CRA EXPLORATION PTY. LTD

EL 6948 - HUGH RIVER, N.T.
EL 6957 - DEEP WELL RANGE, N.T.
EL 6963 - YAM CREEK, N.T.
EL 6964 - TODD RIVER, N.T.

FIRST ANNUAL REPORT
PERIOD ENDING 12th SEPTEMBER 1991

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1. SUMMARY AND CONCLUSIONS

This report details exploration completed within the combined areas of EL 6948 Hugh River (retained portion), EL 6957 Deep Well Range (retained portion), EL 6963 Yam Creek and EL 6964 Todd River during the first year of tenure.

EL's 6948 (367 blocks, 1160km^2), 6957 (450 blocks, 1449km^2) 6963 (307 blocks, 961km^2) and 6964 (329 blocks, 1029km^2) were granted to CRAE on the 13th September 1990. 216 blocks of Hugh River EL 6948 and 198 blocks of Deep Well Range EL 6957 were voluntarily surrendered on 11th April 1991.

The EL's are located approximately 70km south of Alice Springs within the eastern Amadeus Basin. Tenure was acquired to explore for diamonds and base metals.

A detailed airborne magnetics/radiometrics survey was completed over EL's 6948 and 6957. The survey yielded six magnetic anomalies possibly indicative of diamondiferous diatremes within the retained portions. The anomalies were located with helicopter magnetics and loam sampled. Loam samples were observed for kimberlitic indicator minerals and microdiamonds. No positive results were returned.

One magnetic anomaly (HR24/2, EL 6948) was selected for ground magnetics and percussion drilling. Modelling of ground magnetics data indicated an inhomogeneous, broad (<250m diameter), probably flat lying source at less than 20m depth. A single percussion hole (PD90HR1) tested anomaly HR24/2 to a depth of 36m. The anomaly was found to be sourced by magnetic gravels from 20 to 30m.

Radiometrics data acquired with the magnetics were not processed. Inspection of the analogue plots indicated no anomalous radiometric responses.

EL's 6963 and 6964 were not included in the detailed aeromagnetics survey. Within these tenements, a total of 37 gravel samples and 72 4km spaced grid loam samples were collected. All samples were observed for kimberlitic indicator minerals. A total of 54 chromites were recovered from 8 of the gravel samples. No indicator minerals were recovered from the loam samples. The chromites are not considered to be of kimberlitic affinity.

The diamond potential of the combined areas of EL's 6948, 6957, 6963 and 6964 has been adequately tested without sufficient encouragement to justify further diamond exploration.

Detailed literature review was completed to assess the base metal potential of the tenements. Adelaidian to Early Cambrian sediments and carbonates within the combined tenement areas are considered prospective for stratabound base metal mineralisation.

Preliminary exploration for base metals was carried out within Todd River EL 6964. A total of eleven -80# stream sediment, six -40# stream sediment, three -40# soil and four rock chip samples were collected from within EL 6964. A

single rock chip sample was collected from EL 6957. All samples were submitted for multi-element geochemical analysis. No anomalous results were returned. Stream sediment samples appear to have been heavily contaminated with fine aolean silt and as such the results are not conclusive. A coarser stream sediment fraction will be required to avoid contamination from aeolian silt.

2. RECOMMENDATIONS

The diamond potential of the combined areas of EL's 6948, 6957, 6963 and 6964 has been adequately tested without encouragement. No further exploration for diamonds is warranted.

Adelaidian to Early Cambrian sediments and carbonates within the combined tenement areas are considered prospective for stratabound base metal mineralisation. Appropriate combinations of +40# -2mm stream sediment sampling, soil sampling and extensive rock chip sampling of prospective stratigraphy is recommended to further assess the base metal potential within the EL's.

3. INTRODUCTION

This report details exploration completed within the combined areas of EL 6948 Hugh River (retained portion), EL 6957 Deep Well Range (retained portion), EL 6963 Yam Creek and EL 6964 Todd River, during the first year of tenure.

EL's 6948 (367 blocks, 1160km^2), 6957 (450 blocks, 1449km^2) 6963 (307 blocks, 961km^2) and 6964 (329 blocks, 1029km^2) were granted to CRAE on the 13th September 1990 for a period of six years. Tenure was acquired to explore for diamonds and base metals.

216 blocks of Hugh River EL 6948 and 198 blocks of Deep Well Range EL 6957 were voluntarily surrendered on 11th April 1991. The surrendered areas are shown on plans NTd 5159 and 5163. Details of exploration completed within the surrendered areas were reported in CRAE Report 17351 (July 1991).

The EL's are located approximately 70km southeast of Alice Springs, (see plans NTd. 5159, 5163, 4875 and 4876), within the eastern Amadeus Basin covering Adelaidian to Devonian clastic sediments and carbonates. The Amadeus Basin sedimentary succession is relatively poorly exposed within the tenement area due to widespread Quaternary aeolian sand and alluvium cover. Where outcropping, the succession is commonly incomplete and greatly disrupted by tight folding and thrust faulting. The Adelaidian basal units (Bitter Springs Formation, Areyonga Formation, Ringwood Member, Limbla Member and Pertatataka Formation) outcrop poorly in EL 6964 and in the northeast of EL 6957. Predominantly calcareous sediments of the Cambrian Pertaoorrta Group outcrop throughout the tenement areas and are overlain by Cambrian to Ordovician sandstone and siltstone of the Larapinta Group. The youngest rocks exposed belong to the

Hermannsburg Sandstone, outcropping on the eastern end of the James Ranges in EL 6957.

4. EXPLORATION ACTIVITIES

4.1 Aeromagnetic Survey

A detailed aeromagnetics/radiometrics survey covering EL's 6948 and 6957 was flown by Geoterrex Pty. Ltd. for CRA Exploration. The survey did not cover EL's 6963 and 6964. Survey specifications were as follows:

Magnetometer	:	Cesium Vapour optical absorption.
Sensitivity	:	0.02nT
Recording Interval	:	0.2sec (approx 14m sampling)
Spectrometer	:	Nuclear Data 256 channel ADC Crystal
Volume	:	33.5 Litres
Recording Interval	:	1.0 sec (approx. 70m sampling)
Data Recording	:	Geoterrex MADACS acquisition system, digital to magnetic tape.
Terrain Clearance	:	Both detectors in aircraft at 80m
Line Spacing	:	Traverse Lines 300m, (000-180°) Tie Lines 4.0km, (orthogonal)
Flight Path Nav.	:	SYLEDIS STR4 radio navigation system
Flight Path Record	:	Real time calculation of AMG co-ordinates from SYLEDIS STR4 system.

Residual magnetic contours over the surrendered and retained portions of EL's 6948 and 6957 are shown on plans NTd. 5214 and 5213 respectively.

Interpretation of aeromagnetic stacked profiles and contour data yielded six magnetic anomalies possibly indicative of diamondiferous diatremes within the retained portions of EL's 6948 and 6957. Anomaly locations are shown on plans NTd. 5200 and 5205.

4.2 Helicopter Magnetics and Loam Sampling

All airborne magnetic anomalies were located with helicopter borne magnetics and anomaly centres were loam sampling.

Helicopter magnetics data were collected with a Geometrics G-866 recording magnetometer and a Geometrics airborne proton sensor installed in a Bell 206B Jetranger III. Data was collected along N-S flight lines spaced at 200 - 350m. A minimum of three lines were flown over each of the six anomalies. Additional lines were flown over larger anomalies or those which were difficult to locate. Flying speed and height were kept to 30 knots and 60m (sensor height 30m) respectively. Stacked profiles of helicopter magnetics data are shown on plans NTd. 5110, 5114, 5116, 5136, 5137 and 5138.

Anomaly centres were determined from the helicopter magnetics profiles and were loam sampled. Approximately 40kg of -2mm surface loam was collected from each anomaly. Sample locations are shown on plans NTd. 5200 and 5205.

Loam samples were observed for kimberlitic indicator minerals and microdiamonds at CRAE's Belmont Laboratory. Observation results are tabulated in Appendix 1. No positive results were returned.

4.3 Ground Magnetics and Drilling

Anomaly HR24/2, (EL 6948) was selected for ground magnetics follow-up and percussion drilling based on results of helicopter magnetics profile modelling.

Ground magnetics data were collected over HR24/2 using a Scintrex MP-3 with a sensor height of 3m. Readings were taken at 10m intervals along three north-south lines covering the anomaly. Stacked magnetic profiles are shown on plan NTd. 5048.

Modelling of ground magnetics data indicated an inhomogeneous, broad (<250m diameter), probably flat lying, tabular source at less than 20m depth.

A single percussion hole (PD90HR1) was drilled into the centre of anomaly HR24/2, (location on plan NTd. 5200) to a depth of 36m. The drill log is presented in Appendix 2. From the surface the hole intersected 20m of non-magnetic sand and clay overlying 10m of poorly sorted, poorly consolidated, well worked magnetic gravel consisting of hematite, maghemite, silcrete, quartz, chert, limestone, sandstone and mudstone. The hole was terminated in non-magnetic brown and grey clay. The magnetic susceptibility of chips recovered from the hole indicates the anomaly was sourced by the magnetic gravels (maghemite) from 20 to 30m depth. One sample was collected from the bottom of the hole and submitted for multielement geochemical analysis including Ni, Cr, Nb and Zr for kimberlite characterization. All geochemical results were at background levels. Ni, Cr, Nb and Zr levels were not indicative of kimberlitic or associated lithologies. Assay results are tabulated in Appendix 2.

The diamond potential of the combined areas of EL's 6948 and 6957 has been adequately tested by the detailed aeromagnetic survey and subsequent follow-up, without sufficient encouragement to justify further diamond exploration.

4.4 Drill Site Rehabilitation

PD90HR1 was drilled immediately adjacent to an existing station track and no site preparation was necessary. Upon completion of drilling, the drill site was cleared of all debris and the collar was capped and buried. No further rehabilitation is deemed necessary.

4.5 Airborne Radiometrics Survey

Airborne radiometrics data were collected concurrently with the aeromagnetics data. Radiometric survey specifications were reported in section 4.1.

The radiometrics data was not processed. Inspection of the analogue plots indicated no anomalous radiometric responses within the tenement area.

4.6 Gravel and Grid Loam Sampling

Reconnaissance gravel sampling and 4km spaced grid loam sampling was carried out over EL's 6948 Yam Creek and 6957 Hugh River to assess their diamond potential.

A total of thirty-seven 20-25kg -2mm gravel samples were collected at a density of approximately 1 sample per 20km^2. Samples were taken from the best available trap site within the active portion of the creeks. A -80# stream sediment sample was routinely collected at each gravel sample site. Poorly drained portions of the tenement area were grid loam sampled. A total of seventy two 20-25kg -2mm surface loam samples were collected at 4km spacings. Sample locations are shown on plans NTd. 5202, (EL 6963) and 5204, (EL 6964).

Loam and gravel samples were observed for kimberlitic indicator minerals to +0.25mm at CRAE's Belmont Laboratory. Observation results are tabulated in Appendix 1. No positive results were returned from the loam samples. Positive results returned from the gravel samples were as follows:

2657958 (g) - 3 chromites
2657962 (g) - 3 chromites
2657963 (g) - 5 chromites
2657983 (g) - 1 chromite
2657985 (g) - 2 chromites
2658022 (g) - 24 chromites
2658042 (g) - 1 chromite
2658044 (g) - 15 chromites.

None of the chromites recovered are considered to be of kimberlitic affinity. The chromites may be derived from rare basic volcanics known to occur within the Amadeus stratigraphic sequence, however, the source remains unconfirmed.

The diamond potential of the combined areas of EL's 6963 and 6964 has been adequately tested by the gravel and grid loam sampling, without sufficient encouragement to justify further diamond exploration.

4.7 Base Metal Exploration

A detailed literature review was completed to assess the base metal potential of the tenements. Adelaidian to Early Cambrian sediments and carbonates within the combined tenement areas are considered prospective for stratabound base metal mineralisation.

Orientation sampling for base metals was carried out within Todd River EL 6964. A selection of eleven -80# stream sediment samples collected from gravel sample sites draining prospective stratigraphy were submitted for multi-element geochemical analysis. An additional six -40# stream sediment samples were collected from smaller catchments draining prospective stratigraphy. Three -40# soil samples were collected on a small outcrop of the Ringwood Member in the centre of EL 6964, along with three rock chip samples from the same outcrop for the determination of base metal background levels in the unit. An additional rock chip sample from the Bitter Springs Formation was collected within EL 6957 for the same purpose. A single float sample of ferruginized siltstone was collected from a creek in the south of EL 6964. All stream sediment, soil and rock chip sample locations are shown on plans NTd. 5202 (EL 6963), 5204 (EL 6964) and 5205 (EL 6957).

All samples were submitted for Cu, Pb, Zn, Ni, Fe, Co, Cr, Mn, As, Ag and Au analyses. -40# stream sediment, soil and rock samples were also analysed for Pt, Pd and Ba. -80# stream sediment samples were also assayed for Th and U. Stream sediment and soil assay results are tabulated in Appendix 3. Rock sample ledgers and assay results are tabulated in appendix 4.

No anomalous results were returned from the stream sediment , soil or rock samples. The uniformly low stream sediment results are probably a result of heavy contamination from fine aeolian silt. As such, these results can not be considered conclusive. A coarser (+40#-2mm) stream sediment fraction will be required to avoid this contamination.

Background base metal levels in the rock samples collected appear to be low, however more samples collected over a larger area will be required to determine meaningful background levels.

Further work will be required to test the base metal potential of EL 6964. EL's 6963, 6948 and 6957 contain prospective stratigraphy which has yet to be tested.

5. REFERENCES

Agnew, P. D. (1991): EL 6948 Hugh River N.T, EL 6949 Gumtree Hills N.T, EL 6957 Deep Well Range N.T, Partial Relinquishment Report for Period Ending 10th April 1991. CRA Exploration Report No. 17351

Cook, P. J. (1969) : Rodinga N.T. 1:250,000 Geological Series Explanatory Notes. (SG/53-2)

6. KEY WORDS

Diamonds, Base Metals, Aeromagnetic Survey, Radiometrics, Percussion Drillhole, Multielement Geochemistry, Amadeus Basin, Stream Sediment, Gravel, Loam, Kimberlitic Indicators, Chromite.

7. LOCATION

Rodinga SG/53-02 1:250,000
Pellinore 5849 1:100,000
Peachy 5649 1:100,000
Santa Teresa 5749 1:100,000

P. D. AGNEW

APPENDIX 1

KIMBERLITIC INDICATOR MINERAL OBSERVATION RESULTS

KIMBERLITIC INDICATOR MINERAL OBSERVATION RESULTS

L = -2mm Loam Sample
G = -2mm Gravel Sample

	Sample No.	Type	K.I Results	Comments
1	2657897	L	nil	Anomaly HR21/1
2	2657898	L	nil	Anomaly HR21/2
3	2657904	L	nil	Anomaly HR22/4
4	2657906	L	nil	Anomaly HR24/1
5	2657907	L	nil	Anomaly HR24/2
6	2657916	L	nil	Anomaly DW26/2
7	2657923	L	nil	
8	2657924	L	nil	
9	2657925	L	nil	
10	2657926	L	nil	
11	2657927	L	nil	
12	2657928	L	nil	
13	2657929	L	nil	
14	2657930	L	nil	
15	2657931	L	nil	
16	2657932	L	nil	
17	2657933	L	nil	
18	2657934	L	nil	
19	2657935	L	nil	
20	2657936	L	nil	
21	2657937	L	nil	
22	2657938	L	nil	
23	2657939	L	nil	
24	2657940	L	nil	
25	2657941	L	nil	
26	2657942	L	nil	
27	2657943	L	nil	
28	2657944	L	nil	
29	2657945	L	nil	
30	2657946	L	nil	
31	2657947	L	nil	
32	2657948	L	nil	
33	2657949	G	nil	
34	2657950	G	nil	
35	2657951	G	nil	
36	2657952	G	nil	
37	2657953	L	nil	
38	2657954	L	nil	
39	2657955	L	nil	
40	2657957	L	nil	
41	2657958	G	3 chromites	non-kimberlitic
42	2657959	L	nil	
43	2657960	L	nil	
44	2657961	L	nil	
45	2657962	G	3 chromites	non-kimberlitic
46	2657963	G	5 chromites	non-kimberlitic
47	2657964	G	nil	
48	2657965	G	nil	
49	2657966	L	nil	

	Sample No.	Type	K.I Results	Comments
50	2657967	L	nil	
51	2657969	G	nil	
52	2657970	G	nil	
53	2657971	G	nil	
54	2657972	G	nil	
55	2657973	G	nil	
56	2657974	L	nil	
57	2657975	L	nil	
58	2657976	L	nil	
59	2657978	G	nil	
60	2657979	L	nil	
61	2657980	G	nil	
62	2657981	L	nil	
63	2657982	G	nil	
64	2657983	G	1 chromite	non-kimberlitic
65	2657984	G	nil	
66	2657985	G	2 chromites	non-kimberlitic
67	2657986	L	nil	
68	2657987	G	nil	
69	2657988	G	nil	
70	2657989	G	nil	
71	2657990	G	nil	
72	2657991	G	nil	
73	2657992	G	nil	
74	2657993	L	nil	
75	2657994	L	nil	
76	2657995	L	nil	
77	2657996	L	nil	
78	2657997	L	nil	
79	2657998	L	nil	
80	2657999	L	nil	
81	2658000	L	nil	
82	2658001	L	nil	
83	2658002	L	nil	
84	2658003	L	nil	
85	2658005	L	nil	
86	2658006	L	nil	
87	2658007	L	nil	
88	2658008	L	nil	
89	2658009	L	nil	
90	2658010	L	nil	
91	2658011	L	nil	
92	2658012	G	nil	
93	2658013	L	nil	
94	2658014	L	nil	
95	2658015	L	nil	
96	2658016	G	nil	
97	2658017	G	nil	
98	2658018	L	nil	

	Sample No.	Type	K.I Results	Comments
99	2658019	L	nil	
100	2658020	L	nil	
101	2658021	G	nil	
102	2658022	G	24 chromites	non-kimberlitic
103	2658023	G	nil	
104	2658024	G	nil	
105	2658026	G	nil	
106	2658036	G	nil	
107	2658037	L	nil	
108	2658038	L	nil	
109	2658039	L	nil	
110	2658040	G	nil	
111	2658041	L	nil	
112	2658042	G	1 chromite	non-kimberlitic
113	2658043	G	nil	
114	2658044	G	15 chromites	non-kimberlitic
115	2658045	G	nil	

APPENDIX 2

PERCUSSION HOLE PD90HR1 LOG

A EXPLORATION PTY. LIMITED.

PDH90HR1 DRILL LOG

PROJECT EL 6948 HUGH RIVER NT

CO-ORDINATES 391460m E
7296950m N

AZIMUTH
INCLINATION 90°

DRILLERS STRATA EXPLORATION
DRILL TYPE JACRO 350

COMMENCED 29/11/90
COMPLETED 30/11/90

DEPTH 36m
CASING LEFT 2m

HOLE No. 1
DPO Nos 49112

DEPTH From	DEPTH To	CORE REC	CORE SIZE	LOG	GEOLOGY	SAMPLE NUMBER	FROM (m)	TO (m)	REC (m)	GEOPHYSICS SIx10^{-5}	GEOPHYSICS cps
					TESTING MAGNETIC ANOMALY HR24/2						
0m	2m				Ironstone, chert and calcrete pebbles in a matrix of unconsolidated alluvial gravel and sand composed of quartz calcrete, chert and haematite pisolites		0	2		200	120
2m	4m				Minor component as above, 80% calcrete 20% quartz sand with minor iron pisolites and heavy minerals		2	4		40	125
4m	11m				Poorly consolidated alluvial sand composed predominantly of subrounded quartz with minor iron pisolites and calcrete fragments		4	6		30	125
							6	8		20	140
							8	10		30	140
							10	12		38	135
11m	20m				Brown and grey clay with very minor chert, quartz and iron pisolite grit, bands of carbonaceous material (graphite)? in the basal 2M		12	14		35	140
							14	16		35	145
							16	18		20	137
							18	20		40	135
20m	30m				Gravel composed of haematite maghemite silcrete quartz chert and rock fragments (limestone, fine sandstone, mudstone). Grains are subrounded rounded and subangular (less than 1cm) Matrix is coarse to fine sand and clay (brown/grey) made up of similar components. Alluvial gravel is likely Clay increases with depth to predominate at the base. Minor graphite bands in grey clay from 27m		20	22		60	135
							22	24		120	137
							24	26		150	135
							26	28		175	135
							28	30		95	135
							30	32		45	130
							32	34		35	135
30m	36m				Brown and grey clay with minor grit composed of quartz and iron pisolites. Clay coarsens to very fine sand in bands, towards the base	2659057	34	36		35	130
					EOH 36m						

ASSAY RESULTS 2659057

Cu	Pb	Zn	Ni	Fe	Co	Cr	Mn	Ag
35ppm	19ppm	120ppm	31ppm	2.86%	14ppm	28ppm	730ppm	<1ppm

Au	Pt	Pd	As	Ba	Sn	Sb	Nb	Zr	Bi
<1ppb	<5ppb	<1ppb	<1ppm	450ppm	5ppm	<2ppm	14ppm	130ppm	3ppm

SUMMARY:

LOGGED BY J C ROOT

DATE 30/11/90

SHEET 1 OF 1

APPENDIX 3

STREAM SEDIMENT AND SOIL SAMPLE GEOCHEMICAL ASSAY RESULTS

STREAM SEDIMENT AND SOIL SAMPLE SAMPLE GEOCHEMICAL ASSAY RESULTS

	Sample No.	Type	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Fe %	Co ppm	Cr ppm
1	2658086	-40# ss	16	9	8	20	1.74	11	290
2	2658088	-40# ss	14	9	12	18	1.72	11	310
3	2658089	-40# ss	20	11	20	18	2.34	11	200
4	2658090	-40# ss	25	19	20	18	2.22	11	140
5	2658092	-40# ss	11	8	5	-4	1.87	-4	240
6	2658096	-40# ss	10	8	11	12	1.60	8	250
7	2658093	-40# Soil	57	36	76	47	1.99	28	230
8	2658094	-40# Soil	16	12	35	16	1.92	-4	210
9	2658095	-40# Soil	12	8	14	17	1.28	9	280
10									
11	2658022	-80# ss	6	15	25	-5	5.09	-5	10
12	2658036	-80# ss	8	17	25	11	2.23	-5	5
13	2658037	-80# ss	8	15	22	17	2.20	-5	-5
14	2658042	-80# ss	6	21	27	5	2.80	7	40
15	2658043	-80# ss	7	13	17	8	8.79	-5	5
16	2658044	-80# ss	6	15	17	9	2.82	-5	5
17	2658045	-80# ss	6	14	18	9	3.44	-5	-5
18	2657984	-80# ss	18	18	59	28	2.18	10	-5
19	2657985	-80# ss	21	20	59	22	4.04	11	-5
20	2657987	-80# ss	8	13	20	12	4.01	-5	-5
21	2657989	-80# ss	9	13	24	10	2.49	-5	5

	Mn ppm	Ag ppm	Au ppb	Pt ppb	Pd ppb	As ppm	Ba ppm	Th ppm	U ppm
1	200	-.1	3	-5	-1	-2	330	.	.
2	270	-.1	-1	-5	-1	-2	310	.	.
3	430	.1	-1	-5	-1	2	280	.	.
4	240	-.1	-1	-5	-1	-2	330	.	.
5	200	-.1	-1	-5	-1	-2	320	.	.
6	160	-.1	-.1	-5	-1	-2	410		
7	240	-.1	25	-5	-1	-2	400	.	.
8	200	-.1	-1	-5	-1	-2	440	.	.
9	120	-.1	-1	-5	-1	-2	460	.	.
10								.	.
11	232	-.1	-1	.	.	3	.	14.90	1.82
12	207	-.1	-1	.	.	2	.	9.11	1.23
13	258	-.1	-1	.	.	3	.	15.20	1.89
14	332	.3	1	.	.	1	.	52.60	7.45
15	240	-.1	-1	.	.	1	.	13.70	1.74
16	218	.2	3	.	.	-1	.	19.80	2.77
17	203	-.1	1	.	.	-1	.	9.32	1.17
18	460	-.1	1	.	.	1	.	11.30	1.62
19	477	-.1	1	.	.	1	.	12.80	1.78
20	228	-.1	1	.	.	2	.	9.86	1.21
21	164	-.1	1	.	.	1	.	6.52	.98

ss = Stream Sediment

-X = Below Detection Limit (X)

. = Not Assayed

APPENDIX 4
ROCK SAMPLE LEDGERS AND GEOCHEMICAL ASSAY RESULTS

ROCK SAMPLE GEOCHEMICAL ASSAY RESULTS

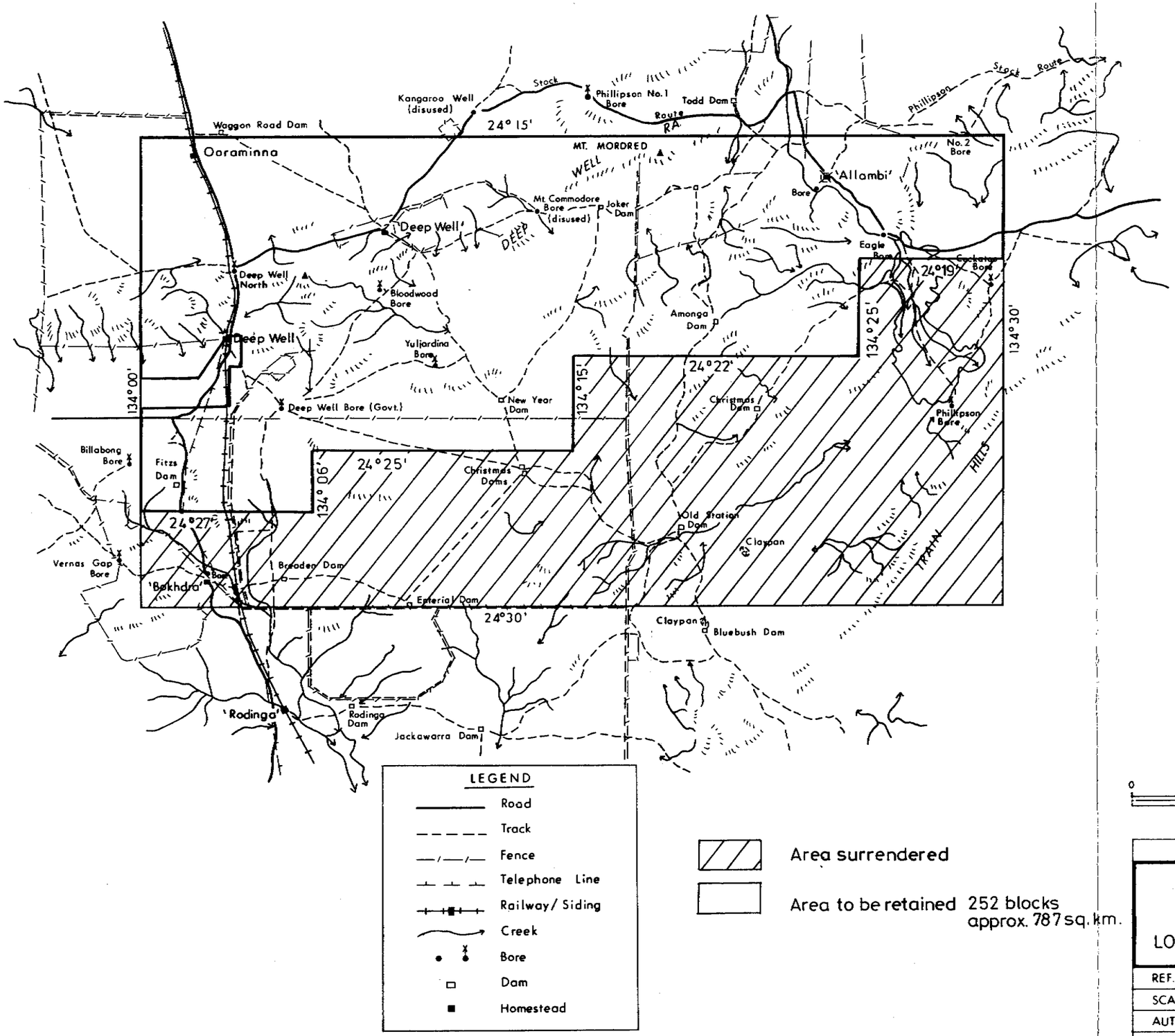
	Sample No.	Type	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Fe %	Co ppm	Cr ppm	Mn ppm
1	1317421	GS	6	4	10	6	1.45	4	20	150
2	1317422	GS	8	6	53	8	2.16	4	30	1200
3	1317423	GS	6	7	75	9	1.97	5	30	1000
4	2658087	GS	13	23	140	-4	1.64	-4	27	1010
5	2658091	F	42	28	160	45	37.00	53	120	15200

	Ag ppm	Au ppb	Pt ppb	Pd ppb	As ppm	Ba ppm
1	-.1	-1	-5	-1	-2	210
2	-.1	3	-5	-1	-2	1350
3	-.1	14	-5	-1	2	920
4	.1	-1	•	•	-2	310
5	-.1	-1	•	•	17	540

GS = Outcrop Grab Sample
F = Float Sample
-X = Below Detection Limit (X)
• = Not Assayed

ROCK SAMPLE LEDGERS

	Sample No.	Description
1	1317421	Limestone (Bitter Springs Fm) - Geochemical background determination
2	1317422	Limestone (Ringwood Member) - Geochemical background determination
3	1317423	Limestone (Ringwood Member) - Geochemical background determination
4	2658087	Limestone (?Ringwood Member) - Geochemical background determination
5	2658091	Highly ferruginized siltstone.



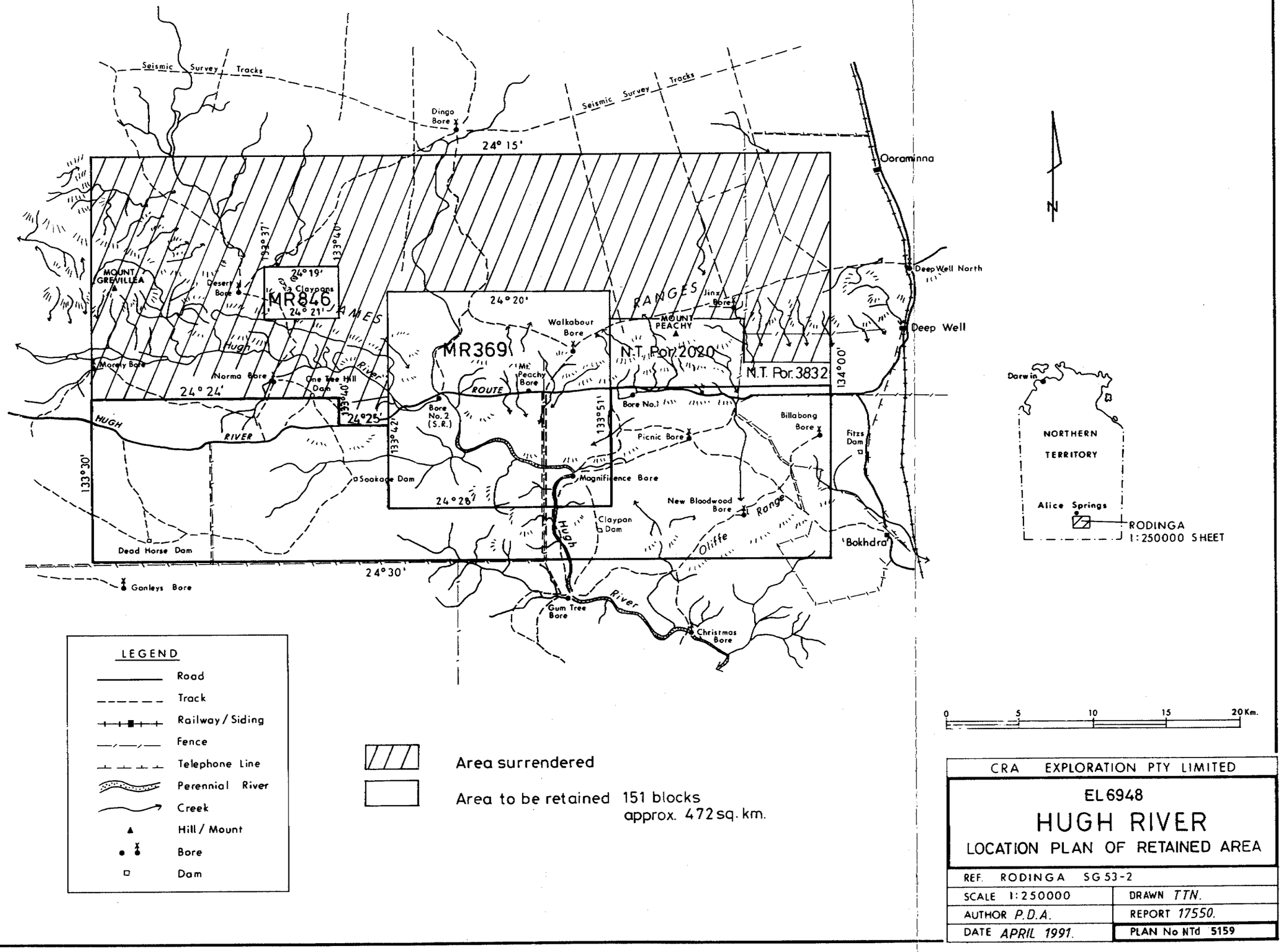
CRA EXPLORATION PTY LIMITED

EL 6957

DEEP WELL RANGE

LOCATION PLAN OF RETAINED AREA

REF. RODINGA SG53-2	
SCALE 1:250 000	DRAWN TTN.
AUTHOR P.D.A.	REPORT 17550.
DATE APRIL 1991.	PLAN No NTd 5163



LEGEND

- Road
- Track
- Railway / Siding
- Fence
- Telephone Line
- Perennial River
- Creek
- Hill / Mount
- Bore
- Dam

Area surrendered

Area to be retained 151 blocks
approx. 472 sq. km.

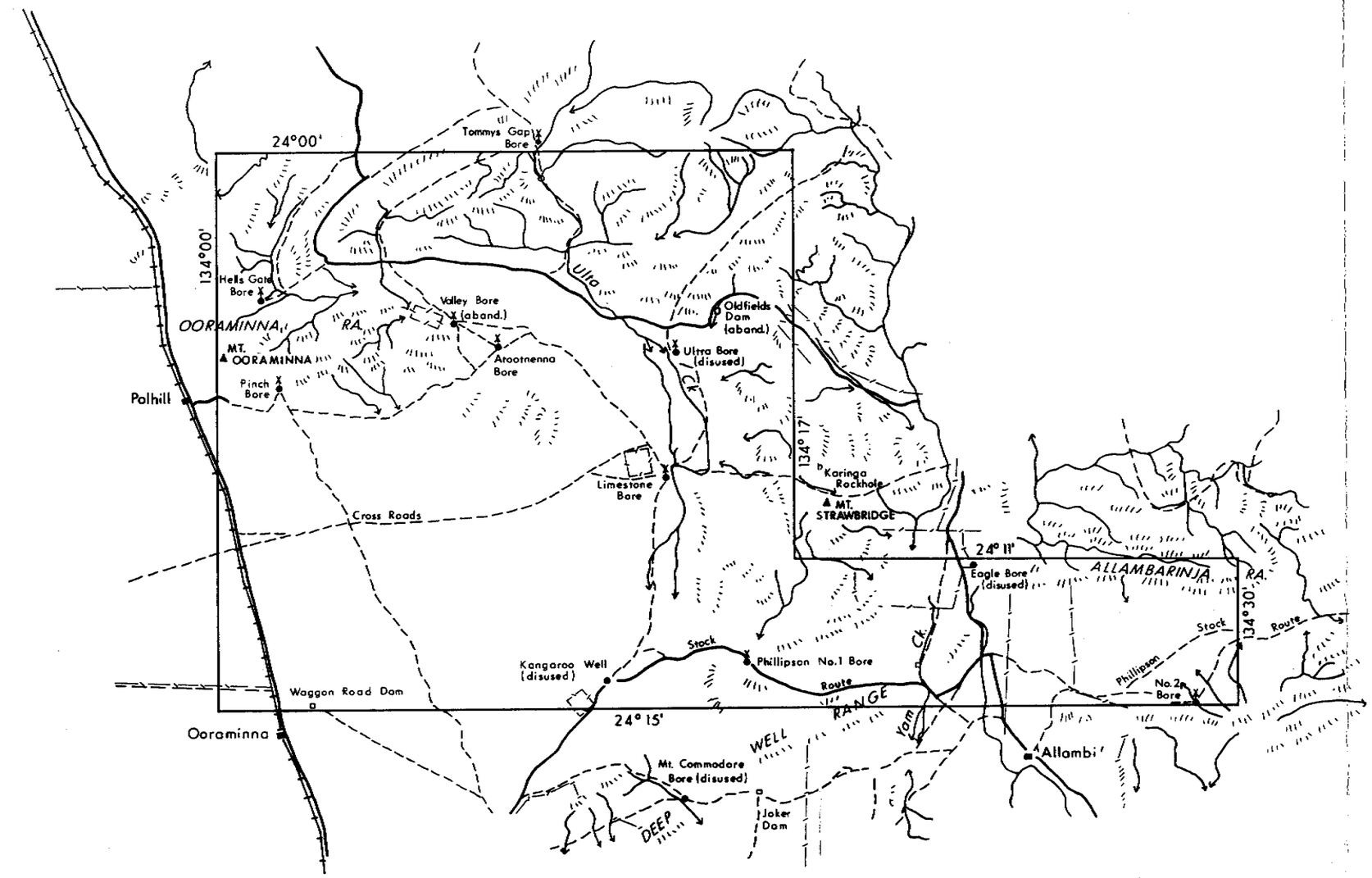
CRA EXPLORATION PTY LIMITED

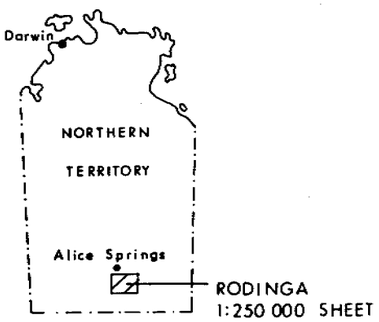
EL 6948

HUGH RIVER

LOCATION PLAN OF RETAINED AREA

REF. RODINGA SG 53-2	
SCALE 1:250000	DRAWN *TTN.*
AUTHOR *P.D.A.*	REPORT *17550.*
DATE *APRIL 1991.*	PLAN No NTd 5159





LEGEND

- Road
- Track
- Fence
- Railway / Siding
- Creek
- Bore
- Hill / Mount
- Dam
- Homestead

AREA : 307 BLOCKS
approx. 961 sq. km.

0 5 10 15 20 Km

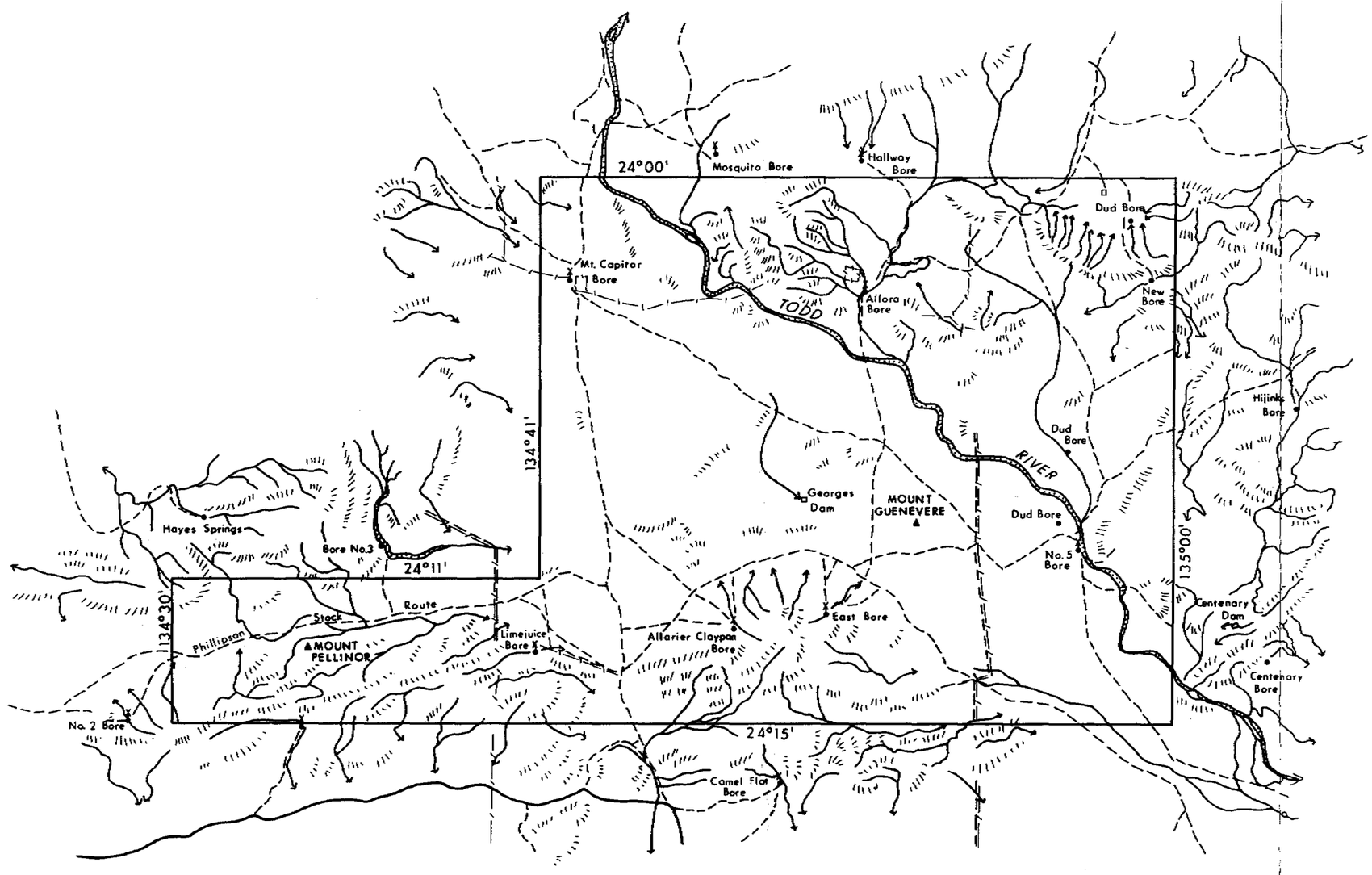
CRA EXPLORATION PTY LIMITED

EL 6963

YAM CREEK

LOCATION PLAN

REF. RODINGA SG 53-2	
SCALE 1:250 000	DRAWN TTN.
AUTHOR P.D.A.	REPORT 17550.
DATE SEP. 1990.	PLAN No NTd 4875



LEGEND

- Road
- Track
- Fence
- Perennial River
- Creek
- Bore
- Hill/Mount
- Dam

AREA: 329 BLOCKS
approx. 1029 sq. km.

0 5 10 15 20Km

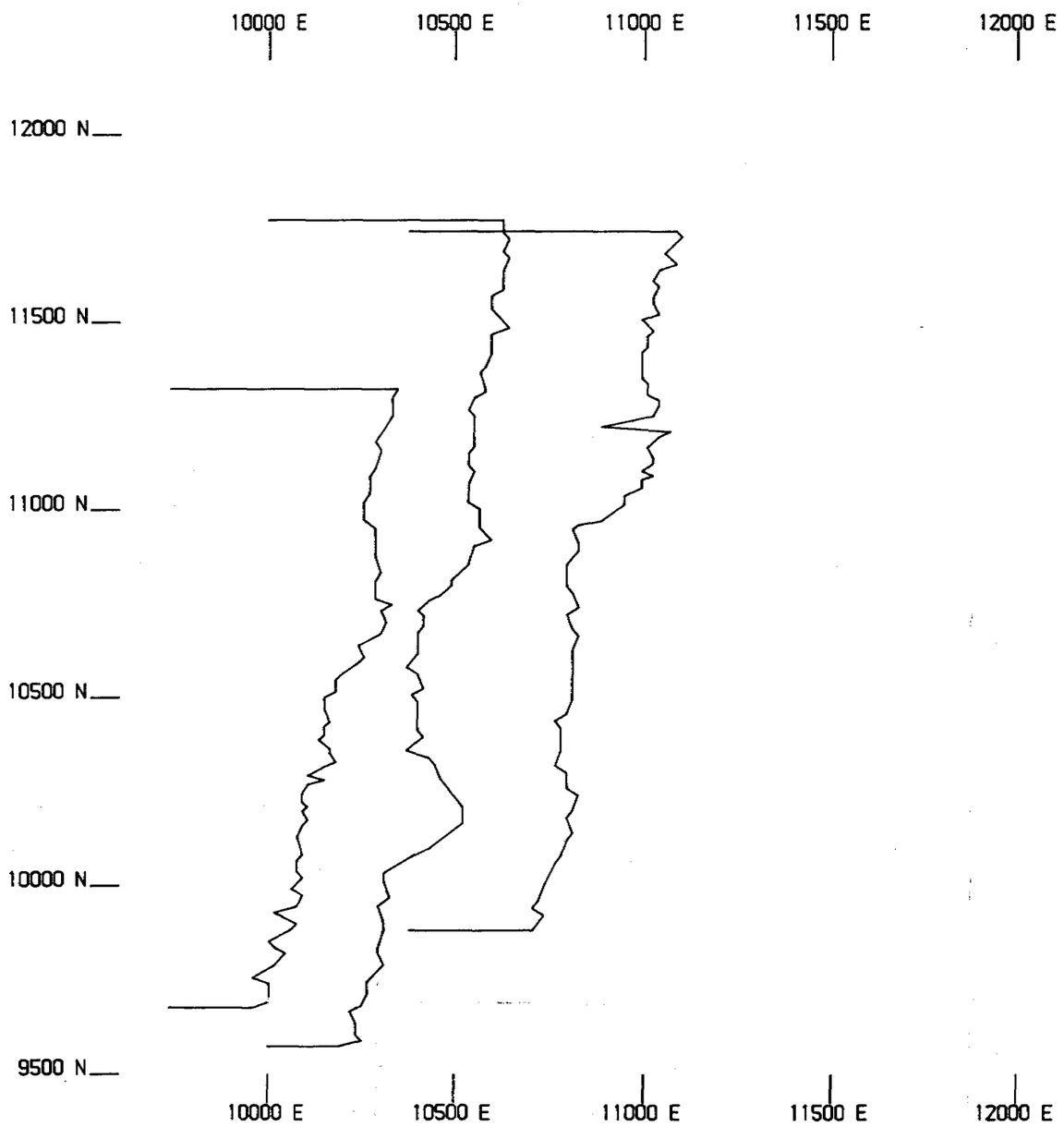
CRA EXPLORATION PTY LIMITED

EL 6964

TODD RIVER

LOCATION PLAN

REF. RODINGA SG 53-2	
SCALE 1:250 000	DRAWN TTN.
AUTHOR P.D.A.	REPORT 17550.
DATE SEP. 1990.	PLAN No NTd 4876



Anomaly Co-ordinates: 390300mE 7290900mN

Instrument: Geometrics G-866

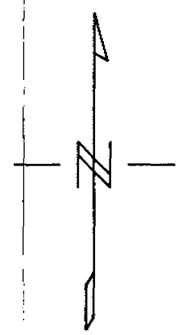
Operator: JCR

Mean sensor height:30 metres

Mean flight speed: 30 knots

Base Level: 54130nT

Vertical scale: 5nT/cm



Approximate magnetic north

Scale 1:15000

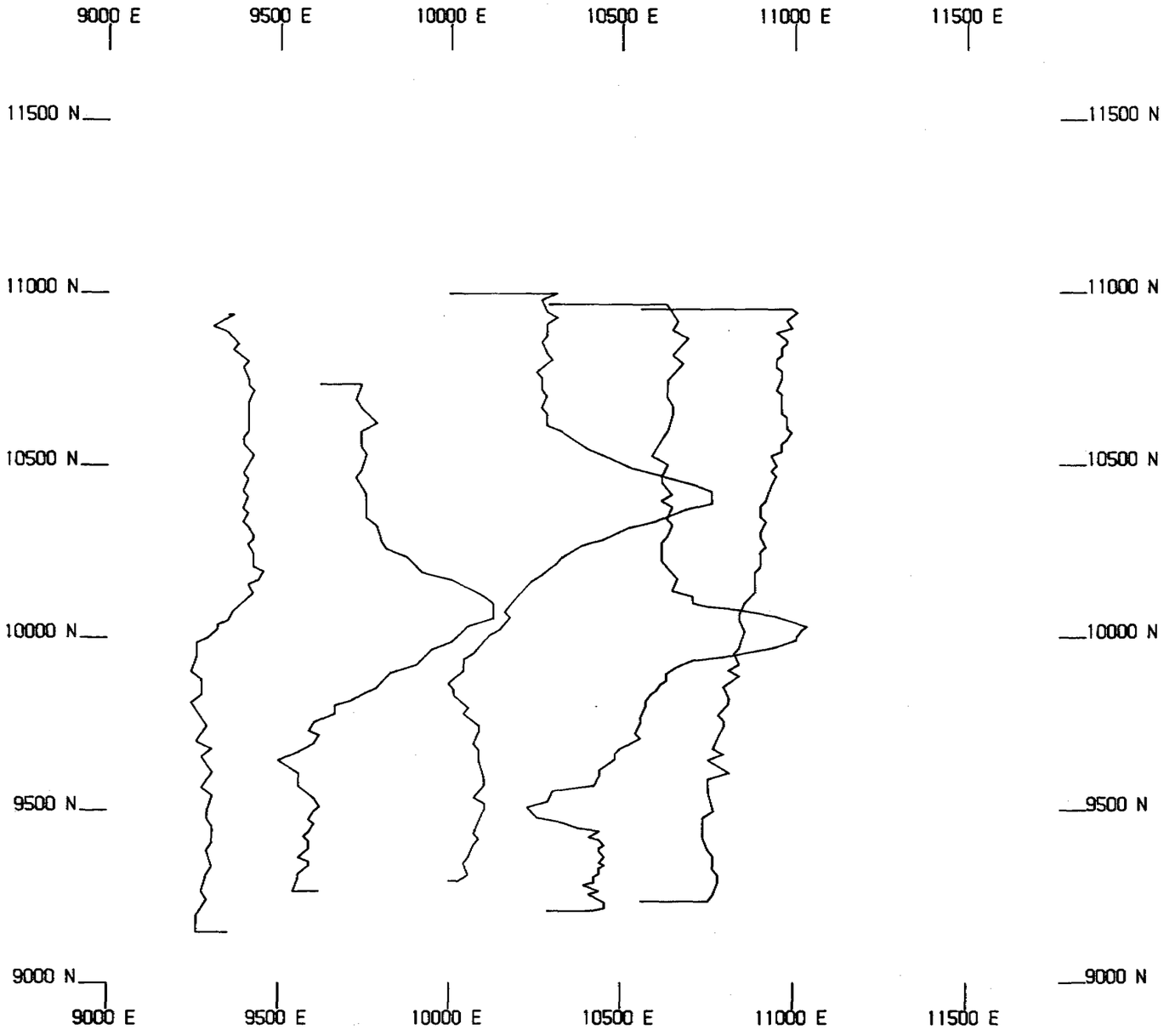
250 0 250 500 750 1000
(metres)

CRA EXPLORATION PTY LTD

ANOMALY HR24/1 - Helicopter magnetic profiles
E.L.6948 Hugh River

Reference:SG5302 RODINGA
Scale= 1:15,000
Author: *P.D.A.* Report: *17550.*

Drawn: JCR *Plan No= NTd 5110*



Anomaly Co-ordinates: 391400mE 7296950mN

Instrument: Geometrics G-866

Aircraft: Bell 206B Jetranger III

Mean sensor height:30 metres

Mean flight speed: 30 knots

Base Level: 54180nT

Vertical scale: 5nT/cm

Approximate magnetic north

Scale 1:15000

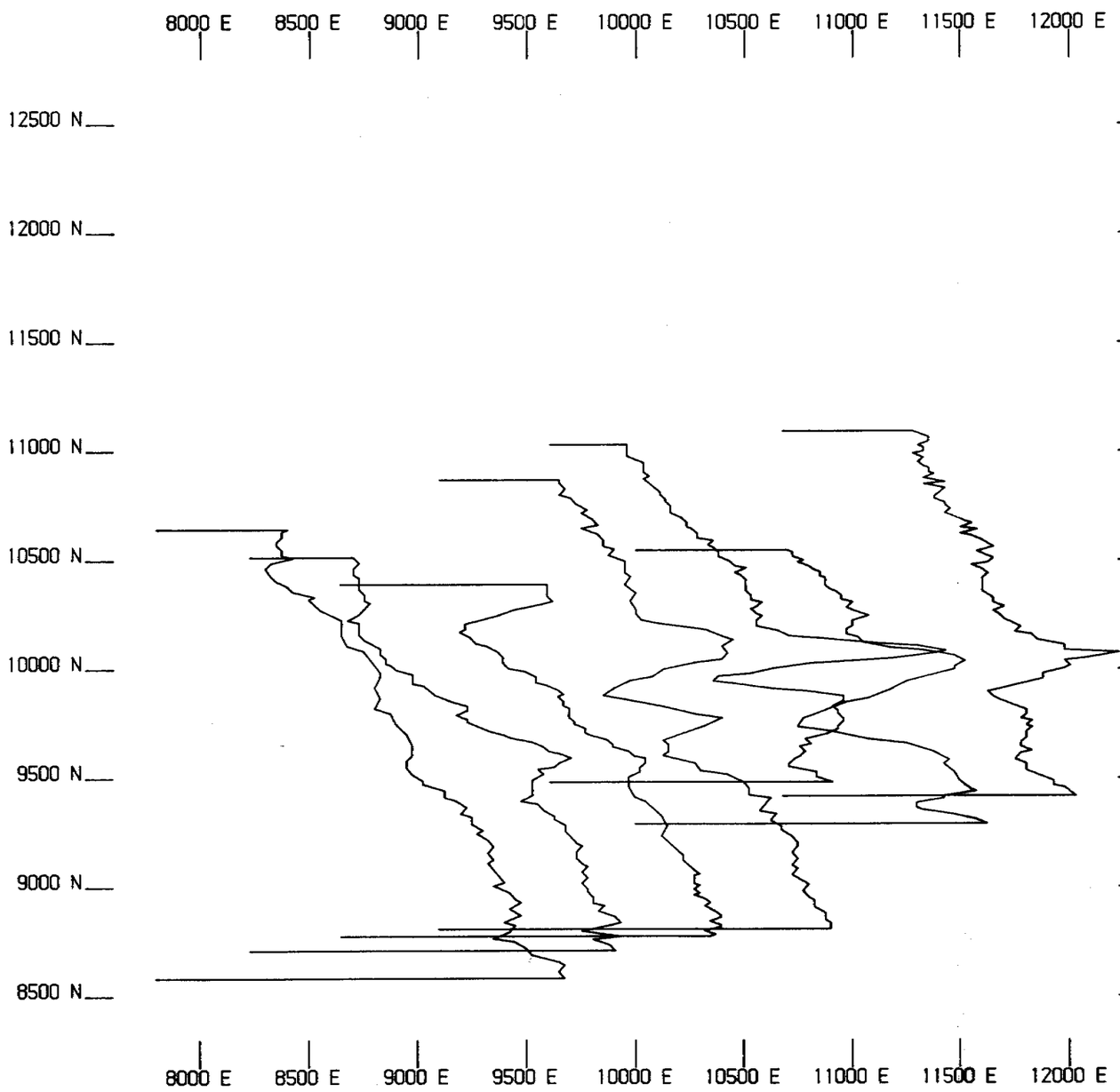
250 0 250 500 750 1000
(metres)

CRA EXPLORATION PTY LTD

ANOMALY HR24/2 - Helicopter magnetic profiles
E.L.6948 Hugh River

Reference:SG5302 RODINGA
Scale= 1:15,000
Author= *P.D.A.* Report: *17550.*

Drawn: JCR *Plan No= NTd 5114*



Anomaly Co-ordinates: 356750mE 7297900mN

Instrument: Geometrics G-866

Aircraft: Bell 206B Jetranger III

Mean sensor height:40 metres

Mean flight speed: 30 knots

Base Level: 54350nT

Vertical scale: 5nT/cm

Approximate magnetic north

Scale 1:25000

250 0 250 500 750 1000 1250

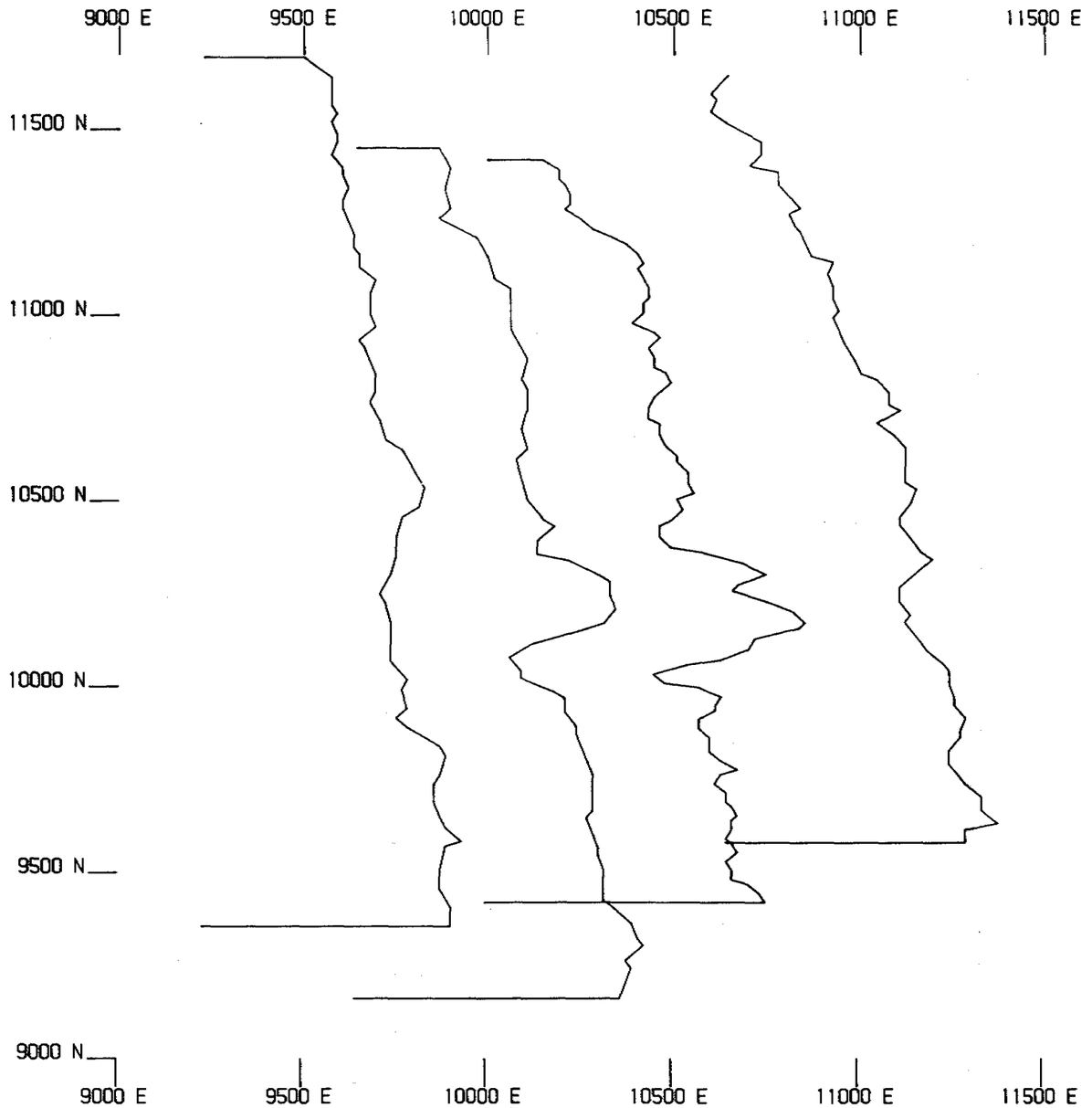
(metres)

CRA EXPLORATION PTY LTD

HR21/1 - Helicopter magnetic profiles
E.L.6948 Hugh River

Reference:SG5302 RODINGA
Scale= 1:25,000
Author: *P.D.A.* Report: *17550.*

Drawn: JCR *Plan No= NTd 5136*



Anomaly Co-ordinates: 356700mE 7295900mN

Instrument: Geometrics G-866

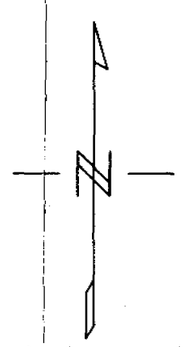
Aircraft: Bell 206B Jetranger III

Mean sensor height:40 metres

Mean flight speed: 30 knots

Base Level: 54370nT

Vertical scale: 5nT/cm



Approximate magnetic north

Scale 1:15000

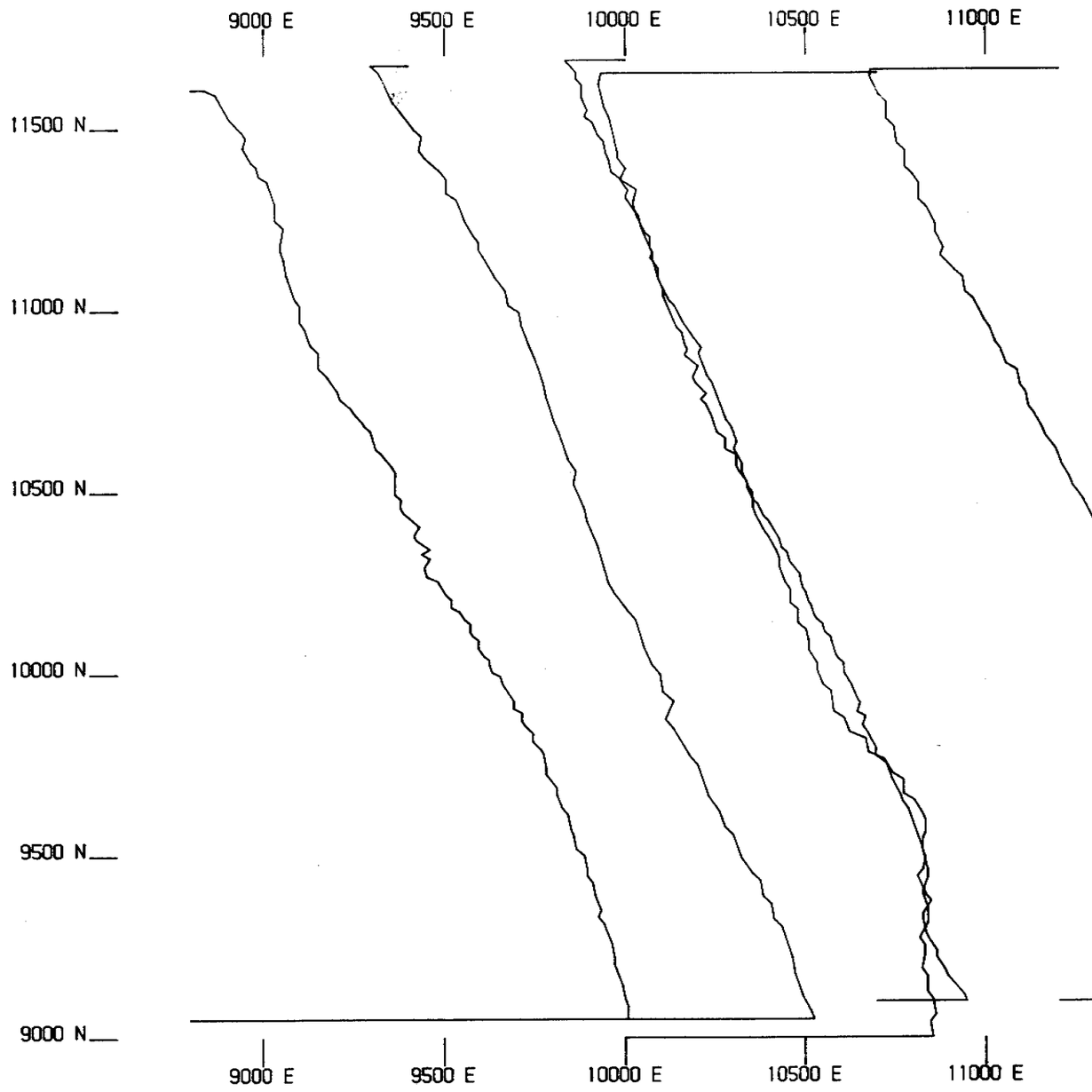
250 0 250 500 750 1000
(metres)

CRA EXPLORATION PTY LTD

HR21/2 - Helicopter magnetic profiles
E.L.6948 Hugh River

Reference:SG5302 RODINGA
Scale= 1:15,000
Author: *P.D.A.* Report: *17550.*

Drawn: JCR *Plan No= NTd 5137*



Grid Centre Co-ordinates: 366000mE 7295900mN

Instrument: Geometrics G-866

Aircraft: Bell 206B Jetranger III

Mean sensor height: 40 metres

Mean flight speed: 30 knots

Base Level: 54310nT

Vertical scale: 10nT/cm

Approximate magnetic north

Scale 1:15000

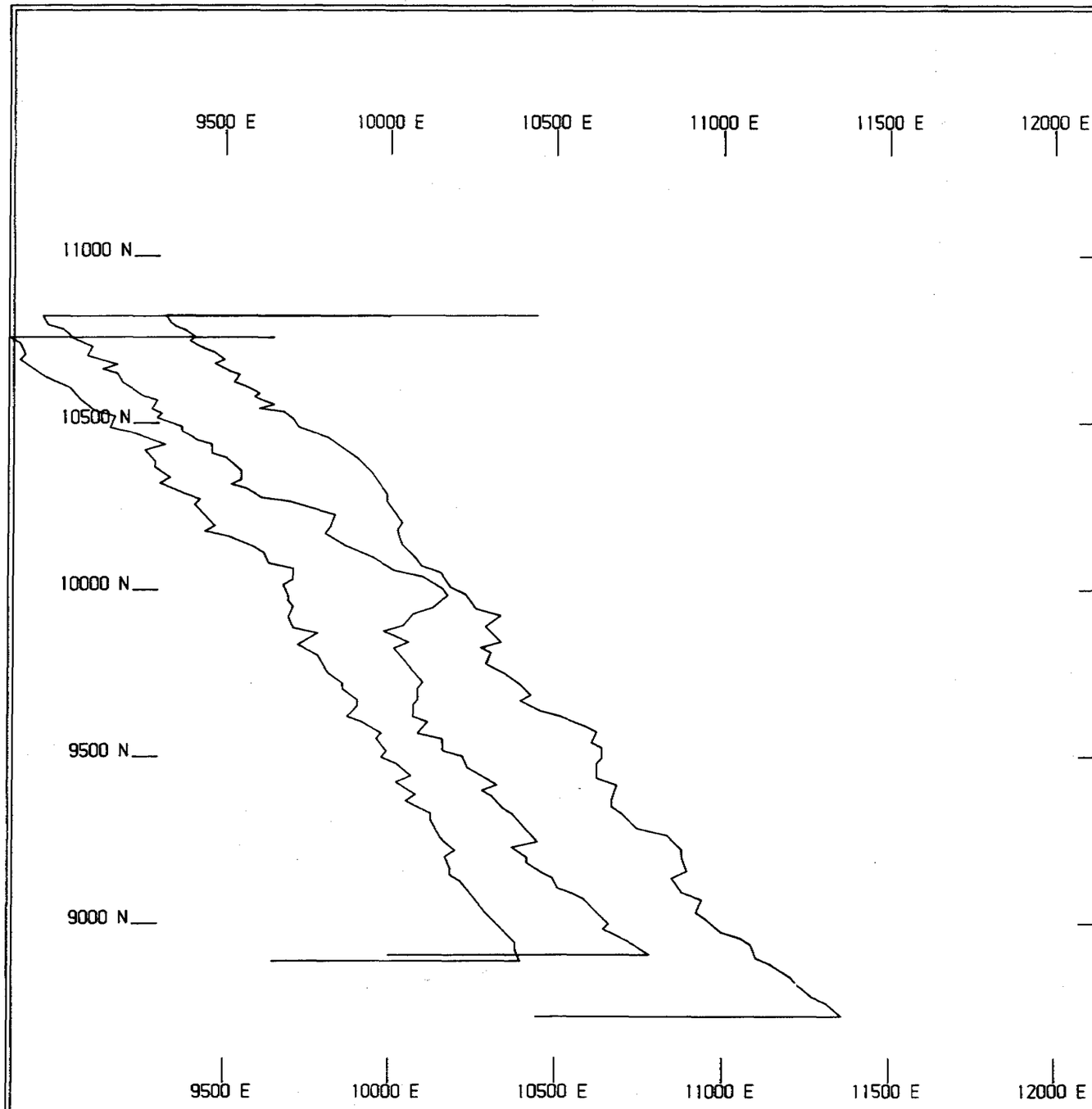
250 0 250 500 750 1000
(metres)

CRA EXPLORATION PTY LTD

HR22/4 - Helicopter magnetic profiles
E.L.6948 Hugh River

Reference: SG5302 RODINGA
Scale= 1:15,000
Author: P.D.A. Report: 17550.

Drawn: JCR Plan No= NTd 5138



Anomaly Co-ordinates: 412350mE 7302850mN

Instrument: Geometrics G-866

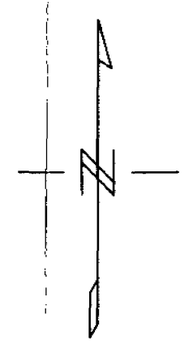
Aircraft: Bell 206B Jetranger III

Mean sensor height:30 metres

Mean flight speed: 30 knots

Base Level: 54200nT

Vertical scale: 5nT/cm



Approximate magnetic north

Scale 1:15000

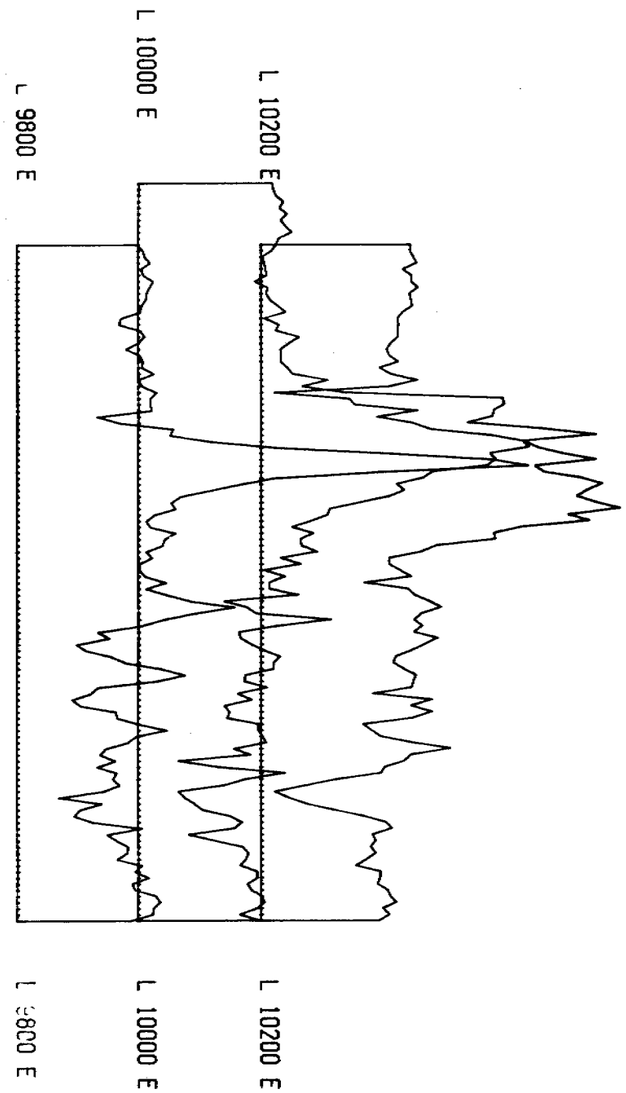
250 0 250 500 750 1000
(metres)

CRA EXPLORATION PTY LTD

ANOMALY DW26/2 - Helicopter magnetic profiles
E.L.6957 (Deep Well Range

Reference:SG5302 RODINGA
Scale= 1:15,000
Author: *P.D.A.* Report: *17550.*

Drawn: JCR *Plan No= NTd 5116*



Anomaly Co-ordinates:391400mE 7296950mN

Instrument: Scintrex MP-3

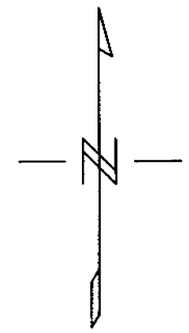
Operator: JCR

Sensor height: 3 metres

Sample interval: 10 metres

Base level: 54370nT

Vertical scale: 10nT/cm



Approximate magnetic north

Scale 1:10000

100 0 100 200 300 400 500

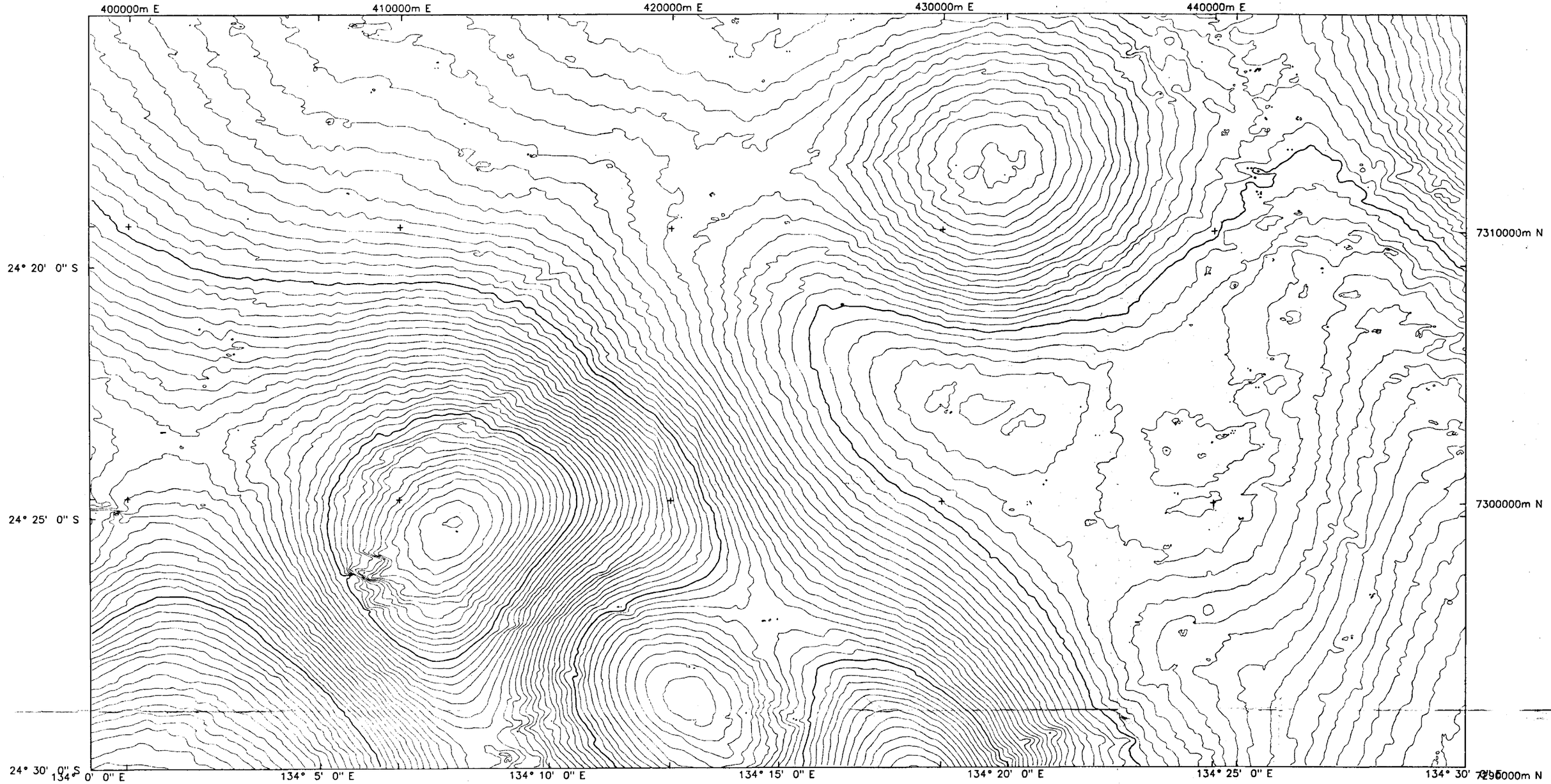
(metres)

CRA EXPLORATION PTY LIMITED

ANOMALY HR24/2 - Ground magnetics profiles
E.L.6948 Hugh River

Reference: SG5302 RODINGA
Scale= 1:10000
Author: *P.D.A.* Report: *17550.*

Drawn: J.C.R. *Plan No= NTd 5048*



SURVEY SPECIFICATIONS

This survey was flown in 1990 by Geoterrex Pty Ltd for CRA Exploration Pty Limited. Line spacing was 300 metres in a N/S direction. Nominal sensor height was 80 metres AGL.

Data processing was completed by Geoterrex Pty Ltd The data are gridded using a 50m x 50m grid-cell.

Contour Interval : 5 nT and 100 nT

SCALE 1:100000

0 2 4 6 8 km

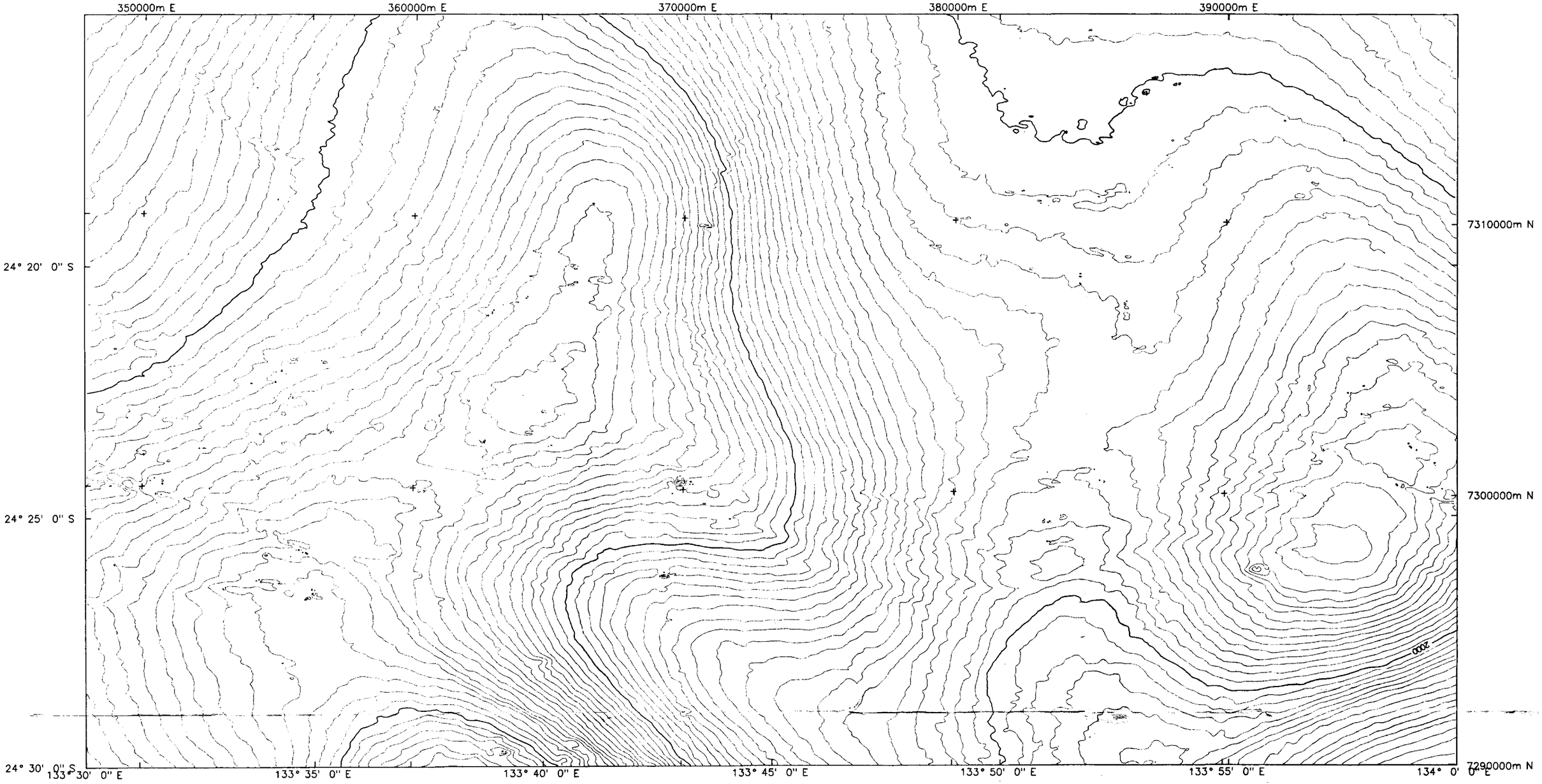
CRA EXPLORATION PTY LIMITED

RODINGA AIRBORNE SURVEY

DEEP WELL RANGE EL 6957

RESIDUAL MAGNETIC CONTOURS

REF. SG 53-02 RODINGA.	
SCALE 1:100000	DRAWN: TTN.
AUTHOR : P.D.A.	REPORT : 17550.
DATE : 3/ 7/ 91	PLAN NO. : NTd 5213.



SURVEY SPECIFICATIONS

This survey was flown in 1990 by Geoterrex Pty Ltd for CRA Exploration Pty Limited. Line spacing was 300 metres in a N/S direction. Nominal sensor height was 80 metres AGL.

Data processing was completed by Geoterrex Pty Ltd The data are gridded using a 50m x 50m grid-cell.

Contour Interval : 5 nT and 100 nT

SCALE 1:100000

0 2 4 6 8 km

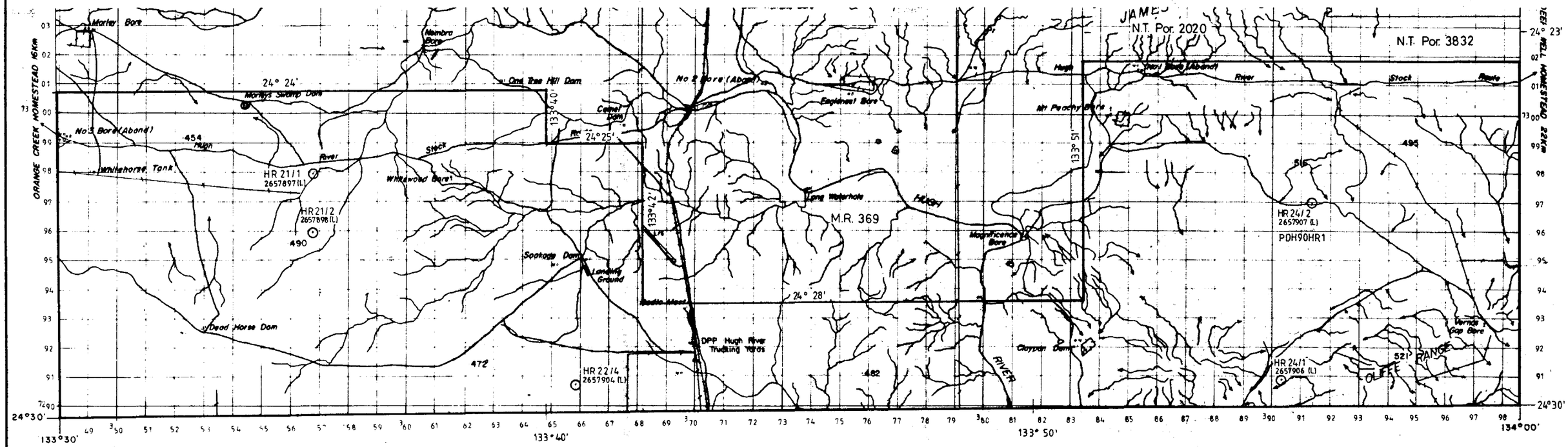
CRA EXPLORATION PTY LIMITED

RODINGA AIRBORNE SURVEY

HUGH RIVER EL 6948

RESIDUAL MAGNETIC CONTOURS

REF. SG 53-02 RODINGA.	
SCALE 1:100000	DRAWN TTN.
AUTHOR : P.D.A.	REPORT : 17550.
DATE : 3/ 7/ 91	PLAN NO. : NTd 5214.



LEGEND

HR 21/1	*Magnetic Anomaly.*
2657897(L)	*Loam sample location.*
PDH90HR1	*Percussion drill hole.*
	Creek.
	Fence.
	Railway.
	Road.

TN

SCALE 1:100,000.

Kilometres 0 1 2 3 4 5 6 7 8 9 10 Kilometres

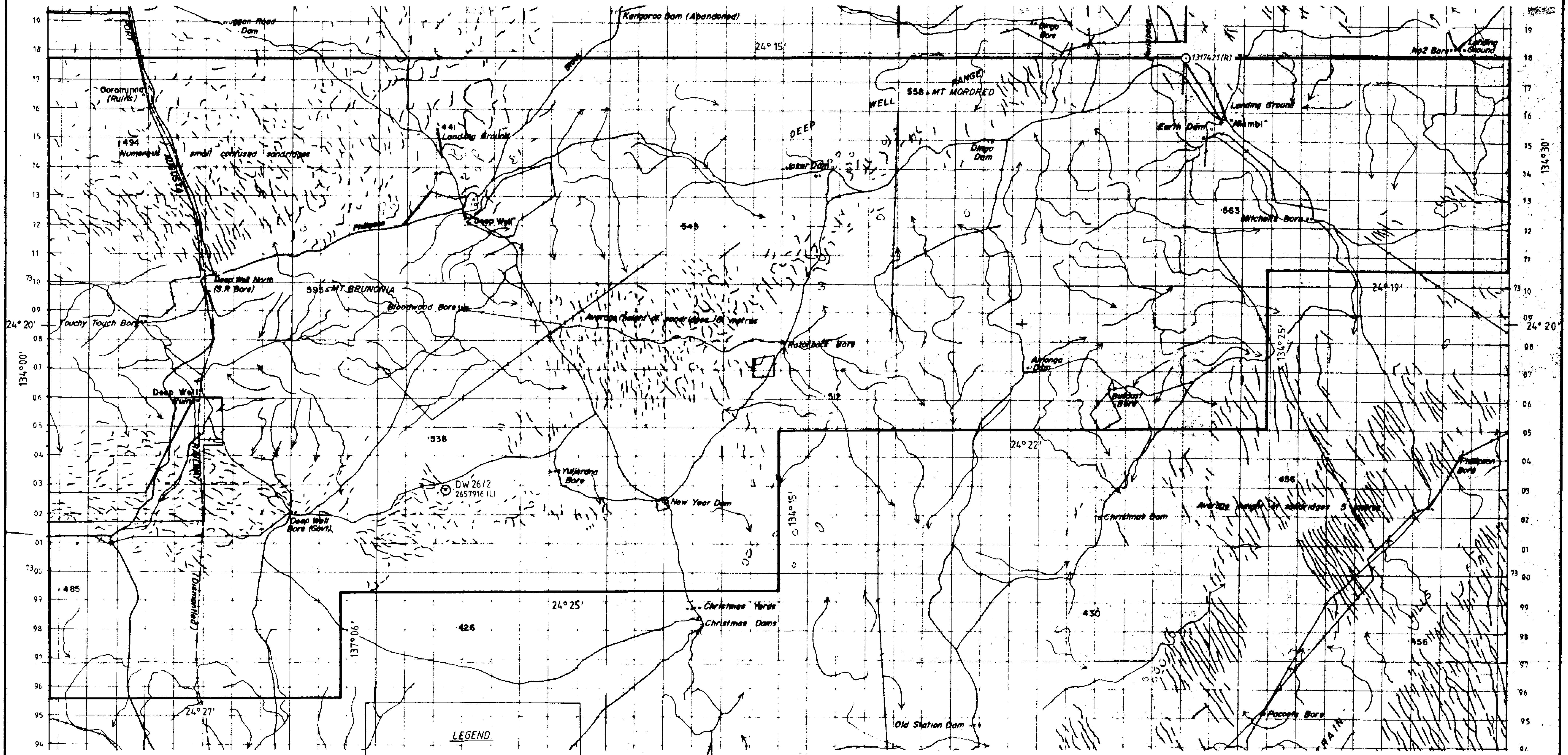
CRA EXPLORATION PTY LIMITED

EL 6948 HUGH RIVER

DRILLHOLE & SAMPLE LOCATION PLAN

(Retained Portion)

REFERENCE *SG 53-02 RODINGA.*	
SCALE *1:100,000.*	DATE *JULY 1991*
AUTHOR *P.D.A.*	REPORT *17550.*
DRAWN *TTN./ SRJ*	PLAN No *NTd 5200.*



LEGEND.

DW 26/2	Magnetic Anomaly.
⊙ 1317421(R)	Rock sample location.
⊙ 2657901(L)	Loam sample location.
→	Creek.
——	Road.
—/—	Fence.
+++	Railway.

SCALE 1:100,000.

Kilometres 0 1 2 3 4 5 6 7 8 9 10 Kilometres

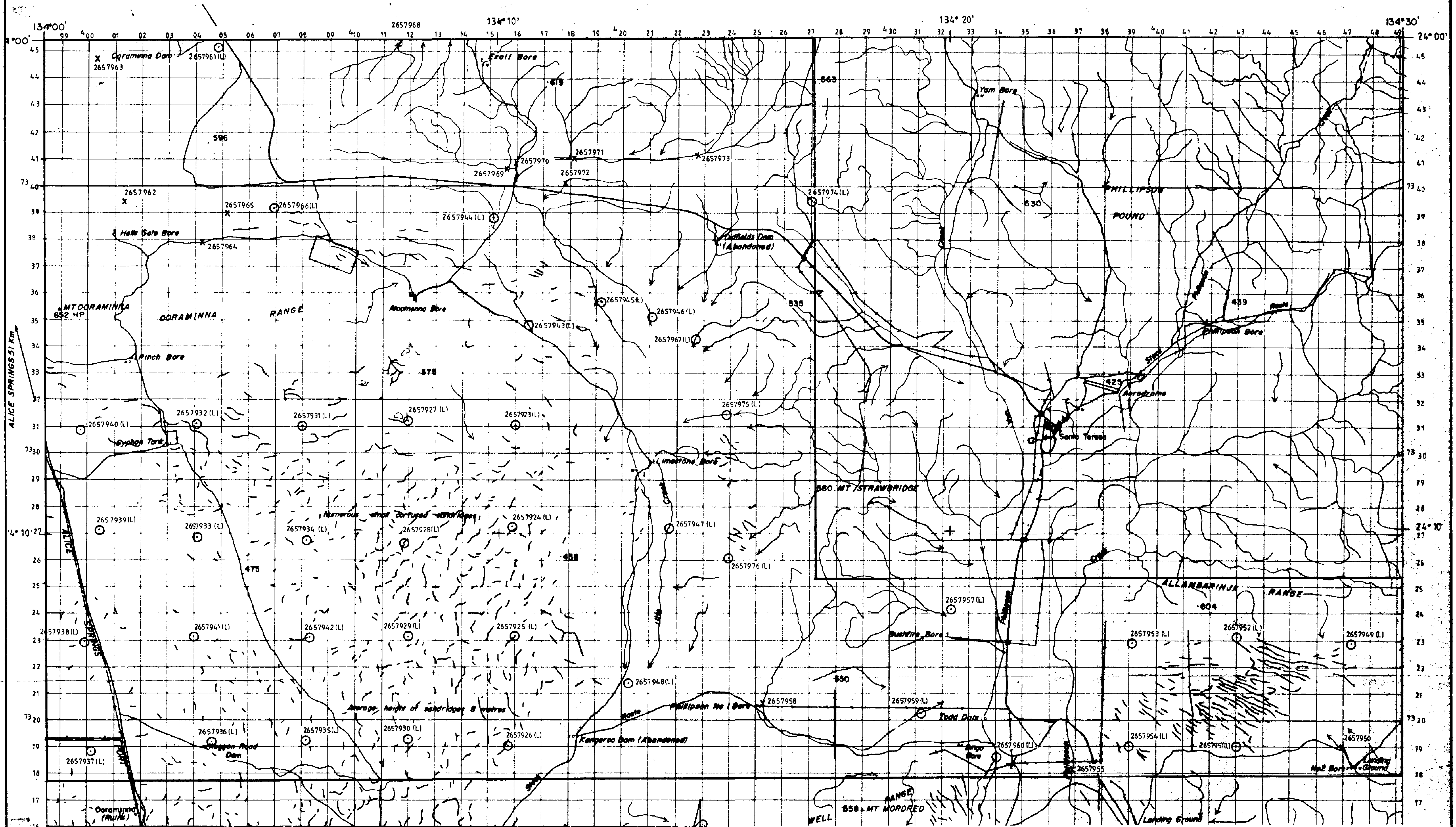
CRA EXPLORATION PTY LIMITED

EL 6957 DEEP WELL RANGE

SAMPLE LOCATION PLAN

(Retained Portion)

REFERENCE SG 53-02 RODINGA	
SCALE 1:100,000.	DATE JULY 1991
AUTHOR P.D.A.	REPORT 17550.
DRAWN T.T.N.	PLAN No NTd 5205.



LEGEND.

X 2657965	Stream settlement location.
⊙ 2657961(L)	Loam sample location.
——	Road.
+++	Railway.
→	Creek.
—/—	Fence.

SCALE 1:100,000.

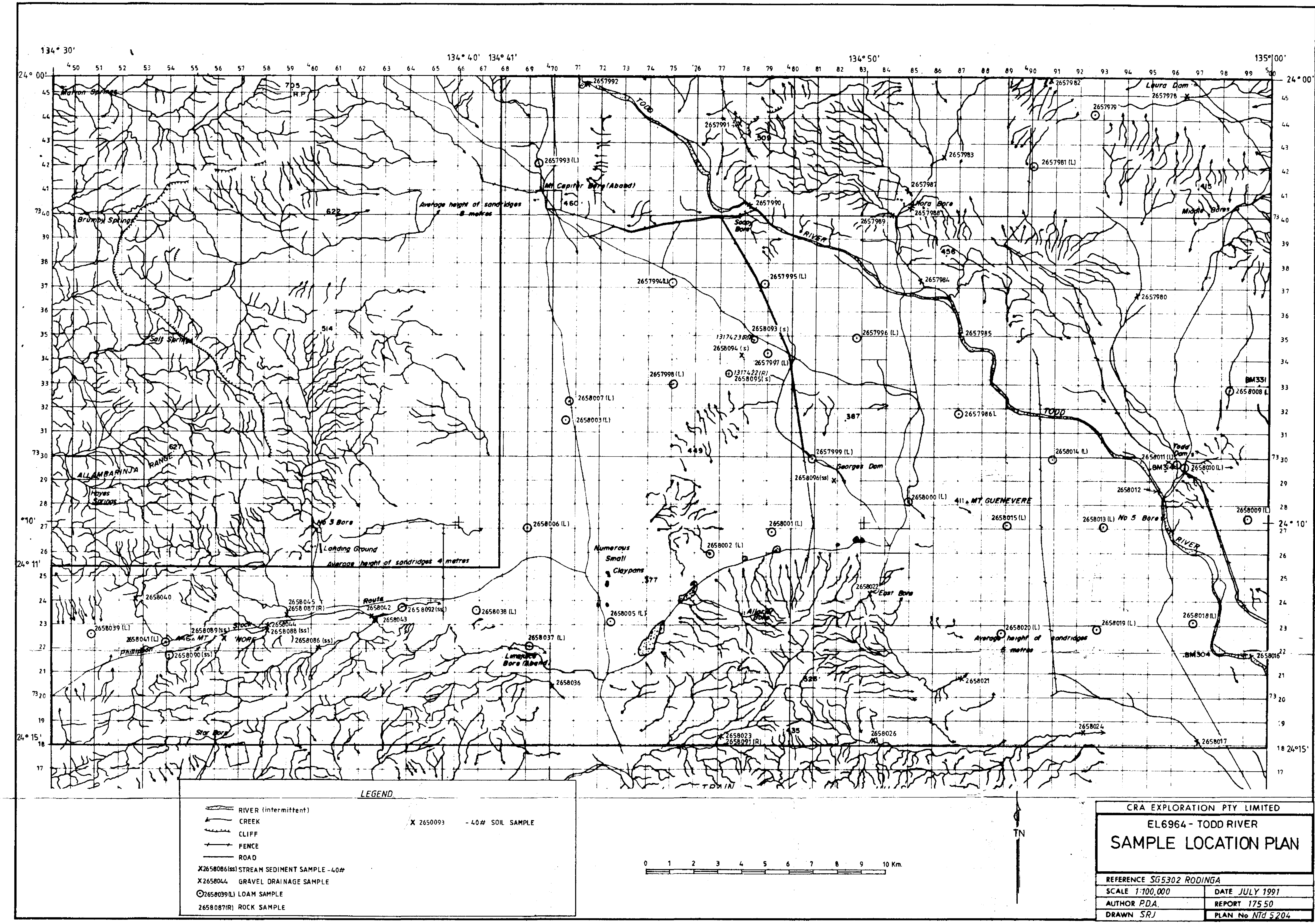
Kilometres 0 1 2 3 4 5 6 7 8 9 10 Kilometres

CRA EXPLORATION PTY LIMITED

EL 6963 YAM CREEK

SAMPLE LOCATION PLAN

REFERENCE SG 53-02 RODINGA.	
SCALE 1:100,000.	DATE JULY 1991
AUTHOR P.D.A.	REPORT 17550.
DRAWN TTN.	PLAN No NTd 5202.



134° 30'
134° 40' 134° 41'
134° 50'
135° 00'
24° 00'
24° 10'
24° 11'
24° 15'
Mt Capitor Bore (Abnd)
Average height of sandridges 8 metres
Brumby Springs
Salt Springs
ALLAMBARINJA RANGE
Hayes Springs
No 3 Bore
Landing Ground
Average height of sandridges 4 metres
TODD
RIVER
Soapy Bore
Nora Bore
Laura Dam
Middle Bores
Georges Dam
MT GUENEVERE
No 5 Bore
Todd Dam
Numerous Small Claypans
East Bore
Limestone Bore (Abnd)
Star Bore
Phillipson
MT NORE
Stock Route
Average height of sandridges 5 metres
LEGEND
RIVER (intermittent)
CREEK
CLIFF
FENCE
ROAD
X2658086(ss) STREAM SEDIMENT SAMPLE -40#
X2658044 GRAVEL DRAINAGE SAMPLE
⊙2658039(L) LOAM SAMPLE
2658087(R) ROCK SAMPLE
X 2650093 -40# SOIL SAMPLE
0 1 2 3 4 5 6 7 8 9 10 Km.
TN
CRA EXPLORATION PTY LIMITED
EL6964 - TODD RIVER
SAMPLE LOCATION PLAN
REFERENCE SG5302 RODINGA
SCALE 1:100,000
DATE JULY 1991
AUTHOR P.D.A.
REPORT 17550
DRAWN SRJ
PLAN No NTd 5204