ANNUAL REPORT ON
EXPLORATION LICENCE 4536
25th July, 1988 - 24th July. 1989

Licence : Peko Wallsend Operations Ltd

Operator : Geopeko (A Division of Peko Wallsend Operations Ltd)

Compiled by : R. Love

Date : September, 1989

Distribution : Department of Mines & Energy - Darwin
Geopeko - Gordon office

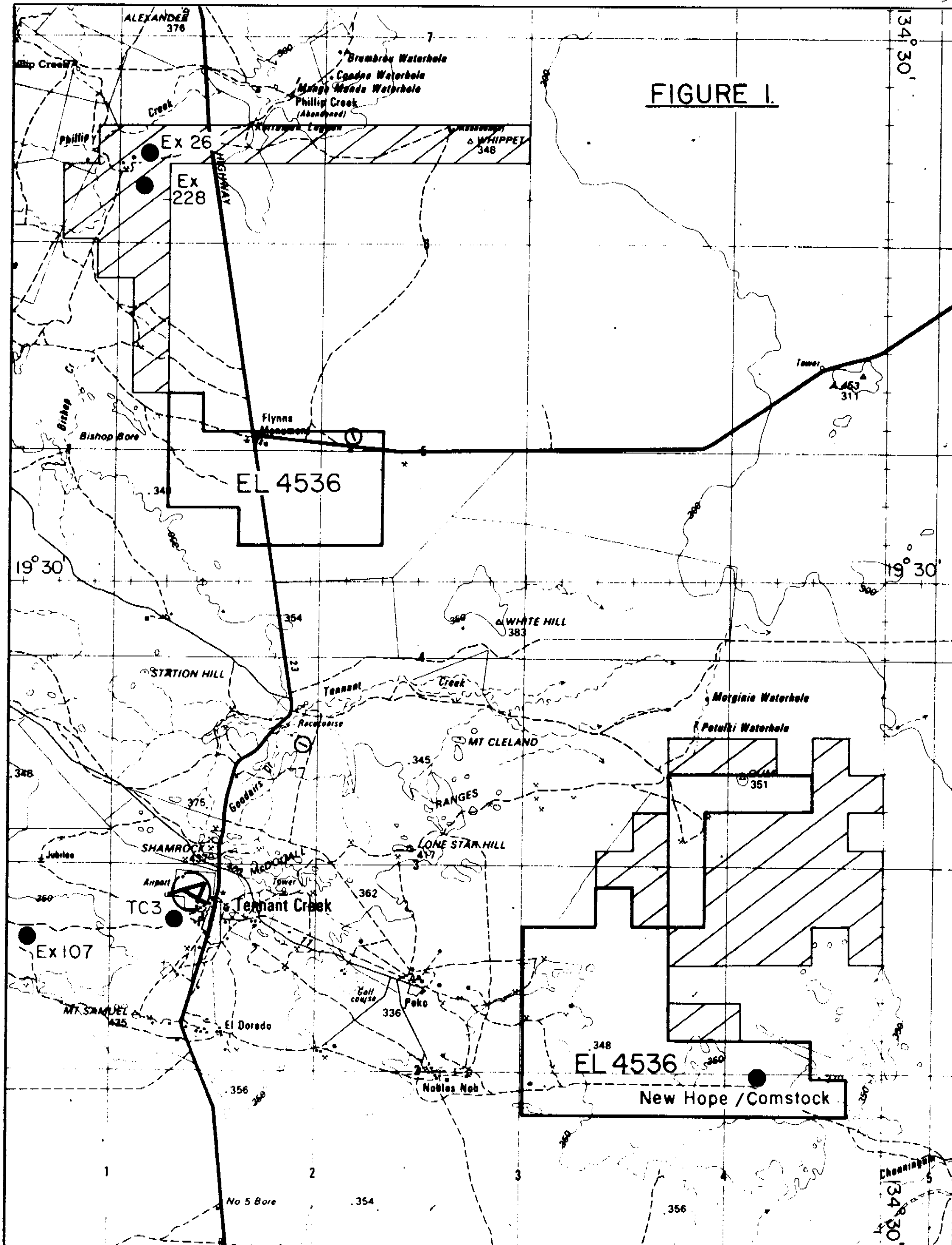
TABLE OF CONTENTS

FIGURES

Diagram No.	Title	Scale
TF 4191	Area to be retained for 5th license year	1:250,000
TF 4252	Explorer 228, Outcrop Geology, Sample Locations	1:5000
TF 4317	Area to be retained for 6th license year	1:250,000

APPENDICES

APPENDIX I	Explorer 195, DH2 - Geological Log
APPENDIX II	Explorer 228 - Surface Sampling Analytical Results - Surface Magnetic Data
APPENDIX III	Report on Soil Geochemistry Survey within the Monument Group



Area to be relinquished

Area to be retained

Topo source: Natmap 1:250000 series sheet SE 53-14

TENNANT CREEK

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD

metres

SCALE 1:250000

GEOLOGIST RJL

DATE 15/6/88

DRAWN RMN

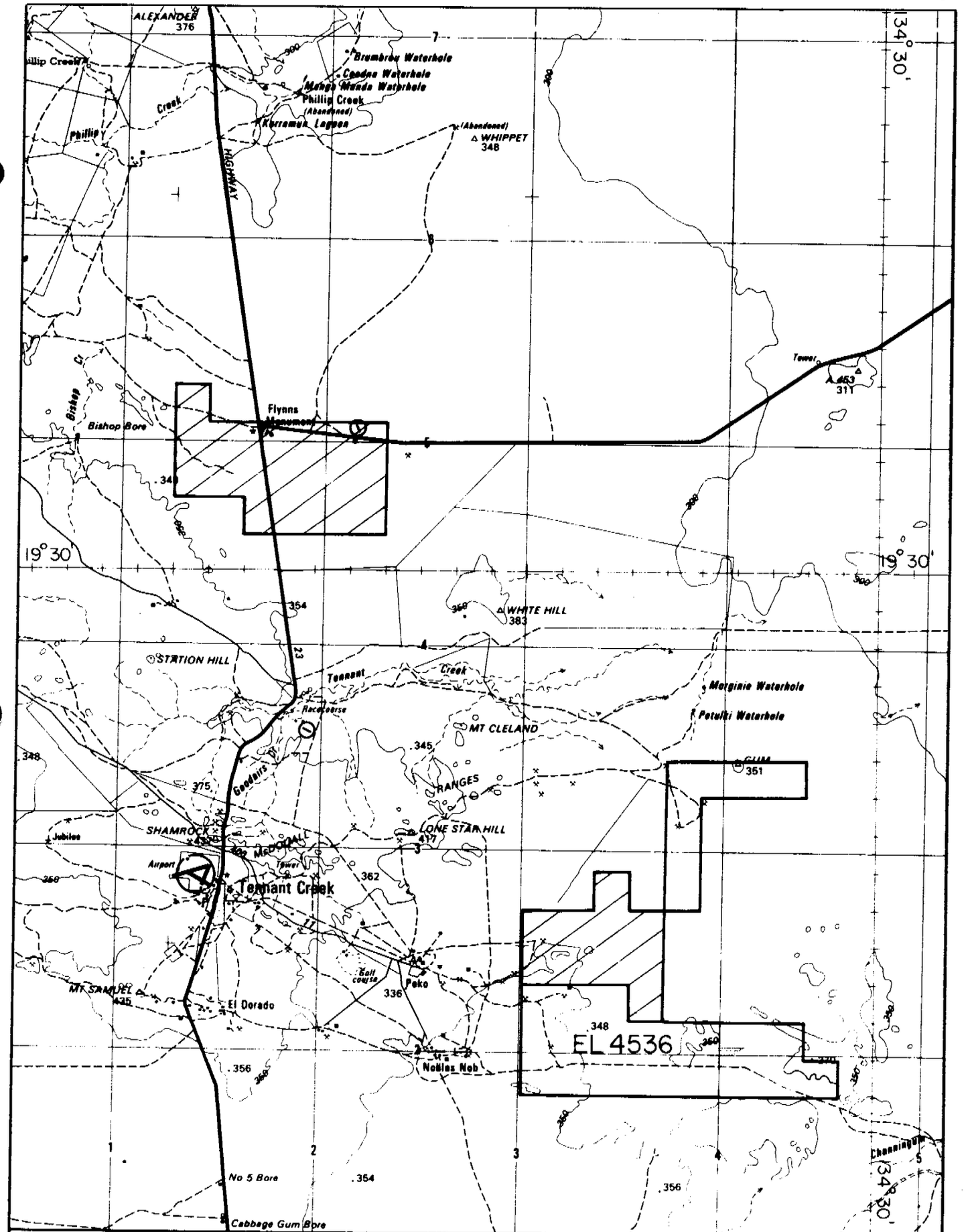
CHECKED

EL 4536

AREA TO BE RETAINED FOR 5th LICENCE YEAR

PROJECT CENTRAL FIELD

DWG NO. TF4191



Area to be relinquished

Area to be retained

Topo source: Natmap 1:250000 series sheet SE 53-14

TENNANT CREEK

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD

25 0 5 10 kilometres

SCALE 1:250000

GEOLOGIST RJL

DATE 22/6/89

DRAWN KAB

CHECKED

EL 4536

AREA TO BE RETAINED FOR 6th LICENCE YEAR

PROJECT CENTRAL FIELD

DWG NO. TF 4317

1. INTRODUCTION

This report covers the exploration activities of Geopeko on EL 4536 during the fifth tenure year (25th July 1988 to 24th July 1989). During this period the license area covered a total of 54 graticular blocks, being located in the vicinity of Tennant Creek (see diagram TF 4191).

Exploration has primarily been directed at the identification of gold, copper and bismuth mineralisation, often associated with bodies of magnetite/hematite, within sediments of the Lower Proterozoic Warramunga Group. The potential for mineralisation to be present in the vicinity of an unconformity at the base of this group has also been investigated. Insufficient encouragement within this area later led to its surrender for the final year of tenure (TF4317).

2. CONCLUSIONS

(a) No significant geochemical variations have been identified between units on either side of an inferred unconformity located approximately 2 km to the south west of the Monument Trig Station, in the vicinity of Three Ways.

(b) Drilling at the Explorer 195 prospect has indicated the presence of a small hematite rich ironstone lenses contained within a talcose alteration assemblage.

(c) Anomalous mineralisation is present within a group of outcropping ironstone bodies located approximately 1.5km to the south of the North Star Mine, and named Explorer 228.

3. RECOMMENDATIONS

(a) A compilation of existing data on the Explorer 195 prospect should be undertaken to assess the potential for strike and dip extensions to the zone of alteration. This may be accomplished through an evaluation of the magnetic data (surface and downhole) together with structural information gained from the geological logs of DHs 1 and 2.

(b) Mineralisation detected at the Explorer 228 prospect may be followed up through a program of R/C drilling.

(c) Surface chip sampling and possibly R/C drilling should be undertaken on the Metallic Hill and Renate ironstone in order to identify shallow, high grade Au/Cu/Bi mineralisation.

(d) A regional soil/bedrock sampling program should be initiated to test for broad mineralogical and geochemical anomalies related to non ironstone hosted mineralisation.

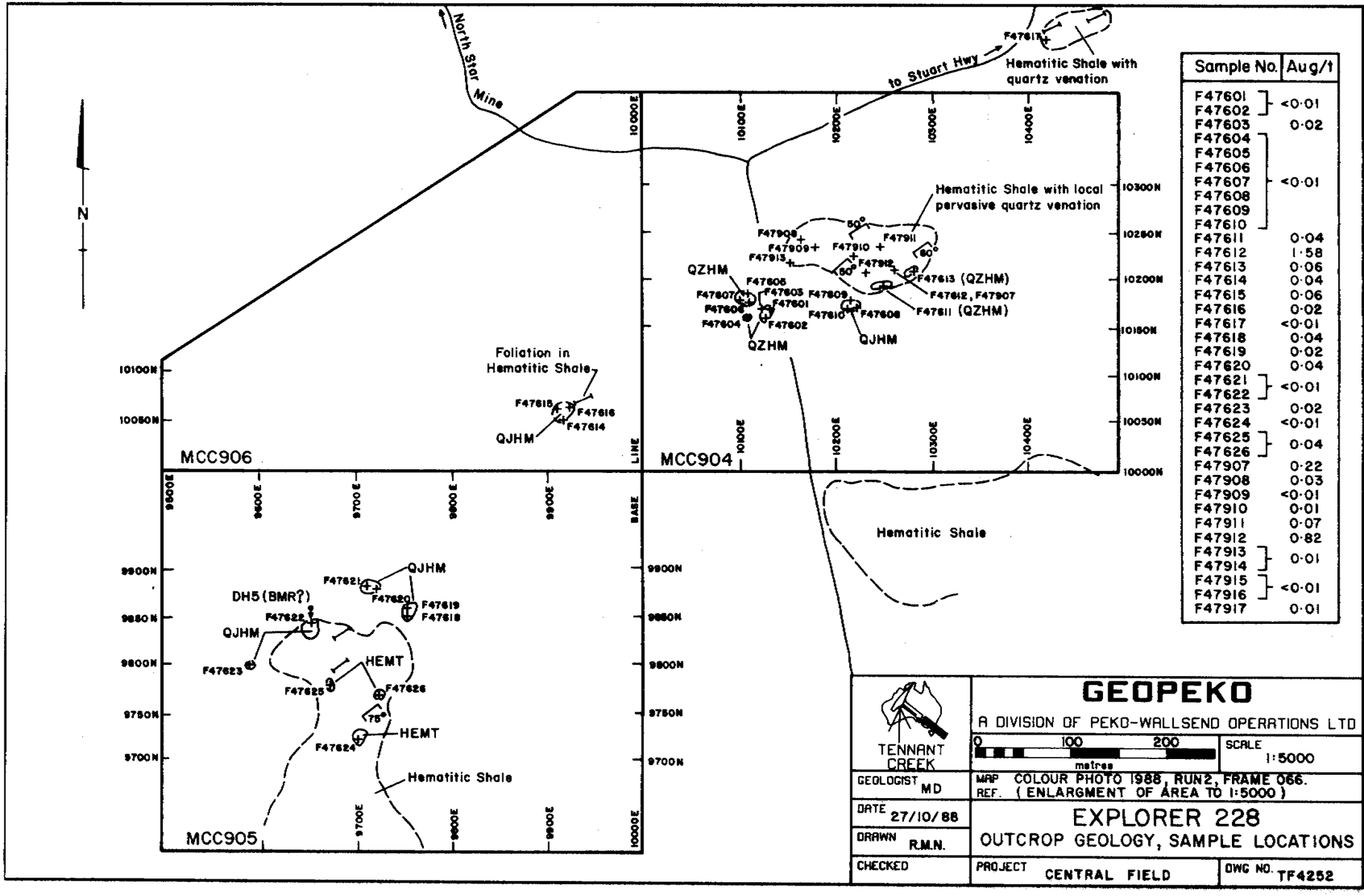
4. WORK CARRIED OUT DURING THE FIFTH LICENSE YEAR

4.1 EXPLORER 195

Review of the data obtained from DH1, drilled at the Explorer 198 prospect during 1984, suggested that there was an opportunity for downplunge extensions to the lode encounted between 80m-140m below surface. Interpretation of the surface magnetic profiles indicated that should these extensions be present they would most likely be steeply dipping to the south and hence a new percussion diamond drill hole was collared at 995E/959N (prospect grid co ordinates) and directed on a bearing of 360° magnetic towards a target 170m vertically below 1000E/1030N. Drilling failed to intersect this target due to excessive and unplanned, steepening of the hole however a number poorly mineralised intervals of ironstone were encountered (see Appendix I for details). A subsequent downhole magnetic survey along this hole, the results of which are still awaited, failed to identify any new targets of significance and hence further drilling has been deferred until a more comprehensive compilation of all existing geological and analytical data can be performed.

4.2 EXPLORER 228

As part of a regional review of geochemical data an occurrence of anomalous bismuth was noted from a sample collected by the B.M.R. during the early 1970's. This result was followed up with the collection of 37 rock chip samples from 9 outcrops of both hematite rich ironstone as well as hematitic shale located approximately 1.5km south of the North Star Mine (TF4252).



Sample No.	Au g/t
F47601	<0·01
F47602	
F47603	0·02
F47604	<0·01
F47605	
F47606	
F47607	
F47608	
F47609	
F47610	
F47611	0·04
F47612	1·58
F47613	0·06
F47614	0·04
F47615	0·06
F47616	0·02
F47617	<0·01
F47618	0·04
F47619	0·02
F47620	0·04
F47621	<0·01
F47622	
F47623	0·02
F47624	<0·01
F47625	0·04
F47626	
F47907	0·22
F47908	0·03
F47909	<0·01
F47910	0·01
F47911	0·07
F47912	0·82
F47913	0·01
F47914	
F47915	<0·01
F47916	
F47917	0·01

TENNANT CREEK

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD

0 100 200 metres

SCALE 1:5000

GEOLOGIST MD

MAP REF. COLOUR PHOTO 1988, RUN2, FRAME 066. (ENLARGMENT OF AREA TO 1:5000)

DATE 27/10/88

DRAWN R.M.N.

CHECKED

EXPLORER 228

OUTCROP GEOLOGY, SAMPLE LOCATIONS

PROJECT CENTRAL FIELD

DWG NO. TF4252

Anomalous analytical results were returned for samples taken within a hematitic shale (see Appendix II for details) while samples of ironstone generally gave Au values near the detection limit of 0.01g/t. These values, together with several anomalous Bi results, led to the pegging of a local grid which was then traversed using a Geometrics G816 magnetometer with a sensor terrain clearance of 4.88m. The magnetic profiles produced from this survey were consistent with low susceptibility, shallow ironstone bodies. Further exploration is expected to include R/C drilling to test each of the three outcropping areas, and possibly a soil sampling program to test for additional occurrences of non outcropping /non ironstone hosted mineralisation.

Following this work three Mineral Claims (MCC's904-906) were pegged, and granted, over this prospect area.

4.3 B.L.E.G. SAMPLING

As part of a program of assessing alternative styles of mineralisation a trial soil/bedrock sampling program was undertaken across an inferred unconformity between the Warramunga Group and an underlying unit thought to be correlated with Arunta Division 1 rocks. Although there were no exposures of this unconformity in the E.L. a segmented traverse line was positioned so as to be likely to cover the boundary as well as pass well into the underlying unit. This traverse is located in the vicinity of the Monument Trig Station, approximately 20km north of Tennant Creek .

A report detailing the results of this survey is enclosed in Appendix III.

5. EXPENDITURE

Total expenditure on EL4536 during the fifth year of tenure was $33875. This figure has been derived from Geopeko monthly financial statements for the 12 month period 1.8.88 to 31.7.89 as costs are reconciled on a calendar month basis.

A breakdown of that expenditure is as follows:

Category		Expenditure($)
Salaries -	Geologists	2621
	Other Technical & General	1223
	Field Assistants	70
Tenement Expenses		3188
Vehicles		834
Freight and Supplies		87
Drilling -	Soil Probe	2929
	Percussion	3720
	Diamond	13116
Analytical Costs		2182
Geophysics -	Ground	520
Survey and Griding		211
Base Support Costs		1998
Management Charges		1176
	Total	33875

The covenant set for the same period was $63500. the variation in expenditure has been due to a modification of the exploration program in which a proposed E.M survey and approximately 500 metres of R/C drilling, were not completed during the tenure year. This together with the reduction in flow-on support costs led to a short fall of $29625, or 46.6% of the proposed expenditure. This compares with an over expenditure of $127492 during the previous year.

6. PROPOSED PROGRAM AND EXPENDITURE FOR SIXTH LICENSE YEAR

The proposed program for the sixth license year is expected to cover the following:

(a) Evaluate the Explorer 195, Metallic Hill and Renate prospects for shallow, and potentially non ironstone hosted mineralisation, by either R/C or percussion/Diamond drilling.

(b) Undertake a regional soil/bedrock sampling program in order to identify mineralogical and geochemical anomalies related to non ironstone hosted mineralisation.

In order to undertake this program a budget of $67,000 is proposed.

APPENDIX I

EXPLORER 195, DH2 - Geological Log

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.

DRILLHOLE SUMMARY SHEET

PROSPECT/MINE : EXPLORER 195 HOLE NO. : H:2

LOCATION : 1.2 KMS S.E. OF GUM RIDGE TRIG.

Purpose of Hole :

Proposed Collar Parameters

Easting : 995.00E
Northing : 959.00N
Azim (grid) : 360°
Azim (mag) : 360°
Dip : -70°

Proposed by : R. LOVE

Surveyed Collar

Easting : 995.00E
Northing : 959.00N
R.L. : 1000
Azim (grid) : 360°
Azim (mag) : 360°
Dip : -70°

Surveyed by :

Target Parameters

Easting : 1000E
Northing : 1030N

Depth below surface :
Hole depth to target : 128M

Drilling Technique	Interval(m)	Hole Size
PERCUSSION	0 - 120	
DIAMOND	102 - 238	NQ

Actual Final Depth : 238M Date Commenced : Drilled by : STADCOTE PTY LTD
Terminated by : R. MAHER Date Completed : Rig Type : LONGYEAR 1000
Logged by : J. FREYBERG
Reason for Termination : LODE INTERSECTED.

Economic Summary :

Lode Type	Interval(m)	Significant Intersections

General Remarks :

1Ver3.1 G E O P E K O 17/10/1988 8:29:

*** PROSPECT : EXPLORER 195 ***
*** HOLE : DH2 ***
Collar Coordinates 995.00 E 959.00 N 1000.0 RL
Azimuth correction = .00
Interpolation inc = 5.0

SURVEYS (Azimuth wrt Grid North)

DEPTH	DIP	AZIMUTH	EASTING	NORTHING	RL
.00	-70.00	360.00	995.00	959.00	1000.00
70.00	-75.00	364.00	995.82	979.57	933.12
147.00	-77.00	363.00	997.06	998.14	858.41
188.00	-78.00	359.00	997.31	1007.01	818.38
200.00	-79.00	352.00	997.14	1009.40	806.62
238.00	-81.00	341.00	995.55	1015.74	769.19

INTERSECTIONS along the EASTING plane

Depth	Easting	Northing	R.L

INTERSECTIONS along the NORTHING plane

Depth	Easting	Northing	R.L
3.0	995.00	960.00	997.22
71.7	995.85	980.00	931.51
155.4	997.16	1000.00	850.26

INTERSECTIONS along the RL plane

Depth	Easting	Northing	R.L
.0	995.00	959.00	1000.00
10.6	995.03	962.54	990.00
21.2	995.11	965.89	980.00
31.6	995.22	969.06	970.00
42.1	995.36	972.07	960.00
52.5	995.52	974.95	950.00
62.9	995.70	977.71	940.00
73.2	995.88	980.40	930.00
83.6	996.07	983.03	920.00
93.9	996.26	985.61	910.00
104.2	996.44	988.14	900.00
114.5	996.61	990.62	890.00
124.8	996.77	993.05	880.00
135.1	996.92	995.43	870.00
145.4	997.05	997.77	860.00
155.6	997.16	1000.06	850.00
165.9	997.26	1002.30	840.00
176.1	997.31	1004.51	830.00
186.3	997.32	1006.66	820.00
196.6	997.21	1008.73	810.00
206.7	996.93	1010.64	800.00
216.9	996.54	1012.41	790.00
227.1	996.09	1014.07	780.00
237.2	995.59	1015.62	770.00

GEOPEKO – DRILLING LOG SHEET PROSPECT: EXPLOERER 195 HOLE No: H:2 PAGE 1 OF 5

GEOLOGICAL LOG	Mineral Percentages								Sample Number F	Interval From	Interval To	Au ppm	Cu ppm	Bi ppm
	HEM	MAG	TAL	QTZ										
102-128.2m HEMATISED SILTSTONE AND GREYWACKE Majority of both the siltstone and greywacke are red - purple colour. Greywacke beds are not as hematitic as the siltstone beds, being a purple grey colour. Sediment is turbiditic, and has been defined by soft sediment slumping. Greywacke beds are only 40cm wide and siltstone beds vary from a few mm to about 10cm - most average 3-5mm. The hematitic alteration tends to follow along the lines of bedding even where it is slumped. Not all the siltstone beds have undergone hematitic alteration. This gives the siltstone a banded look. Greywacke is coarse to medium grained, and most have originally contained feldspar which has since altered to clay. Cleavage can be seen weakly on the broken edges of the core. 102.8-103.3m Fault zone - rock very intensely quartz veined. Core is more vughy therefore crumbly. Where the siltstone is banded it has blebs (1-2mm) and thin layers of white clay which line up along bedding may be oxidation feature. 114.4-115.6m Thick greywacke bed - massive not veined. 118.9-118.95 Coarse grainee quartz sandstone. 60% pink quartz. Shows younging to top of core. 126.15-126.2 Chlorite rich zone made up of plately chlorite.													
127.6-128.2m Siltstone that is very altered by chlorite and talc.														
Bedding *102.25 62°														
110.7 60°														
113.9 65°														
115.85 70°														
122.3 65°														
123.9 65°														
*125.4 62°														
127.15 50°														
Quartz Vein 102.8 21°														
109.6 20°														
111.02 54°														
112.1 41° Opposite direction to bedding														
113.8 45° Opposite direction to bedding														

8

GEOLOGICAL LOG				Mineral Percentages								Sample Number	Interval From	Interval To	Au ppm	Cu ppm	Bi ppm
				HEM	MAG	TAL	QTZ										
Cpy & Chlorite	115.7	60°	Parallel to bedding														
Qtz Vein	122-122.2	18°															
Fracture	117-117.2	12°	Opposite angle to bedding - limonite stained.									4824	127.6-128.2		0.01	13	<10
128.2-128.85m QUARTZ HEMATITE MAGNETITE Hematite with minor magnetite in it. The hematite (specularite) has a massive texture that is broken by quartz veins. Quartz veins vary from 1mm to up to 20mm in width. Some veins run at 45° to LCA. Lode also contains very minor dark green talc in small blebs about 4mm long.				60	5	1	34					48225	128.2 - 129		0.01	80	30
128.85-129m HEMATITE (SPECULARITE) The specularite is coarse grained (1-2mm) in size, and the unit is massive.				100													
129-132.2m TALC HEMATITE MAGNETITE Specularite, with very minor magnetite, is found as blebs that are generally elongated along what is presumed to be cleavage (varies from 25 to 40° to the LCA). The edges of the specularite are embayed and contain talc, talc filled fracture also cut the specularite blebs. The fractures in the hematite are usually parallel to the short axis of the fragment. Talc comes in the varieties light green flakes or dark green flakes. The colour of the dark green flakes may be due to associated with chlorite. The two types of the talc are either intergrown or the dark green variety occurs separately. There are a range of sizes for the hematite, from only a few mm to large patches up to 4cm across. The larger fragmetns of hematite are not as embayed as the smaller fragments. The proportion of the hematite f5agments to the talc matrix varies, this can be seen by the percentages. Thin carbonate veins cut the core - fine only a few mm thick.				40		60						48226	129 - 130		0.01	24	25
				35		65						27	130 - 131		0.01	9	<10
				40		60						28	131 - 132.2		0.01	5	<10

GEOPEKO – DRILLING LOG SHEET PROSPECT: EXPLORER 195 HOLE No: H:2 PAGE 3 OF 5

GEOLOGICAL LOG	Mineral Percentages								Sample Number F	Interval From	Interval To	Au ppm	Cu ppm	Bi ppm
	HEM	MAG	TAL	QTZ										
132.2-135.6m TALC HEMATITE														
Majority of the rock is made up of talc - both the light green and dark green carieties. The dark green variety is found as blebs which vary in size from a few mm to 2cm. The dark green talc blebs have been fractured, these fractures are filled with light green talc. Specularite is found in the core in the light green talc, it forms irregular shapes and filles some of the fractures in the dark green talc. The dark green talc fragments may have originally been sediment, with the talc and hematite being later stage events. There is a shear down the centre of the core to 133.3m which contains CO_2 and varies from 0.5cm to 1cm in width. The shear is about 10° to the LCA and contains talc which is lined up along the direction of the shear. One side of the shear contains fragments of dark green talc and the other doesn't. The side without the dark green talc fragments has hematite fragments, similar to 129-132.2m.	7		93						48229	132.2	133	0.03	<2	<10
	10		90						48231	133	134	<0.01	5	<10
	10		90						48232	134	135	<0.01	8	<10
	7		93						48233	135	136	0.03	<2	<10
135.6-144.4m TALC HEMATITE	10		90						48234	135.6	136	0.01	6	<10
Similar to 129-133.2. Specularite fragments are of varying size with light green talc in between. From 141.4 to 144m specularite is a mixture of light and dark green talc. In the rest of hte interval the hematite fragments are in the light green tlac. Also find blebs of dark green talc like the previous interval. A foliation is present in the core.	40		60						35	136	137	0.01	9	<10
	50		50						36	137	138	<0.01	7	<10
	45		55						37	138	139	<0.01	11	<10
	35		65						38	139	140	<0.01	8	<10
	25		75						39	140	141	0.01	110	<10
	20		80						48241	141	142	0.01	8	<10
* 137.3 35° to LCA	20		80						42	142	143	<0.01	2	<10
141.5 20° to LCA	20		80						43	143	144.4	<0.01	3	<10
144.3-144.4m The core is very weathered and the talc has altered to white clay.														
144.4-145m QUARTZ HEMATITE	40		60						48244	144.5	145	0.01	13	<10
Intergrown quartz and specularite. Quartz is often vughy and the vughs are iron stained. At top also have remanent blebs of talc that have been weathered to a clay. Some of the quartz is in the form of veins, the rest is intergrown with the hematite. Quartz veins 50° to LCA.														

GEOLOGICAL LOG	Mineral Percentages								Sample Number F	Interval From	Interval To	Au ppm	Cu ppm	Bi ppm
	HEM	MAG	TAL	QTZ										
145-172.5m INTERBEDDED SILTSTONE AND GREYWACKE Light grey siltstone interbedded with lesser fine grained greywacke. The beds average 5-10cm in thickness, with quite a few of the greywacke beds showing fining towards the collar. Breaks in the core, which include those parallel to bedding and other oblique fractures, are often limonite stained, suggesting the movement of oxidising fluids. Quartz veins cut the core in various places, and often veins do not cross the bedding boundaries. The larger quartz veins are often vughy.														

	Depth	LCA	LDHP	
Vein	145.1	21°	230°	
	156.8	25°		
145-145.5	Core very broken - mainly along bedding			
145-145.1	Core very altered			
161-161.5	Core broken - limonite stained. Increase in % chlorite			
167.7-168.55	As above.			
168.7-168.9	Large quartz vein, which has fragments of chloritised sediment in it - some of quartz and sediment limonite stained.			
172-172.5	Core broken - limonite stained. Increase in chloritic alteration.			

	Depth	LCA	LDHP	
Bedding	146.2	50°	250°	37/089
" *	148.9	40°	220°	42/052
"	150.5	40°	200°	38/028
"	152.2	50°		
"	154.9	50°		
"	158.75	55°		
"	163.2	53°		
"	164.6	50°		
"	169.5	40°		
" *	170.5	40°		
"	713.5	32°		
"	175.2	40°		

GEOPEKO – DRILLING LOG SHEET | PROSPECT: EXPLORER 195 | HOLE No: H:2 | PAGE 5 OF 5

GEOLOGICAL LOG

172.5-238m INTERBEDDED HEMATITE SHALE AND GREYWACKE

Thin interbeds of red purple hematitic shale and light green grey fine grained greywacke. The average thickness of the siltstone bed is 2-5cm. Limonite staining is found on many of the fractures in the core. The hematite in the siltstone is thought to be due to the movement of an oxidation front through the Ex 195 area.

175.9-176 Quartz vein has chlorite trapped in it.

Contact 40% to LCA.

	Depth	LCA	LDHP	
Bedding	176.9	40°		
	180.6	50°		
	183.1	50°	205°	~~31/035~~ 24/083
	185.9	45°	190°	33/013
*	187.6	50°	190°	28/014
	189.05	51°	190°	27/014.5
	190.95	52°	190°	27/014
	193.75	58°		
	196.4	50°		
	199.6	56°		
	201.3	50°	150°	~~31/314~~ 319
	203.5	60°	145°	~~22/303~~ 307
	205.4	55°	140°	~~27/299~~ 305
	207.2	55°	140°	~~27/299~~ 305
	209.7	62°	140°	~~20/212~~ 299
	212.7	61°	140°	~~19/212~~ 299
*	215.85	57°	140°	~~25/216~~ 302
	219.5	67°	145°	15/205 [illegible]
	222	63°	150°	~~18/227~~ 301
	226.45	67°		
	231.95	62°		
	236.25	62°		
Fracture	217.85-217.95	20°	230°	

Mineral Percentages								Sample Number	Interval From	Interval To	Au	Cu	Bi

22

GEOPEKO
MAGNETIC SUSCEPTIBILITY READINGS

PROSPECT EXPLORER 195 DATE 7.10.88 INSTRUMENT

HOLE NO. H:2 USER M. SPRATT SERIAL NO.

SPACER (mm) CORE SIZE NQ

DEPTH (m)	SUSCEPTIBILITY MIN	SUSCEPTIBILITY MAX	DEPTH (m)	SUSCEPTIBILITY MIN	SUSCEPTIBILITY MAX	DEPTH (m)	SUSCEPTIBILITY MIN	SUSCEPTIBILITY MAX
102	0.0	0.0	231	0.3	0.4			
105	0.0	0.2	234	0.4	0.5			
108	0.0	0.0	237	0.4	0.5			
111	0.0	0.1						
114	0.0	0.2						
117	0.0	0.1						
120	0.0	0.1						
123	0.0	0.1						
126	0.0	0.1						
129	0.0	0.6						
132	0.0	0.2						
135	0.1	0.1						
138	0.1	0.2						
141	0.0	1.1						
144	0.0	0.2						
147	0.0	0.1						
150	0.0	0.1						
153	0.1	0.2						
156	0.0	0.1						
159	0.0	0.2						
162	0.0	0.1						
165	0.0	0.1						
168	0.0	0.1						
171	0.0	0.1						
174	0.0	0.1						
177	0.0	0.1						
180	0.0	0.0						
183	0.2	0.4						
186	0.2	0.3						
189	0.2	0.4						
192	0.2	0.3						
195	0.1	0.2						
198	0.2	0.3						
201	0.2	0.3						
204	0.2	0.3						
207	0.2	0.3						
210	0.3	0.4						
213	0.3	0.4						
216	0.2	0.3						
219	0.2	0.3						
222	0.3	0.3						
225	0.3	0.4						
228	0.3	0.4						

GEOPEKO-TENNANT CREEK BASIC GEOTECHNICAL LOG SHEET

PROSPECT :EXPLORER 195 HOLE No. : 2 PAGE No.:1

DEPTH FROM	DEPTH TO	ROCK TYPE	WEATH.	ALTN.	ROCK STR.	BEDD/CLEAV ING	BEDD/CLEAV AGE	C.B.A S0	C.C.A S1	SENSE S0-S1	CORE REC.%	RQD %	COMMENTS SHEARS, JOINTS, FAULTS, ETC.
102.00	103.00	STGW	SW	1	S	2	1	62			100	87	102.8-103.4m Fault zone - intensely quartz veined.
103.00	104.00	STGW	SW	1	S	2	1				100	43	
104.00	105.00	STGW	SW	1	S	2	1				100	84	
105.00	106.00	STGW	SW	1	S	2	2				100	100	Slumped sediment.
106.00	107.00	STGW	SW	1	S	2	2				100	100	
107.00	108.00	STGW	SW	1-2	S	2	2		55		100	73	
108.00	109.00	STGW	SW	2	S	2	1				100	76	
109.00	110.00	STGW	SW	2	S	2	1				100	80	
110.00	111.00	STGW	SW	2	S	3	1	60			100	67	
111.00	112.00	STGW	SW	2	S	2	1				100	80	
112.00	113.00	STGW	SW	2	S	2	1				100	86	
113.00	114.00	STGW	SW	2	S	3	1	65			100	39	
114.00	115.00	STGW	SW	1-2	S	2	1				100	79	
115.00	116.00	STGW	SW	1-2	S	2	1	60			100	93	
116.00	117.00	SLST	SW	1-2	S	3	1				100	97	
117.00	118.00	SLST	SW	1-2	S	3	1				100	48	
118.00	119.00	STGW	SW	1-2	S	3	1	70			100	92	
119.00	120.00	STGW	SW	1-2	S	2	1				100	75	
120.00	121.00	STGW	SW	1-2	S	2	1				100	85	
121.00	122.00	GWKE	SW	1	S	1	1				100	90	
122.00	123.00	SLST	SW	1	S	2	1	65			100	35	
123.00	124.00	SLST	SW	1	S	3	1	65			100	100	
124.00	125.00	SLST	SW	1	S	3	1				100	100	
125.00	126.00	SLST	SW	2	S	3	1	62			100	50	
126.00	127.00	SLST	SW	2	M	2	1				100	42	126.15-20m Thin chlorite band.
127.00	128.00	SLST	SW	3-4	W	1	1				100	22	
128.00	129.00	QZHT	FR	1	S	1	1				95	74	
129.00	130.00	TLHT	FR	1	M	1	1				100	98	Lode has heavy talc alteration.
130.00	131.00	TLHT	FR	1	M	1	1				100	100	
131.00	132.00	TLHT	FR	1	M	1	1				100	95	
132.00	133.00	TLHT	FR	1	M	1	1				100	100	Shear running 10 degrees to LCA.
133.00	134.00	TLHT	FR	1	M	1	1				100	90	
134.00	135.00	TLHT	FR	1	M	1	1				100	72	
135.00	136.00	TLHT	FR	1	M	1	1				100	85	
136.00	137.00	TLHT	FR	1	M	1	1				100	100	

GEOPEKO-TENNANT CREEK BASIC GEOTECHNICAL LOG SHEET

PROSPECT :EXPLORER 195 HOLE No. : 2 PAGE No.:2

DEPTH FROM	DEPTH TO	ROCK TYPE	WEATH.	ALTN.	ROCK STR.	BEDD ING	CLEAV AGE	C.B.A S0	C.C.A S1	SENSE S0-S1	CORE REC.%	RQD %	COMMENTS SHEARS, JOINTS, FAULTS, ETC.
137.00	138.00	TLHT	FR	1	M	1	1				100	87	137.5m Foliation 35 degrees.
138.00	139.00	TLHT	FR	1	M	1	1				100	100	
139.00	140.00	TLHT	FR	1	M	1	1				100	100	
140.00	141.00	TLHT	FR	1	M	1	1				100	100	
141.00	142.00	TLHT	FR	1	M	1	1				100	100	141.5m Foliation 20 degrees.
142.00	143.00	TLHT	FR	1	M	1	1				100	100	
143.00	144.00	TLHT	FR	1	M/S	1	1				100	100	
144.00	145.00	TLHTQZHT	FR	1	S	1	1				100	92	
145.00	146.00	SLST	FL	1	S	3	1				100	80	
146.00	147.00	SLST	FL	2	S	3	1	50			100	100	
147.00	148.00	SLST	FL	1-2	S	3	1				100	94	
148.00	149.00	STGW	FL	1-2	S	3	1	40			100	100	
149.00	150.00	STGW	FL	1-2	S	3	1				100	100	
150.00	151.00	STGW	FL	1-2	S	3	1	40			100	85	
151.00	152.00	STGW	FR	1-2	S	3	1				100	93	
152.00	153.00	STGW	FR	2	S	3	1	50			100	100	
153.00	154.00	STGW	FR	2	S	3	1				100	100	
154.00	155.00	STGW	FR	2	S	3	1	50			100	100	
155.00	156.00	STGW	FR	2	S	3	1				100	100	
156.00	157.00	STGW	FR	1-2	S	3	1				100	90	
157.00	158.00	STGW	FL	1-2	S	2-3	1				100	89	
158.00	159.00	STGW	FL	2	S	2-3	1	55			100	90	
159.00	160.00	STGW	FL	1-2	S	2-3	1				100	100	
160.00	161.00	STGW	FL	2	S	2-3	1				100	100	
161.00	162.00	STGW	FL	3	M	2-3	1				100	57	161-161.5m Core broken - limonite stained. Increase in
162.00	163.00	STGW	FL	2	S	2-3	1				100	81	chloritic alteration.
163.00	164.00	STGW	FL	1-2	S	2-3	1	53			100	99	
164.00	165.00	STGW	FL	1-2	S	2-3	1	50			100	100	
165.00	166.00	STGW	FL	1-2	S	2-3	1				100	92	
166.00	167.00	STGW	FL	1-2	S	2-3	1				100	100	
167.00	168.00	STGW	FL	1-2	M	2	1				100	69	167.7-168.55m Core broken. Limonite stained.
168.00	169.00	STGW	FL	2	M	1	1				100	61	
169.00	170.00	STGW	FL	1-2	S	2	1	40			100	67	
170.00	171.00	STGW	FL	1-2	S	2	1	40			100	68	
171.00	172.00	STGW	FL	1-2	S	2	1				100	61	

4 GEOPEKO-TENNANT CREEK BASIC GEOTECHNICAL LOG SHEET

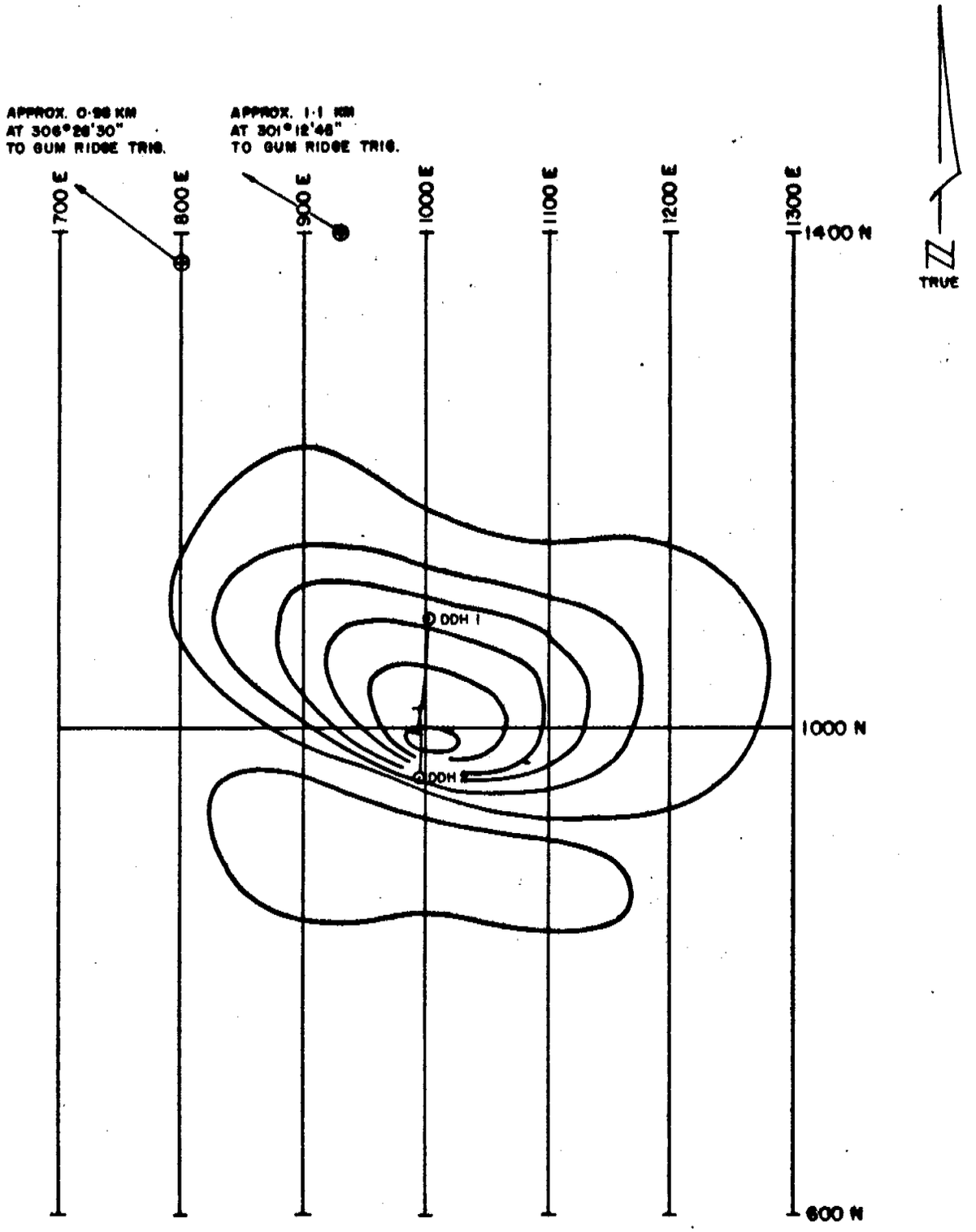
PROSPECT :EXPLORER 195 HOLE No. : 2 PAGE No.:3

DEPTH FROM	DEPTH TO	ROCK TYPE	WEATH.	ALTN.	ROCK STR.	BEDD: ING	CLEAV: AGE	C.B.A : S0	C.C.A : S1	SENSE: S0-S1	CORE REC.%	RQD %	COMMENTS SHEARS, JOINTS, FAULTS, ETC.
172.00	173.00	STGW	FL	1-2	S	2	1				100	15	172-172.5m Core broken. Limonite stained.
173.00	174.00	HMSHGWKE:	FL	1-2	S	3	1	32			100	81	
174.00	175.00	HMSHGWKE:	FL	1-2	S	3	1				100	87	
175.00	176.00	HMSHGWKE:	FL	1-2	S	3	1	40			100	61	
176.00	177.00	HMSHGWKE:	FL	1-2	S	4	1	40			100	69	
177.00	178.00	HMSHGWKE:	FL	1-2	S	4	1				100	82	
178.00	179.00	HMSHGWKE:	FL	1-2	S	4	1				100	94	
179.00	180.00	HMSHGWKE:	FL	1-2	S	4	1				100	62	
180.00	181.00	HMSHGWKE:	FL	1-2	S	4	1	50			100	90	
181.00	182.00	HMSHGWKE:	FL	1-2	S	4	1				100	92	
182.00	183.00	HMSHGWKE:	FL	1-2	S	4	1				100	93	
183.00	184.00	HMSHGWKE:	FL	1-2	S	4	1	50			100	78	
184.00	185.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
185.00	186.00	HMSHGWKE:	FL	1-2	S	4	1	45			100	98	
186.00	187.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
187.00	188.00	HMSHGWKE:	FL	1-2	S	4	1	50			100	100	
188.00	189.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
189.00	190.00	HMSHGWKE:	FL	1-2	S	4	1	51			100	100	
190.00	191.00	HMSHGWKE:	FL	1-2	S	4	1	52			100	100	
191.00	192.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
192.00	193.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
193.00	194.00	HMSHGWKE:	FL	1-2	S	4	1	50			100	100	
194.00	195.00	HMSHGWKE:	FL	1-2	S	4	1				100	92	
195.00	196.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
196.00	197.00	HMSHGWKE:	FL	1-2	S	4	1	50			100	100	
197.00	198.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
198.00	199.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
199.00	200.00	HMSHGWKE:	FR	1-2	S	4	1	56			100	100	
200.00	201.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
201.00	202.00	HMSHGWKE:	FL	1-2	S	4	1	50			100	100	
202.00	203.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
203.00	204.00	HMSHGWKE:	FL	1-2	S	4	1	60			100	100	
204.00	205.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
205.00	206.00	HMSHGWKE:	FR	1-2	S	4	1	55			100	100	
206.00	207.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	

GEOPEKO-TENNANT CREEK BASIC GEOTECHNICAL LOG SHEET

PROSPECT :EXPLORER 195 HOLE No. : 2 PAGE No.:4

DEPTH FROM	DEPTH TO	ROCK TYPE	WEATH.	ALTN.	ROCK STR.	BEDD: ING	CLEAV: AGE	C.B.A S0	C.C.A S1	SENSE: S0-S1	CORE REC.%	RQD %	COMMENTS SHEARS, JOINTS, FAULTS, ETC.
207.00	208.00	HMSHGWKE:	FR	1-2	S	4	1	55			100	100	
208.00	209.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
209.00	210.00	HMSHGWKE:	FL	1-2	S	4	1	62			100	100	
210.00	211.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
211.00	212.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
212.00	213.00	HMSHGWKE:	FR	1-2	S	4	1	61			100	100	
213.00	214.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
214.00	215.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
215.00	216.00	HMSHGWKE:	FL	1-2	S	4	1	57			100	97	
216.00	217.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
217.00	218.00	HMSHGWKE:	FL	1-2	S	4	1				100	99	
218.00	219.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
219.00	220.00	HMSHGWKE:	FR	1-2	S	4	1	67			100	75	
220.00	221.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
221.00	222.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
222.00	223.00	HMSHGWKE:	FR	1-2	S	4	1	63			100	100	
223.00	224.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
224.00	225.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
225.00	226.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
226.00	227.00	HMSHGWKE:	FR	1-2	S	4	1	67			100	100	
227.00	228.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
228.00	229.00	HMSHGWKE:	FL	1-2	S	4	1				100	93	
229.00	230.00	HMSHGWKE:	FL	1-2	S	4	1				100	98	
230.00	231.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
231.00	232.00	HMSHGWKE:	FL	1-2	S	4	1	62			100	100	
232.00	233.00	HMSHGWKE:	FL	1-2	S	4	1				100	100	
233.00	234.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
234.00	235.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
235.00	236.00	HMSHGWKE:	FR	1-2	S	4	1				100	99	
236.00	237.00	HMSHGWKE:	FR	1-2	S	4	1	62			100	93	
237.00	238.00	HMSHGWKE:	FR	1-2	S	4	1				100	100	
238.00	239.00												
239.00	240.00												



SURVEYED GRID LINES

DRILLHOLE PLAN VIEW

TENNANT CREEK

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD

50 0 50 100 150 200 metres

SCALE 1 : 5000

GEOLOGIST R J LOVE

DATE AUGUST 1984

DRAWN 7/89 TLW 8/84

CHECKED RJL

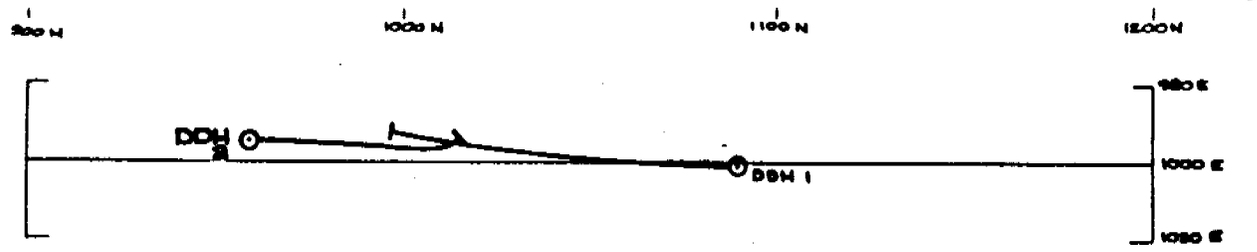
SE - 53-14 - 5758 - 1 - NE

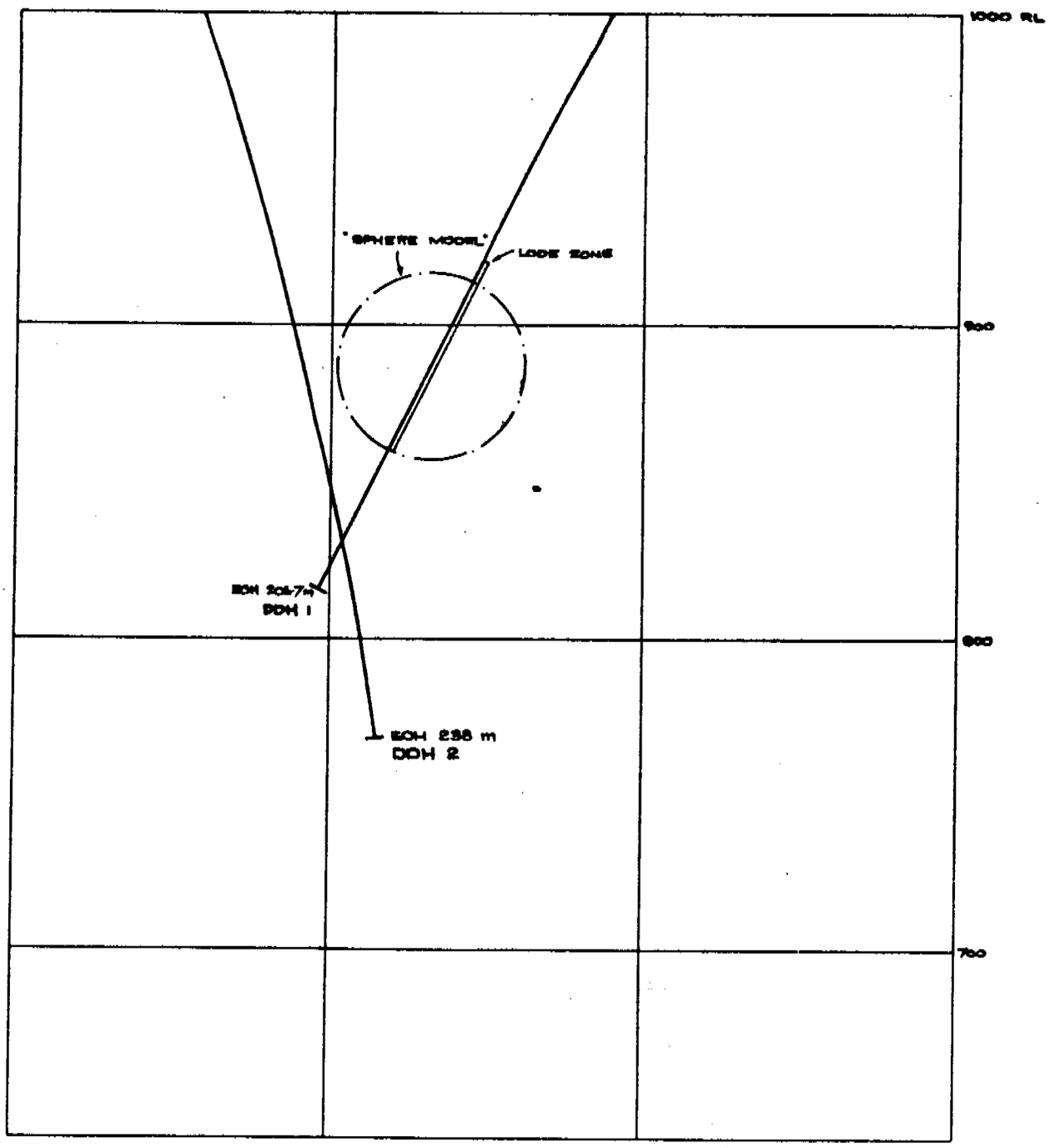
EXPLORER 195

AIRBORNE MAGNETIC SURVEY CONTOURS

PROJECT CENTRAL FIELD

DWG NO. TF 3193





TENNANT CREEK	GEOPEKO A DIVISION OF PEKO-WALLSEND OPERATIONS LTD	
	0 20 40 60 80 100 metres	SCALE 1:2000
GEOLOGIST PRB	MAP REF.	
DATE 6-87	EXPLORER 195 - GUM RIDGE GENERALISED CROSS SECTION 1000 E	
DRAWN 7-89 TLW 6-87,		
CHECKED	PROJECT CENTRAL FIELD	DWG NO. TF 3608

APPENDIX II

EXPLORER 228 - Surface Sampling Analytical Results
- Surface Magnetic Data

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)
305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Mr. Mark Derriman
Geopeko Tennant Creek
Cnr. Schmidt and Irvine Streets
TENNANT CREEK
NT 5760 Australia

JOB NUMBER: 8AD3272

Your Reference: NT 498

Date Received: 11-OCT-1988 Turnaround 3 days
Date Relayed: 14-OCT-1988
Date Reported: 14-OCT-1988

Number of Samples: 11

Report Analyte Codes
N.A. - Not Analysed.
L.N.R. - Listed But Not Received.
I.S. - Insufficent Sample for Analysis.

Report Comprising: Cover Sheet
Pages 1 to 2

Comments:

Report Dist'n: Carbon Copies(CC),Electronic Media(EM),Magnetic Media(MM)

Type	Recipient	Location	Date	Copies

Approved Signature:

for

Harry Fishman
Managing Director.
CLASSIC COMLABS LTD
(Please address any enquiries to Mr. Trevor Francis)

This report relates specifically to the sample(s) tested in so far as that the sample(s) is truly representative of the sample source as supplied.

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)
305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Job: 8AD3272
O/N: NT 498

ANALYTICAL REPORT

EXPLORER 228 / GOSSE RIVER

Rock Chip Samples
EXPLORER 228
Coords refer to cmE/cmN 1:5000 print

SAMPLE	Cu	Pb	Zn	Ag	Bi	
F 47907	15	16	18	1	<10	30.4 / 13.7
F 47908	18	22	14	<1	60	28.4 / 14.3
F 47909	10	12	9	<1	<10	28.6 / 14.2
F 47910	22	10	7	<1	<10	29.5 / 14.0
F 47911	24	14	15	<1	25	30.0 / 14.2
F 47912	19	22	24	<1	30	29.8 / 13.6
F 47913	15	16	16	1	50	28.1 / 13.8

UNITS	ppm	ppm	ppm	ppm	ppm
SCHEME	AAS1	AAS1	AAS1	AAS2	AAS1

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)
305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Job: 8AD3272
O/N: NT 498

ANALYTICAL REPORT

EXPLORER 228 / GOSSE RIVER

SAMPLE	Au Avg	Au Dp1	Au Dp2	Au Dp3	EX 228 (rock chip samples) Coords refer to cmE/cmN on 1:5000 print
F 47907	0.22	0.26	0.17	--	30.4 / 13.7
F 47908	0.03	--	--	--	28.4 / 14.3
F 47909	<0.01	--	--	--	28.6 / 14.2
F 47910	0.01	--	--	--	29.5 / 14.0
F 47911	0.07	--	--	--	30.0 / 14.2
F 47912	0.82	0.64	1.00	--	29.8 / 13.6
F 47913	0.01	--	--	--	28.1 / 13.8
UNITS	ppm	ppm	ppm	ppm	
SCHEME	FA1	FA1	FA1	FA1	

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)
305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Job: 8AD3069
O/N: 36136

ANALYTICAL REPORT

SAMPLE	Cu	Pb	Zn	Bi	Ag
F 47601	17	22	11	10	1
F 47602	14	22	11	10	2
F 47603	9	28	10	<10	1
F 47604	9	20	16	10	1
F 47605	8	24	10	10	1
F 47606	15	24	13	25	1
F 47607	12	22	12	15	1
F 47608	9	12	7	15	1
F 47609	16	28	9	180	2
F 47610	11	26	9	15	2
F 47611	18	40	9	90	1
F 47612	11	14	11	10	<1
F 47613	10	26	8	85	1
F 47614	11	24	12	145	2
F 47615	17	22	10	130	1
F 47616	18	16	8	55	1
F 47617	5	<4	3	<10	<1
F 47618	28	20	12	40	1
F 47619	26	32	12	20	2
F 47620	36	24	11	25	1
F 47621	72	24	8	60	2
F 47622	18	28	13	10	1
F 47623	92	300	46	<10	2
F 47624	28	22	10	55	2
F 47625	11	30	13	<10	1
UNITS	ppm	ppm	ppm	ppm	ppm
SCHEME	AAS1	AAS1	AAS1	AAS1	AAS2

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)

305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Job: 8AD3069
O/N: 36136

ANALYTICAL REPORT

SAMPLE	Cu	Pb	Zn	Bi	Ag
F 47626	30	22	8	45	1
UNITS	ppm	ppm	ppm	ppm	ppm
SCHEME	AAS1	AAS1	AAS1	AAS1	AAS2

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)

305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Job: 8AD3069
O/N: 36136

ANALYTICAL REPORT
EXPLORER 228 CHIP SAMPLES

SAMPLE	Au Avg	Au Dp1	Au Dp2	Au Dp3	Photo Location (1:5,000 Bromide Print) CME/CMN
F 47601	<0.01	--	--	--	27.8 / 12.8
F 47602	<0.01	--	--	--	27.7 / 12.9
F 47603	0.02	--	--	--	27.6 / 12.8
F 47604	<0.01	--	--	--	27.3 / 12.7
F 47605	<0.01	--	--	--	27.3 / 13.2
F 47606	<0.01	--	--	--	27.3 / 13.0
F 47607	<0.01	--	--	--	27.2 / 13.1
F 47608	<0.01	--	--	--	29.6 / 12.9
F 47609	<0.01	--	--	--	29.5 / 13.0
F 47610	<0.01	--	--	--	29.4 / 12.9
F 47611	0.04	--	--	--	30.0 / 13.4
F 47612	1.58	1.66	1.50	--	30.4 / 13.8
F 47613	0.06	--	--	--	30.8 / 13.7
F 47614	0.04	--	--	--	23.5 / 10.5
F 47615	0.06	--	--	--	23.7 / 10.8
F 47616	0.02	--	--	--	23.4 / 10.8
F 47617	<0.01	--	--	--	33.5 / 18.5
F 47618	0.04	--	--	--	20.3 / 6.4
F 47619	0.02	--	--	--	20.4 / 6.7
F 47620	0.04	0.06	0.02	--	19.7 / 7.0
F 47621	<0.01	--	--	--	19.5 / 7.0
F 47622	<0.01	--	--	--	19.2 / 6.2
F 47623	0.02	--	--	--	17.0 / 5.3
F 47624	<0.01	--	--	--	19.2 / 3.8
F 47625	0.04	--	--	--	18.7 / 4.8
UNITS	ppm	ppm	ppm	ppm	
SCHEME	FA1	FA1	FA1	FA1	

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN WA.)

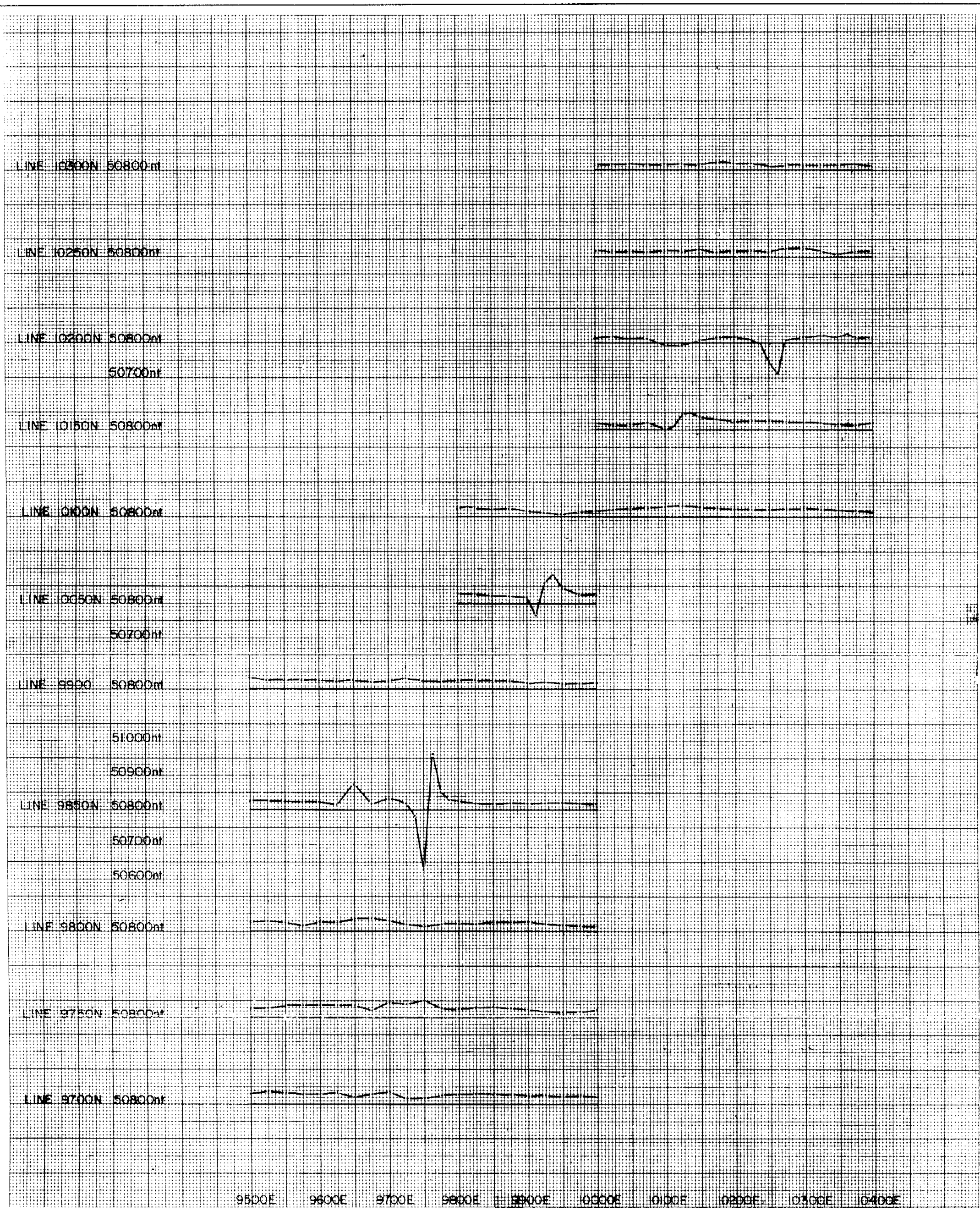
305 South Road, Mile End South, South Australia, 5031
Telephone: (08) 43 5722 Fax: (08) 234 0321 Telex: LABCOM AA89323

Job: 8AD3069
O/N: 36136

ANALYTICAL REPORT

EXPLORER 228 CHIP SAMPLES

SAMPLE	Au Avg	Au Dp1	Au Dp2	Au Dp3	Photo Location (1:5,000 Bromide Print) CME / CMN
F 47626	0.04	--	--	--	19.1 / 5.0
UNITS	ppm	ppm	ppm	ppm	
SCHEME	FA1	FA1	FA1	FA1	



Vertical Scale : 1cm = 100nt

Horizontal Scale : 1cm = 50m

Instrument : G816

Operator : Murray Spratt
Mark Hambridge

Pole Length : 4·88m

Date : 12/12/88

DARWIN

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD

metres

SCALE 'as shown'

GEOLOGIST

DATE 22/9/89

DRAWN KAB

CHECKED

MAP REF. TENNANT CREEK SE53-14

EXPLORER 228
T.M.I. PROFILES

PROJECT CENTRAL FIELD

DWG NO. TF 4400

APPENDIX III

Report on Soil Geochemistry Survey within the Monument Group

REPORT ON SOIL GEOCHEMISTRY SURVEY WITHIN THE MONUMENT GROUP

TENNANT CREEK N.T.

March, 1989

Compiled by : R. Love

TABLE OF CONTENTS

DIAGRAMS / TABLES

APPENDICES

INTRODUCTION

During 1988 a geochemical orientation traverse was undertaken in the Three Ways area (Fig.1) to assess the range of analytical values which could be expected in the vicinity of a basal unconformity to the Warramunga Group. This work formed part of regional exploration activities within EL 4536.

CONCLUSIONS

(a) There were no significant differences between the populations for Au,, Cu, Pb and Zn, for the two lines.

(b) Greater variation of results along the traverse from samples collected in the depth interval 2-3m, compared to the 5-6m interval.

(c) Relatively lower values for Pb in those samples collected over outcropping-subcropping beds in the Monument Trig locality.

RECOMMENDATIONS

(a) Geochemical anomalies, should they exist in this type of geological environment, may be detected by sampling only at the soil/bedrock interface.

(b) Follow up targets for more detailed grid geochemistry may be selected from either regional B.M.R. samples of anomalous results from Explorer drilling programs.

DRILLING AND SAMPLING

Drilling along the traverse lines was undertaken using a tractor mounted percussion drill rig, with a down the hole hammer and cyclone collector. A total of 49 holes were completed along two lines to a minimum depth of 3 metres. In addition, selected holes were extended to 6 metres. Composite samples were collected over the one metre intervals 2-3m and 5-6m for analytical determinations and rock chip identification, (Figures 2 & 3).

Fig. 1

134°13'

134°14'

EXPLORER 12

to Three Ways

19°27'

4112

4113

4114

4115

4116

LINE 2
045° True (040° Mag.)

N

AIR TRACK
HOLE LOCATIONS

STUART HIGHWAY

2826

2825

LINE 1
045° True (040° Mag.)

MONUMENT △ 6017

2824

2823

AIR TRACK
HOLE LOCATIONS

19°28'

4149

4150

4151

4152

to Tennant Ck

134°13'

134°14'

28/2822.

TENNANT CREEK

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD

0 600 metres

SCALE 1:12000

GEOLOGIST R.J.L.

MAP REF. 410928, 410932, 1:12000 Series

DATE 22-9-88

DRAWN R.M.N

CHECKED

EL4536, BLEG TRAVERSE LINES

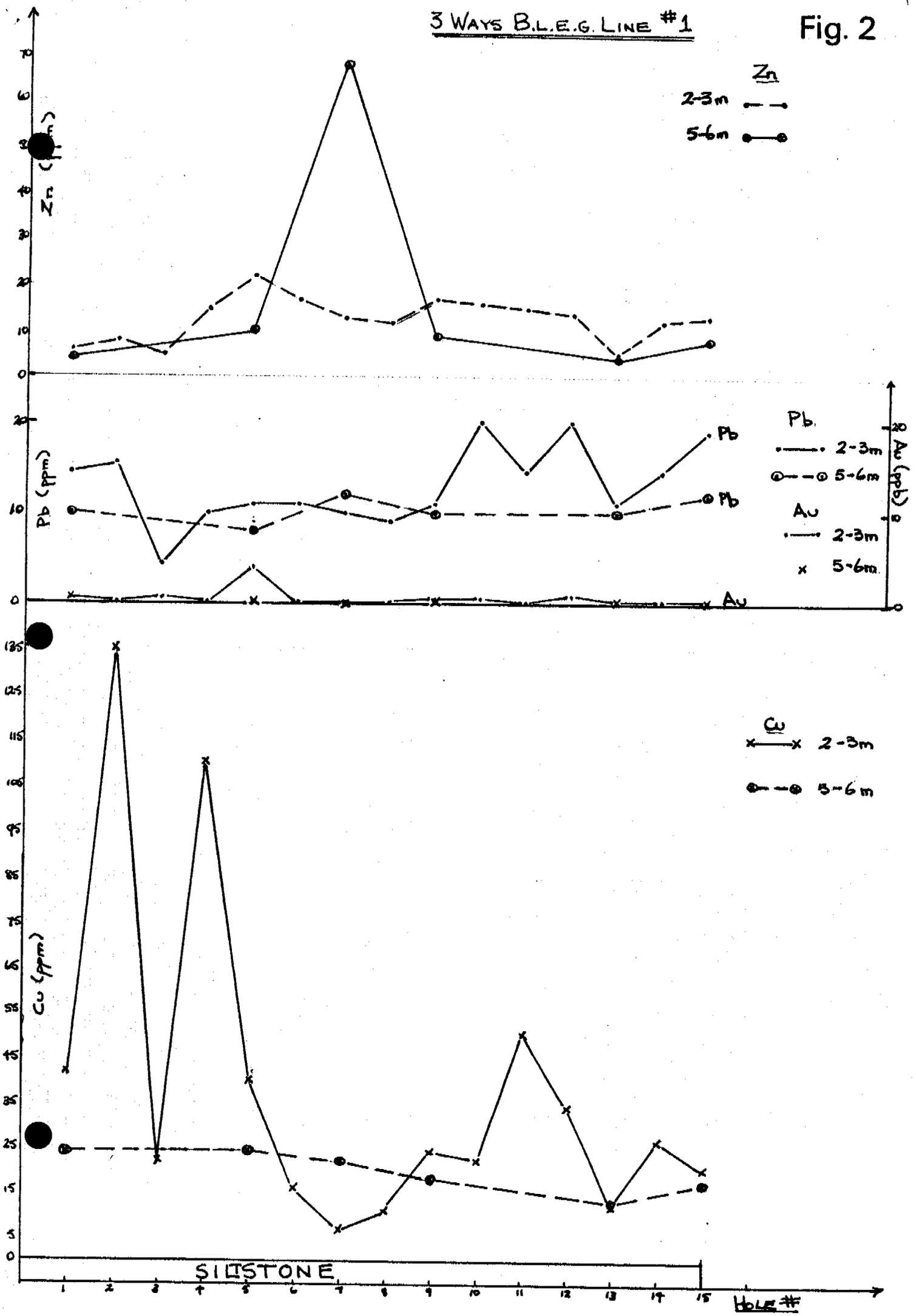
(BULK LEACH EXTRACTABLE GOLD)

PROJECT CENTRAL FIELD

DWG NO. TF4234

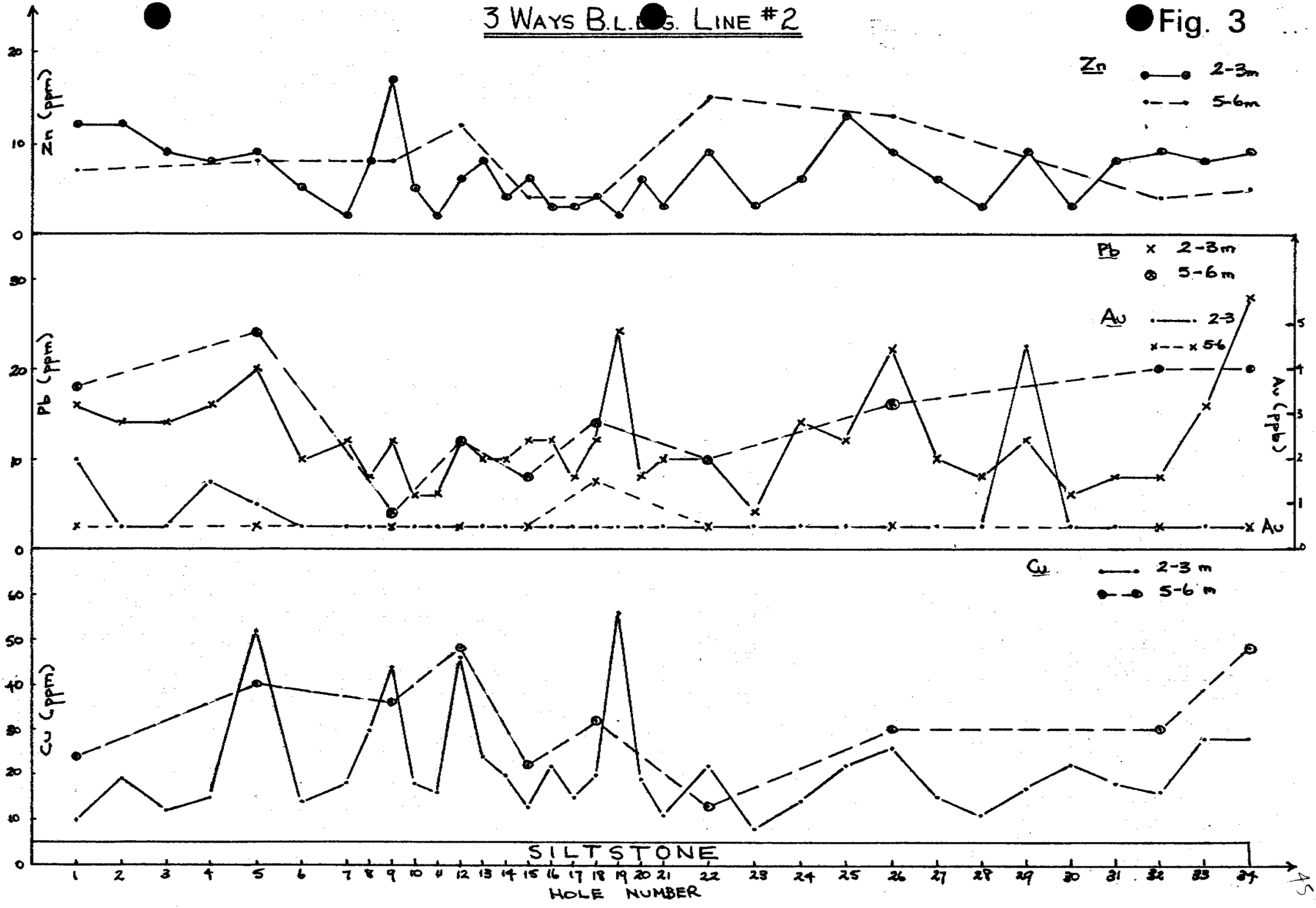
3 WAYS B.L.E.G. LINE #1

Fig. 2



3 WAYS B.L.E.G. LINE #2

Fig. 3



ANALYTICAL RESULTS

Gold

The bulk Leach Extractable Gold (BLEG) scheme was used to detect gold concentrations down to 0.5 ppb.

Except for isolated anomalous values, which may be accounted for by surface enrichment, gold generally occurred in concentrations at, or below, the detection limit.

Copper

A significant variation was noted in the average value and variance for Cu values returned from the two sample intervals 2-3m and 5-6m, the latter giving a much lower variance for values collated along each of the traverse lines (Table 1).

A broad pattern can, however be detected in which Cu values are generally lower towards the northern end of Line 1 and the southern end of Line 2, while a second Cu "low" occurs between holes 13 and 32 along Line 2. The first of these anomalies may indicate the presence of the unconformity in the vicinity of Hole 4 on Line 2.

Lead

Although Pb values were generally erratic along the line there was a much better correlation between the two sample depths than for copper.

The most significant anomaly is a depleted interval, along Line 2, from Hole 6 to 22. The reason for this is uncertain but could be in response to either a stratigraphic horizon or a shallower depth to bedrock.

Zinc

Zinc showed relative depletion in the interval 2-3m compared to corresponding samples in the 5-6m range however, no other anomalous features were detected along the lines.

TABLE 1

BLEG Traverse Lines - Analytical Averages

	Line 1				Line 2			
	2-3m (15 samples)		5-6m (6 samples)		2-3m (33 samples)		5-6m (11 samples)	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Au	0.9 (?)	-	<0.5	-	<0.5	-	<0.5	-
Cu	38.1	35.4	19.7	4.0	22.1	11.6	31.4	10.5
Pb	13.1	4.2	10.3	1.4	12.1	4.9	13.6	6.4
Zn	12.7	4.7	17.2	22.8	6.8	3.5	7.2	3.7

GEOLOGY

The two traverse lines were located so as to pass over the base of the Warramunga Group and extend well into the underlying unit; as yet unnamed. The orientation of the lines was selected at 90° to the interpreted direction of the unconformity in this area.

Rock chips from each of the sample intervals were logged with little variation being noted along each of the traverse lines except for the irregular occurrence of quartz and mottling due to weathering. Fine grained sediments predominated.

APPENDIX I

Analytical Results

50

Job: 8AD3360
O/N: NT 500/ 36197

ANALYTICAL REPORT
3 WAYS BLEG LINE

SAMPLE	Cu	Pb	Zn	Au	LINE 2 HOLE NO.	INTERVAL(m)
F 48011	24	18	7	<0.5	1	5 - 6
F 48012	19	14	12	<0.5	2	2 - 3
F 48013	12	14	9	<0.5	3	2 - 3
F 48014	15	16	8	1.5	4	2 - 3
F 48015	52	20	9	1.0	5	2 - 3
F 48016	40	24	8	<0.5	5	5 - 6
F 48017	14	10	5	0.5	6	2 - 3
F 48018	18	12	2	<0.5	7	2 - 3
F 48019	30	8	8	<0.5	8	2 - 3
F 48020	8	6	12	<0.5	CFS : 9	
F 48021	44	12	17	<0.5	9	2 - 3
F 48022	36	<4	8	<0.5	9	5 - 6
F 48023	18	6	5	<0.5	10	2 - 3
F 48024	16	6	2	<0.5	11	2 - 3
F 48025	46	12	6	<0.5	12	2 - 3
F 48026	48	12	8	<0.5	12	5 - 6
F 48027	24	10	8	<0.5	13	2 - 3
F 48028	20	10	4	<0.5	14	2 - 3
F 48029	13	12	6	<0.5	15	2 - 3
F 48030	7	4	8	<0.5	CFS : 9	
F 48031	22	8	4	<0.5	15	5 - 6
F 48032	22	12	3	<0.5	16	2 - 3
F 48033	15	8	3	<0.5	17	2 - 3
F 48034	20	12	4	<0.5	18	2 - 3
F 48035	32	14	4	1.5	18	5 - 6
UNITS	ppm	ppm	ppm	ppb		
SCHEME	AAS1	AAS1	AAS1	BLEG1		

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)

Job: 8AD3360
O/N: NT 500/ 36197

51

ANALYTICAL REPORT
3 WAYS BLEG LINE

SAMPLE	Cu	Pb	Zn	Au	LINE 1 Hole No.	INTERVAL(m)	
F 47986	42	14	6	1.0	1	2 - 3	
F 47987	24	10	4	1.0	1	5 - 6	
F 47988	135	16	8	<0.5	2	2 - 3	
F 47989	22	4	5	1.0	3	2 - 3	
F 47990	7	6	13	<0.5	CFS : 9		
F 47991	110	10	15	<0.5	4	2 - 3	
F 47992	40	12	22	8.0	5	2 - 3	
F 47993	24	8	10	<0.5	5	5 - 6	
F 47994	16	12	17	<0.5	6	2 - 3	
F 47995	7	10	13	<0.5	7	2 - 3	
F 47996	22	12	68	<0.5	7	5 - 6	
F 47997	11	8	12	<0.5	8	2 - 3	
F 47998	24	12	17	1.0	9	2 - 3	
F 47999	18	10	9	<0.5	9	5 - 6	
F 48000	7	10	10	1.0	CFS : 9		
F 48001	22	20	16	1.0	10	2 - 3	
F 48002	50	14	15	<0.5	11	2 - 3	
F 48003	34	20	14	1.5	12	2 - 3	
F 48004	12	12	5	<0.5	13	2 - 3	
F 48005	13	10	4	<0.5	13	5 - 6	
F 48006	26	14	12	<0.5	14	2 - 3	
F 48007	20	18	13	<0.5	15	2 - 3	
F 48008	17	12	8	<0.5	15	5 - 6	
F 48009	10	16	12	2.0	1	2 - 3	LINE 2
F 48010	8	8	9	<0.5	CFS : 9		
UNITS	ppm	ppm	ppm	ppb			
SCHEME	AAS1	AAS1	AAS1	BLEG1			

CLASSIC COMLABS LTD
Analytical Laboratories (INC. IN W.A.)

Job: 8AD3360
O/N: NT 500/ 36197

52

ANALYTICAL REPORT
3 WAYS - BLEG LINE

SAMPLE	Cu	Pb	Zn	Au	LINE 2 HOLE No.	INTERVAL(m)
F 48036	56	24	2	<0.5	19	2 - 3
F 48037	19	8	6	<0.5	20	2 - 3
F 48038	11	10	3	<0.5	21	2 - 3
F 48039	22	22	9	<0.5	22	2 - 3
F 48040	6	6	6	<0.5	CFS : 9	
F 48041	13	10	15	<0.5	22	5 - 6
F 48042	8	<4	3	<0.5	23	2 - 3
F 48043	14	14	6	0.5	24	2 - 3
F 48044	22	12	13	<0.5	25	2 - 3
F 48045	26	22	9	<0.5	26	2 - 3
F 48046	30	16	13	0.5	26	5 - 6
F 48047	15	10	6	<0.5	27	2 - 3
F 48048	11	8	3	<0.5	28	2 - 3
F 48049	17	12	9	4.5	29	2 - 3
F 48050	8	<4	9	1.0	CFS : 9	
F 48051	22	6	3	<0.5	30	5 - 6
F 48052	18	8	8	<0.5	31	2 - 3
F 48053	26	8	9	<0.5	32	2 - 3
F 48054	30	20	4	<0.5	32	5 - 6
F 48055	28	16	8	<0.5	33	2 - 3
F 48056	28	14	9	<0.5	34	2 - 3
F 48057	48	20	5	<0.5	34	5 - 6
UNITS	ppm	ppm	ppm	ppb		
SCHEME	AAS1	AAS1	AAS1	BLEG1		

APPENDIX II

Geological Logs

GEOPEKO – DRILLING LOG SHEET PROSPECT: BLEG HOLE No: PAGE 1 OF 9

#1 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From To	Au	Cu	Bi
HOLE 1 Red Siltstone Oxidised and weathered sediment with some vein quartz. Oxidised and weathered sediment with some vein quartz. Red siltstone and manganese stained siltstone.										2 - 3 5 - 6			
HOLE 2 Oxidised and weathered sediment Red and yellow siltstone, some vein quartz.										2 - 3			
HOLE 3 Oxidised and weathered sediment. Red and yellow siltstone, some vein quartz.										2 - 3			
HOLE 4 Oxidised and weathered sediment. Varying shades of yellow and brown siltstone - some vein quartz.										2 - 3			
HOEL 5 Oxidised and weathered sediment - red and yellow siltstone. Some vein qtz. 50% o fsiltstone bleached and weathered to white. 50% red siltstone.										2 - 3 5 - 6			
HOLE 6 Oxidised and weathered sediment. 40% bleached and weathered siltstone (to white). 60% brown siltstone. Some vein quartz.										2 - 3			
HOLE 7 Oxidised and weathered sediment. Red siltstone and manganese stained siltstone. Some shades of yellow - some vein quartz. Oxidised and weathered sediment. Varying shades of yellow and brown siltstone. Some bleached white (15%) - some vein quartz.										2 - 3 5 - 6			
HOLE 8 Oxidised and weathered sediment. Grey siltstone - 5% siltstone bleached to white. 5% vein quartz.										2 - 3			

GEOPEKO – DRILLING LOG SHEET PROSPECT: BLEG HOLE No: PAGE 2 OF 9

#1 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From	Interval To	Au	Cu	Bi
HOLE 9														
Oxidised and weathered sediment											2			
Varying shades of grey and brown siltstone. Some vein quartz.										3	5			
Oxidised and weathered sediment.											6			
5% siltstone bleached to white. 25% vein quartz.														
HOLE 10														
Oxidised and Weathered Sediment. Yellow quartz (40%). 5% siltstone bleached to white.										5	6			
HOLE 11														
Oxidised and Weathered Sediment. Varying shades of yellow and brown siltstone. 2% siltstone bleached to white. Some vein quartz.										2	3			
HOLE 12														
Oxidised and Weathered Sediment. Varying shades of yellow and brown siltstone. 5% vein quartz. Some siltstone bleached to white.										2	3			
HOLE 13														
Oxidised and Weathered Sediment. Brown and yellow siltstone. Some vein quartz (2%). Some siltstone bleached to white (5%).										2	3			
Oxidised and Weathered Sediment. 50% of siltsotne bleached and weathered to white. Some vein quartz. 40% brown siltstone (very soft).										5	6			
HOLE 14														
Oxidised and Weathered Sediment. 80% weathered brown siltstone. 5% manganese stained siltstone. 5% bleached siltstone (white). 10% vein quartz.										2	3			
HOLE 15														
Oxidised and Weathered Sediment. 20% vein quartz. 65% bleached and weathered siltstone (white). 15% brown siltstone.										2	3			
Oxidised and Weathered Sediment. Brown, white and yellow clay (very weathered siltstone).										5	6			

GEOPEKO – DRILLING LOG SHEET PROSPECT: BLEG HOLE No: PAGE 3 OF 9

#2 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From To	Au	Cu	Bi
#2													
HOLE 1													
Oxidised and Weathered Sediment. 80% brown clay (very weathered siltstone).										2 – 3			
10% manganese stained siltstone. 10% vein quartz.													
Oxidised and Weathered Sediment. 10% vein quartz. 70% bleached and weathered siltstone (white). 20% yellow siltstone.										5 – 6			
HOLE 2													
Weathered and Oxidised Sediment										2 – 3			
Brown, white and yellow clay (very weatherd siltstone).													
2% manganese stained siltstone.													
Some vein quartz.													
HOLE 3													
Oxidised and Weathered Sediment.										2 – 3			
Grey and brown siltstone.													
Some siltstone bleached to white.													
Some vein quartz.													
HOLE 4													
Oxidised and Weathered Sediment.										2 – 3			
Brown clay (weathered siltstone).													
Black (manganese stained) siltstone with some bleached patches.													
Some vein quartz.													
HOLE 5													
Oxidised and Weathered Sediment										2 – 3			
80% red siltstone.													
10% yellow siltstone.													
10% vein quartz.													
Oxidised and Weathered Sediment										5 – 6			
Red and grey siltstone.													
Some vein quartz.													

GEOPEKO – DRILLING LOG SHEET PROSPECT: BLEG HOLE No: PAGE 4 OF 9

#2 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From To	Au	Cu	Bi
HOLE 6 Oxidised and Weathered Sediment Red and brown siltstone. 10% siltstone bleached to white. Some vein quartz.										2 - 3			
HOLE 7 Oxidised and Weathered Sediment Brown clay (30%) Bleached siltstone (white) (40%) Brown and red siltstone (25%) Some vein quartz (5%)										2 - 3			
HOLE 8 Oxidised and Weathered Sediment 80% brown and red siltstone 10% bleached siltstone (white) 10% vein quartz.										2 - 3			
HOLE 9 Oxidised and WEathered Seidment White (bleached) and yellow siltstone Some vein quartz.										2 - 3			
Oxidised and Weathered Sediment White clay (weathered siltstone) Brown, yellow, red and black (manganese stained) siltstone.										5 - 6			
HOLE 10 Oxidised and Weathered Sediment Brown, yellow, red and white (bleached siltstone (80%) Vein quartz (20%)										2 - 3			
HOLE 11 Oxidised and Weathered Sediment 45% bleached siltstone (white). 45% brown and red siltstone. 10% vein qtz.										2 - 3			

GEOPEKO – DRILLING LOG SHEET PROSPECT BLEG HOLE No PAGE 5 OF 9

#2 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From To	Au	Cu	Bi
HOLE 12													
No core sample recovery.										2 - 3			
No core sample recovery.										5 - 6			
HOLE 13													
Oxidised and Weathered Sediment										2 - 3			
80% brown, red and black (manganese stained) siltstone.													
10% bleached siltstone (white)													
10% vein quartz.													
HOLE 14													
Oxidised and Weathered Sediment										2 - 3			
Brown, yellow, red and white (bleached) siltstone.													
Some vein quartz.													
HOLE 15													
Oxidised and Weathered Sediment										2 - 3			
Red and brown siltstone.													
Some vein quartz.													
Oxidised and Weathered Sediment										5 - 6			
Red, brown and black (manganese stained) siltstone.													
Some vein quartz.													
HOLE 16													
Oxidised and Weathered Sediment.										2 - 3			
70% brown siltstone.													
20% yellow siltstone.													
5% white (bleached) siltstone.													
5% vein quartz.													
HOLE 17													
Oxidised and Weathered Sediment										2 - 3			
30% brown clay (weathered siltstone)													
10% black (manganese stained) siltstone.													
50% brown and red siltstone.													
10% vein quartz.													

GEOPEKO – DRILLING LOG SHEET PROSPECT: BLEG HOLE No: PAGE 6 OF 9

#2 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From To	Au	Cu	Bi
HOLE 18													
Oxidised and Weathered Sediment													
5% black (manganese stained) siltstone.										2 - 3			
10% brown clay (weathered siltstone)													
5% white (bleached) siltstone													
75% brown and red siltstone.													
Oxidised and Weathered Sediment													
45% white (bleached) siltstone.										5 - 6			
50% red and brown siltstone													
5% vein quartz.													
HOLE 19													
Oxidised and Weathered Siltstone													
40% brown siltstone										2 - 3			
50% white (bleached) and yellow siltstone													
10% vein quartz.													
HOLE 20													
Oxidised and Weathered Sediment													
50% white clay (bleached and weathered siltstone)										2 - 3			
40% brown and red siltstone													
10% vein quartz.													
HOLE 21													
Oxidised and Weathered Sediments													
80% brown, red and yellow siltstone										2 - 3			
5% black (Manganese stained) siltstone													
10% vein quartz													
5% white (bleached) siltstone.													
HOLE 22													
Oxidised and Weathered Sediments													
90% brown, red and yellow siltstone										2 - 3			
5% white (bleached) siltstone.													
5% vein quartz.													

GEOPEKO – DRILLING LOG SHEET PROSPECT: BLEG HOLE No: PAGE 7 OF 9

#2 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From To	Au	Cu	Bi
HOLE 22 Oxidised and Weathered Sediments 60% brown and red siltstone. 10% white (bleached) siltstone 15% vein quartz 15% black (manganese stained) siltstone.										5 - 6			
HOLE 23 Oxidised and Weathered Sediments Yellow, red, brown and black (manganese stained) siltstone. Some vein quartz.										2 - 3			
HOLE 24 Oxidised and Weathered Sediments 45% vein quartz 55% brown and yellow siltstone.										2 - 3			
HOLE 25 Oxidised and Weathered Sediments Red, brown and yellow siltstone. Some vein quartz.										2 - 3			
HOLE 26 Oxidised and WEathered Sediments 80% brown clay (weathered siltstone) 10% brown siltstone 10% vein quartz. Oxidised and Weathered SEdiments 80% bleached siltstone (white) 10% brown siltstone 10% vein quartz.										2 - 3 5 - 6			
HOLE 27 Oxidised and Weathered Sediments 20% brown clay (weathered siltstone) 70% brown, yellow and white (bleached) siltstone 5% vein quartz 5% black (manganese stained) siltstone.										2 - 3			

GEOPEKO – DRILLING LOG SHEET PROSPECT: BLEG HOLE No: PAGE 9 OF 9

#2 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From To	Au	Cu	Bi
HOLE 33 Oxidised and Weathered Sediment 30% brown clay 65% brow, yellow and red siltstone. 5% vein quartz.										2 - 3			
HOEL 34 Oxidised and Weathered Sediment White (bleached), brown, red and yellow siltstone. Some vein quartz.										2 - 3			
Oxidised and Weathered 90% red siltstone 5% white (bleached) siltstone 5% veinquartz.										5 - 6			

GEOPEKO – DRILLING LOG SHEET PROSPECT ELEG HOLE No: PAGE 8 OF 9

#2 GEOLOGICAL LOG	Mineral Percentages								Sample Number	Interval From To	Au	Cu	Bi
HOLE 28 Oxidised and Weathered Seidment Brown, yellow, white (bleached), red and black (manganese stained) siltstone.										2 – 3			
HOLE 29 Oxidised and Weathered Sediment 70% white clay (weathered siltstone) 15% white (bleached) siltstone 10% brown siltstone 5% vein quartz.										2 – 3			
HOLE 30 Oxidised and Weathered Sediment 50% brown and white clay (weathered siltstone) 50% white (bleached), brown and black (Manganese stained) siltstone. Oxidised and Weathered Sediment Brown, white (bleached) and yellow siltsotne Some vein quartz.										2 – 3 5 – 6			
HOLE 31 Oxidised and Weathered Sediment 35% brown clay (weathered siltstone) 5% vein quartz 60% brown, red and white (bleached) siltstone.										2 – 3			
HOLE 32 Oxidised and Weathered Sediment 20% brown clay (weathered siltstone) 75% brown, red, yellow, white (bleached) and black (manganese stained siltstone. 5% vein quartz Oxidised and Weathered Sediment 70% white (bleached) siltstone 25% brown and yellow siltstone 5% vein quartz.										2 – 3 5 – 6			