPORT
TO 21ST JANUARY 1993

Distribution:

NTDME
Dominion Mining Ltd, Darwin
Dominion Mining Ltd, Perth

S.J. POOLEY
April 1993

SJP7705

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1. SUMMARY

This report details exploration activities completed by Dominion Gold Operations Pty Ltd (Dominion) on EL7705 for the year ending 21 January 1993. The licence, comprising four (4) graticular blocks was granted to Dominion Gold Operations Pty Ltd on 31 March 1992 for a period of four (4) years. Following consolidation of Dominion's Frances Creek tenements, EL7705 is now held under SEL8032, granted 21 January 1993, for a four (4) year period.

Exploration activities during 1992 consisted of:

- Literature Review
- Acquisition of airborne geophysical data
- Aerial photographic interpretation
- Regional 1:25,000 scale mapping
- Stream sediment sampling
- Rock chip sampling
- Soil sampling

Stream sediment sampling has defined anomalies in pan concentrates along the main Frances Creek drainage up to 134 ppm Au. Further investigation and evaluation of these anomalies are required.

Reconnaissance rock chip sampling of quartz veining returned a peak value of 2.41 ppm Au with significant base metal credits. This area, termed Target 3, was systematically soil sampled. A peak value of 3 ppb Au was returned. Follow up RAB drilling was not considered warranted.

Exploration expenditure amounted to $11,558 against a Year 1 covenant of $7,500.

2. INTRODUCTION

2.1 Location and Tenure

EL7705 is located 180km southeast of Darwin and approximately 30km NE from the township of Pine Creek. The tenement can be found on the Pine Creek 1:250,000 scale (Sheet SD52-8), Pine Creek 1:100,000 scale (Sheet 5270) geology sheet and the Union Reef (Sheet 5270-1) topographical series sheet. (Figure 1).

Access to the tenement from Darwin is via the Stuart Highway to Pine Creek, thence via the Kakadu Highway to the Mary River Station turnoff and then via various maintained station tracks. Access can also be gained via unmaintained tracks either from Pine Creek or Mt. Wells. (Figure 2).

The licence, comprising four (4) graticular blocks, was granted to Dominion Gold Operations Pty Ltd on 31 March 1992 for four (4) years.

Consolidation of Dominion tenements in 1993 resulted in EL7705 forming part of SEL8032 on 21 January 1993. Cessation of EL7705 was effective 22 January 1993.

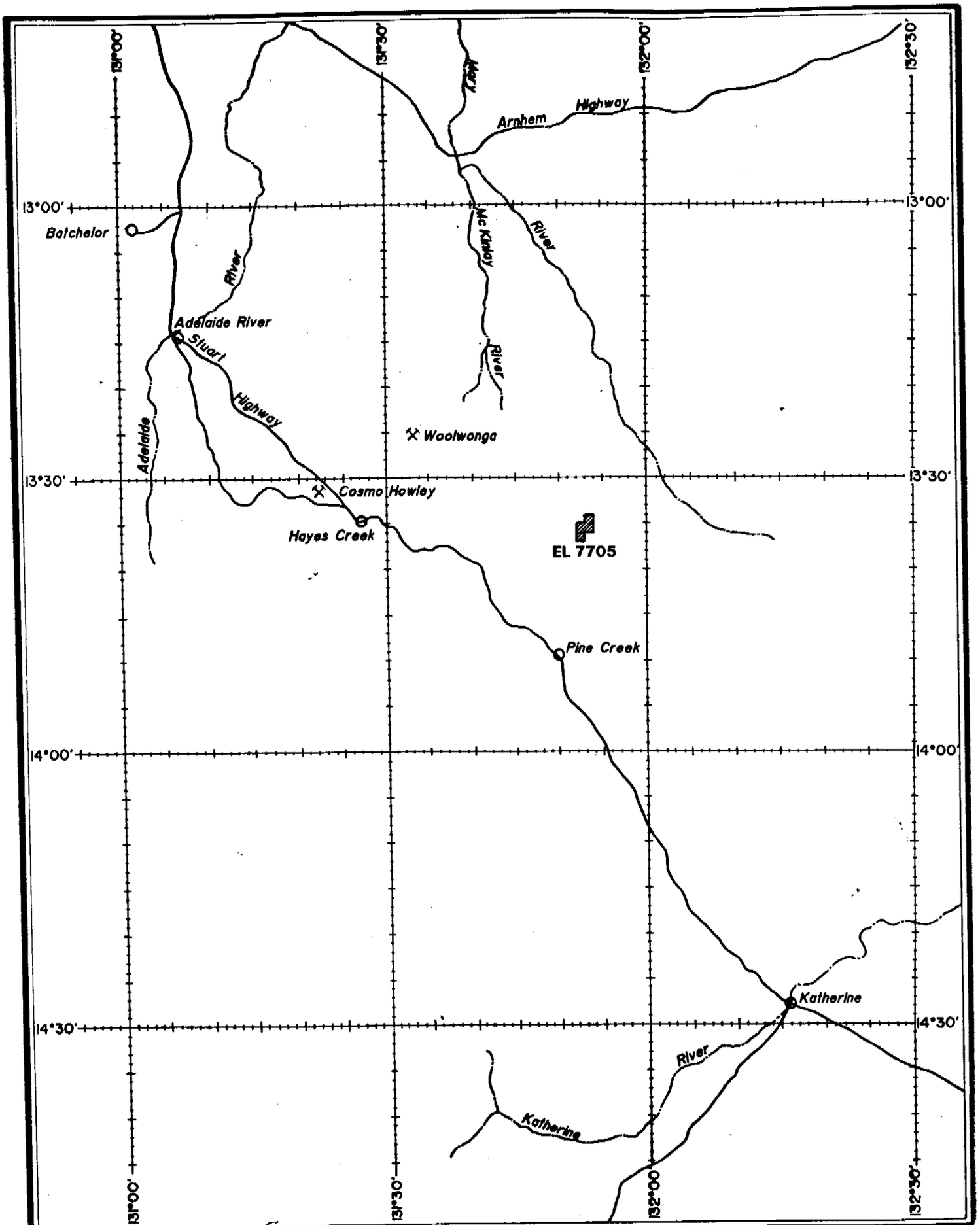
2.2 Climate and Physiography

The Pine Creek Inlier lies within the monsoonal belt of northern Australia and exhibits an average annual rainfall of 1500mm, most of which falls during the wet season from November to April.

The physiography of the area is divided into a number of different units. The lowlands includes the alluvial floodplains of the Alligator, Margaret and Mckinlay Rivers in the north to the plains of the Daly River Basin in the southwest. The plains carry mixed scrubby to open eucalypt woodland and open savannah grasslands.

Granitoid terranes are overlain by undulating sandy rises which usually contain leached skeletal soils and lateritic podsols. Topographic gradients are low with amplitudes of usually 20m. Vegetation is mostly medium to tall semi-deciduous eucalypt woodland.

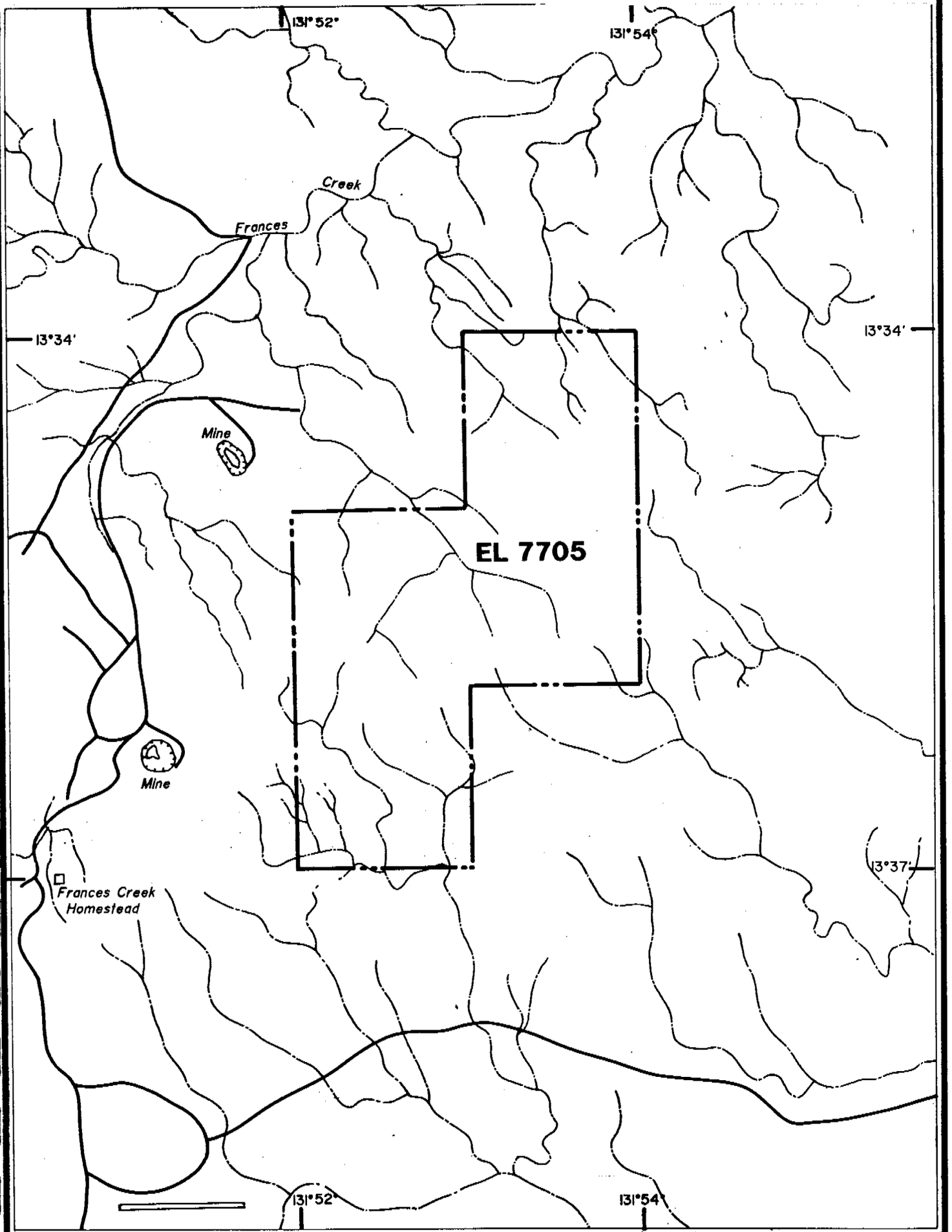
Rock ridges may rise up to 200m elevation above the surrounding plains. Gradients of these ridges are steep and surface boulders and low outcrops are widespread. Mid height woodlands dominate the slopes whilst tall eucalypt forests and dense perennial grasses occupy the dissected creek systems.



EL 7705
TENEMENT LOCATION

PROJECT	N.T. REGIONAL			STATE	N.T.
ORIGINATOR	S.L.	Date 9/92	DRAWN R.L.	Date	9/92
SCALE	1:1000000	FIGURE No:		PLAN No:	2A-T80

Dominion Mining Limited



EL 7705
TENEMENT LOCATION

PROJECT	FRANCES CREEK			STATE	N.T.
ORIGINATOR	S.P.	Date 4/93	DRAWN	R.L.	Date 4/93
SCALE	1:50000	FIGURE No:	2	PLAN No:	2K-Ta6

Dominion Mining Limited

3.0 GEOLOGY

3.1 Regional Geology

3.1.1 Regional History

The Pine Creek Inlier is a roughly triangular area of about 66,000km^2 south and east of Darwin, which contain Early Proterozoic metasedimentary rocks resting on a gneissic and granitic Archaean basement. The metasediments represent fluviatile, shallow water, intertidal basinal and flyschoid sequence up to 14km thick within an intracratonic basinal setting (Needham et al, 1980).

During the Top End Orogeny (1870–1780Ma) rocks within the Pine Creek Inlier were metamorphosed to mainly greenschist facies, however, amphibolite facies metamorphic mineral assemblages dominate in the Alligator Rivers region. Known Archaean rocks are restricted to granite–gneiss of the Rum Jungle, Waterhouse and Nanambu complexes which form mantled gneiss domes near the exposed eastern and western margins of the inlier. (Page, et al, 1980).

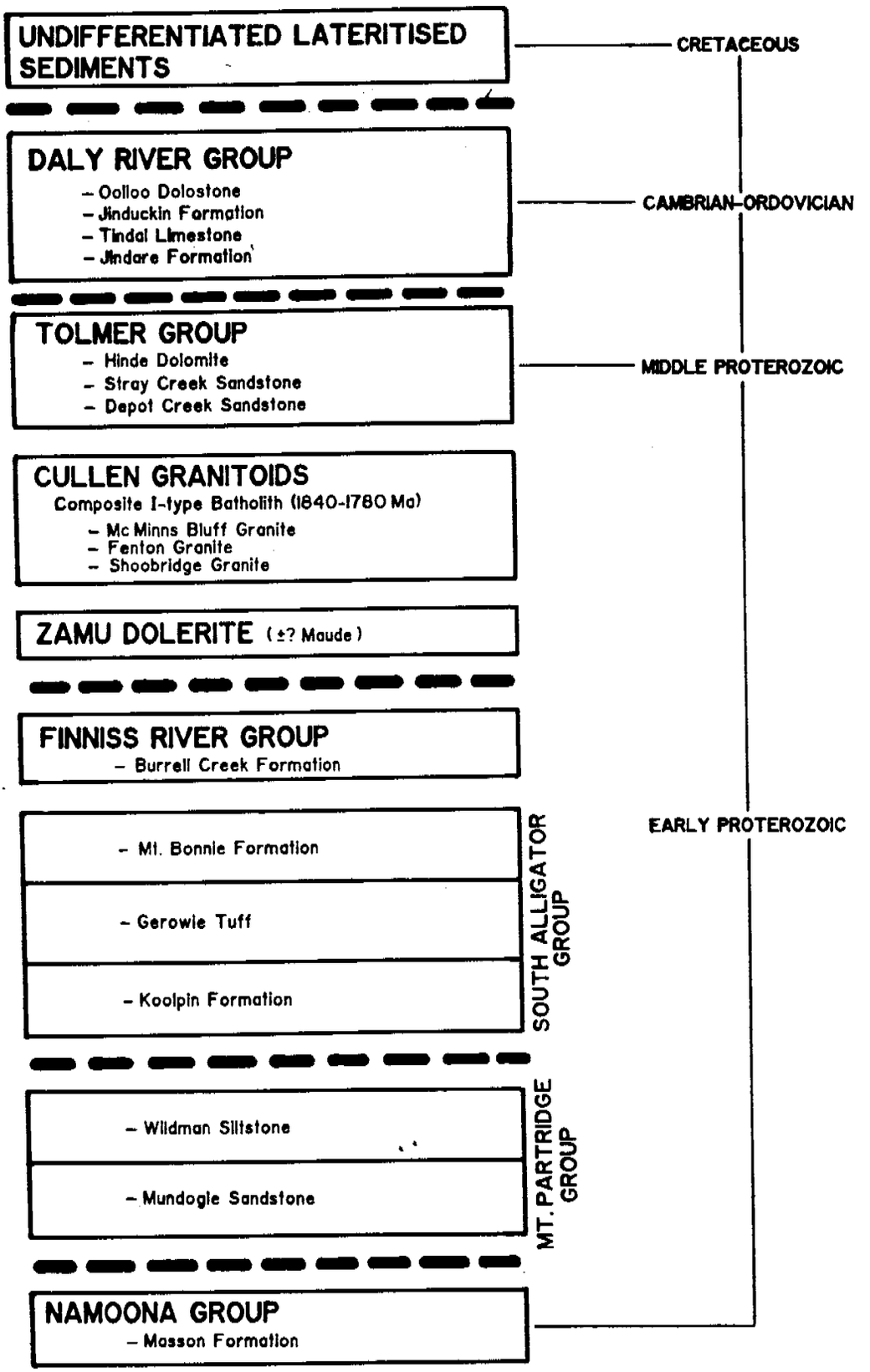
The sedimentary rocks are mainly shale, siltstone, sandstone, conglomerate, carbonate rocks and iron formations. Felsic to mafic volcanism and associated tuffaceous sediments are also present. The sedimentary sequence is intruded by transitional igneous rocks including pre–tectonic dolerite sills and syn to post tectonic granitoid plutons and dolerite lopoliths and dykes. Largely undeformed platform covers of Middle Proterozoic to Mesozoic strata rest on these with marked unconformity. (Figure 3).

Since the Cretaceous the area has generally remained above sea level. The dominant forces which moulded today's landscape were chemical weathering to produce laterite and "cut and fill" modification of the land surface by repeated erosional and aggradational cycles.

3.1.2 Structure

During the Top End Orogeny, the Early Proterozoic sediments, volcanics and dolerite were intensely deformed and regionally metamorphosed, resulting in tight to isoclinal folding and extensive faulting. Two phases of folding have been recognised. The older F_1 folds are tight to isoclinal folds with northwest to northeast trending axial planes. A penetrative slatey cleavage is present in pelitic rocks and a less prominent spaced fracture cleavage in sandstone. The younger F_2 folds are widely spaced, open types with east to west trending axial planes. Both folding events pre date granitoid intrusions. (Figure 4).

STRATIGRAPHIC COLUMN



	CULLEN MINERAL FIELD STRATIGRAPHIC RELATIONS
	PROJECT — STATE N.T.
© Dominion Mining Limited	ORIGINATOR F.F. Date 5/91 — DRAWN R.L. Date 5/91
	SCALE — PLAN No: 2A - G100

REGIONAL STRUCTURE – PINE CREEK INLIER

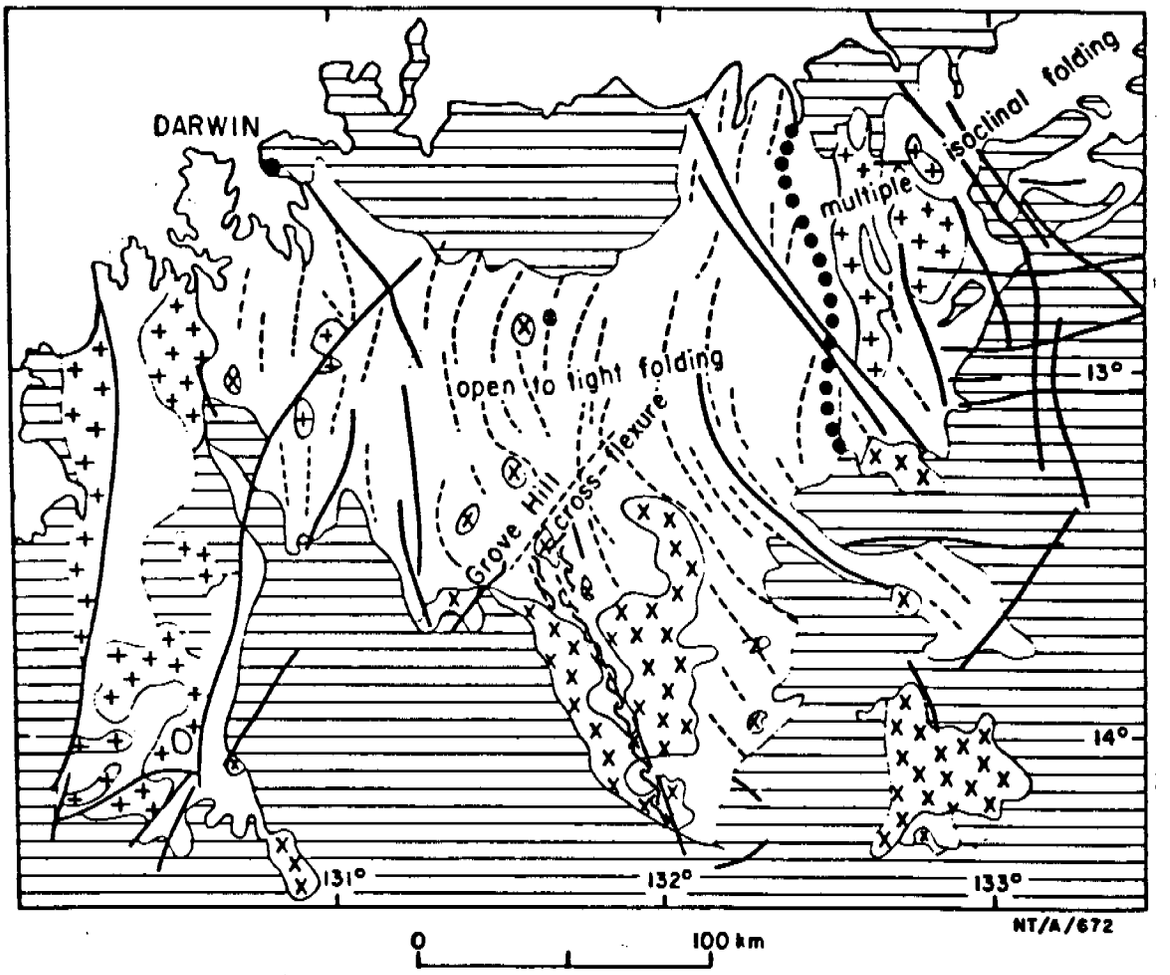


FIGURE 4

3.1.2 Structure (Cont'd)

Regional folding is locally modified by the major SE trending Noonamah – Katherine lineament zone, which consists of a 20 to 25km wide zone of shearing and folding with coincident gravity and magnetic anomalies. In the Pine Creek area the lineament is represented by the Pine Creek shear zone, which contains numerous aligned tight folds and shears and which hosts a concentration of gold occurrences. (Needham and Stuart–Smith, 1984a).

3.1.3 Metamorphism

All the Early Proterozoic rocks have been both regionally metamorphosed to greenschist facies and contact metamorphosed by the syn orogenic to post orogenic granitoids. The regional metamorphic grade ranges from predominantly lower greenschist to amphibolite facies in the NE of Pine Creek Inlier. Table 1 shows the characteristic metamorphic mineral assemblages for various rock types. Regional metamorphism is contemporaneous with regional deformation of the sedimentary pile during the Top End Orogeny. Throughout most of the area, regional metamorphism of pelitic rocks produced fine grained sericite and quartz. Sandstones usually exhibited fractured and/or strained quartz grains and minor sericite, chlorite and muscovite. (Figure 5).

Contact metamorphism largely overprints regional metamorphism indicating syn–post deformation. The contact metamorphic aureole is primarily albite–epidote hornfels with a narrower inner continuous zone of hornblende hornfels. K–feldspar–cordierite hornfels is present immediately adjacent to the granitoids. The contact metamorphic aureole varies in width from a minimum distance of 500m to up to 15km – 20km. In general, granitoids with steeply dipping margins will produce a narrower contact aureole whilst relatively shallow, flat lying granitoids will produce a more extensive contact aureole, although the extent of a contact aureole can be significantly wider or narrower under different temperature – pressure regimes.

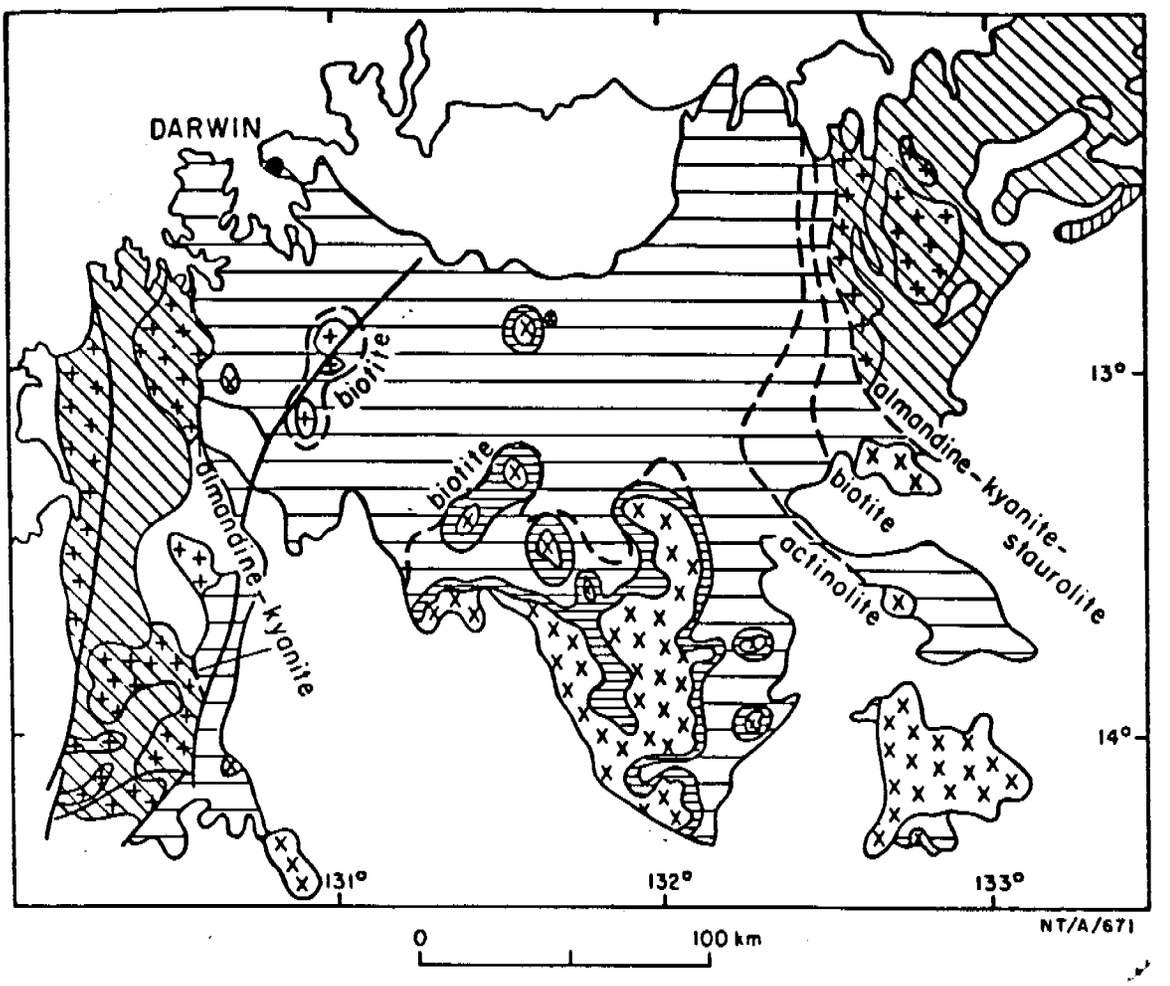
TABLE 1 CHARACTERISTIC METAMORPHIC MINERAL ASSEMBLAGES

Rock Type	*Regional Metamorphism*		*Contact Metamorphism*		
	Lower Greenschist	Upper Greenschist	Albite–epidote Hornfels Facies	Hornblende Hornfels Facies	K-feldspar–cordierite Hornfels Facies
Pelitic rocks	Sericite + quartz	Biotite + muscovite + quartz	Muscovite ± biotite ± chiastolite ± quartz	Muscovite + biotite ± cordierite ± albite ± quartz	Cordierite + andalusite + K-feldspar + biotite + quartz
Quartzose and feldspathic sandstone	Sericite/ muscovite + chlorite		Muscovite + quartz ± albite ± biotite	— ditto —	
Greywacke	Sericite + chlorite + epidote		Muscovite + biotite + quartz ± K-feldspar ± albite ± epidote ± actinolite	Muscovite + K-feldspar + quartz ± albite ± biotite	
Tuff	Chlorite + sericite + quartz	Biotite + muscovite + quartz	Muscovite + quartz ± biotite ± albite ± K-feldspar	— ditto —	
Carbonate rocks	Dolomite + quartz	Tremolite + garnet + biotite + quartz	Calcite + tremolite + epidote Calcite + tremolite + zoisite + sphene + quartz Tremolite + biotite + quartz	Grossular + calcite Diopside + quartz	
Dolerite	Chlorite + sericite + epidote + zeolites	Actinolite + biotite	Actinolite + biotite + epidote + clinozoisite	Hornblende + biotite + plagioclase + K-feldspar ± calcite ± sphene	

REPRODUCED FROM:

STUART-SMITH,P.G.,NEEDHAM,R.S.,BAGAS,L.,& WALLACE,D.A.,1987--PINE CREEK NORTHERN TERRITORY (SHEET 5270). BUREAU of MINERAL RESOURCES, AUSTRALIA 1:100 000 GEOLOGICAL MAP AND COMMENTARY

REGIONAL METAMORPHISM – PINE CREEK INLIER



Lower Proterozoic

- Contact metamorphics
- Greenschist facies
- Amphibolite facies
- Granulite facies
- Mesozoic to Carpentarian sediments
- Late orogenic granite
- Archaean complexes
- biotite — Isograd

FIGURE 5

3.2 Local Geology

The stratigraphy of the Frances Creek area comprises Early Proterozoic metasediments including Mundogie Formation and Wildman Siltstone. Mapping by the BMR indicates significant outcrop of underlying Masson Formation mapped in structural highs and lows and always in valleys. Nowhere in the mapped area did distinct lithologies of Masson Formation outcrop. In broad terms, the Frances Creek stratigraphy consist of uppermost carbonaceous metasiltstones intruded by dolerite sills which corresponds to the Wildman Siltstone. Underlying this sequence are carbonaceous metasiltstones which contain quartzite beds of various thickness. Lower most are carbonaceous sand/siltstones containing coarse ferruginous conglomeratic quartzite units. These underlying units correspond to the Mundogie Formation. The occurrence of the first quartzite horizon in the upper part of the sequence marks the transition from Wildman Siltstone to Mundogie Formation. Frances Creek Geology is presented in Figure 6.

1:25,000 scale regional mapping has defined NW–SE trending strike ridges comprising tightly folded quartzite units interbedded with metasiltstones/shale units. The metasediment – granite contact is present within the southern licence block whilst flat lying Cretaceous sediment overlie Mundogie Formation on the central western boundary of the licence.

Quartz veining is present throughout the licence and contact metamorphism is largely restricted to the immediate vicinity of the granite metasediment contact.

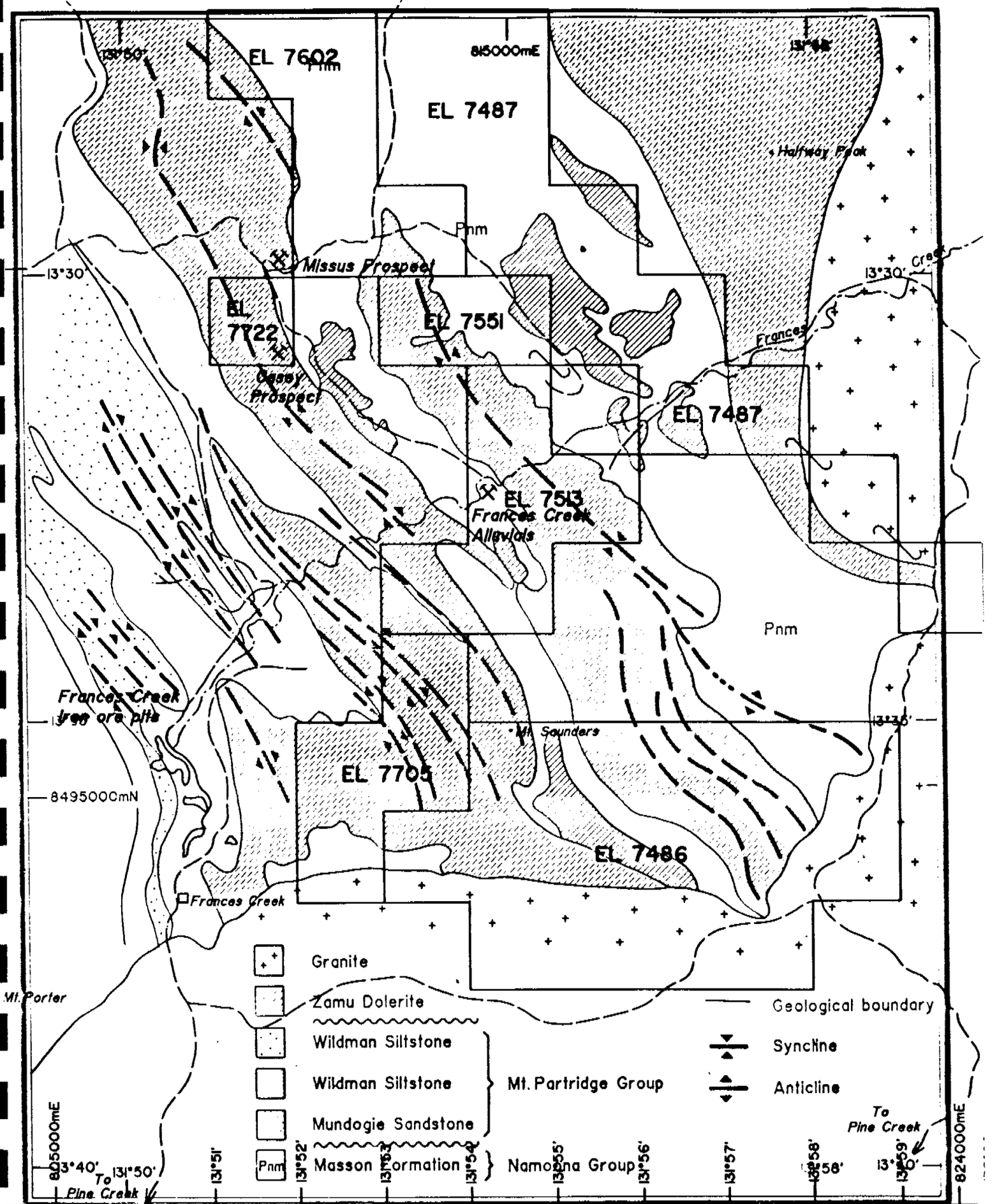
4. 1992 EXPLORATION ACTIVITIES

4.1 Aerial Photography

During April 1992, Dominion purchased colour air photos at 1:25,000 scale from Austlig in Canberra. The relevant air photo runs are:

	Film No.	Run No.	Frame No.
Pine Creek	CAG/C 419	Run 2	109–117
	CAG/C 418	Run 3	007–104

See Plate 1 flight diagram.



FRANCES CREEK GEOLOGY

PROJECT	FRANCES CREEK			STATE	N.T.
ORIGINATOR	S.P.	Date	4/92	DRAWN R.L.	Date 4/92
SCALE	1:100000	FIGURE No:	6	PLAN No:	2K-G6

Dominion Mining Limited

4.2 Geophysics

During August 1992, Dominion commissioned Aerodata to fly airborne magnetics and radiometrics over the Frances Creek tenement areas. The area was re-flown during October 1992.

Preliminary data was recently received and interpretation is underway.

4.3 Stream Sediment Sampling

A regional stream sediment sampling program was conducted by Dominion in various campaigns during the period June to September 1992.

Stream sediment samples were collected from active sediment laden drainages emanating from within the licence. Sample density averaged 1 sample/2km^2. Two sample sizes were collected:

i) -20# silt fraction, 2-3kg, sieved to pass -80# in the laboratory
ii) pan concentrate, approximately 100g

Samples were dispatched to Analabs - Darwin where they were analysed by the following methods:

Au:	30 gram Aqua/Regia Digest, Carbon Rod Finish
Cu,Pb,Zn,As,Ni,Fe,Mn:	Aqua Regia Digest, AAS Finish

A total of 22 stream sediment samples were collected from active sediment laden drainages emanating from within the licence. A best result of 13.0ppm Au was returned (Sample No. 969039) from a pan concentrate. The silt fraction response from the same sample returned <1 ppb Au. Significant pan concentrate anomalies were also recorded along the main Frances Creek drainage. A peak value of 134.0 ppm Au was returned. Follow up infill sampling returned a peak response of 1.01ppm. These anomalous values are thought to be from a transported source as the creek parallels the main Frances Creek access track.

Sample locations and assay results are shown on Fig. 7.

131°52'

131°54'

13°34'

13°35'

13°36'

13°37'

EL 7705

960716
A: 0.035 / 20 / 34 / 73 / 68 / 15 / 70 / 12
B: 0.007 / 27 / 82 / 123 / <50 / 12 / 378 / 2.4

960717
A: 0.015 / 32 / 79 / 250 / 220 / 31 / 244 / 22
B: 0.002 / 46 / 48 / 121 / <50 / 38 / 567 / 4.1

960718
A: 0.010 / 12 / 41 / 40 / 41 / 3 / 31 / 8.3
B: 0.001 / 25 / 92 / 55 / <30 / 10 / 190 / 2.2

960713
A: 134 / 108 / 55 / 280 / 367 / 61 / 2435 / 29.5
B: 0.001 / 47 / 50 / 144 / <50 / 55 / 1218 / 3.5

960714
A: 0.012 / 41 / 20 / 126 / 140 / 39 / 263 / 15.6
B: 0.002 / 56 / 25 / 69 / <50 / 26 / 455 / 3.9

969065
A: 0.002 / 34 / 9 / 34 / 40 / 10 / 87 / 6.85
B: <0.001 / 22 / 21 / 19 / <50 / 16 / 97 / 1.6

969062
A: 1.01 / 53 / 50 / 197 / 350 / 39 / 880 / 21.80
B: 0.001 / 58 / 39 / 138 / <50 / 65 / 439 / 4.7

969066
A: 0.004 / 29 / 24 / 80 / 87 / 10 / 50 / 11.30
B: <0.001 / 13 / 14 / <2 / <50 / 6 / 87 / 0.7

969067
A: 0.004 / 19 / 15 / 69 / 29 / 9 / 1390 / 3.11
B: <0.001 / 17 / 32 / 73 / <50 / 9 / 122 / 1.5

969036
A: 0.002 / 24 / 17 / 71 / 56 / 8 / 80 / 7.27
B: <0.001 / 30 / 27 / 321 / 70 / 27 / 238 / 1.6

969037
A: 0.003 / 39 / 13 / 99 / 90 / 15 / 66 / 9.78
B: 0.001 / 36 / 51 / 84 / <50 / 22 / 324 / 2.9

969038
A: 0.085 / 12 / 8 / 16 / 43 / <2 / 80 / 2.12
B: 0.001 / 18 / 30 / 30 / <50 / 10 / 117 / 1.8

969039
A: 13.00 / 15 / 9 / 20 / 100 / 6 / 100 / 2.85
B: <0.001 / 19 / 20 / 17 / <50 / 11 / 105 / 1.2

969166 0.04 / 4 / <3 / 23 / <50 / 11 / 46 / 0.87
969165 0.04 / 14 / 46 / 24 / 100 / 9 / 47 / 1.24
969164 0.29 / 551 / 306 / 2000 / 2200 / 39 / 84 / 49.00
969163 0.23 / 148 / 365 / 262 / 910 / 11 / 49 / 10.30
969162
2.14 / 41 / 51 / 71 / 300 / 9 / 53 / 4.90

960896
<0.01 / 56 / 305 / 139 / 630 / - / 41 / 5.6

969148
<0.01 / 15 / 25 / 123 / <50 / 7 / 43 / 1.5

969149
<0.01 / 9 / 13 / 26 / <50 / 10 / 39 / 0.41

969150
<0.01 / 11 / 10 / 16 / <50 / 13 / 78 / 0.5

960898
<0.01 / 15 / 13 / 18 / <50 / - / 42 / 1.6

969151
0.03 / 117 / 642 / 1256 / 2570 / 59 / 180 / 32.2

MT SAUNDERS

<0.01 / 4 / <3 / 15 / 266 / 22 / 46 / 32
176598

176597
0.03 / 8 / <3 / 40 / 170 / 32 / 20 / 22.7

960899
<0.01 / 8 / 10 / 9 / <50 / - / 57 / 0.7

969007 969008
969005 969009
969006 960900
969004
969003

960897
<0.01 / 51 / 34 / 235 / 91 / - / 58 / 6.2

176596 0.02 / 33 / 23 / 64 / 124 / 18 / 15 / 11.7
176595 <0.01 / 16 / <3 / 49 / 164 / 16 / 150 / 26.8

969010
A: 0.001 / 15 / 16 / 50 / 44 / 9 / 169 / 3.47
B: 0.001 / 21 / 67 / 105 / 70 / 16 / 281 / 2.3

Main Pit

969003	<0.01	<2	30	25	<50	4	90	0.5
969004	<0.01	5	48	19	60	7	100	0.65
969005	<0.01	7	22	12	<50	6	130	0.71
969006	<0.01	9	50	30	<50	8	100	1.7
969007	<0.01	8	48	75	<50	6	7	121	0.90
969008	<0.01	7	31	115	<50	7	121	0.90
969009	<0.01	21	53	100	475	15	60	9.5
960900	0.81	6	14	35	139	-	80	1.94

969012
A: 0.001 / 11 / 26 / 79 / 35 / 7 / 114 / 3.21
B: <0.001 / 15 / 47 / 117 / <50 / 10 / 269 / 2.1

969011
A: 0.001 / 11 / 15 / 29 / 27 / <2 / 151 / 2.22
B: <0.001 / 23 / 68 / 114 / <50 / 14 / 425 / 2.4

969002
A: 0.001 / 11 / 22 / 37 / 42 / <2 / 161 / 1.93
B: <0.001 / 11 / 26 / 11 / <50 / 3 / 119 / 1.1

960708
A: 0.021 / 5 / 14 / 21 / 33 / 4 / 72 / 1.5
B: 0.005 / 20 / 94 / 189 / 250 / 12 / 678 / 3.2

Stream sediments
Pan Con A: Au / Cu / Pb / Zn / As / Ni / Mn / Fe
Silt B: Au / Cu / Pb / Zn / As / Ni / Mn / Fe
(200 mesh)
ppm %

Rock chips
Fire assay
AAS finish
Au / Cu / Pb / Zn / As / Ni / Mn / Fe
ppm %

0 250 500 750 1500 m

Dominion Mining Limited

EL 7705 GEOCHEMISTRY

PROJECT FRANCES CREEK STATE N.T.
ORIGINATOR S.P. Date 4/93 DRAWN R.L. Date 4/93
SCALE 1:25000 FIGURE Nº: 7 PLAN Nº: 2K-C23

4.4 Rock Chip Sampling

Rock chip sampling was conducted during the course of the field season. Samples, comprising 3–4kgs of material were collected and dispatched to Analabs – Darwin for Au analysis and Cu, Pb, Zn, Ni, As, Fe and Mn determinations. Methods used are as follows:

Au:	30 grams Fire Assay, AAS Finish (GG309)
Cu, Pb, Zn, Ni, As, Fe, Mn:	Aqua Regia Digest, AAS Finish (GA140)

A total of 17 rock chip samples were collected of quartz veins. A best result of 2.14 ppm Au (Sample No. 969162) was returned from an outcropping quartz vein. A further 4 samples were taken from the immediate vicinity. Weakly anomalous value of 0.29 and 0.23 ppm Au were returned from 2 of 4 samples (Sample No. 969164 and 969163). Highly anomalous Cu, Pb, Zn and As values were also associated with the anomalous Au responses. Peak responses were 551 ppm Cu, 365 ppm Pb, 2000 ppm Zn and 2200 ppm As. This area was termed Target 3. (Figure 8 and 9).

4.5 Soil Sampling

Following up on anomalous rock chip samples , soil sampling involved the establishment of a temporary tape/compass and topofil grid was emplaced over the sampled area. This grid comprised a 0.7km baseline and 1.2km of topofilled crosslines.

Orientation soil sampling was conducted during the gridding phase to determine the optimum Au soil response from various size fractions. This was achieved by soil sampling, along a single line normal to strike and over the area of best rock chip response. Samples were dispatched to Analabs – Darwin where the following size fractions were analysed for low level Au and As.

+2mm
–2mm +40#
–40# +80#
–80# +200#
–200#

805000mE 13°51' 13°52' 13°53' 13°54' 13°55' 13°56' 13°57' 13°58' 13°59' 824000mE 132°00'

13°27'
8510000mN
13°28'
13°29'
13°30'
13°31'
13°32'
13°33'
13°34'
13°35'
8495000mN
13°36'
13°37'
13°38'
13°39'

EL 7602

EL 7487

• Halfway Peak

To Mt. Wells

Missus Prospect

EL 7722

Caseys Prospect

EL 7551

Frances Creek

Mary River

EL 7487

EL 7513

Target 3

Rock chip to 2.20 g/t Au

EL 7705

• Mt. Saunders

EL 7486

Nellie Creek

Frances Creek

• Mt. Porter

To Pine Creek

To Pine Creek

T N

Dominion Mining Limited

PROJECT: FRANCES CREEK

PROSPECT: N.T.

FRANCES CREEK PROJECT AREA TARGETS

0 1 2 4 6 8 km

ORIGINATOR: S.L.
Date: 10/92

SCALE: 1:100000
DRAWN: R.L.

FIGURE 8

PLAN Nº: 2K-Tb2

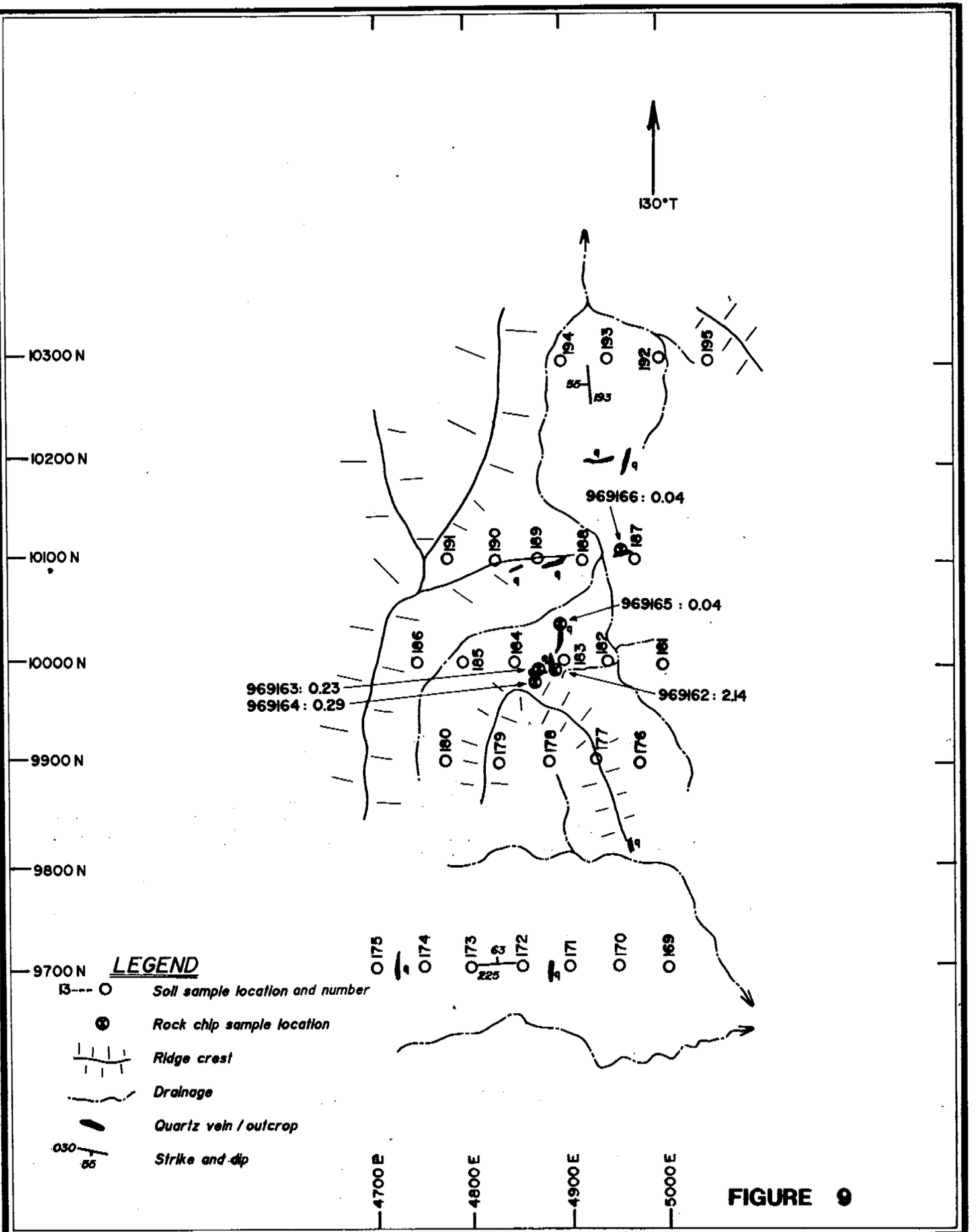


FIGURE 9

TARGET 3 GEOCHEMISTRY

PROJECT	FRANCES CREEK			STATE	N.T.
ORIGINATOR	S.P.	Date 10/92	DRAWN R.L.	Date 10/92	
SCALE 1:5000	FIGURE No:		PLAN No: 2K-C13		

Dominion Mining Limited

4.5 Soil Sampling (Cont'd)

The most consistent Au response was from the +2mm size fraction. (Figure 10).

Soil sampling involved the collection of 27, 2–3kg samples sieved through a –6mm screen in the field (B13169–195). Samples were collected on 50m sample centres and line spacing was varied on 100m and 200m intervals along the baseline.

Samples were sieved by the laboratory and the +2mm size fraction was analysed for low level Au and As using Analabs methods:

Au:	30 grams Aqua Regia Digest, Carbon Rod Finish (GG334)
As:	Aqua Regia Digest, AAS Finish (GA140)

Results were disappointing over this target with a subtle anomalous response of 3ppb being recorded over the zone of anomalous quartz veining against background values of 1ppb Au. See Figure 11 and 12 for contoured Au and As soil values. It was felt that the soil response of Target 3 was too low to warrant any further investigation.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Exploration activities conducted during 1992 within EL7705 included aerial photographic interpretation and reconnaissance mapping at 1:25,000 scale, acquisition of airborne magnetics and radiometrics data, stream sediment sampling and rock chip sampling.

Stream sediment sampling has returned significant Au anomalism from pan concentrates along the main Frances Creek. Peak values of 134 pm Au and 1.01 ppm Au were returned but were not reflected in the silt fraction values for the same sample site (1.0 ppb Au). Up stream follow up sampling failed to identify any further anomalism except for one sample (969039) which returned a peak pan concentrate value of 13.00 ppm Au. This sample site is located immediately east of the fault line which hosts the Frances Creek iron ore deposits. Further up stream evaluation of this anomaly is required.

FRANCES CREEK
TARGET 3 LINE 10000 N

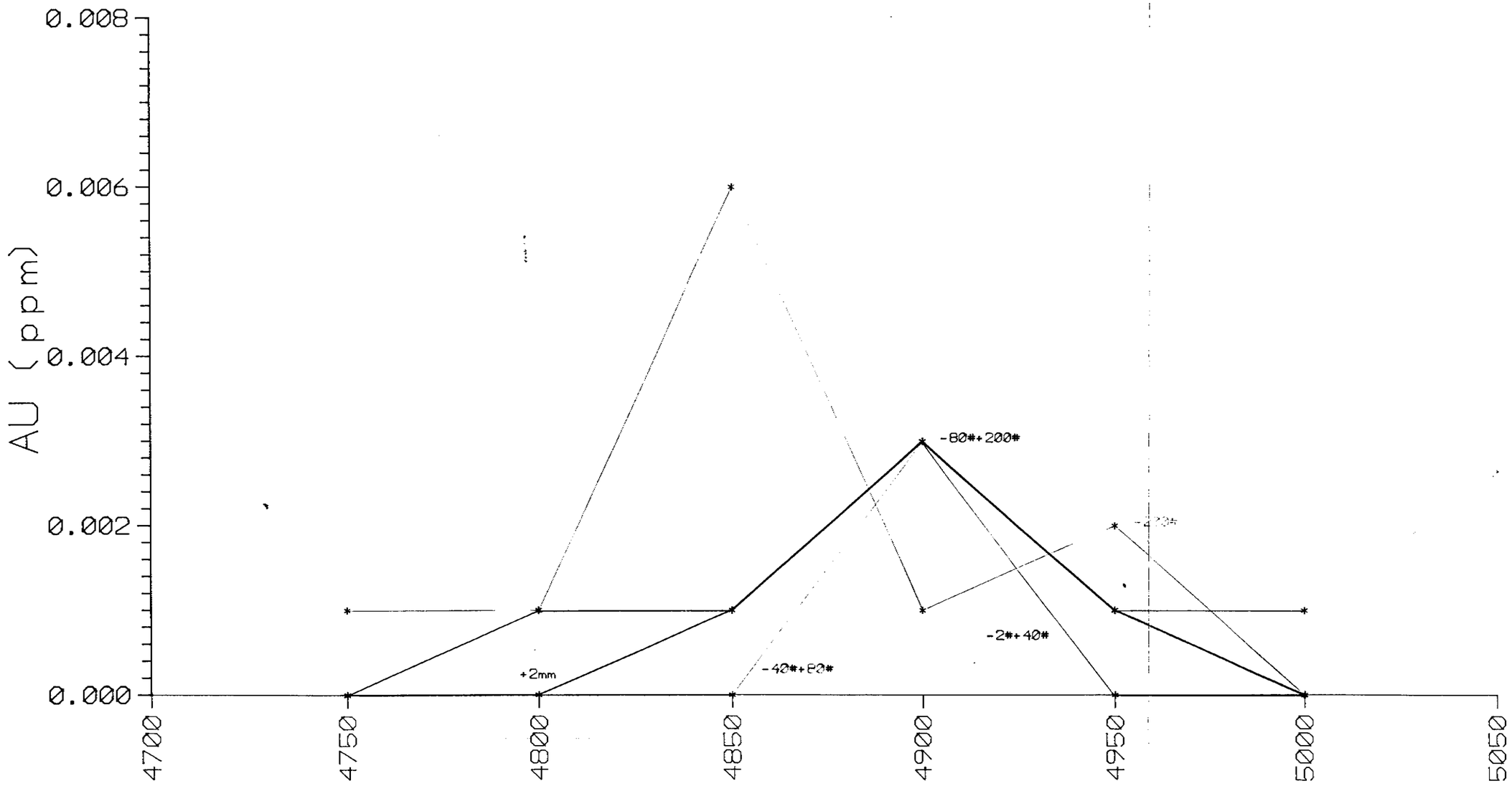


FIGURE 10

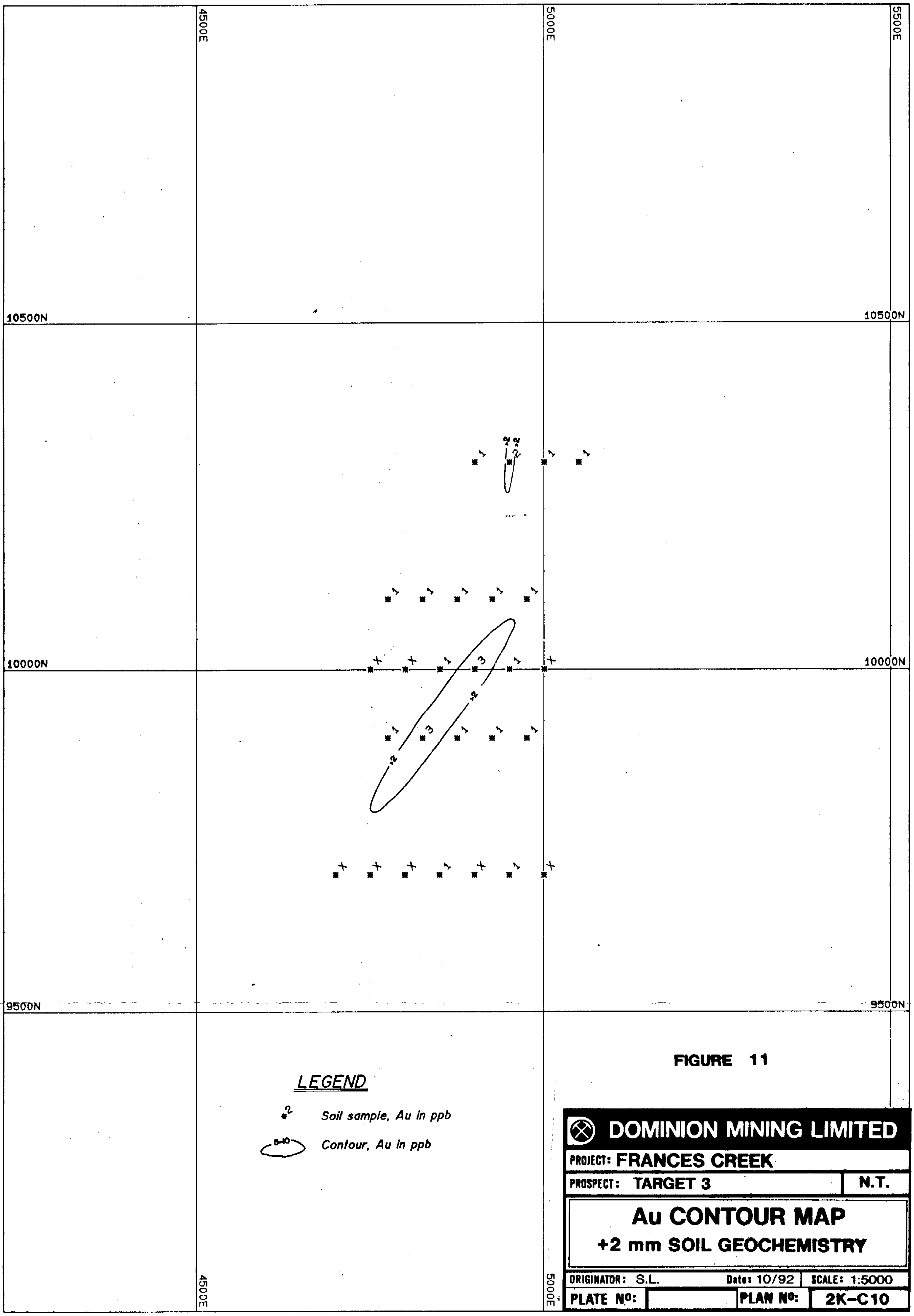


FIGURE 11

DOMINION MINING LIMITED

PROJECT: **FRANCES CREEK**

PROSPECT: **TARGET 3** | **N.T.**

Au CONTOUR MAP

+2 mm SOIL GEOCHEMISTRY

ORIGINATOR: S.L. | Date: 10/92 | SCALE: 1:5000

PLATE No: | PLAN No: **2K–C10**

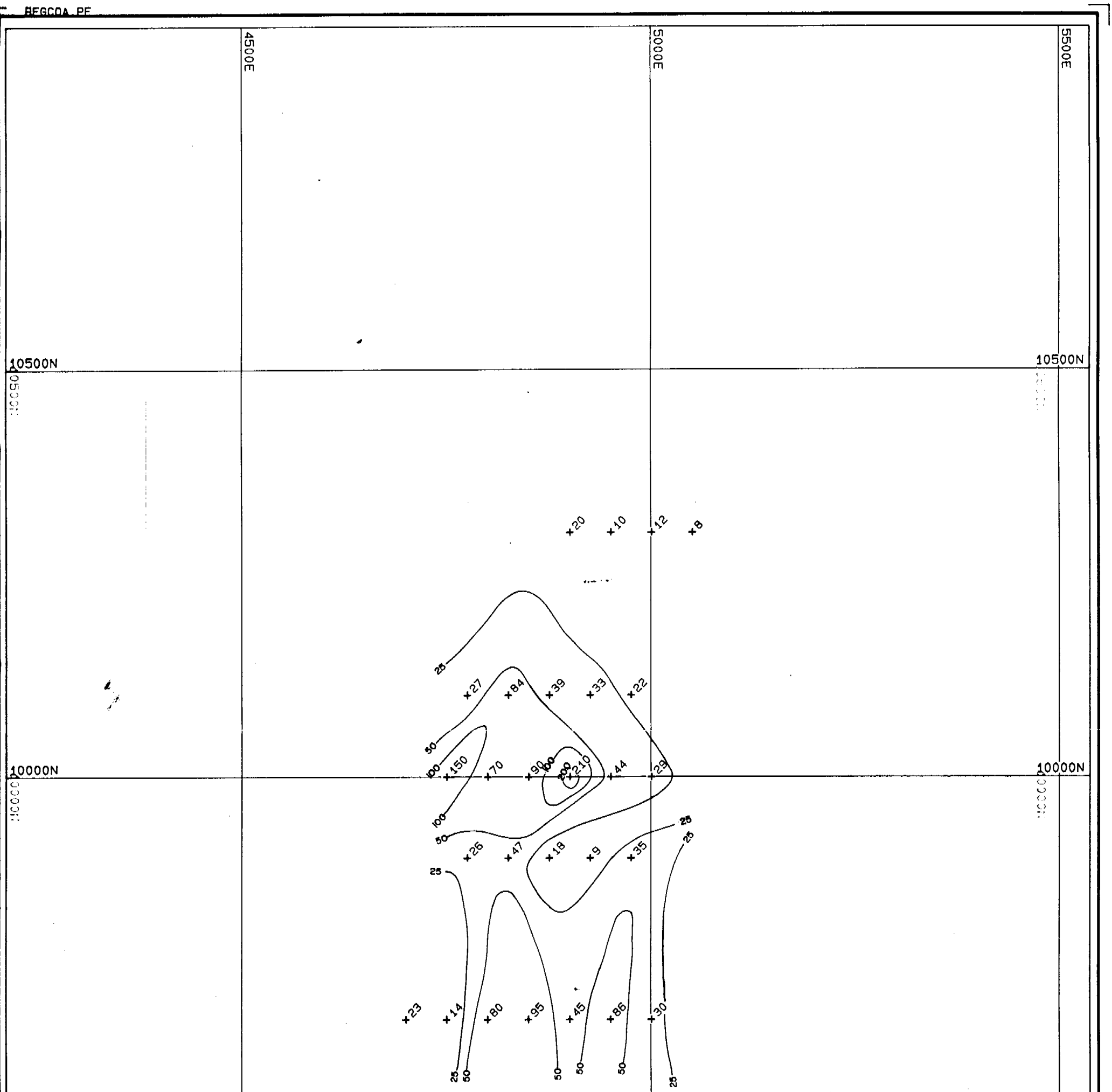


FIGURE 12

TARGET 3

DOMINION MINING LIMITED	
PROJ: FRANCES CK (PINE CREEK)	N.T.
SOIL GEOCHEMISTRY As (ppm)	
PROS: TARGET 3	
SCALE 1:5000	ORIG: S.P.
DATE: 7-APR-93	PLATE No PLAN No 2K-C17

5.0 Conclusions and Recommendation (Cont'd)

Rock chip sampling of quartz veining returned a peak Au response of 2.14 ppm Au. Sampling of quartz veining from the same area produced elevated base metal responses (Zn 2000 ppm, As 2200ppm). Soil sampling over this area, termed Target 3, returned a peak value of 3ppb Au. No further follow up of this anomaly was warranted.

Proposed Programme:

- Evaluation of newly acquired airborne geophysical data
- Follow up stream and rock chip sampling from the 13.00 ppm Au pan concentrate anomaly
- Regional soil sampling if favourable results

6.0 EXPENDITURE

Exploration expenditure for EL7705 to 21 January 1993 amounted to $11,588 against a covenant of $7,500.

EL7705 EXPENDITURE

	EL7705 $
Assays	1,345
Aerial Photography	110
Geophysics	2,073
Drilling: RAB	–
Data Acquisition	–
Equipment	262
Salaries & Wages	4,680
Travel & Accomm	1,429
Vehicles	726
Field Supplies/Equip	79
Camp Rental/Prov.	1,325
Draft & Computing	640
Darwin Office	780
	638
	13,449
Administration (5%)	550
TOTALS	**11,558**

7.0 REFERENCES

NEEDHAM, R.S., CRICK, I.H. and STUART-SMITH, P.G. 1980

Regional geology of the Pine Creek Geosyncline. In Ferguson, J, and Goleby, A.B. (Editors) - Uranium in the Pine Creek Geosyncline. International Atomic Energy Agency, Vienna, pp1-22.

NEEDHAM, R.S. and STUART-SMITH, P.G. 1984a

Geology of the Pine Creek Geosyncline, 1:500,000 Geological map. Bureau of Mineral Resources, Australia.

PAGE, R.W., COMPSTON, W. and NEEDHAM, R.S. 1980

Geochronology and evolution of the late - Archaean basement and Proterozoic rocks in the Alligator Rivers Uranium Field, NT, Australia. In Ferguson, J. and Goleby, A.G., (Editors) - Uranium in the Pine Creek Geosyncline. International Atomic Energy Agency, Vienna, pp39-68.

APPENDIX 1

ANALABS
A Division of Inchcape Inspection and Testing Services, Australia, Pty. Ltd.

Phone (089)472355 | Cnr Coonawarra & Mataram St Winnellie NT | Fax (089)847984

ANALYTICAL REPORT No. 105160.21.07180

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

INVOICE TO:
Dominion Gold Operations
Exploration Division
PO Box 37321

Winnellie NT 0821

ORDER No.	PROJECT
6280	

DATE RECEIVED	RESULTS REQUIRED
02/10/92	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES
1	14/10/92	1

TOTAL No. OF SAMPLES: 21

SAMPLE NUMBERS	SAMPLE DESCRIPTION	ELEMENT/METHOD
+1MM,13169/180,13187/195	SO Prep :	Au,Au(R)/BB33A
+1MM,13169/180,13187/195	SO Prep :	As/BA140,As/BA11A

RESULTS TO
Mr S Pooley
Dominion Gold Operations Pty Ltd
PO Box 37321

Winnellie NT 0821

RESULTS TO

RESULTS TO

REMARKS

Target 3 - Soils.

AUTHORISED OFFICER

ANALABS

A Division of Inchcape Inspection and Testing Services Australia Pty. Ltd.
A.C.N. 004 591 664

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	105160.21.07180	14/10/92	4280	1 OF 1

TUBE No.	SAMPLE No.		As	As	Au	Au(R)				
1	13169 +1MM		<50	30	<0.001	-				
2	13170 +1MM		86	-	0.001	-				
3	13171 +1MM		<50	45	<0.001	-				
4	13172 +1MM		95	-	0.001	-				
5	13173 +1MM		90	-	<0.001	-				
6	13174 +1MM		<50	14	<0.001	-				
7	13175 +1MM		<50	23	<0.001	-				
8	13176 +1MM		<50	35	0.001	-				
9	13177 +1MM		<50	9	0.001	-				
10	13178 +1MM		<50	16	0.001	0.001				
11	13179 +1MM		<50	47	0.003	-				
12	13180 +1MM		<50	26	0.001	-				
13	13187 +1MM		<50	22	0.001	0.001				
14	13188 +1MM		<50	33	0.001	-				
15	13189 +1MM		<50	39	0.001	-				
16	13190 +1MM		84	-	0.001	-				
17	13191 +1MM		<50	27	0.001	-				
18	13192 +1MM		<50	12	0.001	-				
19	13193 +1MM		<50	10	0.002	-				
20	13194 +1MM		<50	20	0.001	-				
21	13195 +1MM		<50	8	0.001	-				
22										
23	DETECTION		50	1	0.001	0.001				
24	UNITS		PPM	PPM	PPM	PPM				
25	METHOD		GA140	GA114	GG334	GG334				

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER Wayne S. Turner

CR93-195

Dominion Mining Limited

PROJECT : **FRANCES CREEK**

PROSPECT : **N.T.**

FRANCES CREEK DISTRICT
FLIGHT DIAGRAM

0 0.5 1 2 3 4 km

ORIGINATOR : S.P.	SCALE : 1:50000
Date : 5/92	DRAWN : R.L. Date : 5/92
REVISION : Date :	PLATE NO : 1
REVISION : Date :	PLAN NO : 2K-Pg1

LEGEND

- Creek / river
- Road / track
- Air photo centre

FILM	RUN	FRAMES	DATE	SCALE
CAG/C 400	12	097-106	23.6.74	1:25000
	13	022-031	23.6.74	1:25000
CAG/C 419	1	006-015	23.7.75	1:25000
	2	109-117	23.7.75	1:25000
CAG/C 418	3	007-014	22.7.75	1:25000
CAG/C 416	4	116-124	21.7.75	1:25000

EL 7602
EL 7487
EL 7551
EL 7722
EL 7513
EL 7705
EL 7486

To Mt. George
Mary River
To Mary River Homestead
Halfway Peak
McKinlay River
To Mt. Wells
Frances Creek
Mine
Walsh Creek
Frances Creek Homestead
Mt. Porter
Nellie Creek
To Union Reefs
To Pine Creek

RUN 12 CAG/C 400 — 097, 102, 098
RUN 13 CAG/C 400 — 022, 026, 030
RUN 1 CAG/C 419 — 015, 011, 006
RUN 2 CAG/C 419 — 109, 113, 117
RUN 3 CAG/C 418 — 014, 010, 007
RUN 4 CAG/C 416 — 116, 120, 124

13°25' 85I5000mN
13°26'
13°27'
8510000mN
13°28'
13°29'
13°30'
8505000mN
13°31'
13°32'
13°33'
8500000mN
13°34'
13°35'
8495000mN
13°36'
13°37'
13°38'
8490000mN
13°39'
13°40'
13°45' 800000mE 13°46' 13°47' 13°48' 805000mE 13°49' 13°50' 13°51' 810000mE 13°52' 13°53' 13°54' 815000mE 13°55' 13°56' 13°57' 820000mE 13°58' 13°59' 13°00'