CRA EXPLORATION PTY. LIMITED

W.J. FISHER/RUNNING CREEK FARM-IN & JOINT VENTURE

MINERAL CLAIMS MCN's 2688, 2689, 2690 and 2691
THIRD ANNUAL REPORT

Submitted By : D.C. PALMER

Accepted By : H.J. ROIKO

Date : March, 1992

Copies To : CRAE, Darwin
W.J. & E.E. Fisher Pty Ltd
C.I.S. Canberra
: N.T. Dept. of Mines and Energy

Map Reference : ROBINSON RIVER, SE5304

Report No. : 17879

The contents of this report remain the property of CRA Exploration Pty. Limited, and may not be published in whole or in part, nor used in a company prospectus without the written consent of this company.
CONTENTS

1. SUMMARY 1
2. CONCLUSIONS/RECOMMENDATIONS 1
3. INTRODUCTION 1
4. WORK UNDERTAKEN 2
   4.1 TENURE YEAR THREE ACTIVITIES 2
   4.1.1 MCN 2688 RUNNING CREEK NORTH 3
       MCN 2691 RUNNING CREEK SOUTH 3
   4.1.2 MCN 2690 SALTICK 4
   4.1.3 MCN 2689 FELIX 4
5. EXPENDITURE 5
6. KEYWORDS 5
7. LOCATION 5
8. REFERENCES 5
9. LIST OF PLANS 6
1. **SUMMARY**

During tenure year three, a total of four line kilometres of 100m spaced dipole-dipole IP and 600m of 50m spaced dipole-dipole IP was completed over MCN's 2688, 2690 and 2691.

Two 100m dipole traverses were undertaken at the Running Creek Mine Prospect (MCN's 2688 and 2691) over lines 9750E and 9500E. The resistivity and chargeability pseudo-section patterns on both lines were attributed to minor sulphides at a fault-contact beneath cover thickening to the north. Fifty metre spaced dipole data collected over the line 9750E confirmed localized sulphide accumulation adjacent to the Running Creek Mine pit.

One 100m dipole traverse was completed at Saltlick Prospect (MCN 2690) over the 9750E line. The pseudo-section pattern was consistent with a layer of low resistivity/low chargeability material at surface. No response attributable to significant sulphide accumulation was defined.

No field work was undertaken within MCN 2689 Felix during tenure year three.

2. **CONCLUSIONS/RECOMMENDATIONS**

IP traverses completed in the Running Creek Mine area (MCN 2688 and 2691) and at Saltlick Prospect (MCN 2690), have failed to locate responses attributable to significant stratabound sulphide development within the Gold Creek Volcanics sequence.

A CRAE-sized basemetal target does not exist within any of the MCN's and as a consequence, it is recommended that no further work be undertaken within MCN's 2688 - 2691 (inclusive).

3. **INTRODUCTION**

MCN'S 2688, 2690 and 2691 lie within Exploration Licence No. 5468, located in the southeast portion of the Proterozoic McArthur Basin, 60km NNW of Wollogorang Station near the N.T./Qld. border (Plan NTd 5094).
Mineral Claims 2688 - 2691 (inclusive) were pegged by W.J. Fisher on 24th August, 1988 and subsequently granted on 15th December, 1988 for a period of five years. The tenements cover an area of seventy-six hectares, protecting cupriferous exposures of Proterozoic Gold Creek Volcanics (Tawallah Group).

First year of tenure activities completed over the MCN's by W.J. Fisher included:- gridding; geological mapping; rock chip sampling and shallow auger drilling.

Mr W.J. Fisher subsequently offered the tenements for Farm-Out to CRA Exploration Pty. Limited. A Farm-In and Joint Venture between the above partners was registered with the N.T. Department of Mines and Energy on 17th October, 1990, against MCN's 2688 - 2691 (inclusive) and additional tenement areas under registration No. D5357.

During tenure year two, drill testing of potential "Redbank-style" breccia targets within the four MCN's was undertaken by CRAE. Nine drillholes were completed within the MCN's (284.1m percussion and 71.9m NQ diamond core).

Weak-to-moderate copper mineralisation was encountered in drillholes completed at Running Creek Prospect (MCN 2688 and 2691) and Saltlick Prospect (MCN 2690) (CRAE Report #17167).

Follow-up dipole-dipole array IP investigations were conducted across three MCN's during tenure year three. This report details all work completed on MCN's 2688 - 2691 (inclusive) during the third year of tenure.

4. WORK UNDERTAKEN

4.1 Tenure Year Three Activities

Reconnaissance percussion/diamond drilling completed within MCN's 2688-2691 (inclusive) during tenure year two suggested a potential for stratabound mineralisation at relatively shallow depth within MCN's 2688, 2690 and 2691 (CRAE Report #17167).
During tenure year three, dipole-dipole array IP surveying was undertaken at Running Creek Prospect and Salttick Prospect, in an attempt to locate shallow responses which could be attributable to disseminated sulphides within the Gold Creek Volcanics sequence.

Dipole-dipole IP surveys were undertaken on behalf of CRAE by Zonge Engineering. A GDP-16 receiver was used with a GTT-25 25kw transmitter. Apparent resistivities were measured in the frequency domain using a base frequency of 0.125Hz.

Chargeabilities were calculated from the amount the receiver signal lagged behind the transmitted signal (i.e. the degree to which it was out of phase).

Apparent resistivity and three point DC phase (chargeability) data are presented as pseudo-sections (Plans NTd 5233 - 5236).

The results were interpreted in-house using the simple modelling program IP2D.

4.1.1 MCN 2688 Running Creek North  
MCN 2691 Running Creek South

IP data was collected along line 9750E (9000N-10850N) and line 9500E (9500N-10600N) using a 100m dipole separation. The middle section of the 9750E line was repeated using 50m dipoles (9600N-10800N). Grid locations are shown on Plan NTd 5077.

Pseudo-sections for the five lines are presented on Plans NTd 5234 - 5236. Results of the survey are discussed below.

Line 9750E : Resistivities on this line increase from south to north but show no distinctive pattern. The chargeabilities display a broad "pantsleg" high in the centre of the line with depressed values at surface to the north (Plan NTd 5235).

This pattern is attributed to three factors:-

(1) Non chargeable cover rocks thickening to the north.
(2) An underlying contact between a lower resistivity material to the south and a higher resistivity lithology to the north.

(3) A small body of chargeable material lying at the contact beneath thin cover. This occurs beneath the old pit at 10000N and is interpreted to represent a narrow, steeply dipping body of sulphide with no indication of a flat-lying extension. Depth to top is about 50m.

The chargeability pattern is attributed mainly to factors (1) and (2) with the sulphides required only to explain elevated values in the "pantsleg".

IP data collected over this line using 50m dipoles confirms the pattern and interpretation of the 100m dipole data (Plan NTd 5236).

Line 9500E : This line displays a similar pattern to line 9750E and is attributed to the same model (Plan NTd 5234).

4.1.2 MCN 2690 Saltlick

Data was collected over line 9750E (9250N-10250N) using a 100m dipole separation. The pseudo-section is presented on Plan NTd 5233 and discussed below. Grid locations are shown on Plan NTd 5087.

Resistivities display a near surface low. Chargeabilities increase with depth. The pattern is consistent with a patch of low resistivity, low chargeability material at surface. The interpreted body correlates with a zone of cover over resistive sandstone, trachyte and siltstone observed at the prospect. There is no indication of response attributable to a significant body of sulphides anywhere on the pseudo-section.

4.1.3 MCN 2689 Felix

No field work was undertaken at MCN 2689 Felix during tenure year three.
5. **EXPENDITURE**

Grouped expenditure by CRA Exploration Pty. Limited on the four tenements to 31st December, 1991, (nearest accounting period) totalled $29,529.00

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payroll</td>
<td>$6,282</td>
</tr>
<tr>
<td>Drilling</td>
<td></td>
</tr>
<tr>
<td>Contractors</td>
<td>$9,332</td>
</tr>
<tr>
<td>Laboratory</td>
<td>$ 130</td>
</tr>
<tr>
<td>Field and Transport</td>
<td>$1,163</td>
</tr>
<tr>
<td>Travel and Accommodation</td>
<td></td>
</tr>
<tr>
<td>Professional Charges</td>
<td></td>
</tr>
<tr>
<td>Office Costs</td>
<td>$ 57</td>
</tr>
<tr>
<td>District Administration</td>
<td>$9,365</td>
</tr>
<tr>
<td>Regional Overheads</td>
<td>$3,200</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$29,529</strong></td>
</tr>
</tbody>
</table>

6. **KEYWORDS**

Copper; Disseminated; Ground IP Survey; Gold Creek Volcanics; Proterozoic - LR; Wearyan Shelf.

7. **LOCATION**

Robinson River SE5304 1:250 000 mapsheet
Selby 6464 1:100 000 mapsheet

8. **REFERENCES**

<table>
<thead>
<tr>
<th>Plan No.</th>
<th>Title</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTh 5094</td>
<td>Running Creek Farm-In &amp; J/V MCN's 2688, 2689, 2690 and 2691 Location Plan</td>
<td>1:100 000</td>
</tr>
<tr>
<td>NTh 5077</td>
<td>Running Creek Farm-In &amp; J/V MCN 2688 and MCN 2691 Running Creek Mine Area Geology and Drillhole Location Plan.</td>
<td>1:100 000</td>
</tr>
<tr>
<td>NTh 5087</td>
<td>Running Creek Farm-In &amp; J/V MCN 2690 Saltlick Prospect Geology and Drillhole Location Plan.</td>
<td>1:100 000</td>
</tr>
<tr>
<td>NTh 5234</td>
<td>Running Creek N.T. Induced Polarization Survey Line 9500E.</td>
<td>1:100 000</td>
</tr>
<tr>
<td>NTh 5236</td>
<td>Running Creek N.T. Induced Polarization Survey Line 9750E</td>
<td>1:5000</td>
</tr>
<tr>
<td>NTh 5235</td>
<td>Running Creek Farm-In &amp; J/V Induced Polarization Survey Line 9750E</td>
<td>1:10 000</td>
</tr>
<tr>
<td>NTh 5233</td>
<td>Running Creek Farm-In &amp; J/V Saltlick Prospect Induced Polarization Survey Line 9750E</td>
<td>1:10 000</td>
</tr>
</tbody>
</table>