

WESTERN MINING CORPORATION LIMITED
EXPLORATION DIVISION

ANNUAL REPORT

ON

E.L. 3678

MAY 1984 - MAY 1985

OPEN FILE

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JUNE, 1985

NORTHERN TERRITORY
GEOLOGICAL SURVEY

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WESTERN MINING CORPORATION LIMITED
EXPLORATION DIVISION

ANNUAL REPORT ON EXPLORATION

PERIOD : May 27, 1984 - May 26, 1985
TENEMENT : EXPLORATION LICENCE 3678
MINERAL : GOLD
LOCATION : ADELAIDE RIVER, N.T.
PINE CREEK 1:250 000 Sheet
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DATE : JUNE 1985

SUMMARY

Work completed during the second year of the licence was mainly restricted to a re-assessment of all the data generated during 1983-84. This work has involved the re-assessment of the photogeological mapping, the helicopter-borne prospecting and the rock chip analytical data.

The field work programme planned for 1984/85 was postponed until this year due to the intense field work commitment in E.L. 3565, E.L. 4066 and ERL 56.

Expenditure during the second year of tenure totalled \$2526.

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L I S T O F F I G U R E S

<u>Figure No.</u>	<u>Title</u>	<u>Plan No.</u>
1	Location Plan showing E.L. 3678 Scale : 1:250 000	7034/2
2	Geological Plan showing sample locations Scale : 1:25 000	F/5171/107

1. INTRODUCTION

The Exploration Licence was granted to W.R. Grace (Australia) Ltd. on 26 May 1983, and this report deals with exploration in the licence during the second year of tenure. In January 1985, the E.L. became part of the Mt. Ringwood joint venture between W.R. Grace Ltd. and Western Mining Corporation Ltd.

The E.L. consists of eight sub-blocks, and is located on the Batchelor 1:100,000 sheet approximately 4 km west of Adelaide River (Figure 1). Access into the area has only been achieved by helicopter, however vehicular access along the flats of some creeks is possible.

Exploration during the first year of tenure (1983-4) defined three areas of anomalous gold associated with quartz veining. Values up to 53 ppm Au were located during this exploration phase. Exploration during the second year of the licence was restricted to a re-assessment of all data in light of the progress made in other areas of the Pine Creek Geosyncline held under licence by W.R. Grace.

2. GEOLOGY

The Exploration Licence occurs on the western side of the Pine Creek Geosyncline close to the western margin of the Batchelor Shelf as defined by Stuart Smith et al (1980). The Licence covers an area of moderately outcropping sediments of the Finnis River Group, consisting of siltstones and wackes which exhibit turbiditic sedimentary features. Thick sequences of felspathic wacke occur in the south eastern part of the licence. The sediments in the Exploration Licence are moderate to tightly folded along N.W. to N trending axes.

Quartz veining is common throughout these sediments and this veining is strongly developed in the central part of the E.L. The majority of these quartz veins trend N.W. and are sub-vertical in attitude.

3. PREVIOUS EXPLORATION 1983-4

Helicopter-borne reconnaissance chip sampling of quartz reefs in 1983 defined three gold anomalous areas within the E.L. (Samples 7060, 7061 and 7151, Figure 2). Follow-up sampling later in the same year failed to repeat the anomalous 7060 and 7061 samples, but confirmed the presence of a series of thin (0.5-1 m) auriferous reefs in the most westerly anomaly (viz. sample no. 7151). The results of this follow-up sampling are shown in Figure 2. The most encouraging results were obtained from a 70 metre long E-W subvertical reef averaging 0.5 metres thick. Three samples (7867, 7868 and 7869, Figure 2), each representing chips of quartz over approximately 25 metre strike length

gave values ranging from 13.8 ppm Au to 53.2 ppm Au, and averaging 35 ppm Au. Other minor gold values were reported in other reefs within this area during this follow-up sampling programme (see Figure 2).

4. 1984-5 EXPLORATION RESULTS

The 1984-5 completed work programme was one of re-assessment of existing data. The field work programme planned for 1984/5 was postponed until this year (1985-86) due to the intense field work commitments of Grace geologists in E.L. 3565, E.L. 4066 and ERL 56.

A re-appraisal of all the rock chip sampling data and photogeological mapping by L.G. Smith indicates the following :-

- (a) The most encouraging gold values from the rock chip sampling occur in a series of small E-W quartz veins. N-S trending veins do not appear as auriferous except where they are juxtaposed to the E-W veins (e.g. see sample 7151, Figure 2). The results to date although interesting, only indicate small tonnages within these auriferous zones.
- (b) The presence of auriferous wall rock zones around these auriferous quartz reefs has not yet been investigated and will be a priority task this year. These zones, if present, could significantly increase tonnage potential.
- (c) The helicopter-borne reconnaissance rock chip sampling programme carried out in 1983 concentrated on sampling quartz reefs within the E.L. The next phase of exploration needs to explore for more disseminated auriferous zones which may have been missed by this 1983 programme. The E.L. is amenable to a stream sediment sampling survey which would detect any major auriferous zones not yet located.

5. FUTURE WORK PROGRAMME

Exploration during the third year of tenure will involve a detailed evaluation of the gold mineralization located by W.R. Grace. This work will include further rock chip sampling around the auriferous quartz reefs, and soil sampling along the strike extension of the mineralization.

In addition the entire Exploration Licence will be stream sediment sampled at a density of 1 sample/km². The fine fraction will be analysed for gold.

An estimate of the cost of this work is as follows:

Geology	\$ 6,000
Geochemical	2,000
Analytical	3,000
	<u>\$11,000</u>

6. EXPLORATION EXPENDITURE

A breakdown of the exploration expenditure of E.L. 3678 for the year ended 26 May, 1985 is as follows :-

(a)	<u>ADMINISTRATION</u>	\$
	Auditors Remuneration	23
	Consultants, Financial & Tax	21
	Data Processing (Accounting)	39
	Electrical Power & Light	19
	Financial Controller	37
	Insurance, General Workmens Compensation	80
	Legal Fees	131
	Mining Engineering Supervision	286
	Payroll Tax	27
	Postage, Courier, Bank Charges	24
	Printing & Stationery	56
	Rent & Storage	110
	Secretarial & Bookkeeping	152
	Staff Recruitment	26
	Telephone, Radio, Telex	37
	Travelling	93
	Office Miscellaneous	-
	Promotion & Representation Costs	3
(b)	<u>DRILLING, TRENCHING & ASSAYING</u>	
	Assaying	-
	Contract Grading	-
	Contract Drafting	20
	Contract Gridding & Surveying	-
	Core Cutting & Storage Contractor	24
	Core & Sample Storage	2
	Costean Trenching	-
	Drilling - Diamond, Percussion, Etc.	-
(c)	<u>FIELD & CAMP EXPENDITURE</u>	
	Camp Cook/Contractor	-
	Camp Construction	-
	Field Rations & Supplies	-
	Field Camp Equipment Amenities	3
	Fuel & Oil	52
	Helicopter Hire Aerial Survey	-
	Hire Plant & Equipment	24
	Motor Vehicle Expense	51
	Operating Supplies, Consumables	33
	Repairs & Maintenance	76
	Site Preparation, Bulldozing & Clearing	-
	Motor Vehicle Lease	33
(d)	<u>METALLURGICAL INVESTIGATIONS & CONSULTANTS</u>	
	Metallurgical Consultants	-
	Metallurgy	-
	Mineralogy & Petrology	-

(e)	<u>GEOLOGICAL SERVICES</u>	\$
	Consulting Geologist	10
	Geological Contractors	383
	Geophysical Surveys	-
	Consulting Geologist - Staff	-
	Field Assistants (Contractors)	-
	Photogeological Interpretation	-
	Contract Geologists	-
	Data Processing (Geological)	-
	Technical Assistant (Contractor)	-
(f)	<u>EXPLORATION LICENCE FEES & LEASES</u>	
	EL Fees	
	Option Payments	
	Rental Exploration Leases	80
(g)	<u>ENVIRONMENTAL/SACRED SITE STUDIES</u>	
(h)	<u>DEPRECIATION</u>	75
(i)	<u>NEW YORK CHARGES</u>	
	Overseas Mining Consultants	487
(j)	<u>CONTINGENCIES</u>	
(k)	<u>FLUOR STUDY</u>	
(l)	<u>FOREIGN EXCHANGE LOSS</u>	9
(m)	<u>CAPTIAL EXPENDITURE</u>	
Total:		<u>\$2,526</u>

7. REFERENCES

Stuart-Smith, P.G., Wills, K., Crick, I.H. and Needham, R.S. (1981).
 Evolution of the Pine Creek Geosyncline. In Ferguson, J.
 and Goleby, A. "Uranium in the Pine Creek Geosyncline".
 I.A.E.A., Vienna pp 23-38.

