CR91/400A

PANCONTINENTAL RESOURCES (EXPLORATION) PTY LIMITED

REPORT NO. 90/30

FINAL REPORT FOR PERIOD 30 OCTOBER 1989 TO 11 JULY 1990, ARLTUNGA PROJECT, NORTHERN TERRITORY FOR EXPLORATION LICENCES 4865, 5156, 5157, 5681, 6105, 6153, 6154, 6604 & 6665

VOLUME 1 OF 1

G.A. EDSER
APRIL 1991

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2. INTRODUCTION

2.1 Location and Access

The Arltunga Project has an area approaching 2,000 square kilometres and is centred approximately on the Arltunga district which includes a historic Mining Reserve and the White Range Gold N.L. gold mine which is currently in production.

The Arltunga district is located approximately 90 kilometres east-north-east of Alice Springs, which is situated in the south central part of the Northern Territory.

Alice Springs has a population of 24,000 and is the major government administrative centre for the region as well as a service centre for the pastoral industry and a growing tourist industry. Alice Springs lies approximately 1,325 kilometres due south of Darwin.

Alice Springs is well serviced by regular commercial air services to the eastern seaboard and to Darwin and Adelaide. A rail link connects Alice Springs with Adelaide.

The project area is readily accessible by road or by light aircraft. An airstrip suitable for light twin engine aircraft is maintained at Claraville Station.

A field office and accommodation facility was established at the White Range Gold N.L. mine camp which is connected to Alice Springs via Arltunga by approximately 120 kilometres of partly sealed road. From Arltunga, maintained property access roads lead to the homesteads of Ambalindum, Claraville and Atnarpa which are located within the project area. Other roads pass through the region to more remote homesteads.

A network of station tracks provides access by 4WD vehicle to those parts of the project area where the terrain is flat or subdued. In area of rugged topographic relief where tracks are absent, access can only be gained by the use of pack animals or by helicopter.

A location plan of the project area and the various individual titles is shown in Figure 1.

2.2 Physiography and Climate

The project area consists of two general physiographic divisions, the Hale Plain and the mountain ranges. The Hale Plain is a dominant central feature surrounded by a number of prominent ranges.

Foothills of the Strangways and Harts Range lie to the west and north respectively, while the Georgina Ranges boarder on the southern edge.

The Hale Plain is approximately 600 metres above sea level, 40 kilometres in length, 10 kilometres in width, and is bisected by the sinuous course of the Hale River draining from west to east.

Occasional tributaries of the Hale River have incised dendritic drainage patters into the plain to form low rolling hills. Small mesa-type hills up to 20 metres in height occur sporadically through the area and along the southern margin of the plain.

The annual rainfall ranges from 240 to 300 millimetres, falling intermittently between November and march.

Vegetation through the project area is sparse consisting of Mitchell grass on the plains and Spinifex in the surrounding mountains. Trees and shrubs are generally restricted to watercourses and calcrete-capped hills.

The temperature is hot and sultry during the summer months of November to March, cooling to warm days and cold nights during winter.

Access within the project area can be severely restricted by intermittent rainfall during summer.

2.3 Land Use and Infrastructure

Land use in the Arltunga Project area is dedicated to open range cattle grazing which is the principal industry in the region.

Tourism is a developing industry in the area with visitors being attracted to the natural attributes of the Ruby Gorge Nature Park on the Hale River and the historic significance of the Arltunga Mining Reserve.

Basic infrastructure in the project area is restricted to a network of unpaved roads and a microwave communication system servicing the requirements of the pastoral industry.

The area is not linked to the Territory electricity grid system and the water resources in the area are limited to underground supplies provided by bores.

2.4 Tenure

This was discussed in the previous annual report and is not repeated here.

Due to budget constraints Pancon advised on 11 July 1990 that it was withdrawing from the Joint Venture with Central Rare Earths Corporation N.L. covering the Arltunga and Hale River Projects.

As a result of this all future tenement responsibilities will revert back to Central Rare Earths Corporation. No recommendations regarding impending ground relinquishment have been made in this report, as this is no longer the responsibility of Pancon.

2.5 Target Concepts

Interest in the Arltunga Project by Pancon was stimulated by the exploration success of the joint venture partners, Mules and Bruce, in locating hardrock areas, principally within EL 4865, with attractive potential for rare earths minerals and zircon.

In EL 4865 the rare earth mineral allanite (a rare earth bearing epidote) was discovered in sub-economic concentrations within a variety of complex high grade metamorphic host rocks and intrusive granite pegmatites. Both monazite and zircon were noted in the course of studies by the CSIRO to be in significant concentrations in host rocks related to the allanite occurrences.

Since the joint venture was formed, a preliminary review of the regional geology of the greater project area has revealed that potential may exist for a number of other attractive commodities occuring in a variety of deposits styles.

The principal commodities of interest and their respective ore deposit models which form the target concepts for the Arltunga Project are listed in Table 1 in descending order of exploration importance.

It is acknowledged that the effect of high grade metamorphism and structural deformation, which are prominent influences in the Arltunga Project area, may make identification of the classical recognition criteria of the various ore deposit models difficult and problematical.

2.6 Objectives

The objectives of the Stage I program of exploration which was being conducted by Pancon until its withdrawal from the Joint Venture on 11 July, 1990 were as follows:

a) To undertake a comprehensive statistical assessment of the Endras (Mules and Bruce) geochemical database (results of stream sediment samples) which relates to the "old" EL's (EL's 4865, 5156, 5157, 5681, 6105 and 6219) in order to define geochemical anomalies or signatures which highlight mineralisation associated with the preferred target models.

   Status: Completed and documented in Annual Report to 29 October 1989.

TABLE 1

ARLTUNGA PROJECT
TARGET CONCEPTS

Commodity	Ore Deposit Model	Principal Geochemical Pathfinder Elements
Rare Earth Minerals * Monazite * Allanite * Xenotime * Samarskite	Granitoid (& migmatite) related hydrothermal systems - lodes, vein stockworks, greisens, skarns Pegmatites	La, P, Y, Zr
Zircon	Alkaline igneous complexes - Carbonatites	Cr, Cu, Ni, Pb, Zn, Ba, La, Nb, P, Zr
Gold	Hydrothermal lodes and stockworks - granitoid, metamorphic, and greenstone related	Au, As, Sb, Bi, Co, Cu, Pb, Zn
PGE's	Layered mafic complexes	Ni, Cu, As, Cr, Co, PGE's
Diamonds	Alkaline igneous complexes - Kimberlites and Lamproites	Cr, Cu, Ni, Pb, Zn, Ba, La, Nb, P, Zr
Tantalum	Pegmatites	Ta, Sn, W, Mo
Copper Lead Zinc Silver	Polymetallic VMS and SEDEX deposits	Cu, Pb, Zn, Au, Fe, Mn

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PANCONTINENTAL MINING LIMITED

A.C.N. 009 712 092

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DEPARTMENT OF
MINES &
ENERGY

PANCON

4 June 1991

Mr P. LeMessurier
Director
Northern Territory Geological Survey
Centrepoint Towers Building
The Mall
DARWIN NT 0800

Dear Sir

RE: EL'S 4865, 5156, 5157, 5681, 6105, 6153, 6154, 6219, 6604 & 6665 (ARLTUNGA PROJECT)
COMBINED FINAL REPORT
(PANCONTINENTAL - CENTRAL RARE EARTHS JOINT VENTURE)

As requested, enclosed please find the combined Final Report for the abovementioned Exploration Licences, for the period to 11 July 1990 being the date of Pancontinental's withdrawal from the Joint Venture. This report summarises work completed since the previous Annual Report to 29 October 1989.

Yours faithfully

R. Meares

R.M.D. Meares
Regional Manager -
Eastern Australia & Southwest Pacific

enc.

1. SUMMARY

By Letter Agreement dated 8 June 1989, Pancontinental Mining Limited through its wholly owned subsidiary Pancontinental Resources (Exploration) Pty Limited ("Pancon") entered into a joint venture with Messrs J.H. Mules and J.R. Bruce ("Mules and Bruce") for the purpose of advancing mineral exploration on 10 Exploration Licences ("EL's") which comprise the Arltunga Project (EL's 4865, 5156, 5157, 5681, 6150, 6153, 6219, 6604 and 6665). The Mules and Bruce interest was subsequently transfered to Central Rare Earths Corporation N.L.

The joint venture was established to enable Pancon to conduct mineral exploration primarily for economic deposits of rare earth minerals (monazite and allanite) and zircon in hardrock geological settings. Due to budget constraints Pancon advised on 11 July 1990 that it was withdrawing from the Joint Venture with Central Rare Earths Corporation N.L. covering the Arltunga and Hale River Projects.

This report was requested by the Director of the Northern Territory Geological Survey and outlines the exploration activities which occurred after the completion of the last technical report on the Arltunga Project (Graham and Edser, 1989).

The degree of detail in which the results of this exploration have been discussed, is necessarily constrained by the fact that all files and original technical data were returned to the joint venture partners immediately following Pancon's withdrawal from the joint venture, at which time interpretation of the exploration data collected from the preceeding field program was only partially completed.

b) To conduct a comprehensive evaluation of the Endras geophysical database (Claraville Airborne Geophysical Survey) covering the "old" EL's using image processing as appropriate to define magnetic and radiometric anomalies which highlight geological and structural settings indicative of the target models sought.

Status: Completed and documented in Annual Report to 29 October 1989.

c) To conduct an initial preliminary study of Landsat TM imagery airphoto interpretation over the entire project area to identify geological and structural settings which are analogous with those associated with preferred target models.

Status: Had not been started at the time of Pancon's withdrawal.

d) To carry-out a close-spaced stream sediment sampling program of the "new" EL's (EL's 6153, 6154, 6604 and 6665) peripheral to the "old" EL's. Analyses will be conducted for Au and 21 pathfinder elements.

Status: Samples completed and documented in Annual Report to 29 October 1989. Preliminary analysis of geochemical data in this report.

e) To combine the assay data obtained from the "new" EL's with the Endras assay data to provide an enlarged geochemical database suitable for further detailed statistical studies and anomaly determination.

Status: Datasets merged. Analysis of combined dataset had not commenced at the time of Pancon's withdrawal.

f) To study the regional geological framework, the metallogenic character of the project area, and the results of previous exploration by competitors to identify prospective environments consistent with those of the target models.

Status: This had not been completed nor documented at the time of Pancon's withdrawal.

g) To integrate all interpreted datasets to form a layered multidisciplinary database from which anomaly coincidence will identify priority targets for immediate assessment.

Status: This had not been completed nor documented at the time of Pancon's withdrawal.

h) Undertake appropriate detailed geological, geochemical and geophysical exploration programs on selected high priority targets in order to delineate drill targets for testing.

Status: Completed.

3. REGIONAL GEOLOGY

This was detailed in the Annual Report to 10 February 1990 and is not repeated here.

4. EXPLORATION CONDUCTED BY PANCON

4.1 Introduction

Since the inception of the Joint Venture on 8 June 1989, Pancon as Operator and Manager of the Joint Venture initiated a Stage I program of exploration aimed at assessing the potential of the Arltunga Project area for the commodities and deposit styles indicated in Table 1. Details of the objectives of the Stage I program were outlined in Section 2.6. Also included was a summary of the status of those objectives at the time of Pancon's withdrawal from the Joint Venture. During the period extending from 30 October, 1989 to 11 July, 1990, the following exploration activities occurred and are reported chronologically.

4.2 Exploration Summary

* Field operations for the 1989 field season on the Arltunga Project concluded on 7 December, 1989.

* During the lead-up period to the Christmas break, work activities were dominated by administrative duties and activities associated with field data processing and evaluation that was planned to be undertaken in February, 1990.

* Base maps at 1:25,000 scale were prepared from airphoto overlays for the "new" EL areas. Digitisation of these stream sediment sample locations had not occurred at the time of Pancon's withdrawal from the joint venture.

* Landsat TM scenes in Band 4 and 7 were received but no interpretation of this data had occurred at the time Pancon's withdrawal from the joint venture.

* Data reduction and data processing commenced on the ground magnetic and ground radiometric surveys which were completed on the Paradise Well, Harts View, White Flower and Valley View prospects in late 1989.

* Data processing and univariate statistical analysis of the regional geochemical drainage databases recommenced with the aim of identifying anomalies for follow-up. This work was completed during February.

* Preliminary interpretation of the Landsat TM scenes (Bands 4 and 7) covering the hardrock projects area was commenced but never completed.

* Preparation of brief work programmes and budgets for each of the hardrock tenements was completed for lodgment with the NT Department of Mines as required under the "project status" of the tenements.

* A brief geological mapping and rock chip sampling program was conducted with the objective of evaluating the Zr/REE potential of four prospects gridded during the September-December, 1989 field program. These prospects (Paradise Well, Harts View, White Flower and Valley View) were selected as they contained strong airborne thorium anomalies and several had associated magnetic anomalies.

  Following data checking and contouring of the 1989 ground radiometric and magnetic survey data, field work included relocating the major total count radiometric anomalies on each grid and rock chip sampling of outcrop at each anomaly. In addition, limited reconnaissance and detailed geological mapping was conducted and petrological samples were collected from outcrops at a number of anomalies.

  A total of 26 rock chips samples were collected, including samples from the four grids, the Bluey's Folly allanite prospect, and the Star Well airborne thorium/magnetic anomaly. The samples were assayed for Au plus 22 elements by fire assay/AAS/ICP by Classic Laboratories (Adelaide). This data had not been analysed in any detail at the time of Pancon's withdrawal from the Joint Venture.

  On-going office-based activities in preparation for the next field program which had been scheduled to commence in July, 1990 but did not occur as a result of Pancon withdrawing from the Joint Venture, included:-

  * Further analysis of the current airborne geophysical, drainage geochemical, satellite imagery and geological databases to identify and rate anomalies, particularly those due to a combination of elements of the various databases.

    (Status: Incomplete at 11 July, 1990).

  * Further evaluation of the mineralogy of the pan concentrate sub-samples of the original overbank samples.

    (Status: Not commenced at 11 July, 1990).

* literature study of applicable models for hardrock Zr and REE deposits and identification of the exploration signature of those deposits.

  (Status: Not commenced at 11 July, 1990).

* preparation of a fact sheet on the Bluey's Folly allanite mineralisation to assist the design of further metallurgical testwork.

  (Status: Not commenced at 11 July, 1990).

Project files and original data have been assembled and returned to Central Rare Earths, and the temporary field office at Arltunga closed down in August, 1990.

5. RESULTS OF EXPLORATION BY PANCON

5.1 Introduction

As was indicated above, all project files and original data have been returned to Central Rare Earths Corporation NL. Many of the activities referred to in Section 4 had not been completed up to this point and some activities had not commenced. As a result of this, documentation of the results of this work is incomplete. Those activities which had been written up at the time Pancon's withdrawal from the Joint Venture are however discussed in this section of this report. This work is mainly confined to the univariate statistical analysis of geochemical data from the overbank stream sediment samples collected from the "new" tenement areas. A plan showing the extent of the stream sediment sampling of the "new" EL's is included as Figure 2.

5.2 Statistical Analysis of Geochemical Data From "New" Tenements

Univariate statistical analysis was conducted on this data to generate anomalous thresholds for all elements, which could be compared with those derived from the Endras database in order to make some conclusions regarding the geochemistry of the area sampled by Pancon.

There are significant differences between thresholds for the Endras and Pancon data for certain elements, which point to the area sampled by Pancon being prospective for rare earth elements, base metals and zircon.

A comparison of thresholds for the two areas in shown in Table 2. A table showing univariate statistics for the Pancon data is included as Table 3.

The most significant differences are:-

1. The rare earth elements lanthanum and yttrium have significantly higher thresholds in the "new" EL's sampled by Pancon than those recorded for the Endras database.

2. The zinc threshold is substantially higher (260%) for the "new" EL's compared with the Endras database.

3. Zircon is substantially higher (1300%) for the "new" El's when compared to the Endras database.

TABLE 2

ARLTUNGA PROJECT
COMPARISON OF ANOMALOUS ASSAY RESULTS
"NEW" AND ENDRAS DATABASES

Is "New" >or< than Endras	Element	Threshold(ppm)		Number of Assays Above Threshold (% in brackets)				Number of Assays in Endras Database	
		New	Endras	New		Endras		New	Endras
Lower	Au	7ppb	19ppb	17	(2.8%)	41	(3.2%)	606	1279
Same	Co	37	38	26	(4.3%)	55	(4.3%)	606	1279
Lower	Cr	101	120	9	(1.5%)	19	(1.5%)	606	1279
Higher	Cu	157	102	21	(3.5%)	15	(1.2%)	606	1279
Higher	Mo	8	4.3	5	(0.8%)	6	(0.5%)	606	1237
Higher	Ni	76.4	51.5	11	(1.8%)	34	(2.7%)	606	1279
Higher	Pb	46	35	38	(6.3%)	9	(0.7%)	606	1279
Much Higher	Zn	507	195	8	(1.3%)	24	(1.9%)	606	1279
Higher	As	18	15	22	(3.6%)	13	(1.0%)	606	1273
Much Higher	Ba	615	311	1		43	(3.4%)	606	1273
Higher	Fe	6.2%	4.9%	18	(3.0%)	50	(3.9%)	606	1273
Much Higher	La	12.8	79.1	28	(4.6%)	57	(4.5%)	606	1273
Higher	Mn	1387	1230	16	(2.6%)	34	(2.7%)	606	1273
Same	Nb	5	5	7	(1.1%)	15	(1.2%)	606	1273
Higher	P	2900	1205	8	(1.3%)	15	(1.2%)	606	1273
-	Bi	4?	3.45	1	(0.2%)	42	(3.3%)	606	1279
Higher	Sn	15	10	9	(1.5%)	34	(2.7%)	606	1273
Higher	W	10	6.9	13	(2.1%)	2	(0.2%)	606	1273
Higher	SB	15	10	13	(2.1%)	4	(0.3%)	606	1273
	Ta	N/A	N/A					606	590
Much Higher	Zr	89	7	3	(0.5%)	7	(1.8%)	606	377
Higher	Y	60	45	15	(2.5%)	15	(4.0%)	606	377

TABLE 3

ARLTUNGA PROJECT
Sample Statistics For "New" Data
(From "New" Areas)

Element	Comment	Population 1					Population 2				
		D	M	S	N	T	D	M	S	N	R
AAS ASSAYS											
Au	Unimodal	Log	-2.991	0.415	606	7(b)					
Bi	Data not amendable to parametric statistics, too may BLD's										
Co	Unimodal	Norm	22.7	7.078	606	36.9					
Cr	Bimodal	Log	1.645	0.196	601	100.7	?	322(m)	-	5	-
Cu	Bimodal	Log	1.801	0.203	605	157.4	?	650(m)	-	1	-
Ni	Unimodal	Log	1.497	0.193	606	76.4					
Pb	Bimodal	Log	1.192	0.271	595	46.1	?	127(m)	-	11	-
Zn	Unimodal	Log	2.295	0.205	606	507					
ICP ASSAYS											
As	Unimodal	Log			606	18					
Ba	Unimodal	Log	2.289	0.250	606	615					
Fe	Unimodal	Norm	4.434	0.877	606	6.2%					
Mn	Unimodal	Log	2.906	0.118	606	1387					
La	Unimodal	Log	1.693	0.206	606	128					
Nb	Bimodal	Log			599	N/A	?	-	-	7	5
P	Bimodal	Log			598		?	-	-	8	2900
Sb	Bimodal	Log	0.529	0.211	605		?	-	-	1	15
Sn	Bimodal	Log			605		?	-	-	1	15
Ta	Data not amendable to parametric statistics										
W	Data not amendable to parametric statistics										
Zr	Bimodal	Log			526	Log	1.673	0.138		80	89
Y	Bimodal	Log	1.389	0.156	605		-	-	-	1	60
Mo	Bimodal	Log			601	-	-	-	-	5	8

All concentrations are in ppm or Log ppm unless otherwise stated.

D = Distribution Type
M = Sample Mean
S = Sample standard deviation
N = Number of samples
T = Threshold

4. The barium threshold is significantly higher (almost double at 198%) for the "new" EL's when compared to the Endras database.

5. The phosphorous threshold is significantly higher (240%) for the "new" EL's when compared to the Endras database. Such elevated levels may be indicative of rare earth bearing apatite.

6. The gold threshold is significantly lower (41%) for the "new" EL's when compared to the Endras database.

7. Other elements of potential interest which have higher thresholds in the "new" EL's are copper, lead, nickel, arsenic, tin, antimony and tungsten.

8. Elements which return lower thresholds in the "new" EL's were chromium and cobalt while niobium and bismuth were the same.

5.3 Geological Mapping And Rock Chip Sampling

Analyses from this sampling are included in this report as Appendix 1. No detailed interpretation of the results had been conducted at 11 July, 1990, however it is noted that while Zr values are low (max. 36ppm), anomalous values in La (max. 1,850ppm) and Y (max. 46ppm) are present.

6. CONCLUSIONS AND RECOMMENDATIONS

The Stage 1 exploration program initiated by Pancon was in progress until 11 July, 1990, at which point Pancon withdrew from the Joint Venture. Stage 1 activities which occurred during the reporting period were dominated by data processing and evaluation. The work which was carried out was aimed at generating priority rated targets for detailed follow-up evaluation. This work preceeded a major field program which was planned for the second half of 1990 and which did not take place.

At this stage the work which has been conducted is still not sufficiently advanced to generate any definitive conclusions about the economic potential of the Arltunga Project for the described commodities and target types.

Clearly, what is required is a fulfilment of the objectives of the Stage 1 program as set out in Section 2.6 of this report. These objectives were only partially met at the time of Pancon's withdrawal from the Joint Venture on 11 July, 1990.

REFERENCES

Graham, J.M. and Edser, G.A., 1989: Combined Annual Report for period 30 October 1988 to 29 October 1989, Arltunga Project, Northern Territory For Exploration Licences 4865, 5156, 5157, 5681, 6105, 6153, 6154, 6219, 6604 and 6665., report by Pancontinental Resources (Exploration) Pty Limited.

APPENDIX 1

ANALYTICAL RESULTS FROM ROCK CHIP SAMPLES OVER THE GRIDDED AREAS.

CLASSIC LABORATORIES LTD
Incorporated in WA; a wholly owned subsidiary of Amdel Ltd
Osman Place, Thebarton, South Australia 5031
Telephone: (08) 43 5722 Facsimile: (08) 234 0321

(SECOND COPY)

Gave GATE disc of data on 17.4.90

Mr R Meares
Pancontinental Mining Ltd
7th Level, 20 Lotus Street
SYDNEY
NSW 2000

FINAL ANALYSIS REPORT

Your Order No: 52761 Our Job Number : 0AD0764

Samples received : 12-MAR-1990 Results reported : 06-APR-1990
No. of samples : 26
Report comprises a cover sheet and pages 1 to 4

This report relates specifically to the samples tested in so far as that the samples as supplied are truly representative of the sample source.

Note:
If you have any enquiries please contact Mr David Eardley-Harris quoting the above job number.

Approved Signatory:

Dr John Kikkert
General Manager - Adelaide

CC Mr R Meares NSW
MM Mr R Meares NSW

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

Distribution Codes:
CC - Carbon Copy
EM - Electronic Media
MM - Magnetic Media

"RELIABLE ANALYSES AT COMPETITIVE COST"

CLASSIC LABORATORIES LTD

Job: 0AD0764
O/N: 52761

ANALYTICAL REPORT

Sample	Bi	Co	Cr	Cu	Ni	Pb	Zn
28926	<10	16	56	7	15	8	18
28927	<10	24	40	11	10	8	14
28928	<10	40	34	10	8	12	8
28929	<10	28	40	6	12	8	14
28930	<10	8	4	4	10	6	20
28931	<10	20	48	10	8	14	15
28932	<10	30	64	9	10	20	20
28933	<10	25	45	10	5	14	7
28934	<10	32	48	10	10	30	20
28935	<10	30	50	10	10	14	12
28936	<10	38	40	7	5	12	10
28937	<10	25	42	7	8	8	7
28938	<10	36	32	5	4	26	8
28939	<10	26	50	7	14	14	16
28940	<10	38	40	11	8	10	5
28941	<10	24	38	8	8	8	15
28942	<10	52	34	10	6	12	6
28943	<10	24	30	5	5	10	6
28944	<10	32	30	4	10	18	4
28945	<10	18	44	3	12	5	9
28946	<10	38	22	50	4	36	7
28948	<10	44	34	32	5	12	6
28949	<10	28	22	6	5	34	24
28950	<10	38	24	5	5	14	75
28951	<10	24	28	6	8	10	14
28952	<10	45	24	6	6	10	6
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detn Limit	10	4	4	2	4	4	2
Scheme	AAS1S	AAS1S	AAS1S	AAS1S	AAS1S	AAS1S	AAS1S

CLASSIC LABORATORIES LTD

Job: 0AD0764
O/N: 52761

ANALYTICAL REPORT

Sample	As	Ba	Fe	La	Mn	Mo	Nb
28926	5	180	2.04	28	640	<4	<4
28927	<5	130	1.34	90	120	<4	<4
28928	5	95	1.06	65	140	<4	<4
28929	<5	70	4.08	60	140	<4	<4
28930	25	70	1.98	4	2300	<4	<4
28931	5	85	2.38	24	200	4	<4
28932	<5	110	3.40	34	280	4	<4
28933	<5	120	0.61	65	95	<4	<4
28934	<5	140	2.50	180	180	<4	<4
28935	<5	90	1.08	26	120	<4	<4
28936	<5	60	0.55	36	75	<4	<4
28937	<5	95	1.04	95	110	4	<4
28938	10	60	0.83	290	120	<4	<4
28939	10	160	1.54	50	250	<4	<4
28940	<5	90	0.65	100	110	<4	<4
28941	<5	90	0.94	65	120	<4	<4
28942	<5	70	0.86	20	85	<4	<4
28943	<5	55	0.78	46	95	<4	<4
28944	<5	60	0.90	140	140	<4	<4
28945	<5	30	1.98	50	200	<4	<4
28946	30	230	0.92	1850	170	<4	<4
28948	<5	140	0.67	85	110	<4	<4
28949	<5	120	1.06	360	110	<4	<4
28950	5	210	2.18	70	300	<4	<4
28951	<5	160	0.84	48	150	4	<4
28952	<5	90	0.59	70	100	<4	<4
Units	ppm	ppm	%	ppm	ppm	ppm	ppm
Detn Limit	5	2	0.01	4	2	4	4
Scheme	ICP11	ICP11	ICP11	ICP11	ICP11	ICP11	ICP11

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Job: 0AD0764
O/N: 52761

ANALYTICAL REPORT

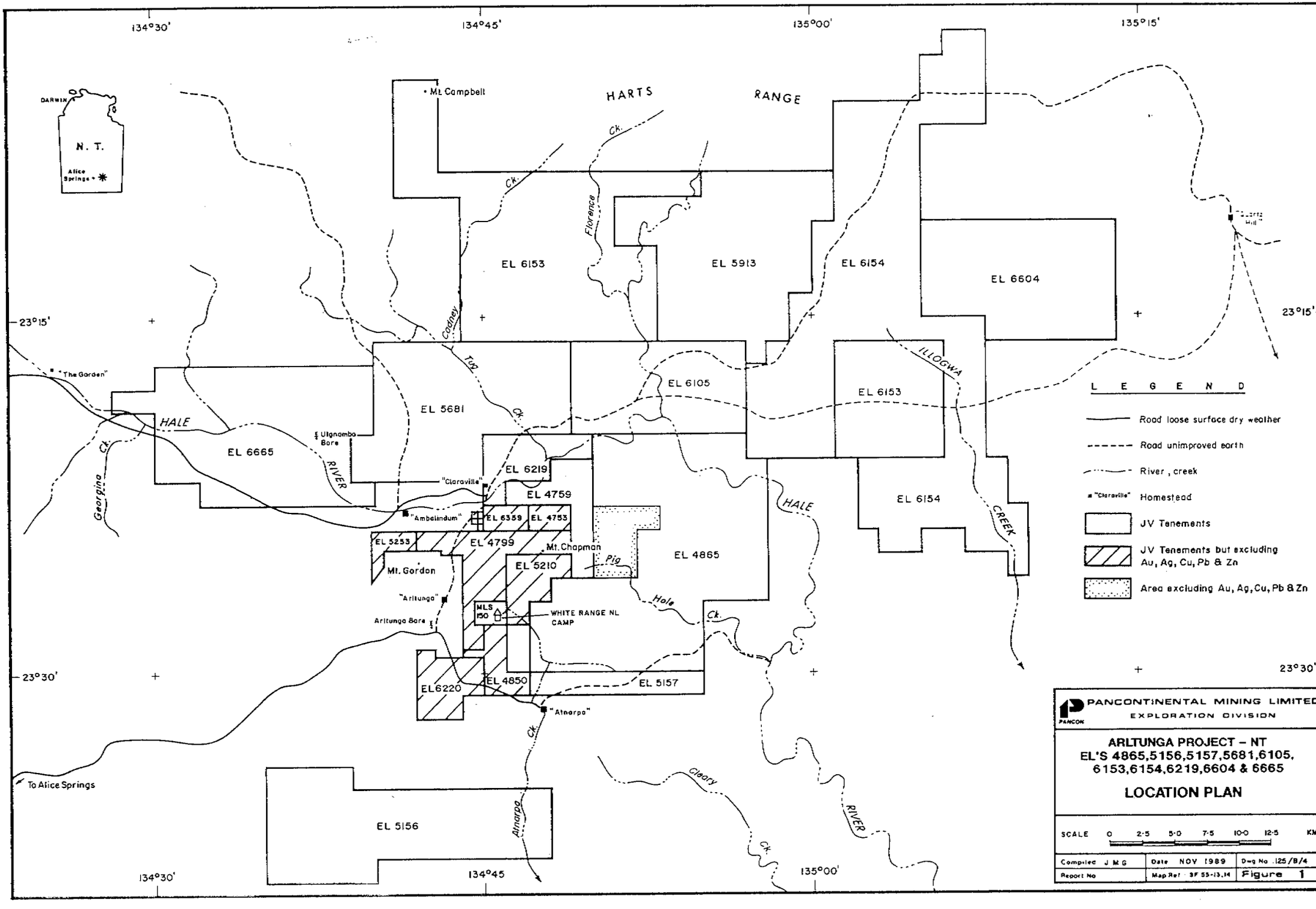
Sample	P	Sb	Sn	Ta	W	Y	Zr
28926	820	<5	5	<5	<5	8	4
28927	260	<5	<5	<5	<5	7	<2
28928	330	<5	<5	<5	<5	7	9
28929	350	15	<5	<5	<5	10	6
28930	1450	5	10	<5	<5	10	<2
28931	410	10	5	<5	<5	4	12
28932	220	10	5	<5	<5	3	8
28933	290	<5	<5	<5	<5	11	8
28934	420	15	<5	<5	<5	10	12
28935	130	<5	<5	<5	<5	3	15
28936	150	<5	5	<5	<5	11	12
28937	280	<5	<5	<5	<5	9	9
28938	470	<5	<5	<5	<5	24	16
28939	230	5	5	<5	<5	11	4
28940	540	<5	<5	<5	<5	10	13
28941	160	<5	<5	<5	<5	9	10
28942	150	<5	<5	<5	<5	7	12
28943	240	10	<5	<5	<5	12	15
28944	580	<5	<5	<5	<5	16	12
28945	430	<5	5	<5	<5	6	10
28946	500	<5	<5	<5	<5	44	3
28948	300	<5	<5	<5	<5	7	6
28949	470	<5	5	<5	<5	24	36
28950	160	10	5	<5	<5	46	26
28951	210	<5	<5	<5	<5	6	9
28952	210	<5	<5	<5	<5	5	16
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detn Limit	5	5	5	5	5	2	2
Scheme	ICP11	ICP11	ICP11	ICP11	ICP11	ICP11	ICP11

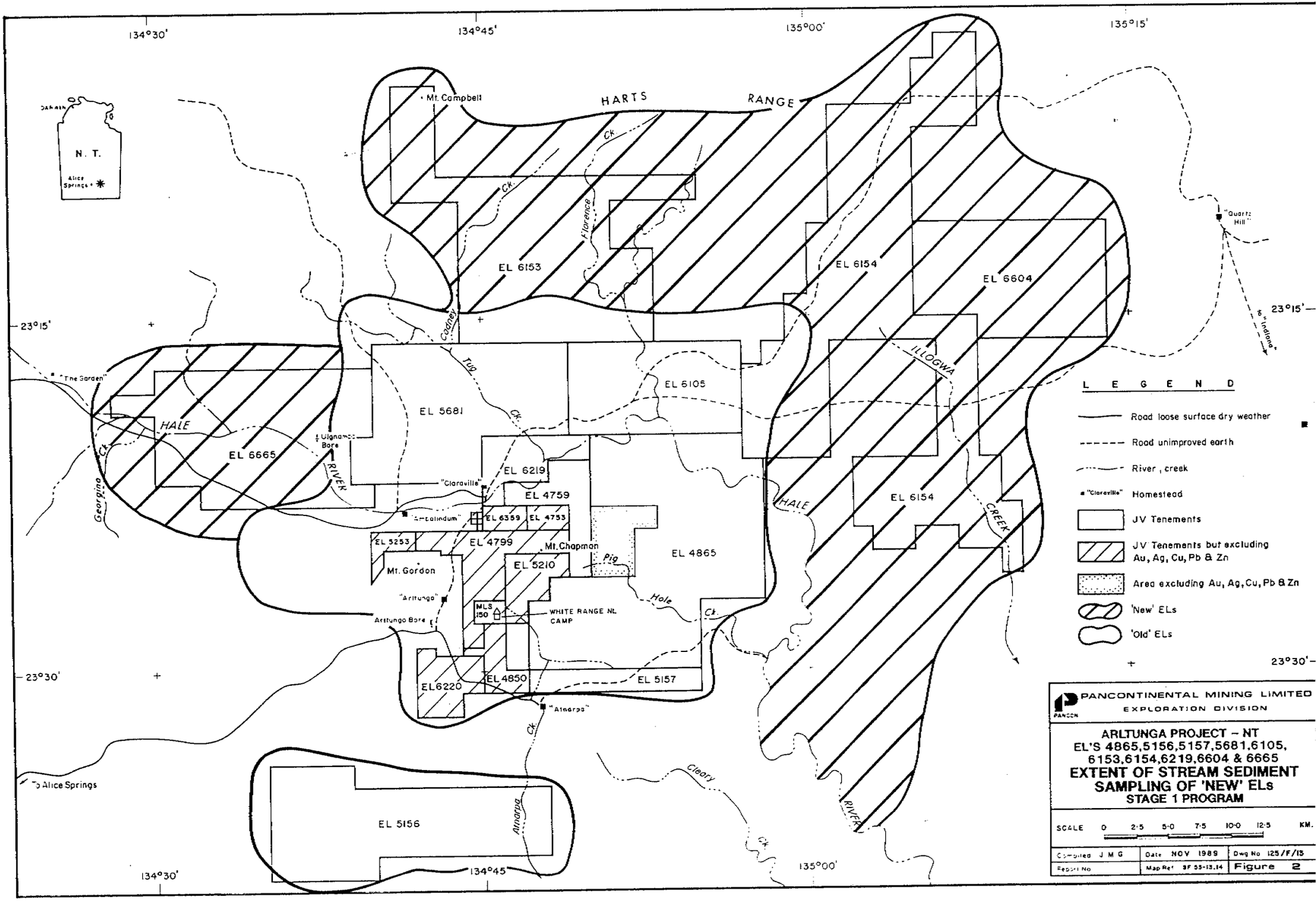
CLASSIC LABORATORIES LTD

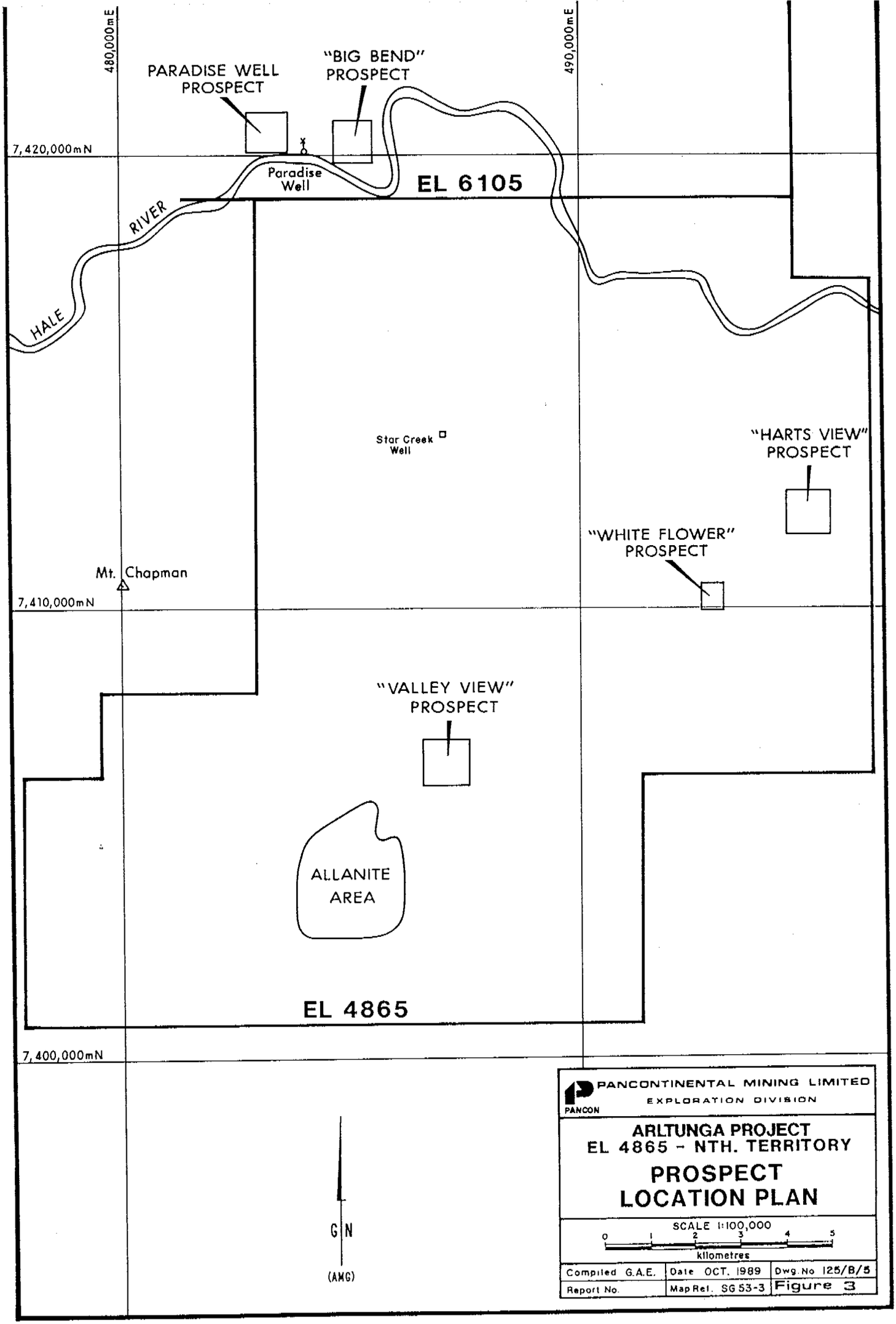
Job: 0AD0764
O/N: 52761

ANALYTICAL REPORT

Sample	Au Avg	Au	Au Rp1	Au SS1
28926	<1	<1	<2	--
28927	<1	<1	--	--
28928	<1	<1	--	--
28929	<1	<1	--	--
28930	1	1	--	--
28931	<1	<1	--	--
28932	<1	<1	--	--
28933	<1	<1	--	--
28934	<1	<1	--	--
28935	<1	<1	--	--
28936	<1	<1	--	--
28937	<1	<1	--	--
28938	<1	<1	--	--
28939	<1	<1	--	--
28940	<1	<1	--	--
28941	<1	<1	--	--
28942	<1	<1	--	--
28943	1	1	--	--
28944	<1	<1	--	--
28945	<1	<1	--	--
28946	<1	<1	<2	--
28948	<1	<1	--	--
28949	<1	<1	--	--
28950	1	1	--	--
28951	<1	<1	--	--
28952	<1	<1	--	--
Units	ppb	ppb	ppb	ppb
Detn Limit	1	1	2	2
Scheme	FA3	FA3	FA3	FA3


134°30'
134°45'
135°00'
135°15'
23°15'
23°30'
DARWIN
N. T.
Alice Springs
Mt. Campbell
HARTS RANGE
Ck.
Florence
EL 6153
EL 5913
EL 6154
EL 6604
Cadney
Tug Ck.
EL 6105
EL 6153
ILLOGWA
"The Garden"
HALE
EL 5681
EL 6665
Ulgnamba Bore
RIVER
Georgina Ck.
"Claraville"
EL 6219
EL 4759
"Ambalindum"
EL 6359
EL 4753
EL 5253
EL 4799
Mt. Chapman
Mt. Gordon
EL 5210
EL 4865
Pig
Hole
Ck.
"Arltunga"
Arltunga Bore
MLS 150
WHITE RANGE NL CAMP
EL 6220
EL 4850
EL 5157
"Ataarpa"
HALE
EL 6154
CREEK
To Alice Springs
EL 5156
Atnarpa
Ck.
Cleary
RIVER
Ck.
L E G E N D
Road loose surface dry weather
Road unimproved earth
River , creek
"Claraville" Homestead
JV Tenements
JV Tenements but excluding Au, Ag, Cu, Pb & Zn
Area excluding Au, Ag, Cu, Pb & Zn
PANCONTINENTAL MINING LIMITED
EXPLORATION DIVISION
PANCON
ARLTUNGA PROJECT – NT
EL'S 4865,5156,5157,5681,6105,
6153,6154,6219,6604 & 6665
LOCATION PLAN
SCALE 0 2·5 5·0 7·5 10·0 12·5 KM.
Compiled J M G
Date NOV 1989
Dwg No 125/8/4
Report No
Map Ref SF 55-13,14
Figure 1


134°30'
134°45'
135°00'
135°15'
23°15'
23°30'
N. T.
Alice Springs
Mt. Campbell
HARTS RANGE
Florence Ck
Codney Ck
Tug Ck
EL 6153
EL 6154
EL 6604
"Quartz Hill"
to "Indiana"
"The Garden"
HALE
Georgina Ck
EL 6665
Ulgnamoo Bore
RIVER
EL 5681
EL 6105
ILLOGWA
"Claraville"
EL 6219
EL 4759
"Emballendum"
EL 6359
EL 4753
EL 5253
EL 4799
Mt. Chapman
Mt. Gordon
EL 5210
Pig Hole Ck
EL 4865
"Arltunga"
Arltunga Bore
MLS 150
WHITE RANGE NL CAMP
EL 6220
EL 4850
EL 5157
"Amarga"
HALE CREEK
EL 6154
To Alice Springs
EL 5156
Amarga Ck
Cleary Ck
RIVER
L E G E N D
Road loose surface dry weather
Road unimproved earth
River , creek
"Claraville" Homestead
JV Tenements
JV Tenements but excluding Au, Ag, Cu, Pb & Zn
Area excluding Au, Ag, Cu, Pb & Zn
'New' ELs
'Old' ELs
PANCONTINENTAL MINING LIMITED
EXPLORATION DIVISION
ARLTUNGA PROJECT – NT
EL'S 4865,5156,5157,5681,6105,
6153,6154,6219,6604 & 6665
EXTENT OF STREAM SEDIMENT
SAMPLING OF 'NEW' ELs
STAGE 1 PROGRAM
SCALE 0 2·5 5·0 7·5 10·0 12·5 KM.
Compiled J M G
Date NOV 1989
Dwg No 125/F/13
Report No
Map Ref SF 53-13,14
Figure 2


480,000mE
490,000mE
PARADISE WELL PROSPECT
"BIG BEND" PROSPECT
7,420,000mN
Paradise Well
EL 6105
RIVER
HALE
Star Creek Well
"HARTS VIEW" PROSPECT
"WHITE FLOWER" PROSPECT
Mt. Chapman
7,410,000mN
"VALLEY VIEW" PROSPECT
ALLANITE AREA
EL 4865
7,400,000mN
G N
(AMG)
PANCONTINENTAL MINING LIMITED
EXPLORATION DIVISION
PANCON
ARLTUNGA PROJECT
EL 4865 - NTH. TERRITORY
PROSPECT LOCATION PLAN
SCALE 1:100,000
0 1 2 3 4 5
kilometres
Compiled G.A.E.
Date OCT. 1989
Dwg.No 125/B/5
Report No.
Map Ref. SG 53-3
Figure 3