SOUTHERN STAR
TENNANT CREEK

EXPLORATION DRILLING
1992

Prepared for
Roebuck Resources NL
by
S.B. Warne

November, 1992

Technical Report No. 284
CONTENTS

SUMMARY 1
CONCLUSIONS 2
RECOMMENDATIONS 2
1. INTRODUCTION 3
2. PROSPECT GEOLOGY 3
3. 10E DRILL SECTION 4
4. 55W DRILL SECTION 5
5. REFERENCES 5

FIGURES

<table>
<thead>
<tr>
<th>Scale</th>
<th>Location Plan</th>
<th>1:100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
<td>Southern Star, Geological map</td>
<td>1:500</td>
</tr>
<tr>
<td>Scale</td>
<td>Drill Section 10E</td>
<td>1:500</td>
</tr>
<tr>
<td>Scale</td>
<td>Drill Section 55W</td>
<td>1:500</td>
</tr>
<tr>
<td>Scale</td>
<td>Southern Star Prospect, Geological Map (Thiele, 1987)</td>
<td>1:1,000</td>
</tr>
<tr>
<td>Scale</td>
<td>Longitudinal Projection 80W-40E</td>
<td>1:500</td>
</tr>
</tbody>
</table>

APPENDICES

Appendix I Summary Sections previous drilling Australian Development 1963 and Roebuck Resources NL (1987)
Appendix II Drill Hole Logs SS-P1, SS-P2, SSRC20 (1992)
Appendix III Drill sample assays 1992 drilling
Appendix IV Reassay Roebuck 1987 drill cuttings and sundry rock samples.
SUMMARY

Detailed mapping about the old Southern Star workings and reassessment of earlier shallow drilling suggested potential for secondarily enriched gold mineralisation within a sheared zone hosting haematite and chlorite-carbonate-sericite alteration.

Deeper drilling in 1992 showed that rocks in the sheared zone are weathered and leached to 80 metres below surface and contain weakly anomalous gold and bismuth and anomalous copper.

Potential for economic mineralisation appears confined to a particular fracture intersection zone of limited strike in the vicinity of the former Southern Star No. 2 shaft area.
CONCLUSIONS

1. Detailed mapping shows a complex of intersecting faults occur in the area between 120W and 120E on the Southern Star grid.

2. The southernmost fault hosts auriferous quartz-haematite and quartz-chlorite-haematite-carbonate-sericite alteration.

3. Highest gold values have been intersected at, or in the vicinity of, the intersection of the southern fault with an arcuate East-northeast to east trending fracture about 305,50W.

4. High gold values occur sporadically near surface associated with elevated copper and bismuth in a haematite and haematitic siltstones. The gold occurs as secondary enrichments within a deeply weathered zone. At deeper levels, on the 55W section, rocks in the main shear are leached to 80 metres below surface, slightly anomalous in gold and bismuth, increasingly anomalous in copper.

5. Potential for economic mineralisation in the mapped area, appears to be confined to a 40 metres strike in the immediate vicinity of the southern fault - arcuate fracture intersection between 20W and 60W.

RECOMMENDATIONS

1. Prior to further drilling at Southern Star 1:500 scale mapping should be refined to elucidate structure and extended west and east in the same detail to:

   a) provide a clearer overall perspective of the prospect area;

   b) indicate whether other structures prospective for mineralisation exist.

2. Deeper drilling beneath the fracture intersection zone about 305,50W to test for secondary enrichment gold mineralization at the base of oxidation.
1. INTRODUCTION

The Southern Star prospect was wagon drilled by Australian Development Ltd. (ADL), 1963. Highest gold assays occurred in haematite at depths of 5-50m below surface in the vicinity of No. 2 shaft of the main Southern Star workings located near the west end of the Southern Star ridge.

In 1987 Roebuck Resources N.L. completed a programme of 1:1000 scale geological mapping and shallow percussion drilling on old mine areas near the eastern and western extremities of the Southern Star ridge (Thiele, 1988). This drilling showed erratic anomalous gold-copper and bismuth occurred in a haematite bearing sections at the western end of the Southern Star ridge between 100W and 100E. The highest gold assay (1m of 46.9/58.6 g/t) in hole SSRC4 occurred in the vicinity of No. 2 shaft and confirmed high assays from the same location by ADL in 1963.

During 1992 the Southern Star ridge was mapped at a scale of 1:500 between 120W and 120E to cover the main workings and zone of gold bearing ADL and Roebuck drill intersections.

Mapping showed that the old workings occurred along silica-haematite infilled fractures displaying chlorite-carbonate-sericite alteration within an overall complex structural setting.

An attempt was made to correlate ADL drill results with Roebuck 1987 results (Appendix I). Mapping by ADL was however not sufficiently accurate or detailed to relocate the ADL grid or hole positions precisely. Relocation was made more uncertain by post 1963 bulldozing of outcrop and infilling of workings, including obliteration of No. 2 shaft. Nevertheless, ADL hole positions were, it is believed, relocated within a few metres of their true positions.

Irregular near surface gold intersections with anomalous bismuth and copper geochemistry in earlier drilling, together with mapped rack alteration, suggested the possible presence of significantly mineralised shear zone along the southern edge of the Southern Star ridge between 120W and 120E.

The conventional percussion drill holes (total 152m) and one reverse circulation drill hole (108m) were completed on section lines 10E and 55W on 14 July and 27 August 1992. Drilling was aimed at testing for gold enrichment within the mineralised shear. Seventy five drill samples were collected and assayed for gold, copper, bismuth and lead.

2. PROSPECT GEOLOGY

The Southern Star ridge is a 500 metre, east-west trending outcrop of red siltstones and fine grained, variously sandy, greywacke sediments. Ironstone cappings are extensively developed over haematite siltstones on the north flank of the ridge. The ridge appears to reflect a shallowly west plunging anticlinal structure exhibiting cross
faulting westward of 150E. Outcrop mapping of the overall prospect area is presented in Thiele, 1988.

Detailed mapping of the western portion of the ridge between 120W and 130E is shown in Figure 2 at 1:500 scale.

Past mining focussed on a sheared zone flanking the southern edge of the ridge outcrop between 70W to 50E. From 30W to 50E a zone, up to 11 metres wide, consists of two bands of massive quartz-haematite rock (quartz greater than 50 percent) separated by strongly chloritic and patchily sericitised, sheared sediments. Spoil from old shafts includes haematite-quartz-carbonate suggesting silica may have partially replaced pre-existing carbonate alteration.

Around 20S, 40W the quartz-haematite shear zone joins an arcuate fracture which has an initial east-northeast trend, then east trend to rejoin the main shear around 00, 100E. The arcuate fracture is at first dominantly silica infilled, then quartz-haematite merging into a dense black, rubbly outcropping haematite rock replacing sheared, possibly talcose, sediment.

No. 2 shaft was located immediately north of the main shear-arcuate fracture intersection near 25S, 25W. All higher value ADL, 1963 and Roebuck, 1987 drill intercepts occurred immediately west of this intersection.

Ironstone outcrop west of the main shear/arcuate fracture intersection, thins rapidly.

North of the shear/arcuate fracture intersection, the sediments are strongly surface ferruginised and merge into a zone of haematite caprock developed on haematitic siltstone flanking the northern edge of the ridge. The haematite capped siltstone outcrops have been affected by a series of west-northwest trending fractures which parallel a marked zone of quartz veining mapped along the southern flank of the ridge between 40W and 60W. The veining appears to reflect a stronger shear significantly displacing the main southern shear.

The main shear and arcuate fracture between 60W and 100E appear to have provided an open fracture entry for mineralising and rock altering fluids. At and near surface sheared and altered rock associated with fractures has been selectively silica and haematite replaced to produce wide, bold, silica rich outcrops.

3. 10E DRILL SECTION (Figure 3)

SSP1 was sited to test at depth the weakly auriferous haematite sections of SSRC6 and SSRC7.

The hole was drilled to 85 metres (limit of available rods and air capacity) without intersecting the target and was not surveyed. Even assuming a serious hole deviation the target should have been reached. Figure 2 assumes a fault displacement to explain the non-intersection.
Only trace gold and bismuth occurred in haematitic siltstones in the lower section of the hole.

4. **55W DRILL SECTION (Figure 4)**

SSP2 and SSRC20 tested the main shear zone west of the arcuate fracture intersection and beneath the zone of higher ADL, 1963, higher gold values. Both holes interested a 15 metre wide shear zone, with hanging wall quartz in contact with haematite then haematitic siltstone followed by a second wider haematite zone separated from the footwall by altered sediments.

The shear zone yielded anomalous copper (100-920 p.p.m.), weakly anomalous bismuth values (10-31 p.p.m.) and trace gold content.

All rocks were extremely weathered and, in SSRC20, reduced to soft, coloured clay rock 80 metres below surface.

Copper geochemistry increased with depth from 100-215 p.p.m. in SSP2 to 140-920 p.p.m. in SSRC20.

Highest gold geochemistry occurred in weathered chloritised footwall siltstone/sandy greywacke in SSP2 (20-225 p.p.b.). In SSRC20 the same section assayed trace gold but yielded the only free gold from any panned sample.

5. **REFERENCES**


Shear zone

1.13 g/t Au.


Completely weathered rock, fine red siltstone, trace of f.g. haematite, f.g. quartz with trace Au.

E.O.H. 70m.

E.O.H. 110m.

SSRC:15

SSRC:20

SS P2

SS


Completely weathered rock, fine red siltstone, trace of f.g. haematite, f.g. quartz with trace Au.

E.O.H. 70m.

E.O.H. 110m.

KEY

- Quartz-haematite & massive haematite occurring with haematitic siltstones, Quartz-haematite > 50%
- Well cleaved footwall siltstone & greywacke
- Screen
- Pronounced vein quartz
- Haematitic siltstone & siltstone occurring with quartz-haematite veins
- Dominantly siltstone with f.g. greywacke interbeds

SCALE 1:500

ROEBUCK RESOURCES N.L.

TENNANT CREEK J.V.

SOUTHERN STAR PROSPECT

DRILL SECTION 55W

( looking West)
APPENDIX I

Summary Sections Previous Drilling
Australian Development 1963 and
Roebuck Resources 1987
LEGEND

- Wagon Drill Holes & Declination
- Orp.kem intersections
- Au intersections
- Orp.kem overcuts

Open Cuts
AUSTRALIAN DEVELOPMENT LIMITED

S.W.D.H. 310

LOCATION: Southern Star

CO-ORDS: 4 + 40 W, 0 + 40 S

R.L. 180°

BEARING:

SURVEY DATA: 0 -60°; 100' -55° 30'; 190' -40° 45'

DEPTH: 260 feet

DATE: 14. 8. 63

LITHOLOGICAL LOG

0 - 220' Pale pink to brown mudstone siltstone.

156 - 200 10% disseminated hematite.

220 - 260' Light red sandstone siltstone.
LOCATION: Southern Star
CO-ORDS: 1 W, 2 + 50 S
R.L.
BEARING: 360°
SURVEY DATA: 0 - 45°, 130° - 42°
DEPTH: 150'
DATE: 17.8.63

LITHOLOGICAL LOG

0 - 62'
Pale pink sediments.

62 - 74'
Red schist.

74 - 78'
Red sericitised hematite schist, 30% hematite.

78 - 86'
Dark brown sericitised hematite schist, 50% hematite.

86 - 98'
Red sericitised hematite schist, 20% hematite.

98 - 150'
Pale pink sediments.

[Diagram: Scale 1" = 40']
LOCATION: Southern Star
CO-ORDS: 1 W, 1 + 50 S
R.L.: 
BEARING: 25°
SURVEY DATA: -45°;
DEPTH: 100 feet
DATE: 20.8.63

LITHOLOGICAL LOG

0 - 62'
Pale pink sediments.

62 - 74'
Red sericitised hematite schist.
  62 - 70'  5% hematite.
  70 - 74'  20% hematite.

74 - 92'
Sericitized and specular hematite, 90% hematite.

92 - 100'
Red sericitised hematite schist, 20% hematite.

Diagram:
- Line 25° to NW
- Scale 1″=40 ft
AUSTRALIAN DEVELOPMENT LIMITED

S.W.D.H. = 314

LOCATION: Southern Star

CO-ORDS: 1 W, 1+50 S

R.L.: 335°

BEARING: -45°; 75° -37°

SURVEY DATA:

DEPTH: 100 feet

DATE: 20.8.63

LITHOLOGICAL LOG

0 - 82' Pale pink sediments.

82 - 100' Hamatite schist.

82 - 86' 10% hem.

86 - 90' 20% hem.

90 - 100' 10% hem.

Scale 1" = 40'
LOCATION: Southern Star
COORDS: 5 + 50 N, 2 + 75 S
R.L.
BEARING: 360°
SURVEY DATA: -45°; 75' -36° 30'
DEPTH: 120 feet
DATE: 21.8.63

LITHOLOGICAL LOG

0 - 62
Pale pink sediments.

62 - 64'
Red slightly sericitised mudstone, 2% hematite.

64 - 70'
Hematite schist, 30% hematite.

70 - 103'
Pink mudstone.

108 - 120'
Red sediments with possibly narrow quartz seams, 5% quartz, 5% disseminated hematite.
AUSTRALIAN DEVELOPMENT LIMITED

LOCATION: Southern Star
CO-ORDS: 11° W, 3 + 30 S
R.L.
BEARING: 360°
SURVEY DATA: 0 - 45°; 75° - 49°; 150° - 45° 30'
DEPTH: 200 feet (60.9 m)
DATE: 22.8.63

LITHOLOGICAL LOG

98 - 134' 99.4 - 19.9
Red sericitised mudstone, thin quartz and hematite strings with disseminated hematite, 5% hematite.

134 - 144' 108.8 - 43.9
Red sericitised mudstone, 20% quartz hematite.

144 - 200' 131.9 - 60.1
Red sericitised mudstone, 15% disseminated hematite.

No assays.
No log 0 - 92'

[Diagram showing geological features with legend: 'Red sericitised mudstone', 25% quartz - hematite]
LOCATION: Southern Star

CO-ORDS: 13 W, 2 + 55 S

R.L.  

BEARING: 20°

SURVEY DATA: 0 - 45°

DEPTH: 30 feet (14.2 m)

DATE: 23.8.63

LITHOLOGICAL LOG

0 - 30' 0 - 1.1
Red sericitised sediments, 2% disseminated hematite.

30 - 33' 1.1 - 4
Quartz hematite.

33 - 39' 4 - 10.6
Altered sediments and 30% quartz hematite.

39 - 50' 10.6 - 15.1
Sericitised quartz hematite.

44 - 46' 15.1, colour Au; }
46 - 50' 1 " " }
48 - 50' 3 " " }

50 - 60' 33' - 34'. Altered sediments, quartz, and disseminated hematite.
LOCATION: Southern Star
CO-ORDS: 13 W, 2 + 55 S
R.L.
BEARING: 20°
SURVEY DATA: 0 - 60°
DEPTH: 100' (30.5m)
DATE:

LITHOLOGICAL LOG

0 - 40' 0 - 12.2 Altered sediments with quartz and disseminated hematite.
40 - 50' 12.2 - 16.2 Quartz hematite. 44 - 46 several colours Au.
50 - 54' 16.2 - 18.5 Altered sediments and quartz hematite. 50 - 52 several colours Au.
52 - 54 small cluster Au.
64 - 62' 18.9 - 20.9 Altered sediments quartz and disseminated hematite.
64 - 66 66 - 68 1 - 2 dwt. Au
68 - 70 1 dwt

78 - 90' 23.5 - 27.0 Hematite schist. 78 - 80' several colours Au.
90 - 100' 27.0 - 30.5 Mudstone, 20% disseminated hematite.

ASSAY DATA

<table>
<thead>
<tr>
<th>Sample No</th>
<th>Interval (ft)</th>
<th>Au (dwt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>44500</td>
<td>40 - 44</td>
<td>12.3 - 13.4</td>
</tr>
<tr>
<td>01</td>
<td>45</td>
<td>13.3 - 14.6</td>
</tr>
<tr>
<td>02</td>
<td>52</td>
<td>14.6 - 15.3</td>
</tr>
<tr>
<td>03</td>
<td>54</td>
<td>15.3 - 16.2</td>
</tr>
<tr>
<td>04</td>
<td>66</td>
<td>16.4 - 18.1</td>
</tr>
<tr>
<td>05</td>
<td>68</td>
<td>18.1 - 20.1</td>
</tr>
<tr>
<td>06</td>
<td>68</td>
<td>20.2 - 21.3</td>
</tr>
<tr>
<td>07</td>
<td>70</td>
<td>21.4 - 21.6</td>
</tr>
<tr>
<td>08</td>
<td>76</td>
<td>21.6 - 21.9</td>
</tr>
<tr>
<td>09</td>
<td>80</td>
<td>21.9 - 21.6</td>
</tr>
</tbody>
</table>

Cu. 12.1 - 24.0m:
12.2m 2.00g/m.
AUSTRALIAN DEVELOPMENT LIMITED

S.W.D.H. 319

LOCATION: Southern Star
CO-ORDS: 13 W, 2 + 55 S
R.L. 45°
BEARING: 0 - 50°
SURVEY DATA:
DEPTH: 80' (m.w.m.)
DATE: Completed 26.8.63

LITHOLOGICAL LOG

0 - 42' 0 - 13.8 Altersed sediments, quartz & disseminated hematite.
42 - 50' 13.6 - 15.2 Quartz hematite.
50 - 64' 15.2 - 19.5 Altersed sediments and quartz hematite.
64 - 80' 19.5 - 34.4 Altersed sediments, quartz and disseminated hematite.
AUSTRALIAN DEVELOPMENT LIMITED

S.W.D.H. 320

LOCATION: Southern Star
COORDS: 13 W, 2 + 55 S
R.L.: 
BEARING: 45°
SURVEY DATA: -50°
DEPTH: 80' (24.4 m)
DATE: Completed 27.8.63

LITHOLOGICAL LOG

0 - 26' 0 - 7.9 m Altered sediments.
26 - 36' 7.9 - 11 m Quartz hematite.
36 - 30' 11 - 24.4 m Altered sediments, quartz and disseminated hematite.
AUSTRALIAN DEVELOPMENT LIMITED

LOCATION: Southern Star

COORDS: 13 + 50 W, 2 + 80 S

R.L. $360^\circ$

BEARING: 0 - 60$^\circ$; 60$^\circ$ - 62$^\circ$; 100$^\circ$ - 12$^\circ$

SURVEY DATA: 132' (40.1m)

DEPTH: 26.8.63

LITHOLOGICAL LOG

0 - 64' Pale sediments.

64 - 96' Red sericitised sediments, quartz and disseminated hematite.

96 - 132' Quartz hematite.

(Hole abandoned through cuttings in hole)

ASSAY DATA

<table>
<thead>
<tr>
<th>Sample No:</th>
<th>Interval: (ft)</th>
<th>Au (dwt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>44511</td>
<td>98 - 108</td>
<td>Tr</td>
</tr>
<tr>
<td>12</td>
<td>118</td>
<td>&quot;</td>
</tr>
<tr>
<td>13</td>
<td>118 - 129</td>
<td>&quot;</td>
</tr>
</tbody>
</table>

Trace gold over 9.1m downhole.

Full section not penetrated.
LOCATION: Southern Star

COORDS: 13 + 25' W, 2 + 90 S

R.L.

BEARING: 360°

SURVEY DATA: 0 - 60°; 50' - 63°; 100' - 64°.

DEPTH: 130' (29.6m)

DATE: 30.9.63

LITHOLOGICAL LOG

0 - 26' 0 - 7.9
Pale sediments.

26 - 30' 7.9 - 9.1
Pink (limonitic yellow) sericitised sediments. Quartz disseminated hematite.

30 - 70' 9.1 - 23.2
Red sericitised sediments. Quartz disseminated hematite.

70 - 90 21.4 - 24.4
Sericitised quartz hematite schist.

90 - 96' 24.4 - 29.3
Quartz hematite.

92 - 92' few colours gold.

96 - 112' 29.3 - 36
Red sericitised quartz hematite schist. 50% hematite.

112 - 130' 36 - 39.6
Quartz hematite.

(Hole abandoned) Hole steepened, full section not penetrated.

ASSAY DATA

<table>
<thead>
<tr>
<th>Sample No:</th>
<th>Interval: (ft)</th>
<th>Au (dwt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>44514</td>
<td>82 - 86 26 - 26.2 m</td>
<td>Tr</td>
</tr>
<tr>
<td>15</td>
<td>86 - 92 26.2 - 28 m</td>
<td>Tr</td>
</tr>
</tbody>
</table>
Scale 1" = 20'

13+25 W

Probably deceased in 7th month.
LOCATION: Southern Star
CO-ORDINATES: 13 W, 2 + 90 S
R.L. 360°
BEARING: 21.9° W
SURVEY DATA: 0° - 60°; 75° - 62°; 150° - 61°
DEPTH: 170' (52.8 m)
DATE: 3.9.63

LITHOLOGICAL LOG

10 - 70' Red sericitised sediments, quartz and disseminated hematite.
70 - 86' 21.3 - 36.2 90% quartz with sericite and disseminated hematite.
86 - 96' 26.2 - 34.3 80% brown limonitic quartz, sericitised sediments and disseminated hematite. Few colours Au.
96 - 114' 31.3 - 30.6 Limonitic quartz-hematite.
114 - 130' 30.6 - 49.6 Red sericitised quartz hematite schist.
130 - 150' 49.6 - 43.7 20% increasing to 60% hematite.
150 - 170' 43.7 - 61.8 Quartz hematite.

Sericitised quartz-hematite schist.

ASSAY DATA

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Interval (ft)</th>
<th>Au (dwt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>44516</td>
<td>90 - 94'</td>
<td>27.41 - 28.7</td>
</tr>
<tr>
<td>17</td>
<td>90</td>
<td>29.9</td>
</tr>
<tr>
<td>16</td>
<td>100</td>
<td>10.4</td>
</tr>
<tr>
<td>19</td>
<td>102</td>
<td>31.1</td>
</tr>
<tr>
<td>20</td>
<td>104</td>
<td>31.7</td>
</tr>
<tr>
<td>21</td>
<td>106</td>
<td>32.3</td>
</tr>
<tr>
<td>22</td>
<td>108</td>
<td>32.9</td>
</tr>
<tr>
<td>23</td>
<td>112</td>
<td>34.1</td>
</tr>
<tr>
<td>24</td>
<td>116</td>
<td>35.8</td>
</tr>
<tr>
<td>44525</td>
<td>116 - 120</td>
<td>36.6</td>
</tr>
<tr>
<td></td>
<td>Au. 6.7 g/t 8.06 g/l.</td>
<td></td>
</tr>
</tbody>
</table>
AUSTRALIAN DEVELOPMENT LIMITED

S.W.D.H. 324

LOCATION:
Southern Star

CO-ORDINATES:
12+75 W, 2+905

R.L.  

BEARING:
360°

SURVEY DATA:
0° - 60°; 100° - 62°; 175° - 67°

DEPTH:
204' (62.2m)

DATE:
11.9.53

LITHOLOGICAL LOG

0 - 104'
Slightly sericitised sediments, quartz and
disseminated hematite.

104 - 124'
Sericitised quartz hematite schist, 50% hematite.

124 - 150'
Quartz hematite,
  140 - 142' few colours
  142 - 146' 1 dwt.
  146 - 150' few colours.

150 - 204'
Sericitised quartz hematite schist with disseminated
hematite in sediments. 50% hematite.

ASSAY DATA

Sample No:
44526
27
28

Interval:
140' - 142' 142.1 - 143.1 m
142 - 146' 142.1 - 145.0 m
156 - 150' 155.5 - 157.0 m

Au (Dwt):
1.0 0.6m ± 1.54 g/t
1.0 1.2m ± 1.52 g/t
0.4 1.2m ± 0.69 g/t

av. 3.0m ± 1.12 g/t.
LOCATION: Southern Star

CO-ORDINATES: 13 W, 3+15 S

RL

BEARING: 360°

SURVEY DATA: 0 -60°; 80° -63°; 140° -69°12'; 200° -63°

DEPTH: 240' (73.16m)

DATE: 6.9.63

LITHOLOGICAL LOG

0 - 140' 0 - 42m Pale mudstone.

140 - 190' 42 - 55m Red siliceous sediments.

130 - 240' 55 - 73.16m Pale mudstone.
LOCATION: Southern Star

CO-ORDINATES: 134°25' W, 34°8' S

R.L. 350°

BEARING:

SURVEY DATA: 0 - 60°; 100' - 65°; 200' - 75°

DEPTH: 240' (73.2 m)

DATE: 9.9.63

LITHOLOGICAL LOG

0 - 240' (73.2 m)

Mudstone

10 - 138' Pale pink, 3.5' - 42.1 m
138 - 150' red, 42.1' - 42.7 m
150 - 202' pale pink, 42.7' - 61.6 m
202 - 210' red, 61.6' - 64.0 m
210 - 240' white, quartz or gyp. hearth? 64.0' - 73.2 m

Note: assay. Hole steepened and target zone not intersected.
LOCATION: Southern Star

CO-ORDINATES: 13 W, 1+50 S

R.L. 180°

SURVEY DATA: 0 -70°;

DEPTH: 270' (82.3 m)

DATE: 11.9.63

LITHOLOGICAL LOG

10 - 80' 3.46 - 14.38 m
Red sediments and disseminated 2 - 10% Fe.

80 - 146' 24.38 - 40.50
Red sediments, narrow quartz and hematite seams with disseminated hematite. 20% Fe.

146 - 154' 46.50 - 50.94
Sericitised quartz hematite schist, 50% hematite.

154 - 174' 46.94 - 51.01
Quartz hematite, 164 - 174 sericitised.

174 - 201' 52.01 - 57.18
Sediments, narrow quartz and hematite seams with disseminated hematite. 20% Fe.

201 - 270' 52.18 - 52.3
Pale pink mudstone.

ASSAY DATA

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Interval (ft)</th>
<th>Au (g/t)</th>
<th>m.</th>
</tr>
</thead>
<tbody>
<tr>
<td>44529</td>
<td>154 - 158</td>
<td>6.90 - 44.16</td>
<td>0.6</td>
</tr>
<tr>
<td>30</td>
<td>158 - 162</td>
<td>4.38</td>
<td>1.0</td>
</tr>
<tr>
<td>31</td>
<td>164 - 170</td>
<td>50.60</td>
<td>1.0</td>
</tr>
<tr>
<td>32</td>
<td>170 - 174</td>
<td>51.92</td>
<td>0.8</td>
</tr>
<tr>
<td>44533</td>
<td>174 - 201</td>
<td>52.04</td>
<td>1.0</td>
</tr>
</tbody>
</table>
AUSTRALIAN DEVELOPMENT LIMITED
S.W.D.H. 328°

LOCATION: Southern Star
CO-ORDINATES: 12+50W, 3+30S
R.L. 360°
BEARING: 360°
SURVEY DATA: 0 -55°; 100° -55°; 200° -45°.
DEPTH: 230' (70.1m)
DATE: 

LITHOLOGICAL LOG

142 - 150' 44.3 - 45.7 Slightly sericitised sediments with 30% quartz and 5% disseminated hematite.
150 - 180' 46.7 - 54.9 Quartz hematite.
No colours of gold.
180 - 230' 50.9 - 70.1 Sericitised quartz hematite schist.
No analyz.
AUSTRALIAN DEVELOPMENT LTD.
C.W.D.H. 228
12 + 50 W, Z + 209 (ADL GRID)

Scale 1:500.

slightly sericitized sediment, 30% quartz, 70% disseminated hematite

Al2O3-hematite: not assayed.

Sericitized quartz-hematite schist.

70.1
North-south trending line of four, approximately 1.4m deep pits. Workings located in brecciated siltstone, with both hematite and quartz veins in pit walls. Both hematite and quartz veins sub-parallel to foliation.

Dark brown and purple ferruginous siltstone. Abundant hematite float, 2 brecciated siltstone, 1 quartz float.

Purple, fine grained, finely foliated, moderately weathered, slightly ferruginous siltstone. 095/65N

- Surficial material
- Hematite
- Magnetite
- Siltstone
- Clay
- Quartz
- Porphyry
- Mullock

EOH 40m
All assays < 0.20 g/t Au

SCALE 1:250

ROEBUCK RESOURCES

TENNANT CREEK PROJECT

SOUTHERN STAR PROSPECT
REVERSE CIRCULATION DRILL SECTIONS

SSRC - 3

DRAWN BY:
CARTOGRAPHICA P/L

GEOLOGIST.
B.W. THIELE

DATE
SEPT. 1987

FIGURE 6
Abandoned hole: cave-in due to broken ground.

Dark brown, ferruginous siltstone. Common hematite, common milky quartz, rare brown brecciated siltstone.

Dow brecciated lus quartz and fms. Veins appear el to north-south and show a steep Top 1st metre of appear lateritized.

0.26/0.21 g/t Au

2.85/2.74 g/t Au

EOH 56 m

ROEBUCK RESOURCES
TENNANT CREEK PROJECT
SOUTHERN STAR PROSPECT
REVERSE CIRCULATION DRILL SECTION
SSRC - 5

SCALE 1:250

SURFICIAL MATERIAL
HEMATITE
MAGNETITE
SILTSTONE
CLAY
QUARTZ
PORPHYRY
MULLOCK

DRAWN BY:
CARTOGRAPHICA P/L
B.W. THIELE

DATE:
09/07/1987

FIGURE 8
Pit walls show brown ferruginous siltstone with both hematite and quartz veins. Veins appear sub-parallel to north-south foliation.
APPENDIX II

Drill Hole Logs SS-P1, SS-P2, SSRC20 (1992)
Roebuck Resources N.L.

LOG OF PERCUSSION DRILL HOLE.

HOLE NO. 55-P1

RL COLLAR

INCLINATION 55°

LOCATION:

CO-ORDS 10E 38N

DIRECTION 180° mag.

Geochemistry ppm

<table>
<thead>
<tr>
<th>Depth</th>
<th>Cu</th>
<th>Bi</th>
<th>Zn</th>
<th>Pb</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-12</td>
<td>1</td>
<td>2</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>12-14</td>
<td>1</td>
<td>2</td>
<td>31</td>
<td>3</td>
</tr>
<tr>
<td>14-16</td>
<td>2</td>
<td>5</td>
<td>66</td>
<td>3</td>
</tr>
<tr>
<td>16-18</td>
<td>2</td>
<td>8</td>
<td>120</td>
<td>1</td>
</tr>
<tr>
<td>18-20</td>
<td>2</td>
<td>10</td>
<td>110</td>
<td>3</td>
</tr>
<tr>
<td>20-22</td>
<td>3</td>
<td>9</td>
<td>92</td>
<td>4</td>
</tr>
<tr>
<td>22-24</td>
<td>2</td>
<td>11</td>
<td>96</td>
<td>4</td>
</tr>
<tr>
<td>24-26</td>
<td>2</td>
<td>9</td>
<td>94</td>
<td>4</td>
</tr>
<tr>
<td>26-28</td>
<td>2</td>
<td>11</td>
<td>66</td>
<td>4</td>
</tr>
<tr>
<td>28-30</td>
<td>1</td>
<td>3</td>
<td>47</td>
<td>3</td>
</tr>
<tr>
<td>30-32</td>
<td>1</td>
<td>2</td>
<td>41</td>
<td>3</td>
</tr>
<tr>
<td>32-34</td>
<td>1</td>
<td>2</td>
<td>62</td>
<td>3</td>
</tr>
<tr>
<td>34-36</td>
<td>1</td>
<td>2</td>
<td>66</td>
<td>3</td>
</tr>
<tr>
<td>36-38</td>
<td>2</td>
<td>2</td>
<td>52</td>
<td>2</td>
</tr>
<tr>
<td>38-40</td>
<td>2</td>
<td>2</td>
<td>45</td>
<td>2</td>
</tr>
<tr>
<td>40-42</td>
<td>3</td>
<td>2</td>
<td>66</td>
<td>3</td>
</tr>
<tr>
<td>34-44</td>
<td>4</td>
<td>4</td>
<td>72</td>
<td>4</td>
</tr>
<tr>
<td>44-46</td>
<td>2</td>
<td>2</td>
<td>70</td>
<td>3</td>
</tr>
<tr>
<td>46-48</td>
<td>2</td>
<td>2</td>
<td>62</td>
<td>2</td>
</tr>
<tr>
<td>48-50</td>
<td>4</td>
<td>3</td>
<td>92</td>
<td>3</td>
</tr>
<tr>
<td>50-52</td>
<td>3</td>
<td>3</td>
<td>90</td>
<td>2</td>
</tr>
<tr>
<td>52-54</td>
<td>4</td>
<td>5</td>
<td>68</td>
<td>1</td>
</tr>
<tr>
<td>54-56</td>
<td>6</td>
<td>6</td>
<td>68</td>
<td>3</td>
</tr>
<tr>
<td>56-58</td>
<td>4</td>
<td>6</td>
<td>88</td>
<td>4</td>
</tr>
<tr>
<td>58-60</td>
<td>3</td>
<td>12</td>
<td>92</td>
<td>2</td>
</tr>
<tr>
<td>60-62</td>
<td>3</td>
<td>12</td>
<td>106</td>
<td>4</td>
</tr>
<tr>
<td>62-64</td>
<td>10</td>
<td>10</td>
<td>96</td>
<td>3</td>
</tr>
<tr>
<td>64-66</td>
<td>8</td>
<td>11</td>
<td>110</td>
<td>4</td>
</tr>
<tr>
<td>66-68</td>
<td>10</td>
<td>9</td>
<td>110</td>
<td>3</td>
</tr>
<tr>
<td>68-70</td>
<td>8</td>
<td>10</td>
<td>108</td>
<td>3</td>
</tr>
<tr>
<td>70-72</td>
<td>5</td>
<td>5</td>
<td>155</td>
<td>1</td>
</tr>
<tr>
<td>72-74</td>
<td>3</td>
<td>6</td>
<td>96</td>
<td>3</td>
</tr>
<tr>
<td>74-76</td>
<td>2</td>
<td>6</td>
<td>68</td>
<td>3</td>
</tr>
<tr>
<td>76-78</td>
<td>3</td>
<td>3</td>
<td>119</td>
<td>2</td>
</tr>
<tr>
<td>78-80</td>
<td>3</td>
<td>3</td>
<td>113</td>
<td>3</td>
</tr>
<tr>
<td>80-82</td>
<td>7</td>
<td>1</td>
<td>37</td>
<td>3</td>
</tr>
<tr>
<td>82-86</td>
<td>6</td>
<td>1</td>
<td>31</td>
<td>3</td>
</tr>
</tbody>
</table>

Description:

Kolinitie & pink siltstone

Chemical analysis: 3% Hematite bearing grey/pink siltstone

Red, contaminated sample downhole as rig not blowing out

Red siltstone

trace of hematite

Red, 2% red and brown hematite siltstone

Red, 2% red and grey siltstone

No more rods.

Scale: 1:500

HOLE TARGET:

Sample Nos:

DRILL TYPE: Hole Drilled

DRILLER: Evans Expl.

DRILLED: 4/1/71-9/2

LOGGED: 5/2/72

37 samples
**ASSAYS**

<table>
<thead>
<tr>
<th>SAMPLE No</th>
<th>Au ppm</th>
<th>Ag ppm</th>
<th>Cu ppm</th>
<th>Pb ppm</th>
<th><strong>LOG</strong></th>
<th><strong>DESCRIPTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td>6 cm thin quartz. pink siltstone. white fink</td>
</tr>
</tbody>
</table>

**SCALE**

<table>
<thead>
<tr>
<th>SAMPLE No</th>
<th>Au ppm</th>
<th>Ag ppm</th>
<th>Cu ppm</th>
<th>Pb ppm</th>
<th><strong>LOG</strong></th>
<th><strong>DESCRIPTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>24-26</td>
<td>3.3</td>
<td>6.4</td>
<td>3.2</td>
<td>3.1</td>
<td>76</td>
<td>red chl. siltstone. well foliated. red</td>
</tr>
</tbody>
</table>

**HOLE TARGET:**

**DRILL TYPE:** hole Pionus.

**DRILLER:** Dave W. Kopf.

**DRILLED:** 14/7/1997.

**LOGGED:** 4/6/98.
### Log of Rotary Drill Hole

**Sample No:**

<table>
<thead>
<tr>
<th>Au (ppm)</th>
<th>Bi (ppm)</th>
<th>Cu (ppm)</th>
<th>Pb (ppm)</th>
<th>Depth (m)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td>Redesilicated.</td>
</tr>
<tr>
<td>26-38</td>
<td>2</td>
<td>2</td>
<td>94</td>
<td>30</td>
<td>Redesilicated.</td>
</tr>
<tr>
<td>26-30</td>
<td>1</td>
<td>6</td>
<td>82</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>30-32</td>
<td>2</td>
<td>4</td>
<td>94</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>32-34</td>
<td>10</td>
<td>4</td>
<td>92</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>34-36</td>
<td>11</td>
<td>5</td>
<td>96</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>36-38</td>
<td>3</td>
<td>15</td>
<td>104</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>38-40</td>
<td>3</td>
<td>21</td>
<td>106</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>40-42</td>
<td>5</td>
<td>17</td>
<td>108</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>42-44</td>
<td>16</td>
<td>15</td>
<td>102</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>44-46</td>
<td>16</td>
<td>15</td>
<td>125</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>46-48</td>
<td>11</td>
<td>19</td>
<td>165</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>48-50</td>
<td>12</td>
<td>15</td>
<td>200</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Redesilicated.
- Pink, red silstone.
- Pink, red silstone with tree roots (heam).
- Heam.
- Heam, biotite.
- Heam, biotite.
- Heam, biotite.
- Heam, biotite.
- Heam, biotite.
- Heam, biotite.
- Heam, biotite.
- Heam, biotite.
- Heam, biotite.
- Heam, biotite.

**Drill Type:** Half-Pinion
**Driller:** Evema Exh
**Drilled:** 14/7/1992
**Logged:** 5/8/92

**Location:** Prospect Southern Star
**Coordinates:** 53W 25N
**Hole No.:** 55-P2
**RL Collar:**
**Inclination:** 66°
**Direction:** 15°W.
<table>
<thead>
<tr>
<th>SAMPLE No</th>
<th>Au (g/t)</th>
<th>Ag (g/t)</th>
<th>Cu (%)</th>
<th>Pb (%)</th>
<th>DEPTH (m)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-52</td>
<td>15</td>
<td>13</td>
<td>225</td>
<td>3</td>
<td>47</td>
<td>Di red. chl. caliche.</td>
</tr>
<tr>
<td>52-54</td>
<td>18</td>
<td>17</td>
<td>205</td>
<td>3</td>
<td>44</td>
<td>30% hematite, some talc.</td>
</tr>
<tr>
<td>54-56</td>
<td>16 (19)</td>
<td>23</td>
<td>215</td>
<td>3</td>
<td>45</td>
<td>Co hematite; talc; grey</td>
</tr>
<tr>
<td>56-58</td>
<td>20 (28)</td>
<td>21</td>
<td>205</td>
<td>3</td>
<td>47</td>
<td>Co hematite; bright talc; grey</td>
</tr>
<tr>
<td>58-60</td>
<td>31</td>
<td>165</td>
<td>14</td>
<td></td>
<td>48</td>
<td>Ar. red. hematite; grey (grey dominant); 30% hematite; grey; talc.</td>
</tr>
<tr>
<td>60-62</td>
<td>29 (40)</td>
<td>27</td>
<td>125</td>
<td>5</td>
<td>52</td>
<td>Ar. red. hematite; grey; talc; grey; 30% hematite; grey; talc.</td>
</tr>
<tr>
<td>62-64</td>
<td>16 (10)</td>
<td>11</td>
<td>112</td>
<td>4</td>
<td>61</td>
<td>Di red. hematite; grey; talc; 30% hematite; grey; talc.</td>
</tr>
<tr>
<td>64-66</td>
<td>10</td>
<td>11</td>
<td>130</td>
<td>4</td>
<td>64</td>
<td>30% hematite; grey; talc; 30% hematite; grey; talc.</td>
</tr>
<tr>
<td>66-68</td>
<td>9</td>
<td>15</td>
<td>120</td>
<td>8</td>
<td>67</td>
<td>Ar. red. hematite; grey; talc; 30% hematite; grey; talc.</td>
</tr>
<tr>
<td>68-70</td>
<td>9</td>
<td>9</td>
<td>106</td>
<td>3</td>
<td>70</td>
<td>30% hematite; grey; talc; 30% hematite; grey; talc.</td>
</tr>
</tbody>
</table>

End of hole.
<table>
<thead>
<tr>
<th>Sample</th>
<th>ASSAYS</th>
<th>Depth (m)</th>
<th>LOG</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td><strong>Sample #1</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>32</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>34</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>36</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>38</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>44</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>46</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>52</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Notes:**

- **Hole Target:** Test from dip extension S56E 030° to S68E 120°
- **Sample N°s:**
- **Drill Type:** Schramm
- **Driller:** Glen Ryan
- **Drilled:** 27/6/1992
- **Logged:** 5/7/92

---

**Log Description:**

- Red siltstone with c. 10% f.g. haem. o.hem. vein: 8% haem.
- Red f.g. chl. quartz: 8% haem.
- Red chl. siltstone: 8% haem.
- Red chl. siltstone: 8% red f.g. haem.
- Deep red chl. siltstone: 8% haem.
- Well cleaned foliated red chl. siltstone: 8% haem.
- Deep red well cleaned siltstone: strongly chloritic
  - Chl. size haem. siltstone: 8% haem. on joints
  - Slighty cleaned haem. siltstone: 8% haem. chips
  - Chl. size haem. siltstone: 8% haem. chips
- Deep red siltstone, minor haem. joints
  - Abnormal width quartzite: Fm. slimes
  - Deep red f.g. quartzite: Fm. slimes:
  - Biotite: red grey siltstone
  - Red quartzite: 8% chl. haem. slimes
  - 8% chl. haem. slimes
  - Deep red well cleaned siltstone
  - Fm. slimes: 8% haem.
  - Fm. slimes: 8% haem.
  - Deep red siltstone: minor chl. haem. (hard) rock
<table>
<thead>
<tr>
<th>Sample</th>
<th>Au</th>
<th>Ag</th>
<th>Pb</th>
<th>Bi</th>
<th>Depth (m)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>69-71</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td>69</td>
<td>det red, ch. f.g. greyscale + 10% f.g. haematite, minor material.</td>
</tr>
<tr>
<td>70-71</td>
<td>0.001</td>
<td>70</td>
<td>0.02</td>
<td></td>
<td>70</td>
<td>det red, ch. f.g. greyscale + 10% f.g. haematite, minor material.</td>
</tr>
<tr>
<td>72-73</td>
<td>0.002</td>
<td>72</td>
<td></td>
<td>2</td>
<td>72</td>
<td>det red, ch. f.g. greyscale. Torrid.</td>
</tr>
<tr>
<td>74-75</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
<td>74</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>76-78</td>
<td>0.04</td>
<td>76</td>
<td>0.04</td>
<td>76</td>
<td>76</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>78-80</td>
<td>0.06</td>
<td>78</td>
<td>0.06</td>
<td>78</td>
<td>78</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>80-82</td>
<td>0.03</td>
<td>80</td>
<td>0.03</td>
<td>80</td>
<td>80</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>82-84</td>
<td>0.01</td>
<td>82</td>
<td>0.01</td>
<td>82</td>
<td>82</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>84-86</td>
<td>0.04</td>
<td>84</td>
<td>0.04</td>
<td>84</td>
<td>84</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>86-88</td>
<td>0.01</td>
<td>86</td>
<td>0.01</td>
<td>86</td>
<td>86</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>88-90</td>
<td>0.04</td>
<td>88</td>
<td>0.04</td>
<td>88</td>
<td>88</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>90-92</td>
<td>0.04</td>
<td>90</td>
<td>0.04</td>
<td>90</td>
<td>90</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>92-94</td>
<td>0.05</td>
<td>92</td>
<td>0.05</td>
<td>92</td>
<td>92</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>94-96</td>
<td>0.01</td>
<td>94</td>
<td>0.01</td>
<td>94</td>
<td>94</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
<tr>
<td>96-97</td>
<td>0.01</td>
<td>96</td>
<td>0.01</td>
<td>96</td>
<td>96</td>
<td>det red, ch. f.g. greyscale.</td>
</tr>
</tbody>
</table>

Hole Target: 55 R.C.06
Survey at 102.6m = 249°
Drilled: 01/11/68
Logged: 01/11/68
Driller: E. Price
Sample No's: 15 samples

APPENDIX III

Drill Sample Assays 1992 Drilling
ANALYTICAL REPORT.

COMMENTS: ATTENTION: P ALLCHURCH/ K FOX....
COMMENTS: ROCK....

JOB INFORMATION
JOB CODE: 269.0/923325
NO. SAMPLES: 244
ELEMENTS: 7
CLIENT O/N: 00069
DATE RECEIVED: 29/07/92
DATE COMPLETED: 11/08/92

LEGEND
'X' = LESS THAN DETECTION LIMIT
'N/L' = SAMPLE NOT RECEIVED
'*' = RESULTS CHECKED
'()' = RESULTS STILL TO COME
'I/S' = INSUFFICIENT SAMPLE FOR ANALYSIS
'E6' = RESULT x 1,000,000
SAMPLE PREPARATION DETAILS

SAMPLE STATE(S) & SAMPLE PREPARATION(S)
(2.50Kg) DR, CR, SSMG

Abbreviations used for Preparation codes:

- CP: Coarse Pulverise
- CUT: Diamond Saw Cut
- SSMG: Single Stage Mix & Grind
- NR: Not Required
- ZK: Two Splits
- CR: Crush
- FP: Fine Pulverise
- MS: Mix & Split
- QTZ: Quartz Clean Between
- DR: Dry
- HM: Hammer Mill
- O: Other
- COMPS: Composite

Abbreviations used for Sample States:

- CONC: Concentrates
- D/CORE: Drill Core
- RNC: Heavy Mineral Concentrates
- RC: Reverse Circulation
- SQLN: Solutions
- U/CHIP: Vacuum Chip
- COST: Costeans
- D/CUT: Drill Cuttings
- PERC: Percussion Chip
- R/CHIP: Rock Chip
- STRSEP: Stream Sediments
- V/DRIL: Vacuum Drill
- CRJCT: Coarse Rejects
- PISLIT: Pisolith
- NR: Not Required
- UNSPEC: Unspecified
- XCRJCT: Ex Coarse Rejects

SAMPLE STORAGE OF SOLIDS:

Bulk residues and pulps will be stored for 60 days without charge. After this time all bulk residues and pulps will be stored at a rate of $1.20/cubic metre/day until your written advice regarding collection or disposal is received. Expenses related to the return or disposal of samples will be charged to you at cost.

SAMPLE STORAGE OF SOLUTIONS:

Samples received as liquids, waters or solutions will be held for 6 weeks free of charge then disposed of, unless written advice for return or collection is received.
<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>Au</th>
<th>Au-Rp1</th>
<th>Au-Rp2</th>
<th>Cu</th>
<th>Pb</th>
<th>Bi</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNITS</td>
<td>ppb</td>
<td>ppb</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
</tr>
<tr>
<td>DETECTION</td>
<td>B/ETA</td>
<td>B/ETA</td>
<td>B/MAS</td>
<td>B/ETA</td>
<td>B/MAS</td>
<td>B/MAS</td>
</tr>
<tr>
<td>METHOD</td>
<td>1</td>
<td>1</td>
<td>0.01</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 808-SSP1:30-32</td>
<td>11 808-SSP1:30-32</td>
<td>12 808-SSP1:32-34</td>
<td>13 808-SSP1:34-36</td>
<td>14 808-SSP1:36-38</td>
<td>15 808-SSP1:38-40</td>
</tr>
</tbody>
</table>

<p>| 29 808-SSP1:10-12 | 34 808-SSP1:12-14 | 66 808-SSP1:14-16 | 120 808-SSP1:16-18 | 110 808-SSP1:18-20 | 92 808-SSP1:20-22 |
| 66 808-SSP1:34-36 | 52 808-SSP1:36-38 | 52 808-SSP1:38-40 | 41 808-SSP1:40-42 | 41 808-SSP1:40-42 | 32 808-SSP1:42-44 |
| 82 808-SSP1:64-66 | 110 808-SSP1:66-68 | 110 808-SSP1:66-68 | 96 808-SSP1:68-70 | 96 808-SSP1:68-70 | 82 808-SSP1:70-72 |
| 82 808-SSP1:72-74 | 82 808-SSP1:74-76 | 82 808-SSP1:76-78 | 82 808-SSP1:78-80 | 82 808-SSP1:78-80 | 82 808-SSP1:80-82 |
| 82 808-SSP1:82-85 | 82 808-SSP1:84-86 | 82 808-SSP1:86-88 | 82 808-SSP1:88-90 | 82 808-SSP1:90-92 | 82 808-SSP1:92-94 |</p>
<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>Au</th>
<th>Au-Rp1</th>
<th>Au-Rp2</th>
<th>Au-Rp3</th>
<th>Cu</th>
<th>Pb</th>
<th>Bi</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNITS</td>
<td>ppb</td>
<td>ppb</td>
<td>ppn</td>
<td>ppb</td>
<td>ppn</td>
<td>ppn</td>
<td>ppn</td>
</tr>
<tr>
<td>DETECTION</td>
<td>B/ETA</td>
<td>B/ETA</td>
<td>B/AAS</td>
<td>B/ETA</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td></td>
</tr>
<tr>
<td>METHOD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41 808-SSP2:30-32</td>
<td>2</td>
<td>94</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42 808-SSP2:32-34</td>
<td>10</td>
<td>92</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43 808-SSP2:34-36</td>
<td>4</td>
<td>86</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44 808-SSP2:36-38</td>
<td>3</td>
<td>104</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 808-SSP2:38-40</td>
<td>3</td>
<td>106</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46 808-SSP2:40-42</td>
<td>5</td>
<td>108</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47 808-SSP2:42-44</td>
<td>16</td>
<td>102</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48 808-SSP2:44-46</td>
<td>16</td>
<td>125</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49 808-SSP2:46-48</td>
<td>11</td>
<td>165</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 808-SSP2:48-50</td>
<td>12</td>
<td>200</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51 808-SSP2:50-52</td>
<td>15</td>
<td>225</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52 808-SSP2:52-54</td>
<td>13</td>
<td>205</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>53 808-SSP2:54-56</td>
<td>16</td>
<td>19</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>54 808-SSP2:56-58</td>
<td>20</td>
<td>28</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55 808-SSP2:58-60</td>
<td>54</td>
<td>255</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56 808-SSP2:60-62</td>
<td>56</td>
<td>15</td>
<td>125</td>
<td>5</td>
<td>27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>57 808-SSP2:62-64</td>
<td>16</td>
<td>10</td>
<td>112</td>
<td>4</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>58 808-SSP2:64-66</td>
<td>10</td>
<td>130</td>
<td>4</td>
<td></td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>59 808-SSP2:66-68</td>
<td>9</td>
<td>120</td>
<td>8</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 808-SSP2:68-70</td>
<td>9</td>
<td>106</td>
<td>3</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ATTENTION K FOX
ROEBUCK RESOURCES NL
PO BOX 690
WEST PERTH WA 6872
AUSTRALIA

ANALYTICAL REPORT.

COMMITS: ATTENTION: P ALLCHURCH, K FOX
COMMITS: D/CHIP....

JOB INFORMATION
JOB CODE : 269.0/924194
NO. SAMPLES : 15
ELEMENTS : 5
CLIENT O/N : 00121
DATE RECEIVED : 11/09/92
DATE COMPLETED : 18/09/92

LEGEND
'X' = LESS THAN DETECTION LIMIT
'N/L' = SAMPLE NOT RECEIVED
'*' = RESULTS CHECKED
'(' ')=' RESULTS STILL TO COME
'I/S' = INSUFFICIENT SAMPLE FOR ANALYSIS
'E6' = RESULT x 1,000,000
SAMPLE PREPARATION DETAILS

SAMPLE STATE(S) & SAMPLE PREPARATION(S)
(2.00Kg) DR, SSMG

Abbreviations used for Preparation codes:

CP : Coarse Pulverise
CUT : Diamond Saw Cut
SSMC : Single Stage Mix & Grind
NR : Not Required
ZK : Two Splits
CR : Crush
FP : Fine Pulverise
NS : Mix & Split
QTZ : Quartz Clean Between
DR : Dry
HM : Hammer Mill
O : Other
COMPS : Composite

Abbreviations used for Sample States:

CONC : Concentrates
D/CHIP : Drill Chip
HMC : Heavy Mineral Concentrates
RC : Reverse Circulation
SOLN : Solutions
"/CHIP : Vacuum Chip
COST : Costeans
D/CORE : Drill Core
PERC : Percussion Chip
R/CHIP : Rock Chip
STRSD : Stream Sediments
V/DRIL : Vacuum Drill
CRJCT : Coarse Rejects
D/CUT : Drill Cuttings
PISLIT : Pisolite
NR : Not Required
UNSPEC : Unspecified
XCRJCT : Ex Coarse Rejects

SAMPLE STORAGE OF SOLIDS:
BULK RESIDUES AND PULPS WILL BE STORED FOR 60 DAYS WITHOUT CHARGE. AFTER
THIS TIME ALL BULK RESIDUES AND PULPS WILL BE STORED AT A RATE OF
$1.20/cubic metre/day UNTIL YOUR WRITTEN ADVICE REGARDING COLLECTION OR
DISPOSAL IS RECEIVED. EXPENSES RELATED TO THE RETURN OR DISPOSAL OF
SAMPLES WILL BE CHARGED TO YOU AT COST.

SAMPLE STORAGE OF SOLUTIONS:
SAMPLES RECEIVED AS LIQUIDS, WATERS OR SOLUTIONS WILL BE HELD FOR 6 WEEKS
FREE OF CHARGE THEN DISPOSED OF, UNLESS WRITTEN ADVICE FOR RETURN OR
COLLECTION IS RECEIVED.
### ELEMENTS

<table>
<thead>
<tr>
<th></th>
<th>Au</th>
<th>Au-Rp1</th>
<th>Cu</th>
<th>Pb</th>
<th>Bi</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNITS</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
</tr>
<tr>
<td>DETECTION</td>
<td>0.01</td>
<td>0.01</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>METHOD</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td>B/AAS</td>
</tr>
</tbody>
</table>

### SAMPLE NUMBERS

<table>
<thead>
<tr>
<th>Sample</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
<th>Value 5</th>
<th>Value 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SSRC20:68-70</td>
<td>33</td>
<td>1</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 SSRC20:70-72</td>
<td>70</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 SSRC20:72-74</td>
<td>68</td>
<td>X</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 SSRC20:74-76</td>
<td>54</td>
<td>X</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 SSRC20:76-78</td>
<td>76</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 SSRC20:78-80</td>
<td>60</td>
<td>1</td>
<td>13</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 SSRC20:80-82</td>
<td>205</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 SSRC20:82-84</td>
<td>140</td>
<td>X</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 SSRC20:84-86</td>
<td>250</td>
<td>4</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 SSRC20:86-88</td>
<td>280</td>
<td>7</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 SSRC20:88-90</td>
<td>920</td>
<td>* 14</td>
<td>14</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 SSRC20:90-92</td>
<td>840</td>
<td>* 6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 SSRC20:92-93</td>
<td>300</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 SSRC20:93-95</td>
<td>76</td>
<td>1</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 SSRC20:95-97</td>
<td>140</td>
<td>1</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Ch.0001 (SSRC20:68-70)

<table>
<thead>
<tr>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>38</td>
<td>1</td>
<td>X</td>
</tr>
</tbody>
</table>

### STD: GLS7

<table>
<thead>
<tr>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.56</td>
<td>16</td>
<td>33</td>
<td>16</td>
</tr>
</tbody>
</table>
APPENDIX IV

Reassay Roebuck 1987 Drill Cuttings and Assays for Sundry Rock Samples
<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Description</th>
<th>Au (ppb)</th>
<th>Bi ppm</th>
<th>Cu ppm</th>
<th>Pb ppm</th>
<th>Fe %</th>
<th>As</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-R1</td>
<td>Cuttings from SS-RC15, Haematite rich; chloritic siltstone, ~28m. depth.</td>
<td>21 (27)</td>
<td>440</td>
<td>155</td>
<td>3</td>
<td>12.50</td>
<td>x</td>
</tr>
<tr>
<td>SS-R2</td>
<td>Cuttings from SS-RC15, ~20m. depth. Haematite/chl. siltstone section as above.</td>
<td>112 (315) (59)</td>
<td>185</td>
<td>4</td>
<td>21.00</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>SS-R3</td>
<td>Cuttings from SS-RC16, ~40m. depth. Deep red chl. greywacke/siltstone with abundant haematite chips, vein quartz, and sericiitized siltstone.</td>
<td>6 (6)</td>
<td>3</td>
<td>120</td>
<td>3</td>
<td>14.50</td>
<td>x</td>
</tr>
<tr>
<td>SS-R4</td>
<td>Cuttings from SS-RC16, ~40m. as for SS-R3</td>
<td>8 (5)</td>
<td>9</td>
<td>92</td>
<td>4</td>
<td>9.4</td>
<td>x</td>
</tr>
<tr>
<td>SS-R5</td>
<td>Cuttings from SS-RC17, apparently ~23m. Haematite and altered siltstone.</td>
<td>5 (6)</td>
<td>21</td>
<td>140</td>
<td>3</td>
<td>16.00</td>
<td>x</td>
</tr>
<tr>
<td>SS-R6</td>
<td>Cuttings from SS-RC17, apparently ~23m. Haematite and altered siltstone.</td>
<td>18 (6)</td>
<td>8</td>
<td>66</td>
<td>4</td>
<td>13.00</td>
<td>x</td>
</tr>
<tr>
<td>SS-R7</td>
<td>Old shaft near SS-RC1. Dark red, altered, strongly chloritized and sericiitized greywacke with fine haematite.</td>
<td>6 (6)</td>
<td>x</td>
<td>101</td>
<td>1</td>
<td>28.00</td>
<td>x</td>
</tr>
<tr>
<td>SS-R8</td>
<td>Mixed zone south of No. 2 shaft (now filled). Strongly chloritic, sericiitized, broken quartz vein, altered S. Q. sediment.</td>
<td>360 (600)</td>
<td>11</td>
<td>101</td>
<td>16</td>
<td>26.00</td>
<td>x</td>
</tr>
<tr>
<td>SS-R9</td>
<td>As for SS-R8 but carrying veins and fragments of haematite and brecciated vein quartz.</td>
<td>520 (600)</td>
<td>225</td>
<td>110</td>
<td>7</td>
<td>19.50</td>
<td>x</td>
</tr>
</tbody>
</table>

Samples SS-R1 to SS-R6 taken to check previous assay which indicated only minor trace gold from SS-RC15, 16, 17 despite having penetrated the ore zone subsurface and beneath shallower mineralized sections. It was noted samples from SS-RC15, 16, 17 were assayed in a different batch to samples from earlier, lower numbered, hole.

16/9: Reasons confirm low Au values for SSR1 to 6-26

3/3/92.
ATTENTION P ALLCHURCH
ROEBUCK RESOURCES NL
PO BOX 690
WEST PERTH WA 6872
AUSTRALIA

ANALYTICAL REPORT.

COMMENTS: ATTENTION: P ALLCHURCH, K FOX ....
COMMENTS: ROCK....

JOB INFORMATION
JOB CODE: 269.0/921183
NO. SAMPLES: 111
ELEMENTS: 10
CLIENT O/N: 210
DATE RECEIVED: 31/03/92
DATE COMPLETED: 09/04/92

LEGEND
'X' = LESS THAN DETECTION LIMIT
'N/L' = SAMPLE NOT RECEIVED
'*' = RESULTS CHECKED
'(' )' = RESULTS STILL TO COME
'I/S' = INSUFFICIENT SAMPLE FOR ANALYSIS
'EO' = RESULT x 1,000,000
SAMPLE PREPARATION DETAILS

SAMPLE STATE(S) & SAMPLE PREPARATION(S)

(1.50Kg) DR, CR, SSMG

Abbreviations used for Preparation codes:

- CP: Coarse Pulverise
- CUT: Diamond Saw Cut
- SSMG: Single Stage Mix & Grind
- NR: Not Required
- ZK: Two Splits
- CR: Crush
- FP: Fine Pulverise
- MS: Mix & Split
- QTZ: Quartz Clean Between
- DD: Dry
- MM: Hammer Mill
- O: Other
- COMPS: Composite

Abbreviations used for Sample States:

- CONC: Concentrates
- D/CHIP: Drill Chip
- HMC: Heavy Mineral Concentrates
- RC: Reverse Circulation
- SOLN: Solutions
- U/CHIP: Vacuum Chip
- COST: Costeans
- D/CORE: Drill Core
- PERC: Percussion Chip
- R/CHIP: Rock Chip
- STRS: Stream Sediments
- V/DRIL: Vacuum Drill
- CRJCT: Coarse Rejects
- D/CUT: Drill Cuttings
- FISLIT: Fisolite
- NR: Not Required
- UNSPEC: Unspecified
- XCRJCT: Ex Coarse Rejects

SAMPLE STORAGE OF SOLIDS:

Bulk residues and pulps will be stored for 60 days without charge. After this time all bulk residues and pulps will be stored at a rate of $1.20/cubic metre/day until your written advice regarding collection or disposal is received. Expenses related to the return or disposal of samples will be charged to you at cost.

SAMPLE STORAGE OF SOLUTIONS:

Samples received as liquids, waters or solutions will be held for 6 weeks free of charge then disposed of, unless written advice for return or collection is received.
<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>Au</th>
<th>Au-Rp1</th>
<th>Au-Rp2</th>
<th>Au-Rp3</th>
<th>Fe</th>
<th>Cu</th>
<th>Zn</th>
<th>As</th>
<th>Pb</th>
<th>Bi</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNITS</td>
<td>ppb</td>
<td>ppm</td>
<td>ppb</td>
<td>ppb</td>
<td>%</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
<td>ppm</td>
</tr>
<tr>
<td>DETECTION</td>
<td>1</td>
<td>0.01</td>
<td>1</td>
<td>1</td>
<td>0.01</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>METHOD</td>
<td>B/ETA</td>
<td>B/AAS</td>
<td>B/ETA</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td>B/AAS</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Sample</th>
<th>Au (ppb)</th>
<th>Au-Rp1</th>
<th>Au-Rp2</th>
<th>Au-Rp3</th>
<th>Fe (%)</th>
<th>Cu (ppm)</th>
<th>Zn (ppm)</th>
<th>As (ppm)</th>
<th>Pb (ppm)</th>
<th>Bi (ppm)</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>89</td>
<td>SSR1</td>
<td>21</td>
<td>27</td>
<td>12.50</td>
<td>155</td>
<td>x</td>
<td>2</td>
<td>46</td>
<td>*</td>
<td>46</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>SSR2</td>
<td>112</td>
<td>310</td>
<td>58</td>
<td>21.00</td>
<td>185</td>
<td>x</td>
<td>4</td>
<td>24</td>
<td>*</td>
<td>24</td>
<td>*</td>
</tr>
<tr>
<td>91</td>
<td>SSR3</td>
<td>6</td>
<td>5</td>
<td>14.50</td>
<td>120</td>
<td>x</td>
<td>3</td>
<td>3</td>
<td>*</td>
<td>3</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>SSR4</td>
<td>8</td>
<td>5</td>
<td>9.40</td>
<td>92</td>
<td>x</td>
<td>4</td>
<td>9</td>
<td>*</td>
<td>9</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>93</td>
<td>SSR5</td>
<td>5</td>
<td>8</td>
<td>16.00</td>
<td>140</td>
<td>x</td>
<td>3</td>
<td>21</td>
<td>*</td>
<td>21</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>94</td>
<td>SSR6</td>
<td>18</td>
<td>8</td>
<td>13.00</td>
<td>66</td>
<td>x</td>
<td>4</td>
<td>8</td>
<td>*</td>
<td>8</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>SSR7</td>
<td>5</td>
<td>5</td>
<td>28.00</td>
<td>104</td>
<td>x</td>
<td>1</td>
<td>1</td>
<td>x</td>
<td>1</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>96</td>
<td>SSR8</td>
<td>280</td>
<td>0.30</td>
<td>26.00</td>
<td>104</td>
<td>x</td>
<td>16</td>
<td>41</td>
<td>*</td>
<td>41</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>97</td>
<td>SSR9</td>
<td>520</td>
<td>0.60</td>
<td>19.50</td>
<td>110</td>
<td>x</td>
<td>7</td>
<td>225</td>
<td>*</td>
<td>225</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>