CR 8502

ANNUAL REPORT FOR PERIOD ENDING 2 JANUARY 1996

MALLAPUNYAH PROJECT

EXPLORATION LICENCES 7575, 7577, 7944, 8322 AND 8360

I R BROWN
R BRESCIANINI
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JANUARY 1996

Exploration Licences are held by:

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Level 3
3 Plain Street
EAST PERTH WA 6004

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31/1/96

SUMMARY

The Mallapunyah Projects tenements cover an area of 870.4 km^2 and are located within the mid-Proterozoic McArthur Basin. The tenements are considered prospective for sediment-hosted Zn-Pb-Ag deposits.

Exploration comprised geochemical sampling, percussion and diamond drilling, and geological mapping.

Four airborne EM anomalies were selected for ground follow-up. Two of these were drill tested. The conductive horizons at anomalies B2 and B3 were attributed to lithologies of the Stretton Sandstone. There were no significant geochemical results.

Soil sampling was conducted at Little Creek to follow-up a soil anomaly in Barney Creek Formation adjacent to the Mallapunyah Fault. There were no anomalous results.

Rock sampling and geological mapping were carried out at Johnstons to follow-up a soil anomaly in Tooganinie Formation. Values up to 6920 ppm Pb and 1920 ppm Zn were reported in ferruginous outcrop. More work is required.

Ashton Mining Limited completed gravel sampling as part of their diamonds exploration. Processing of samples is still underway.

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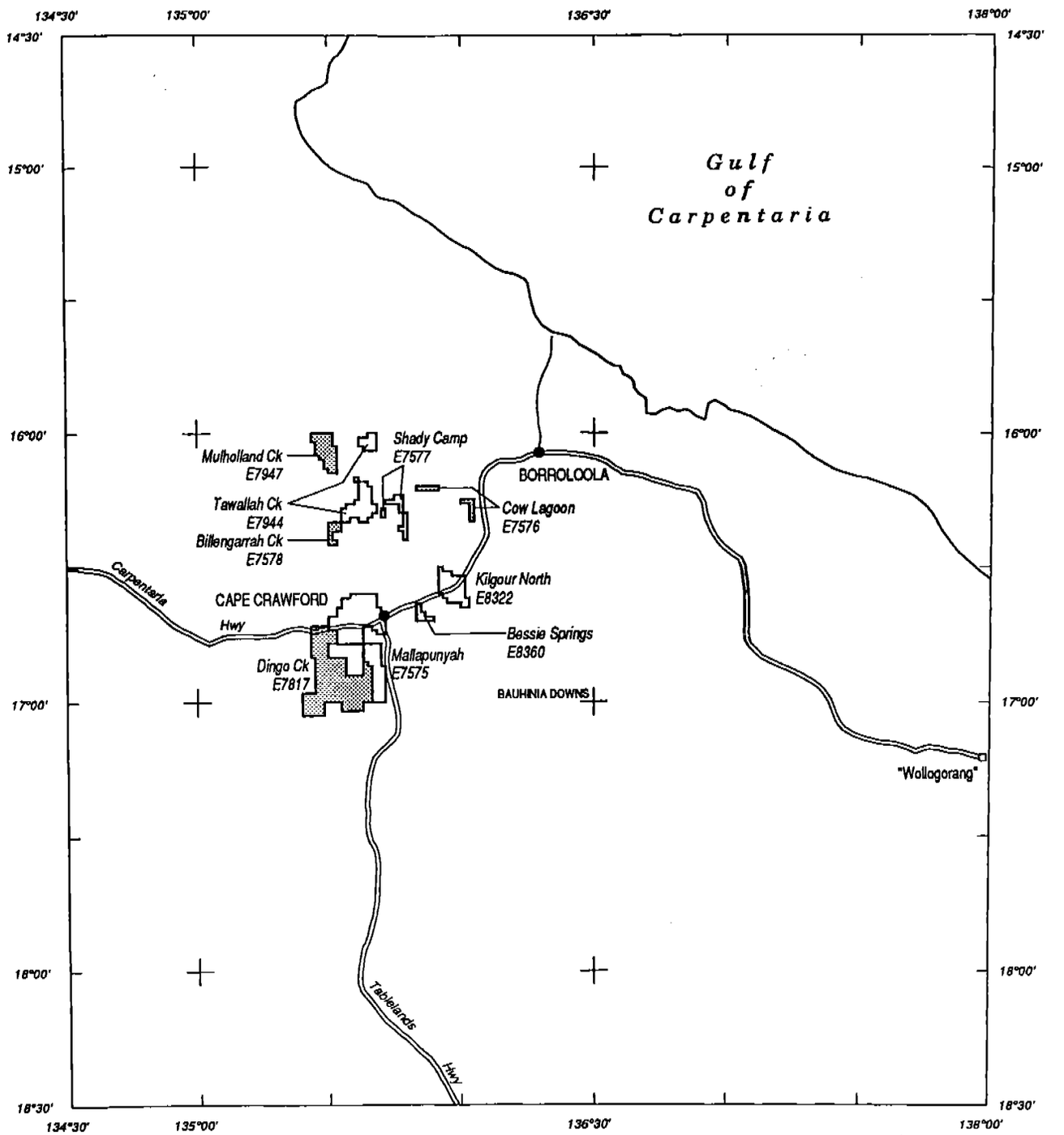

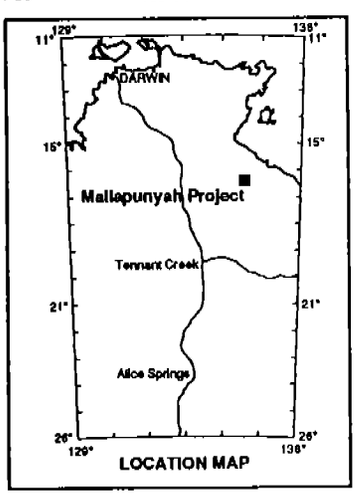

Project tenements

Surrendered tenements

Scale 1 : 2 500 000

0 50 100 150 200 km

Microstation

Prepared : H.Muntanion	BHP Minerals Limited A.C.N. 008 694 782	Centre : Perth
Drawn : S.Shephard	McARTHUR PROJECT	A4-5478
Date : Feb 1993	**MALLAPUNYAH PROJECT TENEMENTS LOCATION MAP**	FIGURE 1
Revised : 31.1.96		

1. INTRODUCTION

This report covers work carried out by BHP Minerals Pty Ltd (BHP) and Ashton Mining Limited (Ashton) on the Mallapunyah Project tenements for the twelve month period ending 2 January 1996. The exploration licences (ELs) covered are 7575, 7577, 7944, 8322 and 8360. These are located on the Bauhinia Downs 1:250,000 sheet and cover part of the Batten Trough in the mid-Proterozoic McArthur Basin.

Exploration was divided into two separate programs. Sediment-hosted base metal exploration was conducted by BHP and diamond exploration by Ashton. Sediment-hosted base metals exploration included geochemical, soil and rock chip sampling. Selected QUESTEM anomalies, delineated during the 1992 exploration program were followed-up by gridding, soil and rock chip sampling, and ground TEM geophysics. Prospective anomalies were drill tested.

Diamond exploration work comprised loam and gravel sampling.

1.1 Location and Access

The tenement area is located approximately 350 km NE of Tennant Creek, NT and is centred on 16° 40' S and 135° 45' E (Fig. 1).

All project tenements are located on the Bauhinia Downs 1:250,000 map sheet (SE 53-03). The Shady Camp (EL7577) and Tawallah Creek (EL7944) tenements are located on the Batten 1:100,000 map sheet (6065). The Mallapunyah (EL7575) and Bessie Springs (EL8360) tenements are located on the Mallapunyah 1:100,000 map sheet (6064). Kilgour North (EL8322) is located on the Mallapunyah and Glyde (6164) 1:100,000 sheets.

Access to ELs7575, 8322 and 8360 is gained by the sealed all weather Carpentaria and Tablelands Highways which run through the tenements. Further access is provided by graded station tracks.

Access to ELs7575 and 7944 is by a formed unsealed road linking Cape Crawford to Borroloola via Billengarrah Station. Further access is provided by graded station tracks. Off-track vehicular access to much of the project area is difficult due to locally rugged topography.

1.2 Tenement Status

All tenement details are listed in Table 1. Total expenditure for the Project for the reporting period was $182,456. Details of expenditure are listed in Appendix 1.

In early 1995, the Mallapunyah Project comprised ELs7575-7578, 7817, 7944, 7947, 8360 and 8322. Project status for reporting purposes for EL7575-7578 was granted by the DME on 15 February 1993. ELs7817, 7944, 7947 and 8360 were added on 22 February 1994. EL8322 was added to the Project on 8 August 1994. ELs7576, 7578, 7817 and 7947 have since been surrendered.

TABLE 1 - TENEMENT DETAILS

TENEMENT NO	TENEMENT NAME	DATE GRANTED	ORIGINAL AREA (km^2)	CURRENT AREA (km^2)	COVENANT	EXPENDITURE 2/1/95 TO 1/1/96
EL7575	Mallapunyah	2/1/92	1,391	515.2	$35,000	$28,441
EL7576	Cow Lagoon	2/1/92	125	0	surrendered	16/8/95
EL7577	Shady Camp	2/1/92	216	54.4	$17,000	$122,729
EL7578	Billengarrah	2/1/92	48	0	surrendered	28/6/95
EL7817	Dingo Creek	13/1/93	567	0	surrendered	30/11/95
EL7944	Tawallah Creek	5/4/93	354	176.0	$23,000	$21,934
EL7947	Mulholland Ck	5/4/93	116	0	surrendered	28/6/95
EL8322	Kilgour North	8/7/94	99.2	99.2	$23,000	$9,178
EL8360	Bessie Springs	25/12/93	25.6	25.6	$15,000	$174

As a result of recent joint venture negotiations, Ashton are conducting diamonds exploration on ELs7577, 7944 and 8360.

1.3 Rehabilitation

Geochemical and geophysical work did not involve any ground disturbance as easy access was suitable for 4WD vehicles. Both drill sites on EL7577 required clearing by bulldozer or grader. Both holes have been capped. Drill site BDD002 has been fully rehabilitated with the sump filled and rubbish removed. Drill site BDP010 requires final rehabilitation

in 1996. Rainfall in November 1995 meant that Batten Creek could not be crossed and the site accessed for rehabilitation.

2. REGIONAL GEOLOGY

All Exploration Licences included in this report are located within the north-north westerly oriented Batten Trough. The Batten Trough is thought to be a syndepositional half graben, bounded to the east by the Emu Fault Zone (Jackson *et al*, 1987).

Middle Proterozoic sediments and volcanics have been deposited within the trough. The sediments consist of cyclic sandstone, siltstone, shale and dolomite sequences. Many display features of shallow water marine and sabka depositional environments. The volcanics consist of dolerites, amygdoidal basalts and potassic tuff.

Proterozoic outcrop in the lease area is approximately 80%. The sequences outcropping are: the Tawallah Group, Seigal Volcanics at the base, through McArthur and Nathan Groups to the Abner Sandstone of the Roper Group. The tenements cover parts of the NW-trending Mallapunyah Fault system which has demonstrated a long history of movement and the north-south Tawallah Fault zone (Pietsch *et al*, 1991).

Only minor geological mapping was completed by BHP during the 1993 tenure period. Therefore all geological information was based on mapping and interpretations completed by the NTGS and BMR.

Refer to Bauhinia Downs SE 53-3, 1:250,000 geological map series. McArthur River Region 6065-6165, 1:100,000 geological map series and Geology of the Abner Range Region, 1:100,000 geological special and BMR Bulletin 220.

3. GEOCHEMISTRY

Sampling was completed in two areas as follow-up to anomalous results from previous work.

3.1 Little Creek - EL7575

Soil sampling in 1993 and 1994 identified a 200 m wide zone assaying >70 ppm Pb on Line L. This zone was highlighted by results of 181, 159 and 107 ppm Pb. The anomaly had not been followed along strike. Seven lines of soil sampling were planned along strike across Barney Creek Formation which either outcropped, subcropped or was interpreted from radiometric data.

-80# material was collected from 97 sites along the seven soil traverses. Traverse details are given in Table 2 and sample site locations are shown on Figure 2. Samples were analysed by Analabs, Townsville. Results are presented in Appendix 2.

TABLE 2 - LITTLE CREEK SOIL TRAVERSE DETAILS

Traverse No.	Length (km)	Sample Spacing (m)	No. of Samples
LC95/1	0.9	50	19
LC95/2	0.5	50	11
LC95/3	0.8	50	17
LC95/4	1.1	100	12
LC95/5	1.2	100	13
LC95/6	1.1	100	12
LC95/7	1.2	100	13
	6.8		97

3.2 Johnstons - EL7944

Soil sampling in 1994 generated a Pb-Zn anomaly located about 4 km north of the Johnstons Prospect. The anomaly is apparently hosted by the Proterozoic Tooganinie Formation.

Follow-up work in 1995 comprised the collection of 24 rock samples. Locations are plotted on Figure 3. Sample descriptions and analytical results are presented in Appendix 3.

The original soil anomaly was characterised by two peaks - east and west. The eastern peak was explained by the presence of the Great Scott Horizon (or equivalent) with rock sample assays to 1820 ppm Pb and 2050 ppm Zn. The western peak can be explained, in part, by the presence of weathered/ferruginous outcrop with rock sample assays to 6920 ppm Pb, 1920 ppm Zn, 39.5% Fe, 2% Mn and 240 ppm Co. The area requires another visit this field season to further investigate this western peak.

4. GEOPHYSICS

4.1 QUESTEM Anomaly Follow-up

Four anomalies from two separate airborne electromagnetic (AEM) surveys were selected for ground EM follow-up within the Mallapunyah Project tenement area. Three anomalies (B1-B3) were interpreted from a QUESTEM survey flown in 1992 and one anomaly (E1) from a GEOTEM survey flown in 1993 (Table 3). Anomaly locations are plotted on Figure 4. Ground EM data are presented in Appendix 4. Survey Specifications are provided in Table 4.

4.1.1 B1

QUESTEM anomaly B1 is located in a confined area of Cz cover about 1.5 km east of the Great Scott Pb prospect. The areal extent of the anomaly is approximately 3 x 1 km, striking north-west. The interpreted bedrock stratigraphy coincident with the anomaly is either Pma or Pml.

Ground TEM work at B1 comprised a single traverse of moving loop SIROTEM. These data confirm the airborne interpretation of a near-surface, moderately conductive, flat-dipping sheet. The source of this response is almost certainly located in the cover sequence.

TABLE 3 - AIRBORNE TEM ANOMALY DETAILS

SITE	1:100,000 SHEET	ACCESS	AMG LOCATION		TEM TYPE	TEM SYSTEM	LOOP SIZE	NO. LINES	LINE LENGTH	LINE DIRECTION
B1	Batten	Vehicle	567100E	8209800N	Moving Loop	SIROTEM	100 m	1	1.2 km	050° Mag
B2	Batten	Vehicle	582400E	8202700N	Moving Loop	SIROTEM	100/200 m	1	1.2 km	085° Mag
B3	Batten	Vehicle	584200E	8192600N	Moving Loop	SIROTEM	100/200 m	1	1.2 km	085° Mag
E1	Mallapunyah	Vehicle	605600E	8165000N	Sounding	SIROTEM	300 m	1	-	-

TABLE 4 - GROUND TEM SURVEY LOGISTICS

EL	:	7577, 7944, 8322	
Contractor	:	**SOLO GEOPHYSICS & CO**	
Instrument	:	SIROTEM Mk3 receiver. SATX-1 transmitter.	
Loop Size Configuration	:	100 x 100 and 200 x 200 metres/moving	(profiling)
		300 x 300 metres/fixed	(sounding)
Base Frequency	:	Composite times. N = 26	(profiling and sounding)
Receiver Spacing/Components	:	50 m / X, Y and Z	(profiling)
		300 m / Z, Y and Z	(sounding)
Date	:	May, June 1995	
Duration	:	4.5 days production, 0.5 days standby	
Coverage	:	3 sites, 1 line per site	(profiling)
		1 site, 1 loop. Both in- and out-of-loop readings	(sounding)
Totals	:	4.3 line km	(profiling)
		1 sounding	(sounding)

4.1.2 B2

Anomaly B2 was interpreted from the airborne data to represent a shallow, gently dipping syncline within the Tawallah Fault Zone. Mapped exposure in the area indicates a likely stratigraphic source of Pmnh.

Moving loop SIROTEM was used to detail the conductive anomaly at site B2. The program comprised an entire line of 100 m moving loop and, where justified by the presence of a conductive source at depth, an abbreviated line of 200 m loop. Qualitative and quantitative (through computer inversion) analysis of these data confirmed a synformal conductive source approximately 7-800 m across. The conductance of the layer varies from 2-4 S, with lower apparent resistivities evident on the eastern limb of the syncline.

4.1.3 B3

Site B3 was ground detailed in a similar fashion to B2 (ie. both 100 m and 200 m moving loop SIROTEM). The anomaly is located approximately 10 km due south of B2 along the Tawallah Fault. Similar anomalous AEM responses are noted immediately east of the fault between B2 and B3 within interpreted Pmnh stratigraphy.

The ground TEM data indicate an easterly dipping source of low to moderate conductance (2-3 S) on the eastern half of the line.

4.1.4 E1

GEOTEM anomaly E1 was selected to further investigate an extensive electrically anomalous zone indicated in the Emu GEOTEM data. This zone follows the course of the McArthur River more or less continuously to the south-west from the HYC deposit.

Ground work consisted of a single 300 m loop SIROTEM sounding. Computer inversion of these data reveal a thin, weakly conductive overburden (1-2 S) overlying a relatively resistive bedrock. No conductive bedrock targets are evident in the data.

5. DRILLING

Two airborne EM anomalies, B2 and B3, were selected for drill testing. Drilling was carried out by Gorey & Cole, Alice Springs using a Warman 1000 rig. Drill hole locations are plotted on Figure 4. Drill logs are presented in Appendix 6. Drilling details are given below in Table 5.

TABLE 5 - EL7577 DRILLING DETAILS

HOLE NO	ANOMALY NO	EASTING	NORTHING	DEPTH (m)	DATES
BDD002	B3	584450	8192700	318.5	28/9-12/10/95
BDP010	B2	582550	8202800	150.0	13-14/10/95

Both holes were sampled in continuous 6 m intervals for the entire length of the holes. Samples were analysed at Analabs, Townsville. Analytical techniques and results are presented in Appendix 5.

5.1 BDD002

Drill hole BDD2 targeted QUESTEM anomaly B3, a 47 Ωm conductor at a depth of 178 to 329 m. The hole intersected a sub horizontal fault breccia zone with a silty clay matrix between 250 and 265 m. This is assumed to be the cause of the anomaly. The hole was terminated at 318.5 m in monotonous quartz arenites of the Stretton Sandstone. A graphical log is attached as Plate 1.

BDD2 is located approximately 500 m to the east of the westerly dipping Tawallah Fault. The Tawallah Fault is interpreted to have reverse movement bringing Tawallah Group and lower Umbolooga Subgroup stratigraphies in the west against Batten Subgroup and Nathan Subgroup stratigraphies in the east. There is exposure of Hot Springs Member of the Lynott Formation 200 m to the west of BDD2 dipping at 70^0

to the east. The Hot Springs Member is also exposed 500 m to the east of BDD2 dipping at 70^0 to the southwest. The area between these two exposures is covered by Cainozoic sand. Cretaceous sandstone is exposed 500 m to the south of BDD2.

A 102 m water bore was drilled on site during 28-29 September. The precollar was commenced on 29/9. HQ diamond drilling commenced on 4/10. This was cased off and NQ diamond drilling commenced on 7/10. The hole was stopped at 318.5 m on 12/10. Diamond drilling was at a rate of approximately 30 m per day through fractured and brecciated ground.

Down time was also incurred on 8/10, 10/10 and 11/10 due to problems with generators and the down hole pump.

The Proterozoic unit intersected in BDD2 is confidently interpreted to be the Stretton Sandstone which would be expected in the structural setting outlined above. The Stretton Sandstone is described as a fine to medium grained , thin to medium bedded quartzarenite with distinctive wavy bedding, small ripples, toolmarks, mud clast casts, desiccation cracks and convolute bedding. This agrees well with lithologies and sedimentary structures observed in the drill core.

Geochemical results for the hole were all low. Peak assays were 80 ppm Cu, 24 ppm Pb and 67 ppm Zn.

5.2 BDP010

Drill hole BDP10 targeted QUESTEM anomaly B2, a 20.6 Ωm conductor at a depth of 68.2 to 150.0 m. The hole intersected a unit of grey laminated carbonaceous siltstone between 81 and 102 m. This is interpreted to be a locally restricted, previously unrecognised, unit within the Stretton Sandstone. The carbonaceous material present satisfactorily explains the anomaly. The hole was terminated at 150 m. A graphical log is attached as Plate 1.

BDP10 is located approximately 500 m to the east of the westerly dipping Tawallah Fault. The Tawallah Fault is interpreted to have reverse movement bringing Tawallah Group and lower Umbolooga Subgroup stratigraphies in the west against Batten Subgroup and Nathan Subgroup stratigraphies in the east. There is exposure of Hot Springs Member of the Lynott Formation 500 m to the southeast of BDP10 dipping at 15^0 to the west. The immediate area around BDP10 is covered by Cainozoic sand.

The Proterozoic unit intersected in BDP10 is interpreted to be the Stretton Sandstone which would be expected in the structural setting outlined above. The Stretton Sandstone is described as a fine to medium grained, thin to medium bedded quartz arenite with distinctive wavy bedding, small ripples, toolmarks, mud clast casts, desiccation cracks and convolute bedding. There is no record of carbonaceous siltstones in the Stretton Sandstone. There was no carbonaceous siltstone in drill hole BDD2 which was also interpreted to have intersected the Stretton Sandstone 10 km to the south. This hole however did not intersect the entire thickness of Stretton Sandstone.

Geochemical results for the hole were all low. Peak values were 97 ppm Cu, 19 ppm Pb and 66 ppm Zn.

6. DIAMOND EXPLORATION

Diamond exploration conducted by Ashton on ELs7577, 7944 and 8360 is documented separately as Appendix 7.

7. CONCLUSIONS AND RECOMMENDATIONS

The strong Pb and Zn anomalies in the rock samples from the Johnstons area should be further investigated by soil and rock sampling. An airborne electromagnetic survey is proposed which will cover the northern portion of EL7944.

Parts of EL7575 and EL8322 will be flown by an airborne electromagnetic survey, which is planned to extend east onto other areas held by BHP. Appendix 8 contains proposed work programs and expenditures.

8. REFERENCES

PIETSCH, B.A., WYCHE, S., RAWLINGS, D.J., CREASER, P.M. and FINDHAMMER, T.L.R., 1991. McArthur River Region 6065-6165, 1:100,000 Geological Map Series and Explanatory Notes. Northern Territory Geological Survey.

APPENDIX 1

EXPENDITURE STATEMENTS

E7575 - MALLAPUNYAH

2nd January 1995 to 1st January 1996

Wages and Salaries		12,823
Field Support		2,148
Vehicles		2,241
Equipment		433
Geochemistry		1,979
Office Expenses		237
Other		422
Computer Expenses		134
Consultants		234
In-House Services:	Geophysics	1,545
	Geochemistry	240
	Drafting	1,265
Sub-Total		**23,701**
20% of Total for Corporate Overheads		4,740
TOTAL		**$28,441**

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E7577 - SHADY CAMP

2nd January 1995 to 1st January 1996

	BHP	ASHTON	TOTAL
Wages & Salaries	13,693	1,805	15,498
Field Support	5,016	454	5,470
Drilling	65,000		65,000
Vehicles	1,958		1,958
Equipment	1,692		1,692
Geochemistry	913	20	933
Geophysics	8,682		8,682
Office Expenses	131		131
Other	137		137
Library	25		25
Consultants	272		272
In-House Services: Geophysics	2,060		2,060
Drafting	230	186	416
Sub-Total	99,809	2,465	102,274
20% of Total for Corporate Overheads	19,962	493	20,455
TOTAL	119,771	2,958	122,729

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E7944 - TAWALLAH CREEK

2nd January 1994 to 1st January 1995

	BHP	ASHTON	TOTAL
Wages & Salaries	5,172	522	5,694
Field Support	2,048		2,048
Vehicles	1,550		1,550
Equipment	849		849
Aircraft Charter		1,569	1,569
Geochemistry	438	429	867
Geophysics	1,842		1,842
Office Expenses	130		130
Other	2,080		2,080
Consultants	234		234
In-House Services: Geophysics	1,030		1,030
Geochemistry	40		40
Drafting	345		345
Sub-Total	15,758	2,520	18,278
20% of Total for Corporate Overheads	3,152	504	3,656
TOTAL	18,910	3,024	21,934

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E8322 - KILGOUR NORTH

2nd January 1995 to 1st January 1996

Wages and Salaries		3,909
Field Support		433
Geochemistry		156
Geophysics		1,842
Office Expenses		123
In-House Services:	Geophysics	1,030
	Geochemistry	40
	Drafting	115
Sub-Total		**7,648**
20% of Total for Corporate Overheads		1,530
TOTAL		**$9,178**

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E8360 - BESSIE SPRING

2nd January 1995 to 1st January 1996

Wages and Salaries	145
Sub-Total	**145**
20% of Total for Corporate Overheads	29
TOTAL	**$174**

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APPENDIX 2

SOIL SAMPLING GEOCHEMISTRY

EL7575 MALLAPUNYAH - LITTLE CREEK AREA
SOIL GEOCHEMISTRY

Sample Number	Easting	Northing	Cu (ppm)	Zn (ppm)	Pb (ppm)	Fe (ppm)	Mn (ppm)
EI5601	560900	8150000	21	50	8	27900	1640
EI5602	560857	8149978	13	21	-3	8400	501
EI5603	560857	8149978	13	23	4	9800	525
EI5604	560813	8149956	10	24	5	12800	528
EI5605	560770	8149933	14	27	8	19600	1170
EI5606	560727	8149911	19	36	11	22600	1030
EI5607	560683	8149889	23	18	14	20200	651
EI5608	560640	8149867	13	11	11	15700	412
EI5609	560597	8149844	15	13	9	20200	375
EI5611	560553	8149822	12	11	9	15200	556
EI5612	560510	8149800	11	17	15	12300	299
EI5613	560467	8149778	13	12	8	15800	279
EI5614	560423	8149756	18	19	20	20600	361
EI5615	560380	8149733	18	16	11	21200	391
EI5616	560337	8149711	18	17	13	23300	341
EI5617	560337	8149711	15	13	10	22500	334
EI5618	560293	8149689	16	17	11	23600	331
EI5619	560250	8149667	17	21	19	31800	544
EI5620	560207	8149644	11	11	25	15500	413
EI5621	560163	8149622	14	14	19	18600	481
EI5622	560120	8149600	23	31	20	39000	247
EI5623	561800	8149700	16	48	10	43900	1930
EI5624	561766	8149680	16	71	13	42900	2510
EI5625	561732	8149660	16	62	10	36200	2850
EI5626	561698	8149640	20	79	12	46600	2070
EI5627	561664	8149620	26	64	10	46200	2760
EI5628	561630	8149600	25	60	17	38900	1100
EI5630	561596	8149580	20	52	15	28200	793
EI5631	561562	8149560	25	57	43	35800	929
EI5632	561528	8149540	28	41	32	37900	1380
EI5633	561494	8149520	30	60	29	46800	685
EI5634	561460	8149500	25	26	31	34800	962
EI5635	562550	8147900	40	37	26	43200	343
EI5636	562507	8147884	24	36	29	28800	715
EI5637	562465	8147869	22	26	29	27000	780
EI5638	562422	8147853	22	31	25	29800	1180
EI5639	562380	8147838	17	24	23	25500	952
EI5640	562337	8147822	17	33	18	24800	554
EI5641	562337	8147822	17	33	22	25300	587
EI5642	562295	8147806	16	39	28	22700	331
EI5643	562252	8147791	23	25	41	33000	1080
EI5644	562210	8147775	16	39	24	24200	460
EI5645	562167	8147759	26	32	18	41600	277
EI5646	562125	8147744	22	22	25	34500	312
EI5647	562082	8147728	12	13	12	16900	490
EI5648	562040	8147713	15	12	16	17200	652
EI5649	561997	8147697	22	21	18	36700	2620
EI5650	561955	8147681	9	17	4	16500	834
EI5651	561912	8147666	12	24	5	14200	932
EI5652	561870	8147650	15	59	8	30800	2990
EI5653	566750	8145550	19	27	15	28200	1040
EI5654	566670	8145486	17	62	8	48600	2450

Analysed at Analabs, Townsville
Batch Number TV32300

EL7575 MALLAPUNYAH - LITTLE CREEK AREA
SOIL GEOCHEMISTRY

Sample Number	Easting	Northing	Cu (ppm)	Zn (ppm)	Pb (ppm)	Fe (ppm)	Mn (ppm)
EI5655	566590	8145422	12	18	6	20200	448
EI5656	566510	8145358	20	61	14	44100	561
EI5657	566430	8145293	23	84	8	40300	298
EI5659	566350	8145229	22	17	42	33500	848
EI5660	566270	8145165	25	41	55	33500	577
EI5661	566190	8145101	27	20	27	33300	474
EI5662	566110	8145037	24	58	58	37000	593
EI5663	566030	8144973	42	21	40	28500	865
EI5664	566030	8144973	41	20	37	28000	847
EI5665	565950	8144908	82	18	18	37300	1900
EI5666	565870	8144844	99	19	23	42000	2540
EI5667	565790	8144780	45	17	10	43000	2110
EI5668	565600	8145300	19	25	12	20600	480
EI5669	565682	8145362	30	84	11	43200	1020
EI5670	565764	8145424	19	33	11	16700	979
EI5671	565845	8145485	14	16	6	20900	1010
EI5672	565927	8145547	15	12	17	26000	2020
EI5673	566009	8145609	21	37	18	26700	1070
EI5674	566091	8145671	14	14	20	12900	812
EI5675	566173	8145733	22	30	25	33100	1540
EI5676	566255	8145795	18	24	25	27900	934
EI5677	566336	8145856	20	31	16	18700	613
EI5679	566418	8145918	32	39	25	38900	1830
EI5680	566500	8145980	18	63	31	23800	507
EI5681	566000	8146500	23	22	19	26800	909
EI5682	565926	8146438	23	21	23	26500	1150
EI5683	565852	8146375	16	14	18	25600	957
EI5684	565852	8146375	16	14	19	24400	917
EI5685	565778	8146313	24	17	33	31000	800
EI5686	565703	8146250	20	38	26	21100	538
EI5687	565629	8146188	21	22	16	22000	856
EI5688	565555	8146125	17	27	13	49100	2570
EI5689	565481	8146063	14	37	15	21700	3090
EI5690	565407	8146000	12	33	12	23000	1380
EI5691	565333	8145938	9	23	14	31700	2040
EI5692	565258	8145875	6	18	8	22300	1130
EI5693	565184	8145813	19	67	7	40300	1590
EI5694	565110	8145750	16	31	8	26300	1250
EI5695	564450	8146800	8	14	7	23900	377
EI5696	564373	8146734	12	21	8	40200	3570
EI5697	564295	8146668	18	20	7	35400	3020
EI5698	564218	8146602	27	22	6	46800	2560
EI5699	564141	8146536	16	15	5	34200	1910
EI5700	564064	8146470	19	12	12	27600	1270
EI5701	564064	8146470	18	12	10	27400	1250
EI5702	563986	8146405	23	13	27	26500	791
EI5703	563909	8146339	24	10	16	35600	781
EI5704	563832	8146273	38	35	16	55800	1170
EI5705	563755	8146207	26	59	13	72100	1400
EI5707	563677	8146141	17	84	9	57900	2150
EI5708	563600	8146075	16	48	33	38300	1680

Analysed at Analabs, Townsville
Batch Number TV32300

APPENDIX 3

ROCK SAMPLING DESCRIPTIONS AND GEOCHEMISTRY

JOHNSTONS AREA - ROCK SAMPLE DESCRIPTIONS

SAMPLE NUMBER	EASTING	NORTHING	DESCRIPTION
DD1189	567522	8207211	Grey dololutite; stromatolitic; minor conophyton; minor galena in veins
DD1190	567420	8207210	Pink-light grey calcrete
DD1191	567415	8207210	Grey dololutite;stromatolitic; domes;galena; carbonate veining
DD1192	567405	8207210	Grey algal dolomite; trace galena
DD1193	567308	8207209	Fine - medium grained quartz sandstone; white - orange; weathered
DD1194	567318	8207215	Grey algal dolomite
DD1195	567120	8207207	Red - brown siltstone
DD1196	567114	8207200	Grey dolomite-dolarenite; domal stromatolites
DD1197	566860	8207205	Highly weathered dololutite and dolarenite; laminated; Mn oxides; galena
DD1198	566800	8207210	White silicified mudstone-siltstone; ?potassic (tuff); possibly marker bed
DD1199	566720	8207203	Grey dolomite float; silicified; banded; float
DD1200	566720	8207203	White-red quartz sandstone; weakly silicified; fine-medium grained; float
EK7395	567850	8206440	Pink-purple siltstone-sandstone; banded
EK7396	567680	8206395	Grey dolomite-dololutite; weathered; float
EK7397	567580	8206390	Grey dolomite-dololutite; float
EK7398	567580	8206390	Pink-brown siltstone/sandstone; float
EK7399	567560	8206340	Grey dolomite/dololutite; low domal stromatolites; algal
EK7400	567520	8206385	Light grey dololutite; stromatolitic
DU8894	567504	8206385	Grey pelletal dolomite; float
DU8895	567490	8206385	Grey dololutite; algal; stromatolitic
DU8896	567440	8206380	Yellow-grey siltstone-sandstone; float
DU8897	567402	8206380	Grey dololutite; algal; stromatolitic
DU8898	567402	8206380	Highly weathered ?sandstone; ferriginous; hematite-limonite
DU8899	567300	8206405	Siliceous dolomite; weathered

Analabs
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Queensland, 4814
Telephone : (077) 25 2311
Facsimilie: (077) 79 7947

Job No: **TV032995**
Order No: 00683
Date Received: 20/09/95
Date Reported: 28/09/95

ANALYTICAL REPORT

Ian Brown
Project Geologist

BHP Minerals International
P.O. BOX 6062
PERTH

WA 6000
AUSTRALIA

Number of pages of report : 3 (excluding this cover sheet)
Number of Samples : 24

Invoice to:
Ian Brown
Project Geologist

BHP Minerals International
P.O. BOX 6062
PERTH

WA 6000
AUSTRALIA

Electronic Data Transmission :

Modem	Y 28/09/95
Facsimile	Y 26/09/95
Disk Report	Y 28/09/95

Preliminary Reports :
26/09/95 Fax Report

Results to:
Tracey Laffan
Technition

BHP Minerals International
P.O. BOX 6062
PERTH

WA 6000
AUSTRALIA

Results to:

Remarks :

Authorised by .....
On behalf of:

Mr Anthony Wilson
Manager-Minerals

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.

Analabs
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Facsimilie: (077) 79 7947

Order No: 00683
Project Code: BCZ
Report Date: 28/09/95
Report Status: Final

Job No: **TV032995**

ANALYTICAL DATA

Sample	Cu	Pb	Zn	Fe	Mn	As
DD1189	30	24	362	0.93	960	10
DD1190	12	16	17	0.61	104	<2
DD1191	17	1820	1730	1.07	1080	9
DD1192	7	180	379	0.90	797	9
DD1193	9	18	10	1.11	309	8
DD1194	14	160	35	1.13	985	16
DD1195	3	13	36	1.83	153	3
DD1196	36	167	2050	0.82	923	<2
DD1197	14	73	1510	28.1	1.69%	62
DD1198	14	53	81	1.51	585	9
DD1199	4	51	26	1.03	282	6
DD1200	6	10	7	1.00	107	3
EK7395	2	17	13	1.88	145	<2
EK7396	13	292	193	1.72	1300	22
EK7397	5	41	104	1.16	669	9
EK7398	16	54	17	1.53	998	2
EK7399	7	68	26	0.90	735	5
EK7400	9	19	5	0.81	671	<2
DU8894	2	408	127	0.68	668	4
DU8895	6	1380	216	0.82	709	9
DU8896	21	77	15	1.64	600	8
DU8897	13	227	<2	1.06	949	<2
DU8898	144	6920	1920	39.5	1.96%	27
DU8899	19	692	515	24.7	4620	9

Method	GI140	GI140	GI140	GI140	GI140	GI140
Units	ppm	ppm	ppm	%	ppm	ppm
Detection Limit	2	5	2	0.01	2	2

Notes:
N.A. = not analysed
-- = element not determined
I.S. = insufficient sample
L.N.R. = listed not received

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Job No: **TV032995**

ANALYTICAL DATA

Sample	Ni	Co	Mo	Cr	P	V
DD1189	3	<2	<2	4	50	8
DD1190	5	3	<2	6	<50	15
DD1191	<2	2	<2	<2	<50	6
DD1192	<2	<2	<2	2	50	<5
DD1193	3	<2	<2	5	<50	<5
DD1194	2	3	<2	3	<50	8
DD1195	9	3	<2	7	300	16
DD1196	<2	2	<2	3	<50	8
DD1197	61	101	<2	17	700	62
DD1198	7	4	<2	11	50	19
DD1199	5	2	<2	10	150	12
DD1200	6	<2	<2	12	400	10
EK7395	5	3	<2	7	400	19
EK7396	7	8	<2	13	<50	16
EK7397	3	3	<2	9	<50	7
EK7398	6	4	<2	15	100	15
EK7399	<2	<2	<2	2	<50	<5
EK7400	<2	<2	<2	<2	<50	6
DU8894	<2	3	<2	4	<50	<5
DU8895	2	2	<2	4	<50	<5
DU8896	7	4	<2	16	50	24
DU8897	<2	<2	<2	<2	<50	6
DU8898	77	240	<2	3	100	42
DU8899	27	59	<2	6	100	34

Method	GI140	GI140	GI140	GI140	GI140	GI140
Units	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	2	50	5

Notes:
N.A. = not analysed
-- = element not determined
I.S. = insufficient sample
L.N.R. = listed not received

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Telephone : (077) 25 2311
Facsimilie: (077) 79 7947

Order No: 00683
Project Code: BCZ
Report Date: 28/09/95
Report Status: Final

Job No: **TV032995**

ANALYTICAL DATA

Sample	Cd	Ag
DD1189	0.5	<0.2
DD1190	<0.5	<0.2
DD1191	5.1	<0.2
DD1192	1.0	<0.2
DD1193	<0.5	<0.2
DD1194	<0.5	<0.2
DD1195	<0.5	<0.2
DD1196	3.3	<0.2
DD1197	3.3	<0.2
DD1198	<0.5	<0.2
DD1199	<0.5	<0.2
DD1200	<0.5	<0.2
EK7395	<0.5	<0.2
EK7396	<0.5	<0.2
EK7397	<0.5	<0.2
EK7398	<0.5	<0.2
EK7399	<0.5	<0.2
EK7400	<0.5	<0.2
DU8894	<0.5	<0.2
DU8895	<0.5	<0.2
DU8896	<0.5	<0.2
DU8897	<0.5	<0.2
DU8898	1.1	<0.2
DU8899	<0.5	<0.2

Method	GI140	GI140
Units	ppm	ppm
Detection Limit	0.5	0.2

Notes:
N.A. = not analysed
-- = element not determined
I.S. = insufficient sample
L.N.R. = listed not received

Analabs

ANALYSIS DESCRIPTION

Job number : TV032995 Order number : 00683

Scheme code : D140 - Aqua regia/perchloric acid digest (0.3g sample)

Aqua regia/perchloric acid digest (0.3g sample)

Scheme code : GI140 - ICPOES determination

ICPOES determination

Cu	: Copper
Pb	: Lead
Zn	: Zinc
Fe	: Iron
Mn	: Manganese
As	: Arsenic
Ni	: Nickel
Co	: Cobalt
Mo	: Molybdenum
Cr	: Chromium
P	: Phosphorus
V	: Vanadium
Cd	: Cadmium
Ag	: Silver

Scheme code : GP032 - RAB/Percussion samples; dry, fine pulverise

---

Sample preparation of RAB/Percussion samples;
dry, fine pulverise

Scheme code : S9804 - Facsimile charges

Facsimile charges

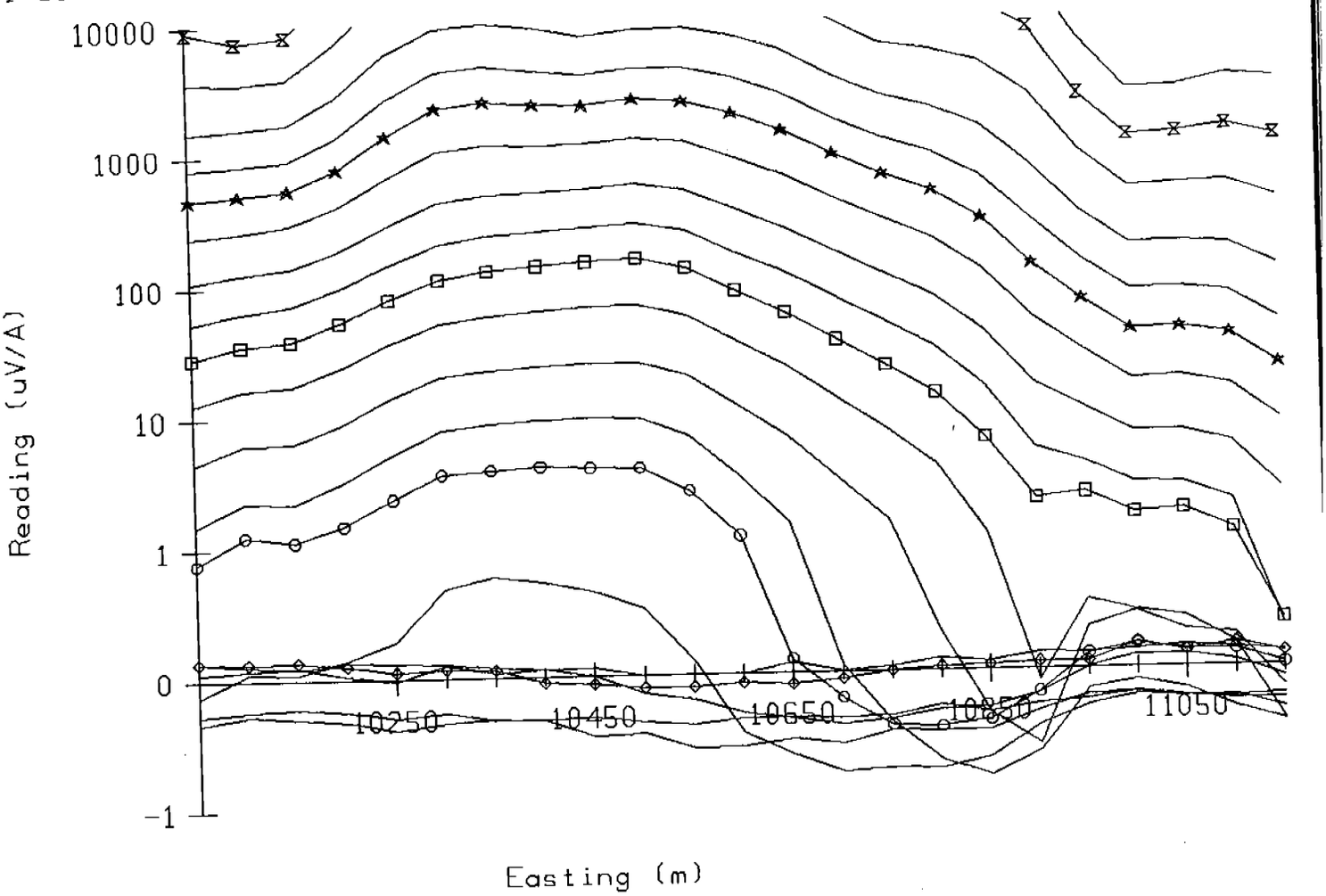
Scheme code : S9805 - Disc Report Charge

Disc Report Charge

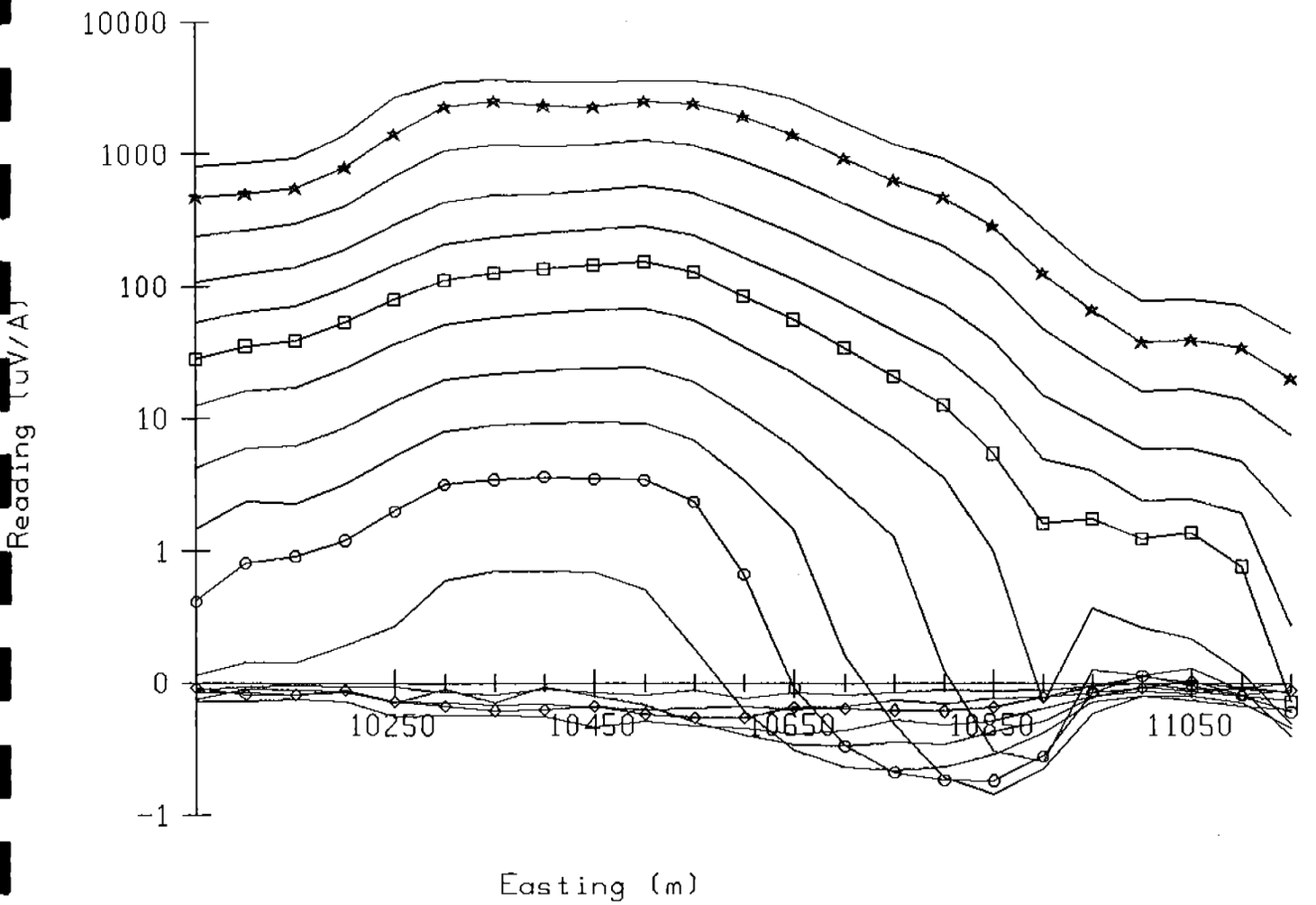
APPENDIX 4

QUESTEM ANOMALIES - GROUND TEM DATA

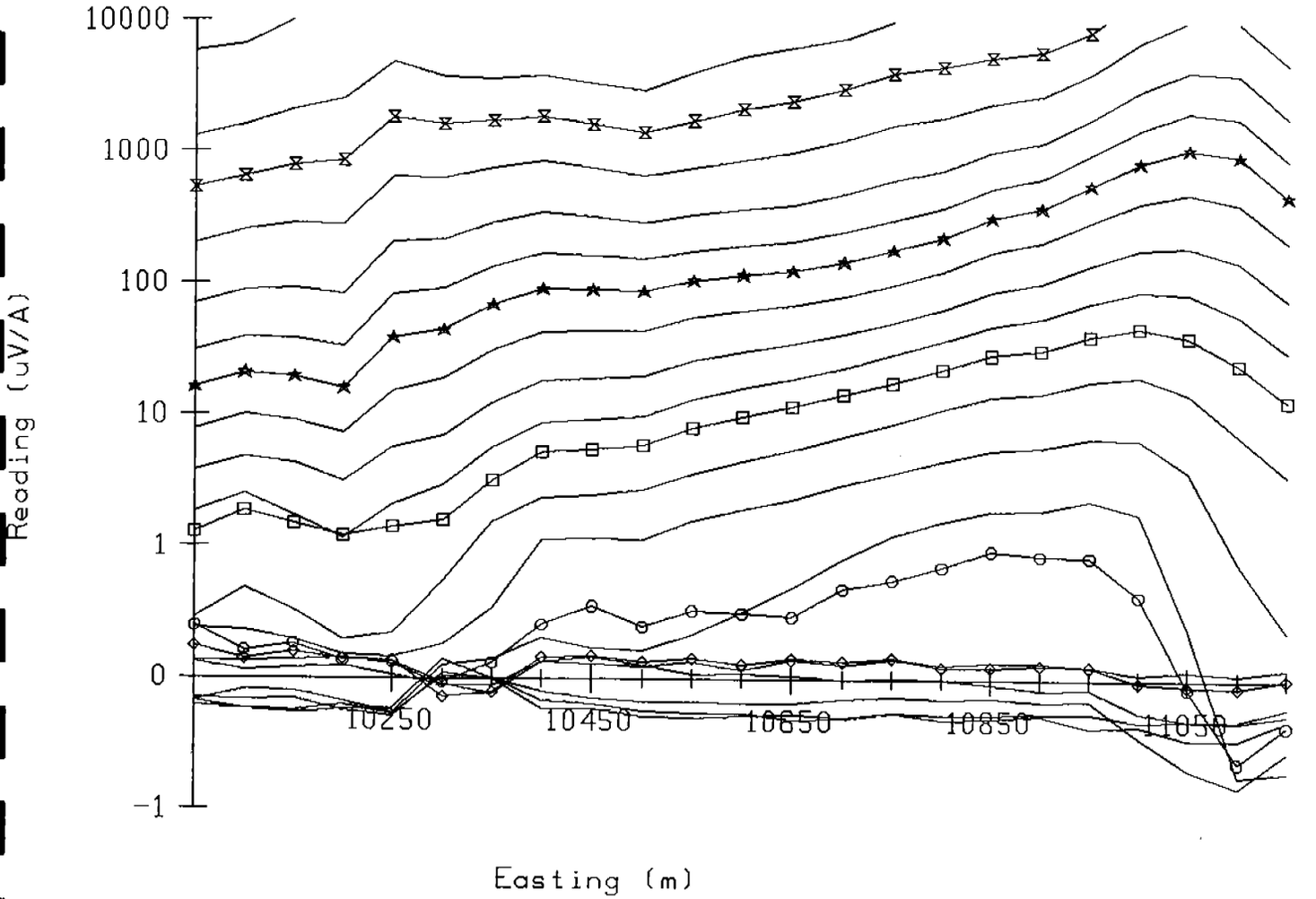
B1 Gain 1: Line 10050N: Rx=Z: F=C3 CH= 7-26



1 Gain 10: Line 10050N: Rx=Z: F=C3 CH=11-26

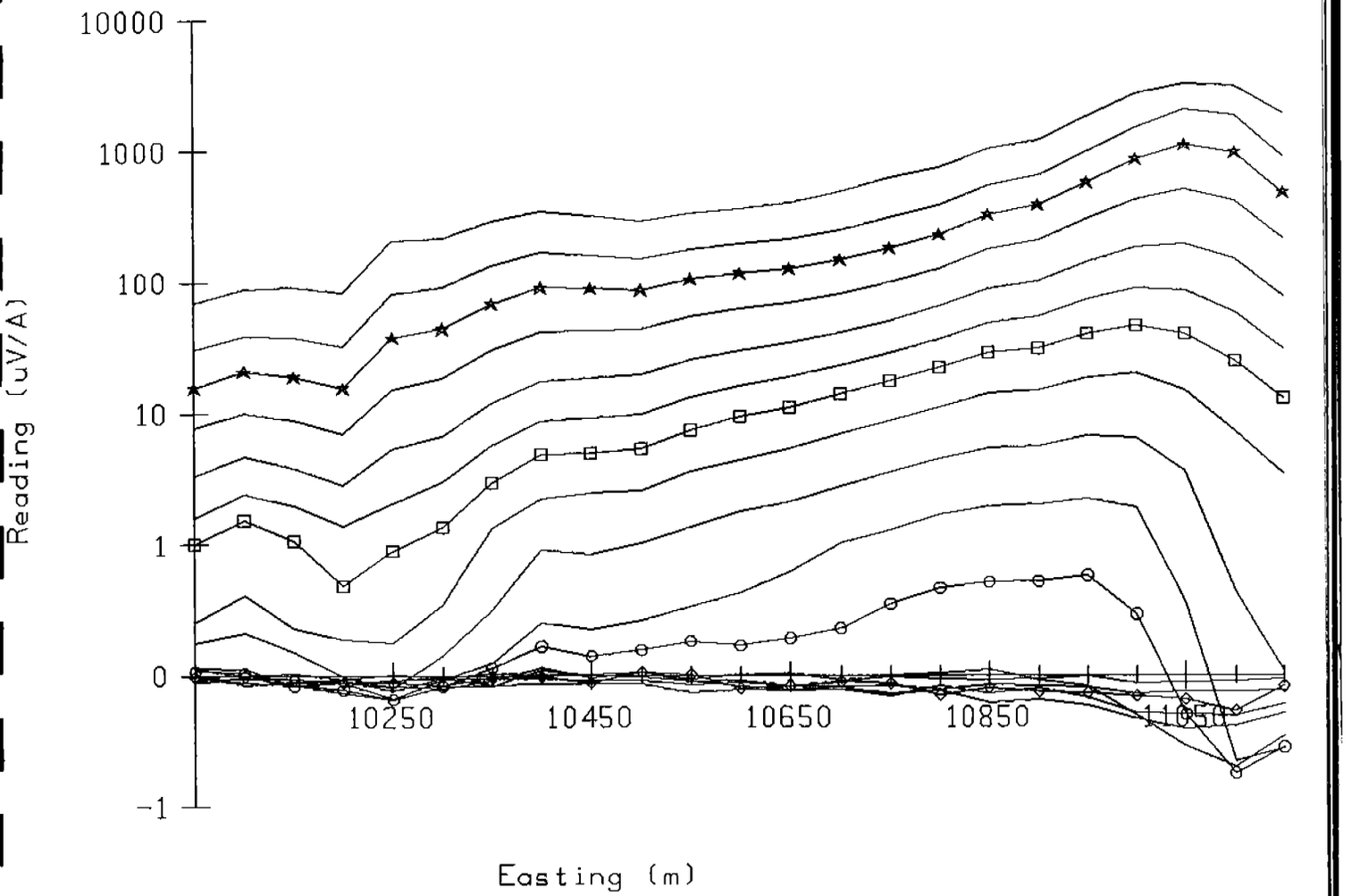


B2 Gain 1: Line 10050N: Rx=Z: F=C3 CH= 6-26

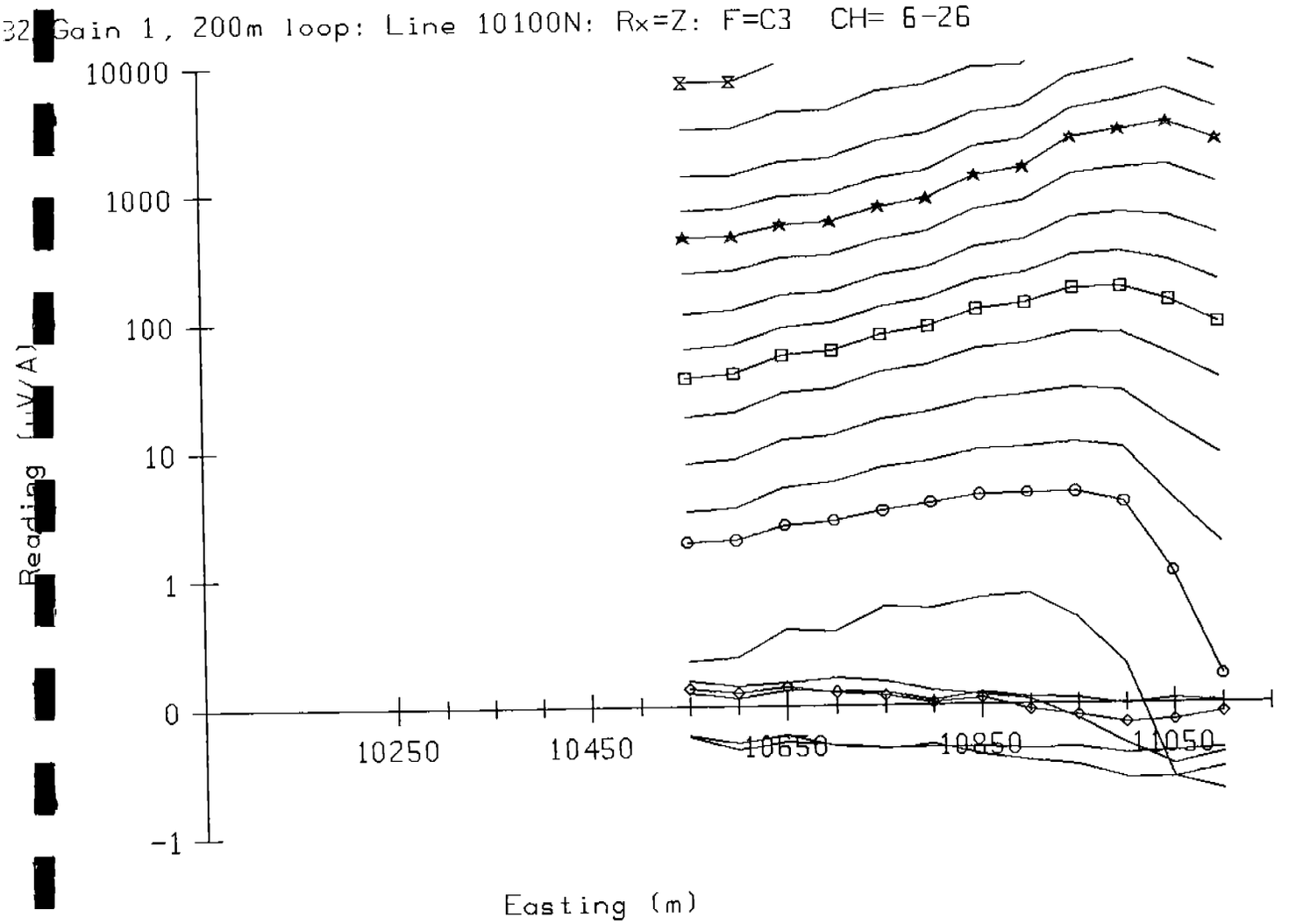


B2

B2 Gain 10: Line 10050N: Rx=Z: F=C3 CH=10-26

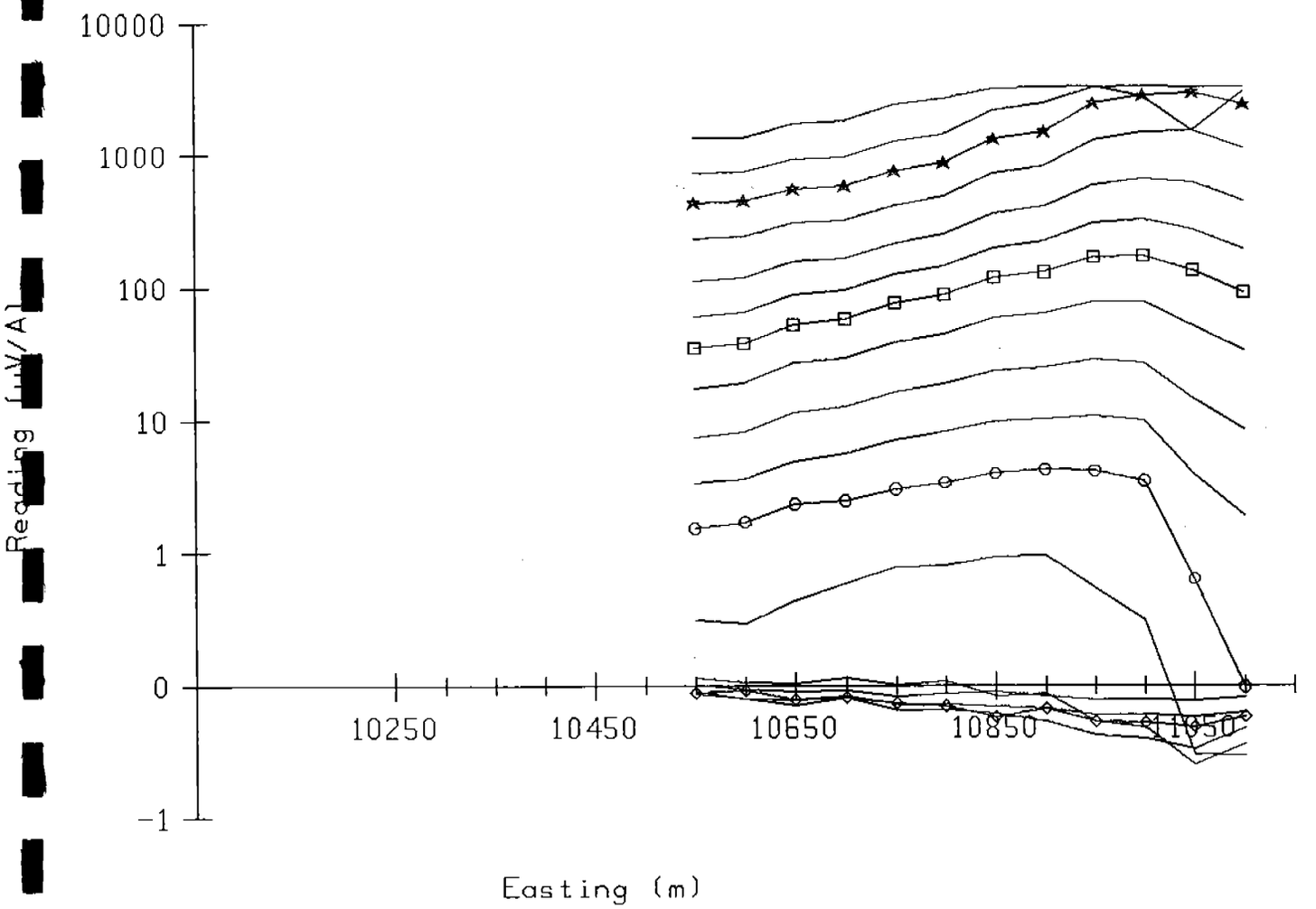


B2

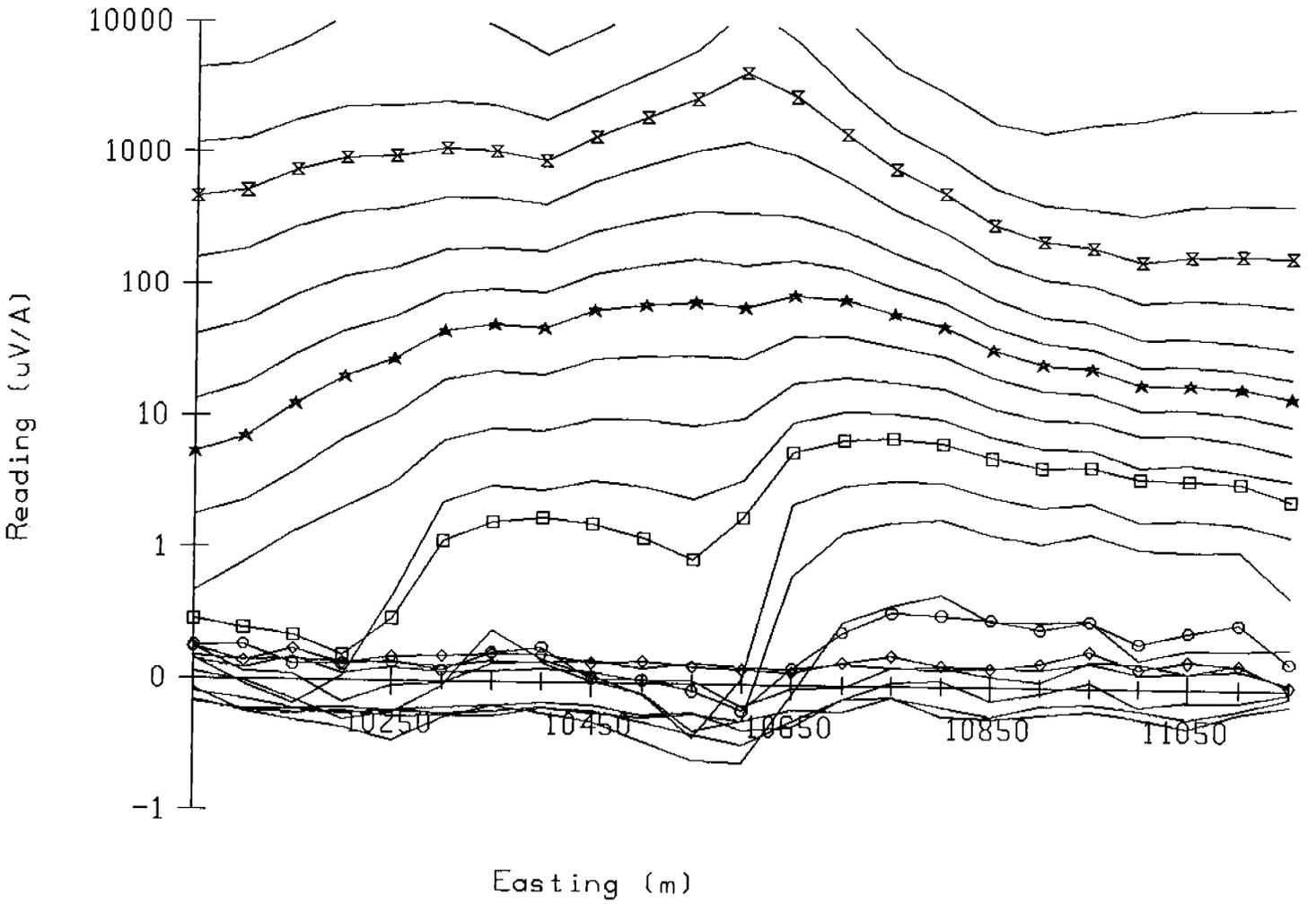

B2 Gain 1, 200m loop: Line 10100N: Rx=Z: F=C3 CH= 6-26
10000
1000
100
10
1
0
-1
Reading (uV/A)
10250
10450
10650
10850
11050
Easting (m)

B2

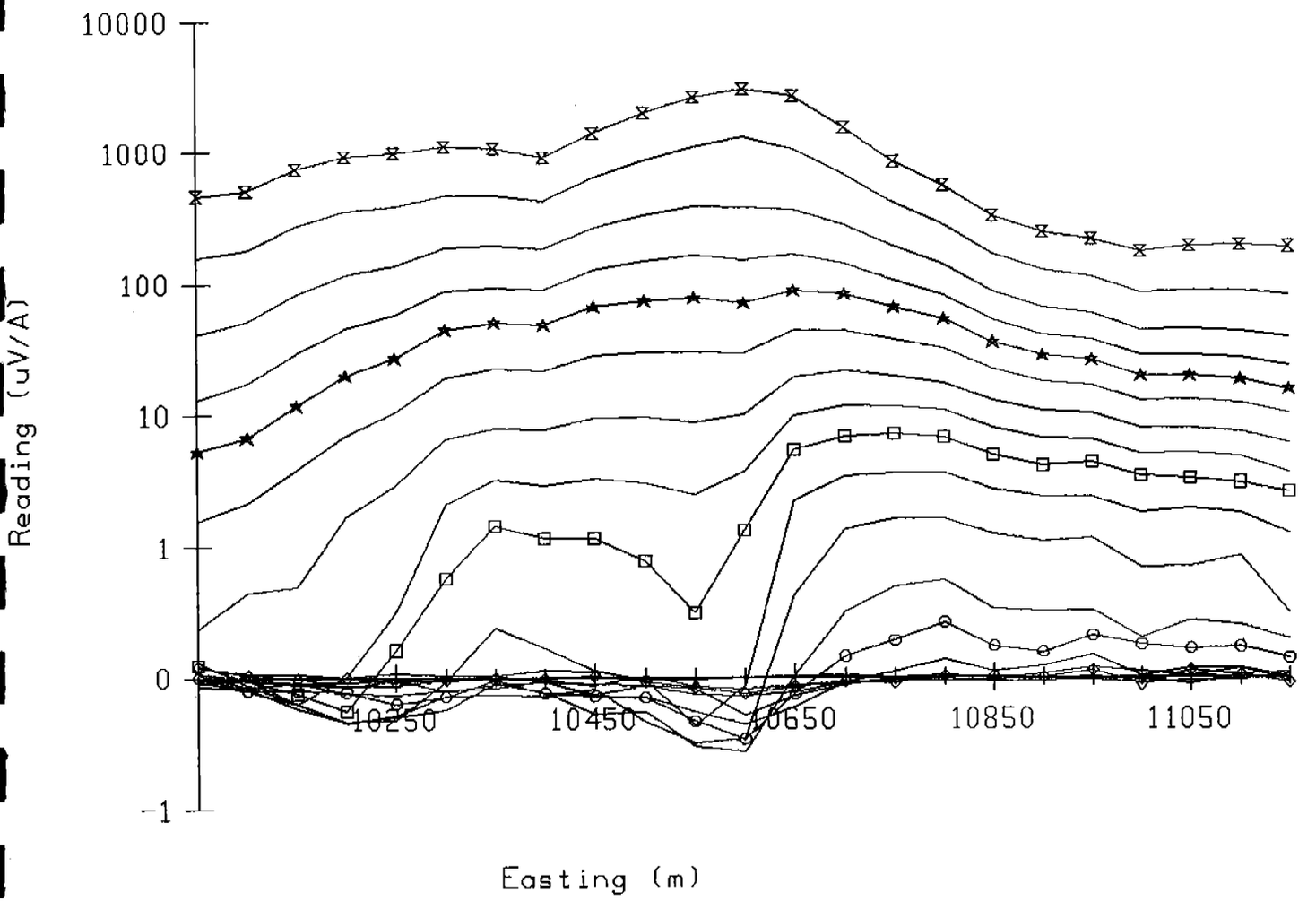
B2 Gain 10, 200m loop: Line 10100N: Rx=Z: F=C3 CH=10-26

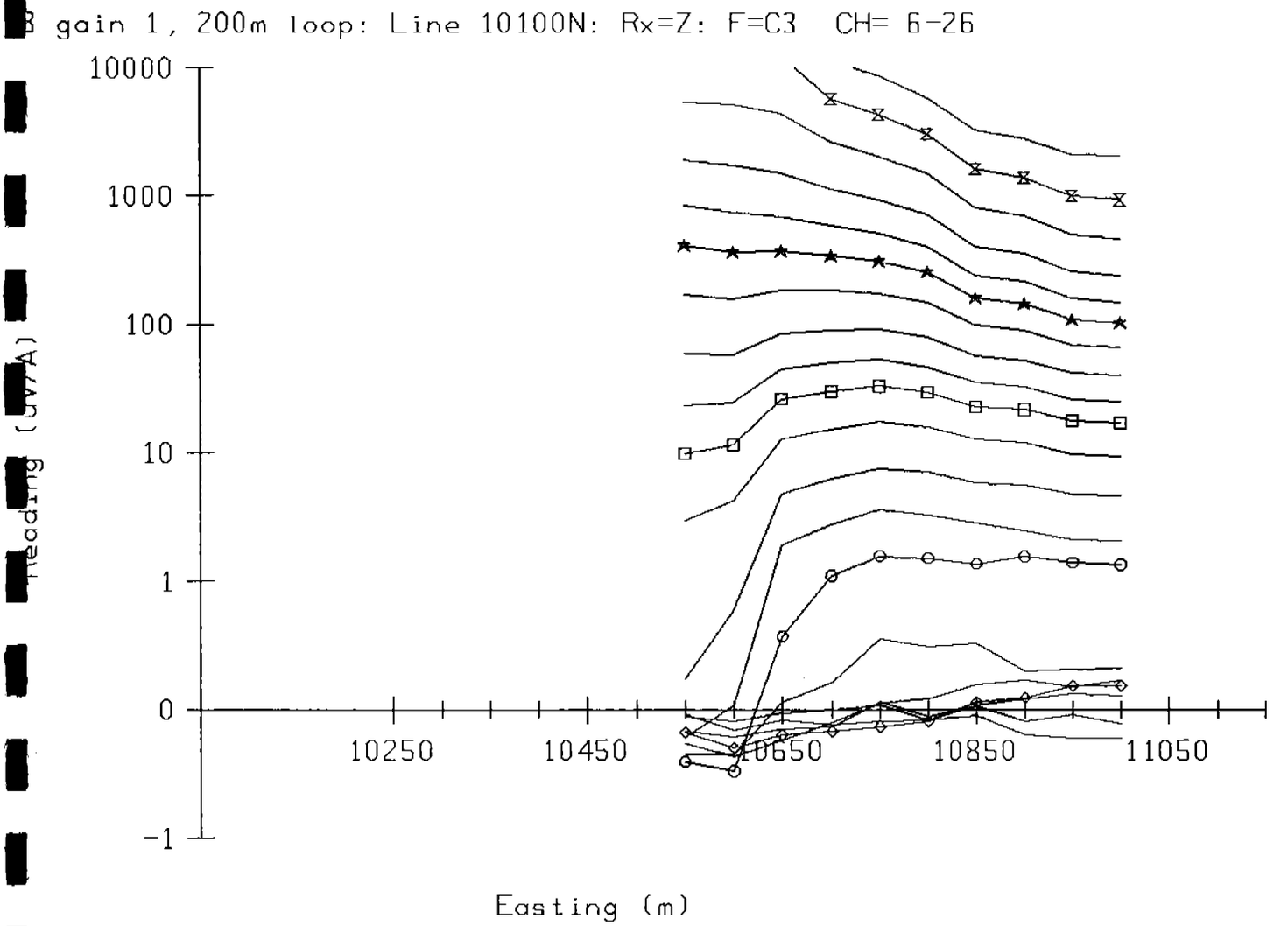


B3 Gain 1: Line 10050N: Rx=Z: F=C3 CH= 6-26

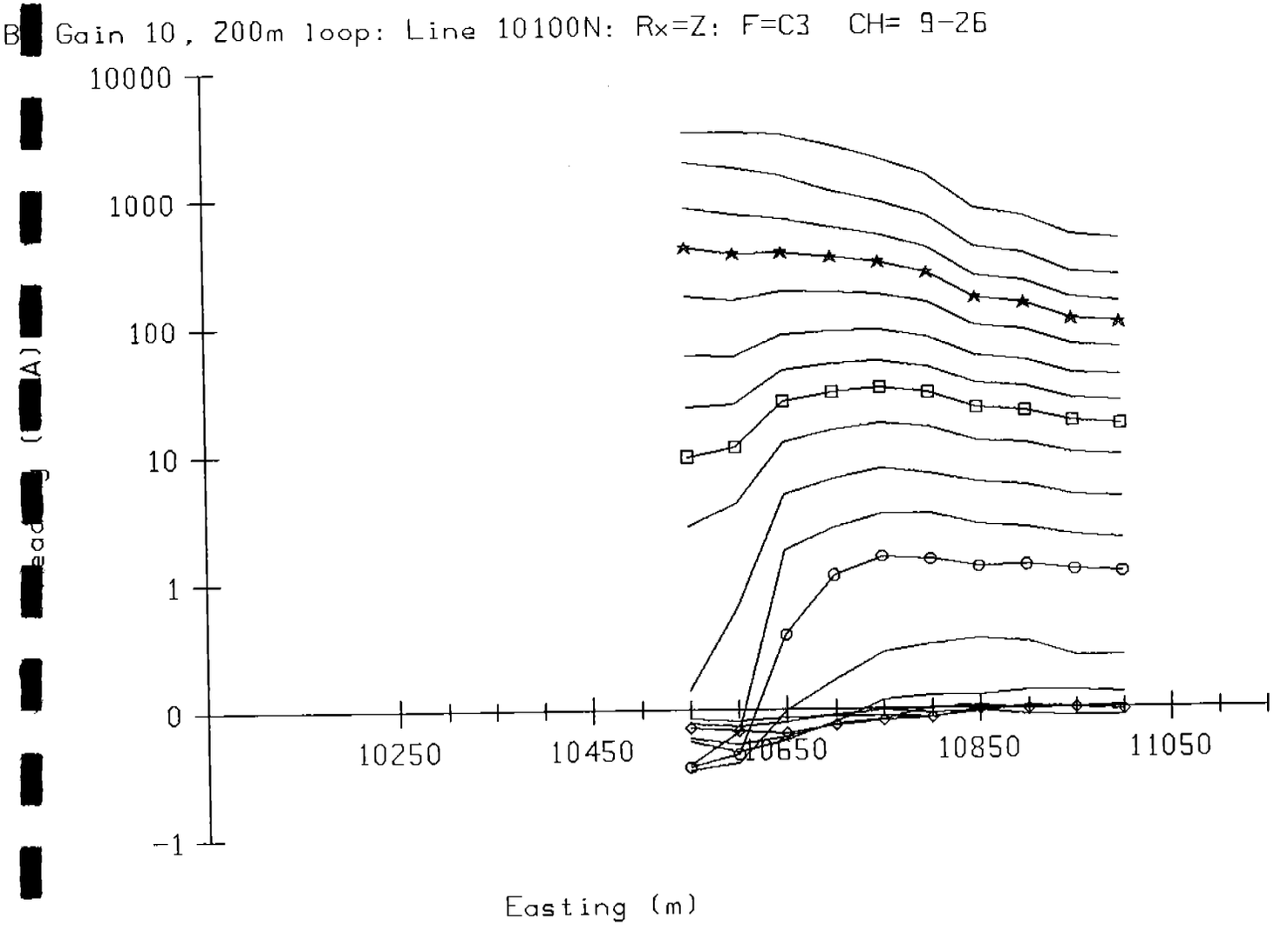


C3 Gain 10: Line 10050N: Rx=Z: F=C3 CH= 8-26

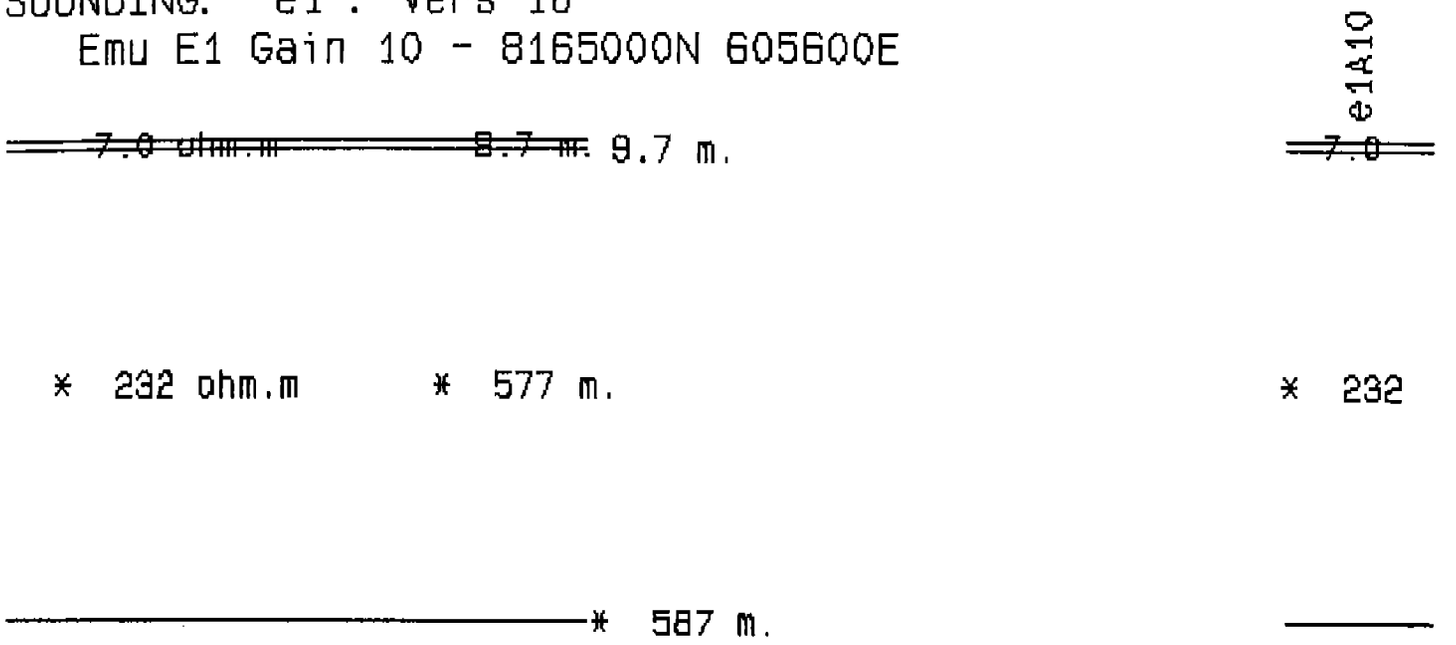



B gain 1, 200m loop: Line 10100N: Rx=Z: F=C3 CH= 6-26
10000
1000
100
10
1
0
-1
10250
10450
10650
10850
11050
Easting (m)

B3

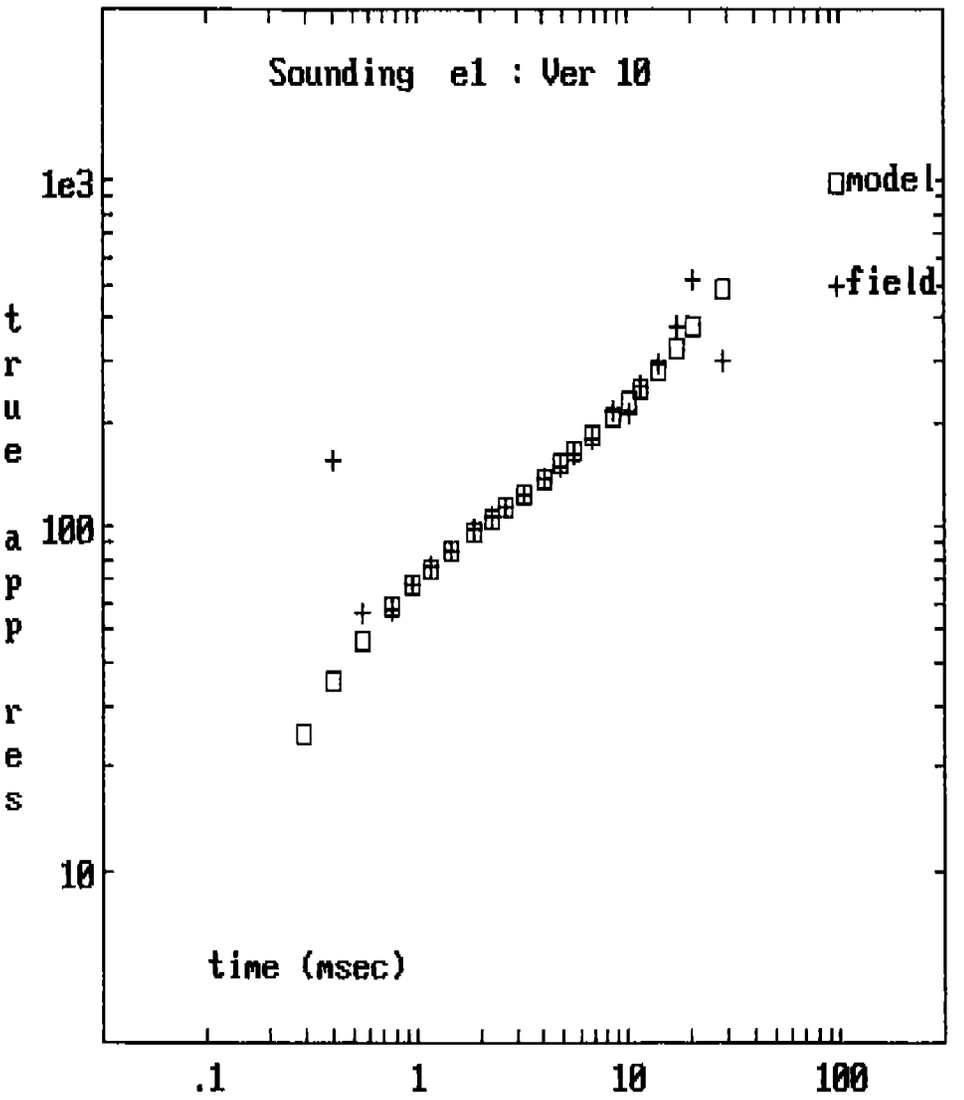

Gain 10, 200m loop: Line 10100N: Rx=Z: F=C3 CH= 9-26
10000
1000
100
10
1
0
-1
10250
10450
10650
10850
11050
Easting (m)

SOUNDING: e1 : Vers 10
Emu E1 Gain 10 - 8165000N 605600E



STD ERR= 2.5% : S= 4 S

E= 2%
S= 4S


Sounding e1 : Ver 10
□model
+field
1e3
100
10
true app res
time (msec)
.1
1
10
100

APPENDIX 5

DRILLING GEOCHEMISTRY

Drill Sample Geochemical Results BDD002

Hole Name	Sample Number	Depth From (m)	Depth To (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Ag (ppm)	As (ppm)	Co (ppm)	Cr (ppm)	Ni (ppm)	P (ppm)	Cd (ppm)	Mo (ppm)	V (ppm)
BDD002	EI2402	0	6	17	11	12	185	36000	-0.2	14	6	133	11	350	-0.5	3	67
BDD002	EI2403	6	12	17	8	10	41	13800	-0.2	19	-2	67	7	450	-0.5	-2	35
BDD002	EI2404	12	18	17	8	16	59	21500	-0.2	7	-2	50	10	350	-0.5	3	43
BDD002	EI2405	18	24	10	8	30	39	20100	-0.2	9	-2	10	8	300	-0.5	-2	38
BDD002	EI2406	24	30	15	14	28	50	20400	-0.2	3	3	11	11	250	-0.5	-2	46
BDD002	EI2407	30	36	11	9	20	37	11400	-0.2	14	3	22	10	150	-0.5	-2	36
BDD002	EI2408	36	42	15	10	27	56	15700	-0.2	14	6	37	12	250	-0.5	-2	46
BDD002	EI2409	42	48	10	10	16	44	7800	-0.2	-2	3	20	6	200	-0.5	-2	36
BDD002	EI2410	48	54	7	9	8	33	6300	-0.2	-2	-2	8	6	200	-0.5	2	33
BDD002	EI2411	54	60	11	9	18	52	8000	-0.2	-2	5	20	7	250	-0.5	3	42
BDD002	EI2412	60	66	9	11	13	60	7500	-0.2	2	3	12	5	150	-0.5	2	29
BDD002	EI2413	66	72	10	8	10	69	8900	-0.2	7	2	25	7	100	-0.5	2	35
BDD002	EI2414	72	78	13	10	8	113	9800	-0.2	-2	2	12	6	200	-0.5	2	37
BDD002	EI2415	78	84	20	6	11	163	11200	-0.2	-2	15	27	9	100	-0.5	2	41
BDD002	EI2416	84	90	22	14	13	20	10100	-0.2	9	-2	8	6	150	-0.5	-2	44
BDD002	EI2417	90	96	25	12	18	62	14800	-0.2	-2	3	51	10	150	-0.5	5	50
BDD002	EI2422	96	102	27	24	32	44	15400	-0.2	7	-2	19	8	200	-0.5	-2	37
BDD002	EI2423	102	108	30	18	20	53	22600	-0.2	11	-2	19	8	200	-0.5	-2	53
BDD002	EI2424	108	114	36	11	26	57	20500	-0.2	12	6	19	13	200	-0.5	-2	49
BDD002	EI2425	114	120	46	22	40	57	18300	-0.2	17	6	35	21	650	-0.5	-2	46
BDD002	EI2426	120	126	38	15	28	70	14800	-0.2	7	6	54	16	450	-0.5	-2	39
BDD002	EI2427	126	132	9	-5	4	34	4600	-0.2	-2	-2	135	10	50	-0.5	-2	7
BDD002	EI2428	132	138	6	14	3	30	2900	-0.2	-2	-2	27	4	50	-0.5	-2	8
BDD002	EI2429	138	144	23	7	8	31	9000	-0.2	8	-2	96	8	150	-0.5	-2	12
BDD002	EI2430	144	150	10	6	4	37	6200	-0.2	-2	-2	71	7	50	-0.5	-2	12
BDD002	EI2431	150	156	17	8	5	29	6600	-0.2	5	-2	88	8	100	-0.5	-2	17
BDD002	EI2432	156	162	15	6	9	26	6800	-0.2	4	-2	18	7	150	-0.5	-2	17
BDD002	EI2433	162	168	26	-5	15	32	13900	-0.2	9	3	27	11	250	-0.5	-2	26
BDD002	EI2434	168	174	29	-5	17	24	14300	-0.2	11	-2	26	11	200	-0.5	-2	34
BDD002	EI2435	174	180	18	8	10	25	9200	-0.2	-2	-2	51	9	200	-0.5	-2	19
BDD002	EI2436	180	186	28	7	24	55	18900	-0.2	5	3	43	12	250	-0.5	-2	30
BDD002	EI2437	186	192	24	-5	21	47	26000	-0.2	9	4	35	15	200	-0.5	-2	26
BDD002	EI2438	192	198	13	5	17	40	26900	-0.2	13	3	48	13	250	-0.5	-2	30
BDD002	EI2439	198	204	11	-5	23	86	32600	-0.2	14	3	41	15	300	-0.5	-2	31

Analysed by ANALABS PTY LTD of Townsville. Batch No. TV033355

Drill Sample Geochemical Results BDD002

BDD002	EI2440	204	210	12	-5	28	76	37400	-0.2	12	4	44	15	250	-0.5	-2	31
BDD002	EI2441	210	216	21	-5	32	92	41300	-0.2	16	5	69	19	350	-0.5	-2	38
BDD002	EI2442	216	218	8	-5	29	38	36700	-0.2	13	4	19	21	350	-0.5	-2	39
BDD002	EI2443	218	224	35	5	36	82	46400	-0.2	12	7	20	23	400	-0.5	-2	38
BDD002	EI2444	224	230	38	-5	31	41	39200	-0.2	9	5	22	23	400	-0.5	-2	38
BDD002	EI2445	230	236	41	-5	33	66	38500	-0.2	-2	5	24	21	350	0.6	-2	42
BDD002	EI2446	236	242	53	-5	37	58	39600	-0.2	13	7	32	25	400	-0.5	-2	41
BDD002	EI2447	242	248	80	-5	47	60	38000	-0.2	10	9	17	31	350	-0.5	-2	44
BDD002	EI2448	248	254	48	-5	49	100	40400	-0.2	15	10	14	29	400	-0.5	-2	41
BDD002	EI2449	254	260	23	6	51	125	43300	-0.2	-2	10	16	27	550	0.6	-2	41
BDD002	EI5775	260	266	48	5	57	108	41900	-0.2	21	15	16	37	450	-0.5	-2	43
BDD002	EI5776	266	272	48	6	38	74	32400	-0.2	14	11	22	26	300	-0.5	-2	37
BDD002	EI5777	272	278	41	5	42	105	35500	-0.2	21	13	13	27	400	-0.5	-2	39
BDD002	EI5778	278	284	18	-5	67	131	38300	-0.2	6	26	15	41	350	-0.5	-2	37
BDD002	EI5779	284	290	9	-5	55	134	41500	-0.2	7	27	14	35	350	-0.5	-2	38
BDD002	EI5780	290	296	-2	6	34	80	40800	-0.2	11	10	18	20	250	0.6	-2	39
BDD002	EI5781	296	302	12	-5	40	107	40800	-0.2	9	11	26	21	250	0.6	-2	40
BDD002	EI5782	302	308	3	6	32	120	41400	-0.2	16	12	13	20	200	-0.5	2	39
BDD002	EI5783	308	316	3	5	31	78	37100	-0.2	-2	9	13	19	200	-0.5	-2	34
BDD002	EI5784	316	318.5	-2	-5	28	68	34300	-0.2	8	8	15	17	200	-0.5	-2	33

Analysed by ANALABS PTY LTD of Townsville. Batch No. TV033355

Drill Sample Geochemical Results BDP010

Hole Name	Sample Number	Depth From (m)	Depth To (m)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Mn (ppm)	Fe (ppm)	Ag (ppm)	As (ppm)	Co (ppm)	Cr (ppm)	Ni (ppm)	P (ppm)	Cd (ppm)	Mo (ppm)	V (ppm)
BDP010	EI4167	0	6	21	14	17	552	37900	-0.2	28	12	37	16	150	-0.5	3	65
BDP010	EI4168	6	12	46	19	17	214	11600	-0.2	6	6	40	10	100	-0.5	4	30
BDP010	EI4169	12	18	33	19	22	39	6400	-0.2	-2	2	90	11	100	-0.5	3	21
BDP010	EI4170	18	24	41	10	21	241	11300	-0.2	8	4	65	10	100	-0.5	3	30
BDP010	EI4171	24	30	44	6	30	147	25400	-0.2	-2	4	66	15	200	-0.5	-2	32
BDP010	EI4172	30	36	52	9	39	321	33700	-0.2	-2	7	51	17	200	-0.5	3	42
BDP010	EI4173	36	42	19	7	33	126	26200	-0.2	-2	4	46	14	200	-0.5	-2	33
BDP010	EI4174	42	48	24	6	27	404	28200	-0.2	7	7	54	16	350	-0.5	2	34
BDP010	EI4175	48	54	15	7	33	85	28900	-0.2	-2	4	40	15	250	-0.5	2	39
BDP010	EI4176	54	60	14	7	39	137	33500	-0.2	9	5	41	18	350	-0.5	3	44
BDP010	EI4177	60	66	12	7	44	90	32000	-0.2	8	6	24	18	500	-0.5	-2	42
BDP010	EI4178	66	72	10	8	42	136	40500	-0.2	10	6	35	20	400	-0.5	3	46
BDP010	EI4179	72	78	17	6	47	131	42100	-0.2	-2	6	17	22	400	-0.5	-2	50
BDP010	EI4180	78	84	41	17	41	114	34600	-0.2	-2	5	20	18	350	-0.5	3	46
BDP010	EI4181	84	90	38	9	62	73	43800	-0.2	11	16	19	33	300	-0.5	-2	45
BDP010	EI4182	90	96	20	8	56	77	39300	-0.2	-2	22	29	29	250	0.6	-2	46
BDP010	EI4183	96	102	65	13	55	69	39300	-0.2	17	22	27	31	200	-0.5	2	46
BDP010	EI4184	102	108	97	12	65	209	60000	-0.2	16	36	19	32	600	-0.5	3	43
BDP010	EI4185	108	114	41	6	51	117	41000	-0.2	21	18	13	26	400	-0.5	-2	38
BDP010	EI4186	114	120	21	-5	66	119	46100	-0.2	16	25	15	28	300	-0.5	-2	44
BDP010	EI4187	120	126	3	8	44	117	41700	-0.2	-2	15	13	20	300	-0.5	-2	35
BDP010	EI4188	126	132	3	8	42	89	39500	-0.2	14	10	17	19	250	-0.5	-2	41
BDP010	EI4189	132	138	4	8	40	60	39200	-0.2	2	7	17	18	250	-0.5	2	36
BDP010	EI4190	138	144	3	7	41	57	39600	-0.2	18	7	15	19	300	-0.5	-2	39
BDP010	EI4191	144	150	4	9	51	71	40200	-0.2	27	15	12	23	300	-0.5	-2	33

Analysed by ANALABS PTY LTD of Townsville. Batch No. TV033355

ROCK, DRILL CORE, DRILL CHIP ANALYSIS DESCRIPTION

Scheme Code: GP033

Sample preparation of drill core/rock samples; dry, jaw crush, fine pulverise

Scheme Code: D140

Aqua regia/perchloric acid digest (0.3g sample)

Scheme Code: GI140

ICPOES determination

Cu:	Copper
Pb:	Lead
Zn:	Zinc
Fe:	Iron
Mn:	Manganese
As:	Arsenic
Ni:	Nickel
Co:	Cobalt
Mo:	Molybdenum
Cr:	Chromium
P :	Phosphorus
V :	Vanadium
Cd:	Cadmium
Ag:	Silver

APPENDIX 6

DRILL LOGS

DRILL LOGS

BDD002 - SUMMARY LOG

0.00 - 4.00	**Cainozoic Soil and Ferricrete**
4.00 - 42.00	**Cretaceous Mudstone**
42.00 - 318.50	**Proterozoic Stretton Sandstone**
42.00 - 287.50	Generally thin bedded, well sorted, sub rounded fine grained quartz arenite. Bedding is $\approx 40^0$.
42.00 - 96.00	Strongly weathered, porous, grey, red.
96.50 - 120.14	Strongly weathered, porous, red, yellow, hematitic, limonitic, banded. Intensely fractured. Silty clay in very intensely fractured zones.
120.14 - 120.30	Strongly weathered, porous, grey, poorly sorted, sub rounded, medium grained, quartz arenite. Elongate siltstone intraclasts. Intensely fractured.
120.30 - 122.50	Strongly weathered, porous, yellow, limonitic, banded. Bedding $\approx 50^0$. Intensely fractured. Silty clay in very intensely fractured zones.
122.50	Base of strong oxidation
122.50 - 138.20	Weakly weathered, porous, grey, banded. Banding defined by recrystallized zones and convolute wispy clay laminae. Moderately fractured. Clay fracture/slippage planes sub parallel to bedding.
138.20 - 139.20	Weakly weathered, porous, grey, poorly sorted, sub rounded, medium grained quartz arenite. Elongate siltstone intraclasts. Moderately fractured. Clay fracture/slippage planes sub parallel to bedding.
139.20 - 144.30	Weakly weathered, porous, grey, orange, lisegang banded. 141.3 - 142.0 medium grained. Moderately fractured. Clay fracture/slippage planes sub parallel to bedding.
144.30 - 146.00	Moderately weathered, porous, red hematitic, banded. Banding defined by convolute wispy clay laminae. Moderately fractured. Clay fracture/slippage planes sub parallel to bedding.
146.00 - 148.50	Weakly weathered, porous, grey, yellow, graded bedded, poorly sorted, sub angular, coarse grained, sub lithic arenite. Graded beds are 5 cm thick. Lithic grains are white siltstone. 146.0 - 146.9 moderately fractured, 146.9 - 148.5 intensely fractured. Clay fracture/slippage planes sub parallel to bedding.
148.50 - 150.80	Moderately weathered, orange, brown. Intensely fractured.
150.80 - 153.00	Fault Zone ? Strongly weathered, red, orange, hematitic, limonitic breccia. In situ, angular arenite fragments in a silty clay matrix.
153.00 - 190.80	Moderately weathered, orange, brown, red, banded to medium bedded. Banding defined by lisegang and contorted clay laminae. Bedding variable between 30^0 and 70^0. Intensely fractured. Clay fracture/slippage planes sub parallel to bedding. Silty clay in very intense fracture zones between 174.3 - 187.0.

190.80 - 212.10	Weakly weathered, orange, red, liesegang banded to medium bedded. 191.3 - 192.0 local folding. 190.8 - 197.6 moderately fractured, 197.6 - 200.1 strongly fractured, 200.1 - 205.0 moderately fractured, 205.0 - 206.2 strongly fractured, 206.2 - 212.1 moderately fractured.
212.10 - 213.60	Fault Zone. Moderately weathered, brown, breccia. In situ to milled angular to sub rounded clasts of arenite in a silty clay matrix.
213.60 - 222.50	Weakly weathered, orange, red, liesegang banded to moderately bedded. Local fold at 221.8.
222.50 - 226.50	Fault Zone. Moderately weathered, brown, breccia. In situ to milled angular to sub rounded clasts of arenite in a silty clay matrix. Poorly healed in places. Black, blue goethite ? crystals in cavity at 263.9 m.
226.50 - 233.10	Weakly weathered, brown, red, medium bedded Bedding $\approx 70^0$. 226.5 - 229.9 intensely fractured, 229.9 - 233.1 moderately fractured.
233.10 - 235.00	Fault Zone ? Moderately weathered, brown, breccia. In situ angular clasts of arenite in a silty clay matrix.
235.00 - 236.40	Weakly weathered, brown, medium bedded. Bedding $\approx 50^0$. Intensely fractured.
236.40 - 236.50	Fault Zone. Strongly weathered, red, breccia. In situ to milled angular to sub rounded clasts of arenite in a hematitic silty clay matrix. Dips $\approx 60^0$.
236.50 - 250.00	Weakly weathered, brown, medium bedded. Moderately fractured. Some silty clay in more fractured zones.
250.00 - 259.30	Fault Zone. Moderately weathered, brown, breccia. In situ to milled angular to subrounded arenite clasts in a silty clay matrix. 5 cm thick non brecciated strongly fractured arenite beds throughout. Bedding and fractures sub horizontal. Breccia zones are parallel to bedding.
259.30 - 261.30	Moderately weathered, brown. Bedding and fractures sub horizontal. Minor breccia zones parallel to bedding.
261.30 - 265.00	Fault Zone. In situ to milled angular to sub rounded arenite clasts in a silty clay matrix. 5 cm thick non brecciated intensely fractured arenite beds throughout. Bedding and fractures 20^0.
265.00 - 287.50	Weakly weathered, brown, minor red lisegang banding. Bedding $\approx 50^0$. 265.00 - 267.10 m strongly fractured sub parallel to bedding, silty clay in stronger fractured zones. 267.10 - 287.50 moderately fractured.
287.50	Base of any significant oxidation.
287.50 - 318.50	Red, brown, medium bedded, graded, well sorted, sub rounded, quartz arenite. Brown medium grained $\approx$ 5 mm thick base to cycles with red fine grained $\approx$ 10 cm thick top. Cycles have sharp upper and lower contacts. At 303.0 m 15 cm thick base, 309.25 m 8 cm thick base, 311.2 m 15 cm cross bedded base, 313.8 m 8 cm cross bedded base. Bedding $\approx 50^0$. Moderately fractured. Clay coatings on fracture planes.

EOH

Note: That angles are inferred dips not angle to LCA.

BDP010 - SUMMARY LOG

0.00 - 3.00	**Cainozoic Soil and Ferricrete**
3.00 - 150.00	**Proterozoic Stretton Sandstone**
3.00 - 10.00	White, pale grey, lime green clay + intensely weathered, pale grey, pink medium grained sandstone.
10.00 - 18.00	Strongly weathered grey, orange, brown, well sorted, sub rounded medium grained, quartz arenite. 12 - 14 open space sugary quartz. 16 - 18 smokey quartz veinlets.
18.00 - 24.00	Weakly weathered pale grey, well sorted, sub rounded, medium grained quartz arenite. Grain boundaries obscured by quartz overgrowths.
24.00 - 74.00	Moderately weathered, orange, brown, well sorted, sub rounded, fine grained, quartz arenite.
66.00	Water table.
74.00 - 81.00	Strongly weathered, red, brown, well sorted, sub rounded, fine grained, quartz arenite.
81.00	Base of significant oxidation.
81.00 - 102.00	Laminated carbonaceous siltstone. 81 - 82 m pale grey, 82 - 88 m dark grey, 88 - 90 m medium grey oxidised brown on fractures, 90 - 92 m dark grey, 92 - 96 m pale grey oxidised orange on fractures, 96 - 100 m dark grey, 100 - 102 m medium grey oxidised brown on fractures.
102.00 - 150.00	Red, brown, well sorted, sub rounded, fine grained, quartz arenite.

EOH

No pyrite or sulphides were observed in the laminated carbonaceous siltstone unit between 81 and 102 m.

APPENDIX 7

DIAMOND EXPLORATION BY ASHTON MINING LIMITED

ANNUAL REPORT

EXPLORATION LICENCES 7577, 7944 and 8360

1st July, 1995
to
31st December, 1995

Licensee:	BHP Minerals
Operator:	BHP Minerals Ashton Mining Limited
Sheet Reference:	1:250,000 Bauhinia Downs (SE 53-03)
Submitted to:	Department of Mines and Energy, Darwin
Copies to:	BHP Minerals Ashton Mining Limited - Perth Office Ashton Mining Library

Author:

N. Ong
ASHTON MINING LIMITED
24 Outram Street
WEST PERTH WA 6005

December, 1995
Report Number: 51195

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2.0 EXPLORATION PROGRAMME 2

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2.2 Gravel Sampling 2
2.3 Laboratory Procedure 2

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4.0 CONCLUSIONS AND RECOMMENDATIONS 3

5.0 PROPOSED PROGRAMME AND BUDGET 3

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Figure 1. Tenement Location Plan - 7577
Figure 2. Tenement Location Plan - 7944
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Figure 4. Sample Location Plan - 7577
Figure 5. Sample Location Plan - 7944

APPENDICES

Appendix 1. Sample Results
Appendix 2. Statement of Expenditure

SUMMARY

During the period 1st July 1995 to 30th December 1995, Ashton Mining Limited, on behalf of the Australian Diamond Exploration Joint Venture (ADE JV), carried out an exploration programme over exploration licences 7577, 7944, 8360. The licence was granted to BHP Minerals, however, through the McArthur River Joint Venture, Ashton Mining has gained access to the tenement to conduct diamond exploration. This report provides details of work undertaken on the licences during the reporting period.

Ashton Mining undertook reconnaissance stream sampling and collected a total of twenty samples. Samples were sent to Ashton's Perth laboratory for processing. To date, three samples have been processed, with one sample (BAU 14121) returning a positive result of two chromites. All other samples are still unprocessed at the time of reporting, however results will be made available in the following reporting period.

Exploration expenditure for the reporting period amounted to $5,642.

1.0 INTRODUCTION

Ashton Mining Limited entered into an agreement with BHP Minerals, on the 1st July 1995. This agreement enable the ADE JV to carry out its search for diamond bearing kimberlitic intrusives within BHP's tenements, Exploration Licences 7577, 7944 and 8360. This agreement is referred to as the McArthur River (Non-Metals) Joint Venture.

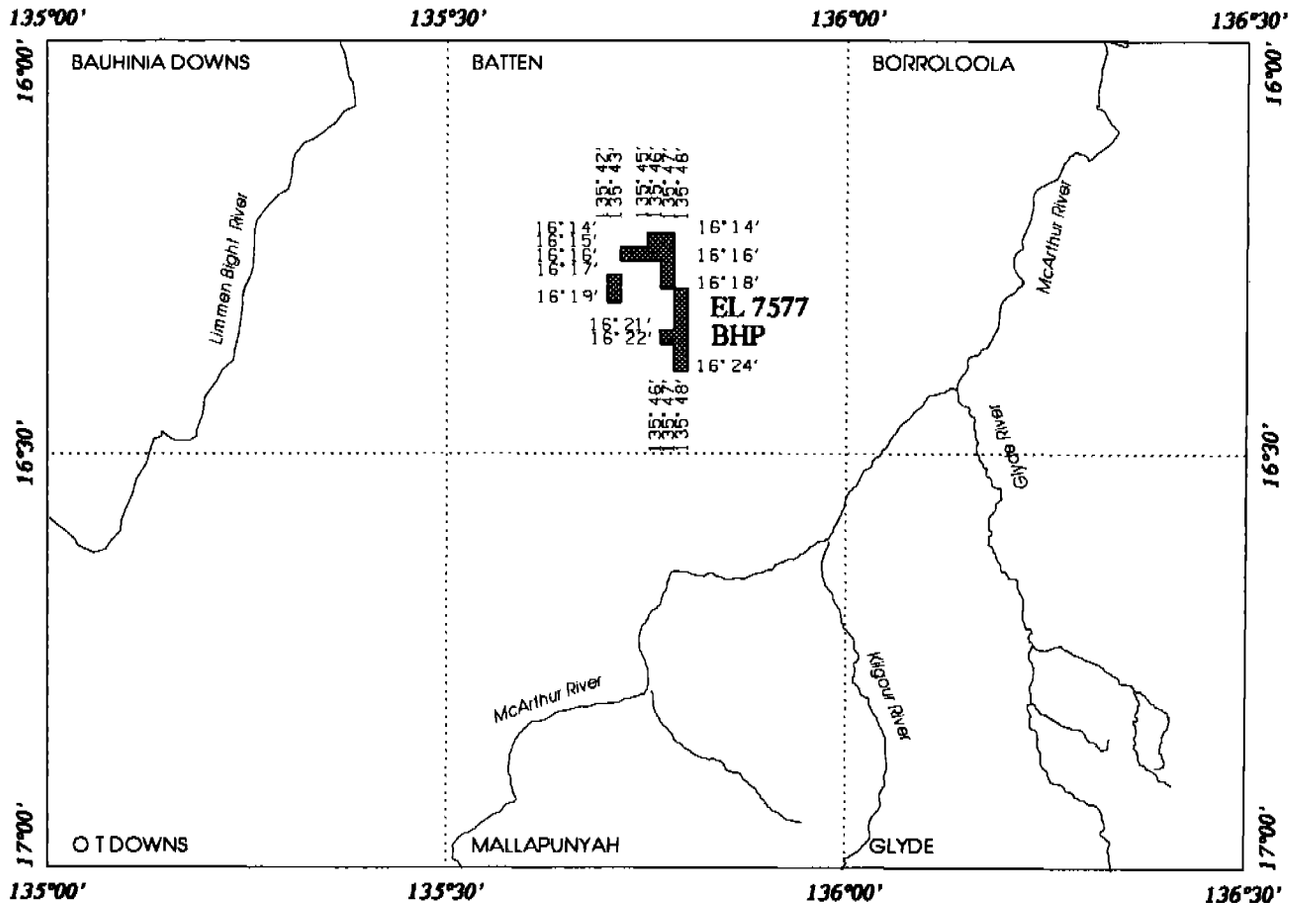
The licences were granted to BHP Minerals and are located on the Bauhinia Downs (SE 53-03) 1:250,000 map sheet. Details of the three tenements are provided in Table 1.

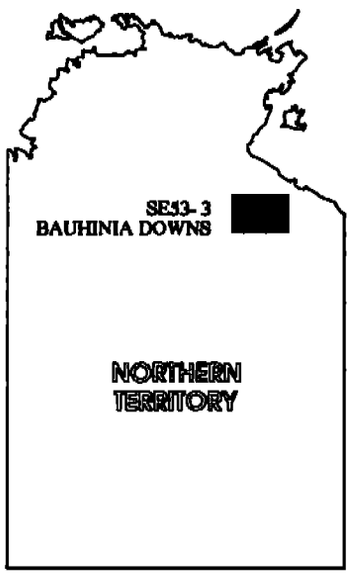
Table 1.

Title	Grant Date	Area (blocks)
7577	02/01/92	17
7944	05/04/93	55
8360	24/12/93	8

Tenement locations maps are shown in Figures 1, 2 and 3.

This report provides a summary of work undertaken by Ashton Mining during the reporting period 1st July 1995 to 31st December, 1995. A statement of expenditure is included in this report.

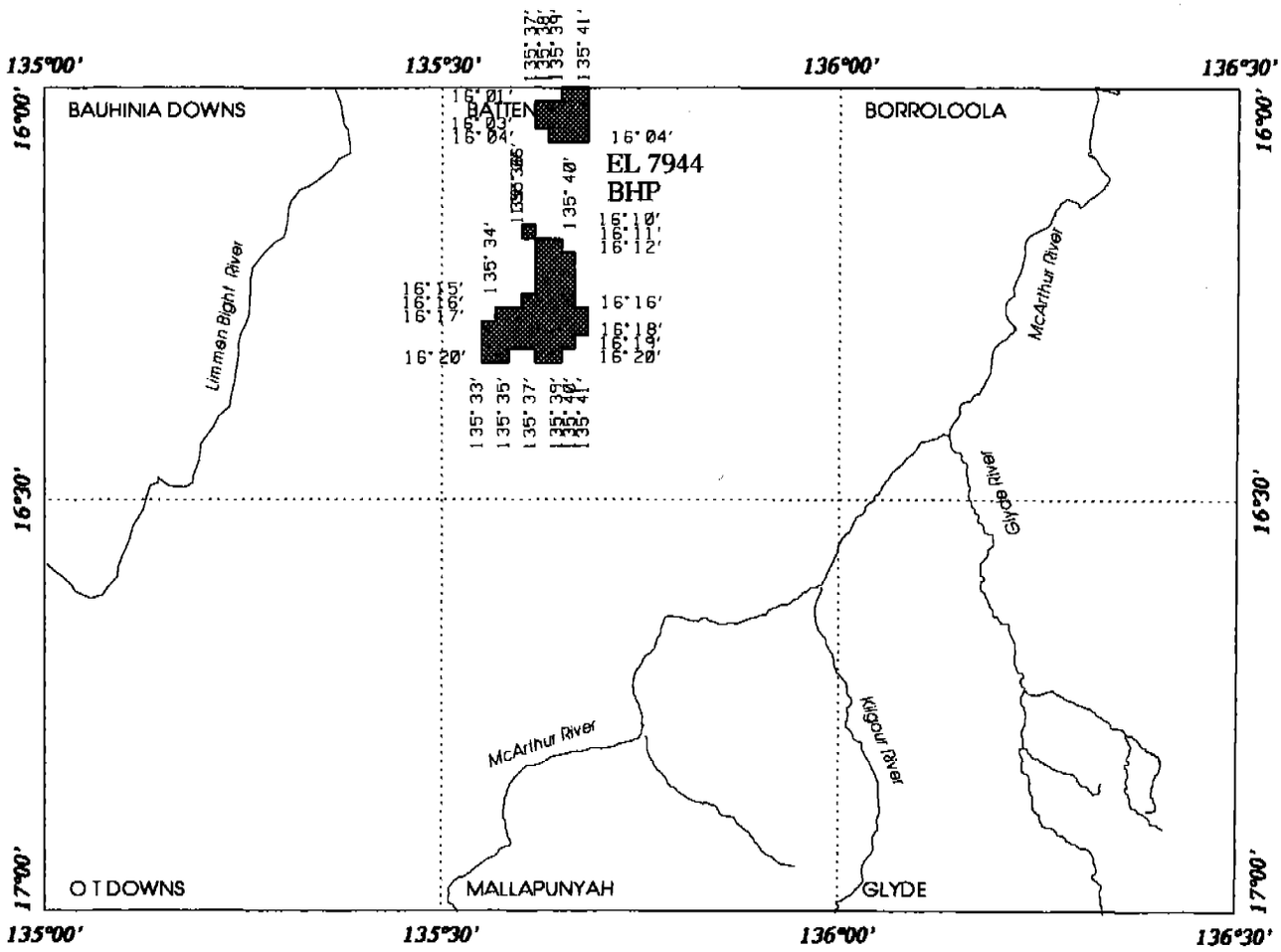




ASHTON MINING LIMITED
A.D.E. JOINT VENTURE
MCARTHUR RIVER JOINT VENTURE

FIGURE 1
EXPLORATION LICENCE 7577
LOCATION MAP

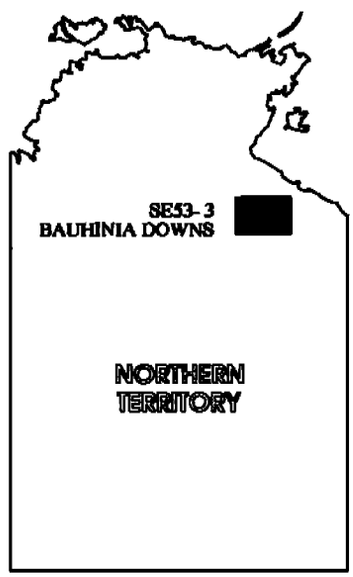
DECEMBER, 1995



KILOMETRES

0 10 20 30 40 50

1 : 1,000,000

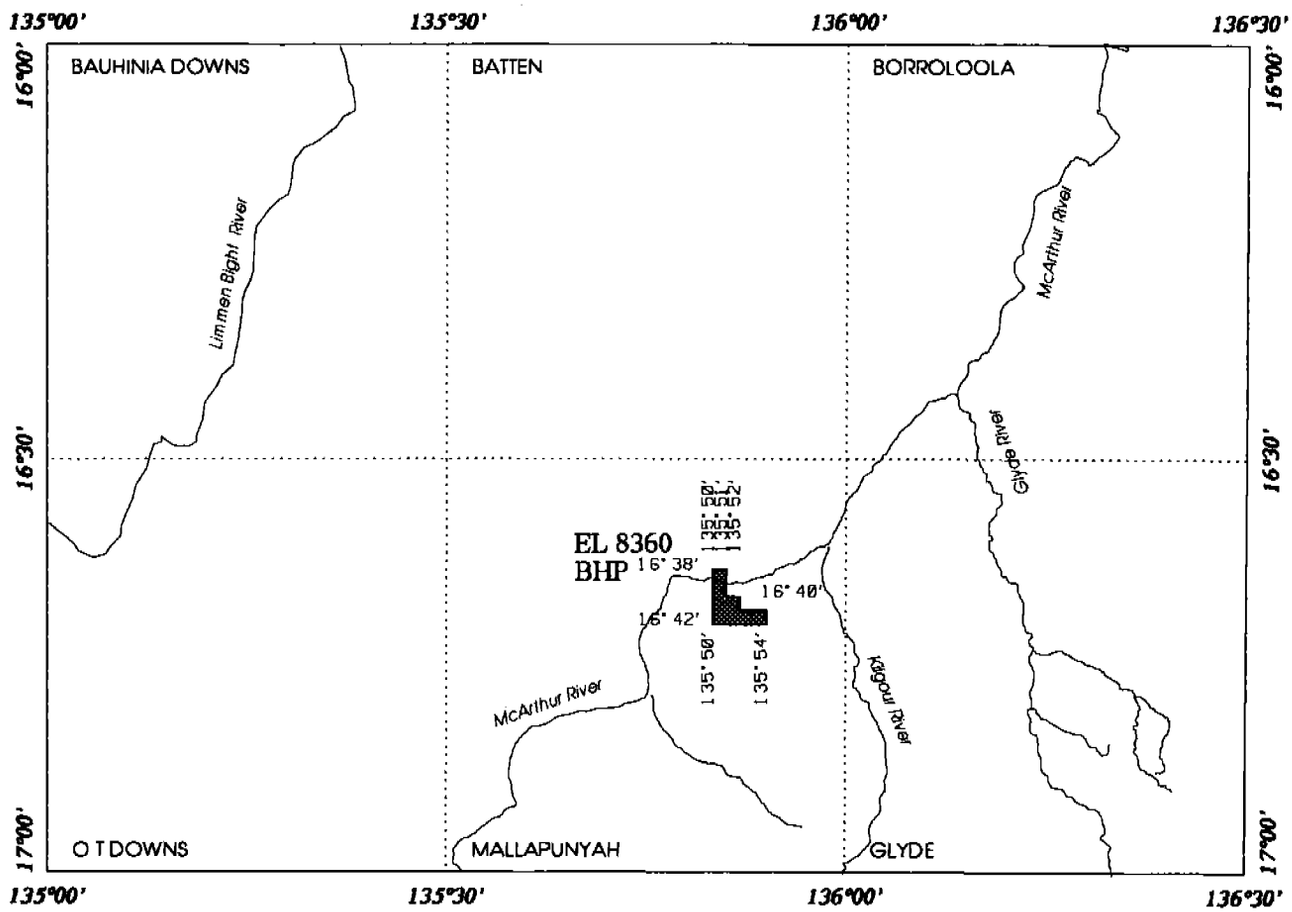


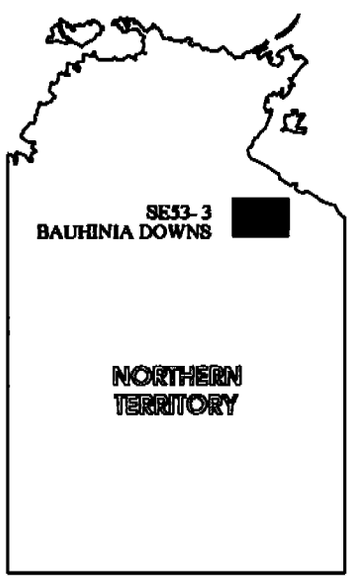
ASHTON MINING LIMITED
A.D.E. JOINT VENTURE
MCARTHUR RIVER JOINT VENTURE

FIGURE 2

EXPLORATION LICENCE 7944
LOCATION MAP

DECEMBER, 1995





ASHTON MINING LIMITED
A.D.E. JOINT VENTURE
MCARTHUR RIVER JOINT VENTURE

FIGURE 3

EXPLORATION LICENCE 8360
LOCATION MAP

DECEMBER, 1995

2.0 EXPLORATION PROGRAMME

2.1 Data Review

Prior to commencing field work, a comprehensive data review of results and previous exploration in the tenement area was undertaken. This highlighted areas which had not been adequately explored. Proposed gravel sample locations were then selected and plotted in the office on the Bauhinia and Mallapunyah 1:100 000 map sheets.

2.2 Gravel Sampling

During the reporting period, Ashton Mining conducted a stream sampling programme, collecting twenty samples. Six samples were collected from EL 7577 and fourteen samples were collected from EL 7944. No samples were collected in EL 8360. The samples were forwarded to Ashton's Perth laboratory for diamond and indicator mineral analysis. Three samples have been processed to date, with one sample (BAU 14121) reporting two chromites. All remaining samples will be processed in the following reporting.

Sample locations are shown on Figures 4 and 5. A sample listing is provided in Appendix 1.

2.3 Laboratory Procedure

The samples were processed by Ashton Mining Limited's laboratory in Perth, where they were concentrated by Wilfley Table and heavy liquid separation techniques. The heavy liquid used was tetrabromethane with a specific gravity of 2.96. The concentrates

were then screened into various size fractions, further concentrated by magnetic and electrostatic separation techniques and a comprehensive grain by grain examination carried out on the minus 1.0mm plus 0.425mm fractions.

3.0 EXPLORATION EXPENDITURE

Exploration expenditure for the period 1 July 1995 to 31st December 1995 amounted to $5,642. A detailed breakdown of expenditure is given in Appendix 2.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Further work in this area will be dependent on the outstanding results of the reconnaissance gravel sampling.

5.0 PROPOSED PROGRAMME AND BUDGET

The proposed programme for each licence will involve additional helicopter supported reconnaissance sampling, and the budgets for the period 2nd February 1996 to 1st February, 1997 are as follows:

EL 7577

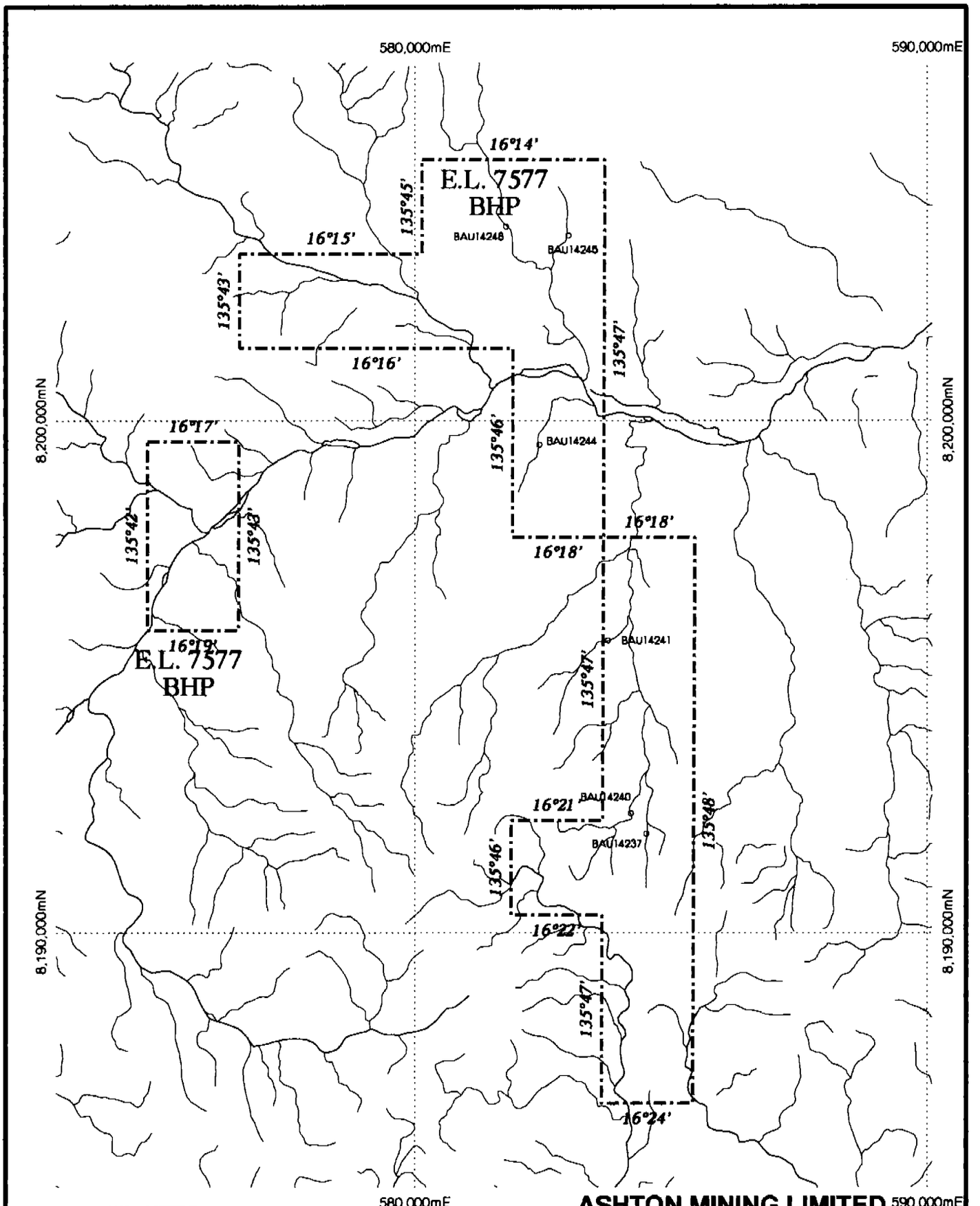
Geoscientist/Professional	2,500
Field Support/Office Staff	1,500
Travel/Accommodation/Meals	2,000
Field Supplies	1,000
Vehicles	500
Freight/Storage	500
Helicopter Charter	4,000
Laboratory	3,000
Drafting	500
Total:	$ 15,500

EL 7944

Geoscientist/Professional	2,500
Field Support/Office Staff	1,500
Travel/Accommodation/Meals	2,000
Field Supplies	1,000
Vehicles	500
Freight/Storage	500
Helicopter Charter	4,000
Laboratory	3,000
Drafting	500
Total:	$ 15,500

EL 8360

Geoscientist/Professional	2,500
Field Support/Office Staff	1,500
Travel/Accommodation/Meals	2,000
Field Supplies	1,000
Vehicles	500
Freight/Storage	500
Helicopter Charter	4,000
Laboratory	3,000
Drafting	500
Total:	$ 15,500



ASHTON MINING LIMITED
A.D.E. JOINT VENTURE
MCARTHUR RIVER JOINT VENTURE

EXPLORATION LICENCE 7577
FIGURE 4
SAMPLE LOCATIONS

DECEMBER, 1995

560,000mE
570,000mE
580,000mE
8,230,000mN
8,220,000mN
8,210,000mN
8,200,000mN

16°00'
135°39'
16°01'
135°37'
135°41'
16°03'
135°38'
16°04'

E.L. 7944
BHP

BAU14227
BAU14230
BAU14231
BAU14228
BAU14229
BAU14226

16°10'
135°36'
135°37'
16°11'
16°11'
135°39'
16°12'

BAU14110
BAU14066
BAU14121

E.L. 7944
BHP

BAU14061

16°15'
135°36'
16°16'
135°34'
16°17'
135°33'
16°18'
135°40'
135°41'
16°19'
135°35'
135°37'
135°39'
16°19'
16°20'
16°20'

BAU14058
BAU14246
BAU14249
BAU14059

- Sample - not yet processed
- Sample - negative
- Sample - chromite positive
- Sample - diamond positive
- Sample - other indicators
- Drill hole location

KILOMETRES
0 1 2 3 4 5
1 : 100,000

ASHTON MINING LIMITED
A.D.E. JOINT VENTURE
MCARTHUR RIVER JOINT VENTURE
EXPLORATION LICENCE 7944
SAMPLE LOCATIONS

FIGURE 5

Geologist :	Date : December, 1995	Report No :
Drafted : M.F.Ariotti	Revised :	Drawing No :

APPENDIX 1

Sample Results

SAMPLE RESULTS FOR EXPLORATION LICENCE 7577

SAMPLE	RESULT	TYPE	GRID	DIAMOND		CHROMITE	OTHER INDICATORS
				MICRO	MACRO		
BAU14237	npro	G	-	-	-	-	-
BAU14240	npro	G	-	-	-	-	-
BAU14241	npro	G	-	-	-	-	-
BAU14244	npro	G	-	-	-	-	-
BAU14245	npro	G	-	-	-	-	-
BAU14248	npro	G	-	-	-	-	-

SAMPLE RESULTS FOR EXPLORATION LICENCE 7944

SAMPLE	RESULT	TYPE	GRID	DIAMOND		CHROMITE	OTHER INDICATORS
				MICRO	MACRO		
BAU14058	npro	G	-	-	-	-	-
BAU14059	npro	G	-	-	-	-	-
BAU14061	npro	G	-	-	-	-	-
BAU14066	npro	G	-	-	-	-	-
BAU14110	npro	G	-	-	-	-	-
BAU14121	POS	G	-	-	-	2	-
BAU14226	npro	G	-	-	-	-	-
BAU14227	npro	G	-	-	-	-	-
BAU14228	npro	G	-	-	-	-	-
BAU14229	npro	G	-	-	-	-	-
BAU14230	npro	G	-	-	-	-	-
BAU14231	npro	G	-	-	-	-	-
BAU14246	neg	G	-	-	-	-	-
BAU14249	neg	G	-	-	-	-	-

APPENDIX 2

Statement of Expenditure

STATEMENT OF EXPENDITURE

EXPLORATION LICENCE 7577

For the period
1st July, 1995 to 31st December, 1995

Geoscientist/Professional	1,805
Field Support/Office Staff	166
Travel/Accommodation/Meals	288
Laboratory	20
Drafting/computing	186
Sub-Total	2,465
10% Overheads	246
Total:	**$ 2,711**

STATEMENT OF EXPENDITURE

EXPLORATION LICENCE 7944

For the period
1st July, 1995 to 31st December, 1995

Field Support/Office Staff	522
Helicopter Charter	1,569
Laboratory	429
Sub-Total	2,520
10% Overheads	252
Total:	**$ 2,772**

STATEMENT OF EXPENDITURE

EXPLORATION LICENCE 8360

For the period
1st July, 1995 to 31st December, 1995

Drafting/computing	145
Sub-Total	145
10% Overheads	14
Total:	**$ 159**

APPENDIX 8

PROPOSED WORK PROGRAMS AND EXPENDITURES

EL7575 - MALLAPUNYAH

Proposed Work Program - 2/1/96 to 1/1/97

1. Airborne electromagnetic survey plus processing and interpretation.

2. Ground follow-up of promising conductors.

Proposed Expenditure

1.	50 line km at $60/km	$3,000
	5 days processing and interpretation at $500/day	2,500
	TOTAL	**$5,500**

EL7944 - TAWALLAH CREEK

Proposed Work Program - 5/4/96 to 4/4/97

1. Soil and/or rock sampling.

2. Airborne electromagnetic survey plus processing and interpretation.

3. Ground follow-up of promising conductors.

Proposed Expenditure

1.	7 days field support at $500/day	$3,500
	50 samples analysed at $15/sample	750
2.	40 line km at $60/km	2,400
	4 days processing and interpretation at $500/day	2,000
	TOTAL	**$8,650**

EL8322 - KILGOUR NORTH

Proposed Work Program - 8/6/96 to 7/6/97

1. Airborne electromagnetic survey plus processing and interpretation.

2. Ground follow-up of promising conductors.

Proposed Expenditure

1.	30 line km at $60/km	$1,800
	3 days processing and interpretation at $500/day	1,500
2.	Field inspection of anomalies	1,700
	TOTAL	**$5,000**

PROPOSED EXPENDITURES - MALLAPUNYAH PROJECT

EXPLORATION LICENCE		BHP	ASHTON *	TOTAL
Mallapunyah	EL7575	5,500		5,500
Shady Camp	EL7577		15,500	15,500
Tawallah Creek	EL7944	8,650	15,500	24,150
Bessie Spring	EL8360		15,500	15,500
Kilgour North	EL8322	5,000		5,000

* See Appendix 7

560000E 562500E 565000E 567500E

8150000N

8147500N

8145000N

LC95/1

EI5602,3 EI5601 EI5622

LC95/2

EI5623 EI5634

LC95/3

EI5635 EI5652

LC95/4

EI5695 EI5696 EI5697 EI5698 EI5699 EI5700,1 EI5702 EI5703 EI5704 EI5705 EI5707 EI5708

LC95/5

EI5681 EI5682 EI5683,4 EI5685 EI5686 EI5687 EI5688 EI5689 EI5690 EI5691 EI5692 EI5693 EI5694

LC95/6

EI5680 EI5679 EI5677 EI5676 EI5675 EI5674 EI5673 EI5672 EI5671 EI5670 EI5669 EI5668

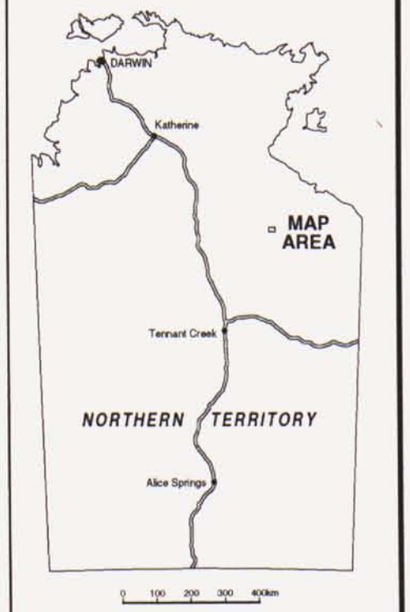
EI5653 EI5654 EI5655 EI5656 EI5657 EI5659 EI5660 EI5661 EI5662 EI5663,4 EI5665 EI5666 EI5667

LC95/7

Relinquished boundary of EL7575

Scale 1 : 25,000

0 500 1000 1500 2000 metres



BHP

Exploration - BHP Minerals

BHP Minerals Pty. Ltd., A.C.N. 008 694 782

NORTHERN PLATFORMS PROGRAM
McARTHUR PROJECT
EL7575 MALLAPUNYAH - LITTLE CREEK AREA

SOIL SAMPLE LOCATIONS

Prepared : I.R.Brown	Date : 30-1-96	**FIGURE 2**
Drawn : A.R.Veale	Revised:	
Centre : Perth	Drg. No.: A3-4004	

566250E 566500E 566750E 567000E 567250E 567500E 567750E

8207250N 8207000N 8206750N 8206500N

Laterite EH1663

Sheet wash EH1664

EH1665

Scree

EH1666 DD1199, 1200

Scree

K 5 K DD1198

EH1667

Weathered DD1197

EH1668

Sheet wash EH1669

10 DD1195

EH1670 DD1196

EH1671

DD1193 DD1194

EH1672

50

DD1192 DD1191 DD1190 (ga)

EH1673

EH1674 DD1189 (ga)

EH1675

20

Line J6

Line J5

EH1655

DU8899 EH1654

Sandstone scree

DU8898 EH1653 DU8897 DU8896

DU8895 EH1652 DU8894 EK7400

EK7397,98 Scree EH1651 EK7399

EK7396 Dolomite scree EH1650

Sandstone scree EH1649 EK7395

Dolomite

Fine sandstone/siltstone

Conophyton

ga Galena

K — K Potassium mudstone

▲ 1994 Soil sample

× 1995 Rock sample

—/— Fence

Scale 1 : 5,000

0 100 200 300 400 metres

BHP

Exploration - BHP Minerals

BHP Minerals Pty. Ltd., A.C.N. 008 694 782

McARTHUR PROJECT
E7944 TAWALLAH CREEK, N.T.

SOIL AND ROCK CHIP SAMPLE MAPPING

Prepared : I.R.Brown	Date : 31-8-95	FIGURE 3
Drawn : A.R.Veale	Revised:	
Centre : Perth	Drg. No.: A3-3985	

560000E 580000E 600000E

8200000N 8180000N 8160000N

B1

B2 BDP010

B3 BDD002

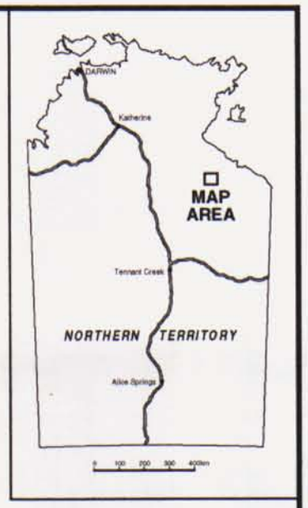
EL7944

EL7577

EL7577

EL8322

E1



BDD002 ● *Drillhole (D=diamond, P=percussion)*

B4 □ *Airborne TEM anomaly*

EL8322 *BHP tenement*

Scale 1 : 250,000

0 5 10 15 20 km

Topographic detail taken from AUSLIG digital data for BAUHINIA DOWNS 1:250,000 sheet (SE53-03)

BHP

Exploration - BHP Minerals

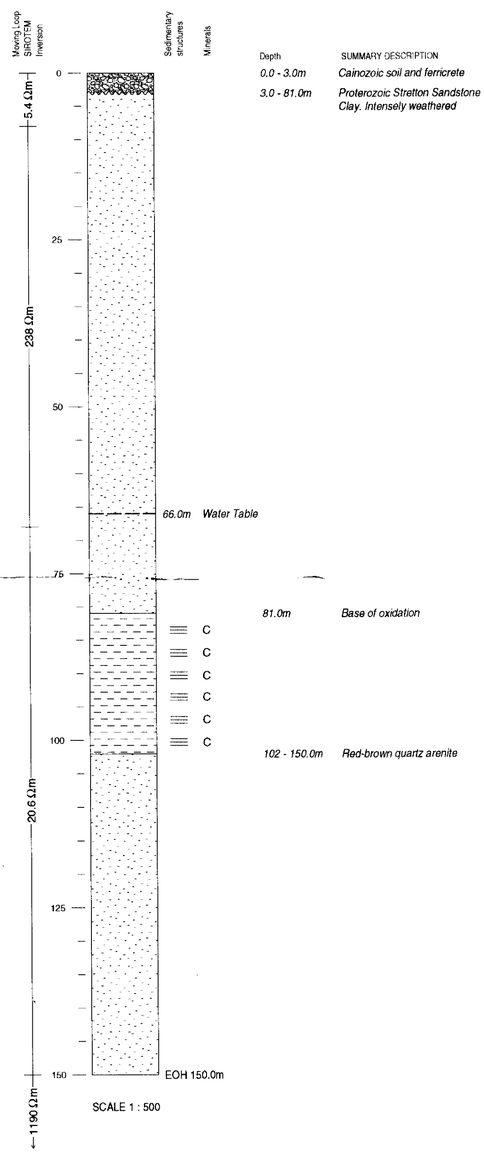
BHP Minerals Pty. Ltd., A.C.N. 008 694 782

NORTHERN PLATFORMS PROGRAM
MALLAPUNYAH PROJECT - ELs 7577, 7944, 8322

LOCATION OF DRILLHOLES AND AIRBORNE TEM ANOMALIES

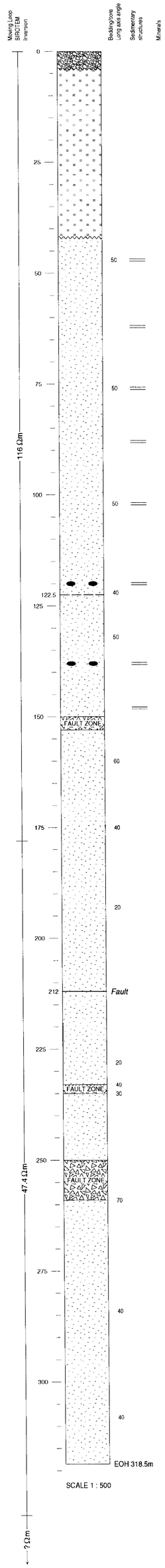
Prepared : M.W.Rennison	Date : 31-1-96	FIGURE 4
Drawn : A.R.Veale	Revised:	
Centre : Perth	Drg. No.: A3-4005	

BDP 010



Depth	SUMMARY DESCRIPTION
0.0 - 3.0m	Cainozoic soil and ferricrete
3.0 - 81.0m	Proterozoic Stretton Sandstone Clay. Intensely weathered

BDD 002

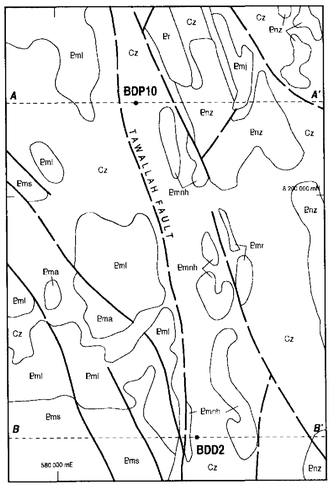


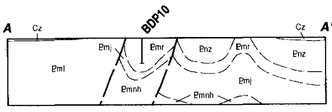
Depth	SUMMARY DESCRIPTION
0.0 - 4.0m	Cainozoic soil and ferricrete
4.0 - 42.0m	Cretaceous mudstone
42.0 - 318.0m	Proterozoic Stretton Sandstone
	Base of strong oxidation
	Graded banding
	Intensely fractured with clay fracture/ slippage planes sub-parallel to bedding
	Lisegang banding
	Moderately fractured
	Minor lisegang banding
	Moderately fractured. Clay coatings on fractures.

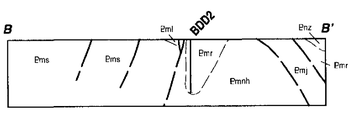
DRILLING DETAILS

	BDP 010	BDD 002
CONTRACTOR:	Gorey and Cole	Gorey and Cole
RIG TYPE:	Warman 1000	Warman 1000
DATE COMMENCED:	13-10-95	29-9-95
DATE COMPLETED:	14-10-95	12-10-95
DECLINATION:	Vertical	Vertical
FINAL DEPTH:	150.0m	318.50m
METHOD:	5¼" RC Hammer	0-96.5m 5¼" RC Hammer 96.5-218.0m HQ core 218.0-318.5m NQ core
COLLAR CO-ORDINATES:	AMG Easting 582550 AMG Northing 8202800 AMG Zone 53	AMG Easting 584450 AMG Northing 8192700 AMG Zone 53
LOGGED:	B.Jones, October 1995	B.Jones, October 1995
SAMPLE:	6m composite RC chips	6m composite RC chips 6m 1/3 core
ANALYSES:	Analabs Pty. Ltd., Townsville, Qld. Peak Values: Cu 97 ppm Pb 12 ppm Zn 65 ppm	Analabs Pty. Ltd., Townsville, Qld. Peak Values: Cu 38 ppm Pb 24 ppm Zn 67 ppm

SIMPLIFIED GEOLOGICAL SETTING







Er	Roper Group (undifferentiated)
Enz	Balbirini Dolomite
Emr	Stretton Sandstone
Emj	Yalco Formation
Emnh	Hot Springs Member
Ema	Amelia Dolomite
Eml	Mallapunyah Formation
Ems	Masterton Sandstone
Et	Tawallah Group (undifferentiated)

C	Carbonaceous
	Intraclasts
	Flat bedding
	Laminated
	Unconformity
	Sandstone
	Siltstone
	Mudstone
	Fault breccia

BHP — Exploration - BHP Minerals
BHP Minerals Pty. Ltd. A.C.N. 008 694 782

NORTHERN PLATFORMS PROGRAM
MALLAPUNYAH PROJECT - E7575
BDP010 & BDD002
SUMMARY GRAPHIC LOGS

Prepared : M.W.Ronnison	Date : 31-1-96	PLATE 1
Drawn : A.R.Veale	Revised :	
Centre : Perth	Drawing No : A1-6828	