



20<sup>th</sup> April 2011

**ASX ANNOUNCEMENT / MEDIA RELEASE**

**Salt Creek Manganese Drilling and Ketchowla Manganese Beneficiation**  
**Results**

**Highlights**

- Widespread manganese intersected in all 19 RC drill holes completed in April 2011.
- The drilling tested 1.5km of strike or just 15% of the known strike length of at least 10km. The eastern limb and western flanks of the syncline yet to be drill tested.
- Significant manganese intercepts including:
  - 5m at 12.47% Mn from 14 to 19m in SCRC11\_002
  - 57m @ 6.44% Mn from 0-57m in SCRC\_003 including 11m at 12.35% Mn from 42 to 53m
  - 7m at 12.12% Mn from 5 to 12m in SCRC11\_005
- At Ketchowla test work using density separation and gravity concentration successfully upgraded a composited sample of Ketchowla KI manganese drill cuttings grading 17.47% Mn to >35% Mn at a 23.21% recovery.

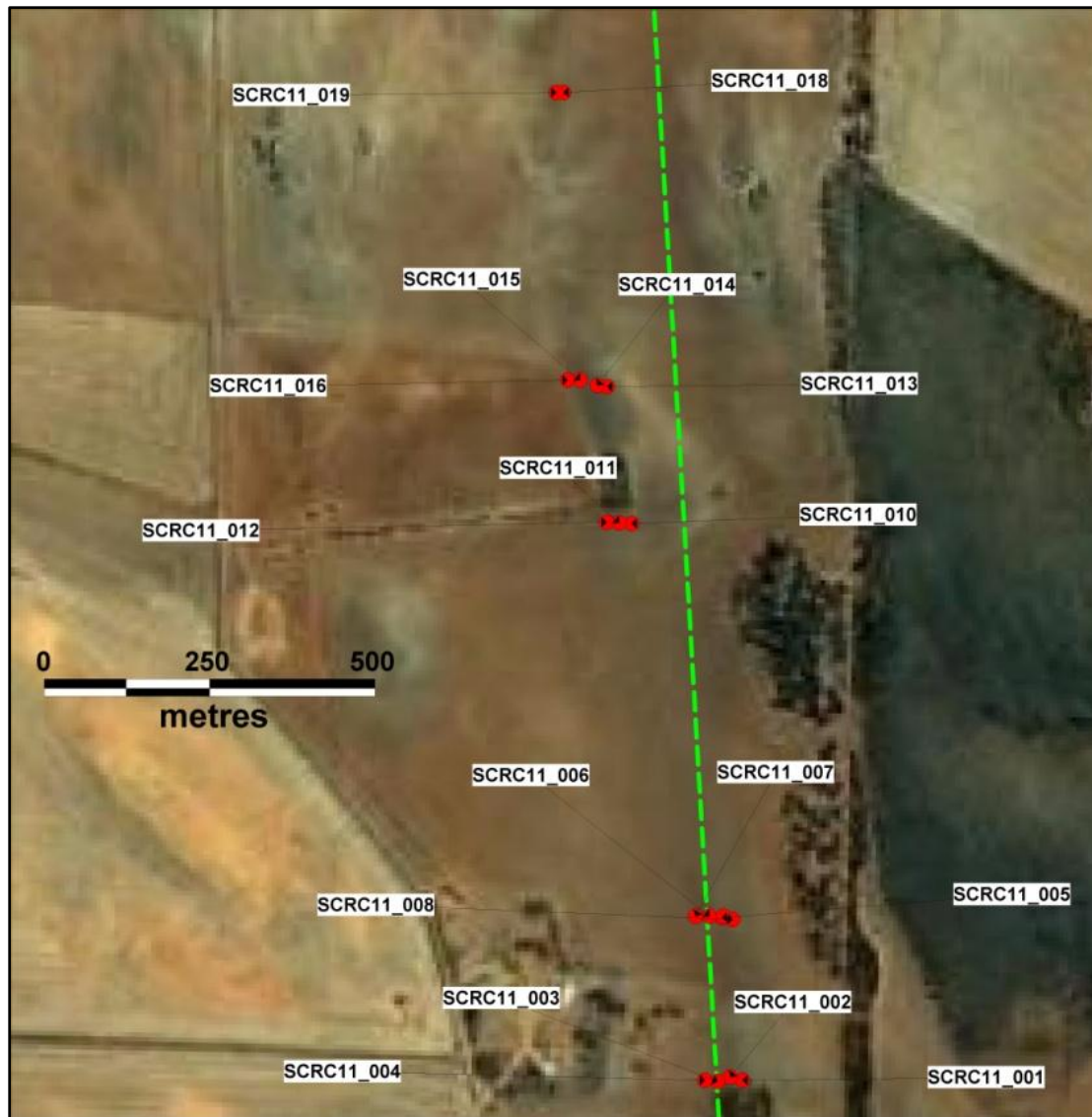
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Archer Exploration Limited completed a 19 hole RC drilling program over the Salt Creek manganese deposit located near Cleve on Eyre Peninsula, South Australia during April 2011.

The drilling targeted an area of discontinuous north-south striking manganese outcrops occurring within cropping paddocks. Previous rock chip samples had returned manganese grades to 27% Mn.

The drilling highlighted that manganese occurs in three different rock units:

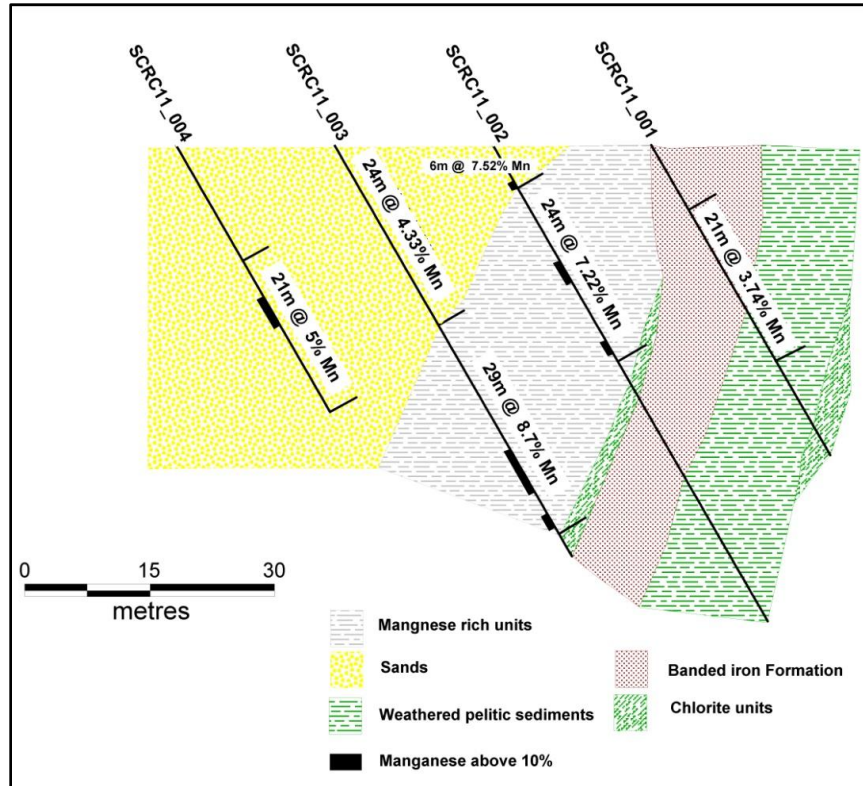
1. High iron manganese associated with weathered Lower Middleback banded iron formation.
2. Fine manganese in weathered pelitic sediments (clays and schists).
3. Up to 5mm fine manganese nodules within transported silica-rich sand.



**Figure 1. Location of Salt Creek Drill holes**

The manganese units appear to comprise two limbs of an overturned syncline with a western limb consisting of sporadic outcrops of high-iron manganese and an eastern limb of manganese and silica-rich manganese adjacent to quartzite/leached BIF. The drilling only targeted the easternmost portion of the western limb with the eastern limb yet to be drill tested.

The presence of fine (<5mm) nodular manganese within unconsolidated silica-rich sand suggests that the manganese was locally re-precipitated. The silica-rich sand units are thought to represent an old scarp (cliff face) possibly formed as a result of faulting. The silica-rich sand hosted nodular manganese was intersected in holes SCRC\_001 - SCRC\_004. Holes SCRC\_005 – SCRC\_019 were drilled to the east of the silica-rich sands. The implication is that manganese mineralisation may continue to the west of the drilling, as well as to the east in the buried syncline.



**Figure 2. Geology of southern drill line with manganese intervals reported.**

Manganese associated with weathered Lower Middleback banded iron formation is high in iron. The degree of iron enrichment encountered during drilling is highlighted in a rock sample, see figure 3 (below).



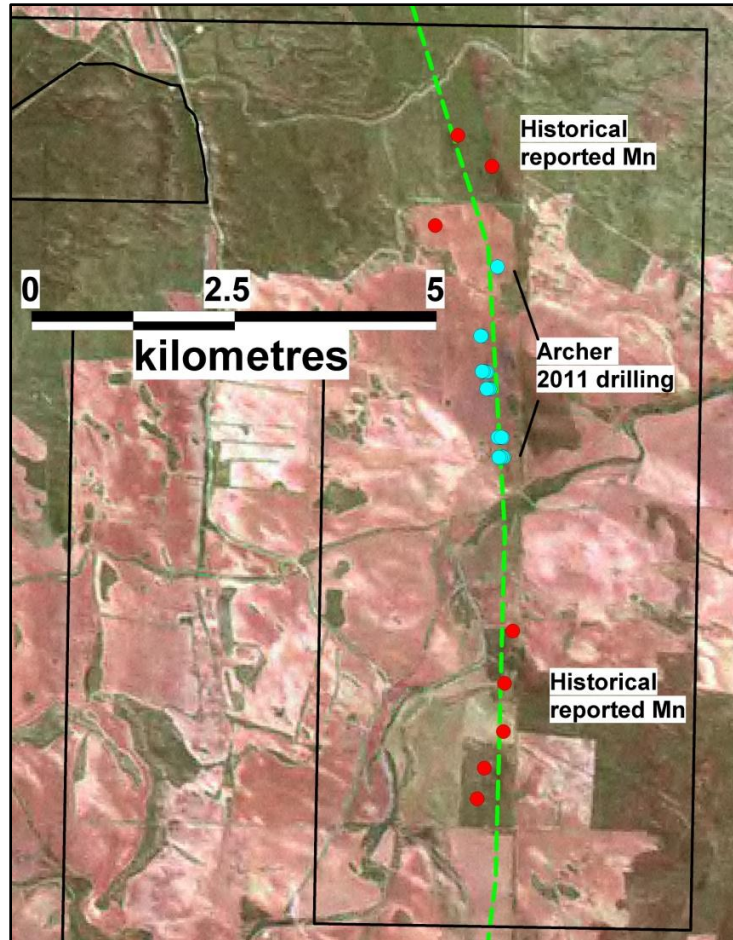
**Figure 3. Limonite and manganese within outcrop**

All 19 drill holes encountered highly anomalous manganese as shown in table 1, below.

Hole Id	From	To	Interval	Mn %	Fe %	Lithology
SCRC11_001	0	9	9	1.13	22.9	schist and BIF
and	9	30	21	3.74	39	weathered BIF
SCRC11_002	0	6	6	<b>7.52</b>	36	weathered BIF
and	6	30	24	<b>7.22</b>	26.32	weathered schist
SCRC11_003	0	24	24	4.33	4.2	Silica sand with nodules
and	24	53	29	<b>8.7</b>	26.89	weathered schist
SCRC11_004	16	37	21	<b>5.04</b>	5.9	Silica sand with nodules
SCRC11_005	0	12	12	<b>9.62</b>	25	weathered schist
SCRC11_006	12	26	14	4.3	25.48	weathered schist
SCRC11_007	44	59	15	2.41	24.31	weathered schist
SCRC11_008	8	19	11	2.54	17.05	weathered schist
SCRC11_009	0	24	24	<b>5.45</b>	26.94	weathered schist
SCRC11_010	0	27	27	3.48	22.45	weathered schist
SCRC11_011	10	42	32	<b>5.26</b>	23.75	weathered schist
SCRC11_012	30	38	8	2.35	22.92	weathered schist
SCRC11_013	0	14	14	1.67	30.75	weathered BIF
and	14	28	14	4.72	21.25	weathered schist
SCRC11_014	10	30	20	4.61	34.42	weathered BIF
and	41	46	5	4.84	13.68	weathered schist
SCRC11_015	23	46	23	2.65	29.57	weathered BIF
SCRC11_016	32	43	11	2.89	33.24	weathered BIF
SCRC11_017	4	12	8	3.4	1.08	highly silicified
SCRC11_018	1	3	2	<b>5.99</b>	13.69	weathered schist
SCRC11_019	0	25	25	2.98	9.34	weathered schist

**Table 1. Manganese intervals for all Salt Creek drill holes**

The Salt Creek manganese deposit has a strike length of at least 10km as evidenced by rock chip sampling and the recent drilling program and as indicated by historical mapping and sampling (CRA-1978, Shell-1986 and Aberfoyle-1991), figure 4 below.



**Figure 4 The potential strike extensions to the Salt Creek manganese deposit**

Representative samples of the three styles of manganese mineralisation will be collected for dense media and gravity concentration tests.

#### **Ketchowla Manganese Beneficiation Test Results**

A composite RC drill hole sample from the Ketchowla manganese deposit was sent to Nagrom in Kelmscott, Perth for dense media separation and gravity concentration. The tests successfully upgraded the 17.47% Mn composite RC drill sample to >35% Mn (at an excellent recovery of 23.2% recovery) as shown in the table below.



Product Summary	Yield (%)	Mn % dist		Fe % dist		SiO <sub>2</sub> % dist	
Coarse Concentrate	11.99%	<b>36.49</b>	25.04%	1.77	5.12%	17.42	5.21%
Fines Concentrate	2.58%	<b>38.95</b>	5.74%	5.42	3.37%	8.75	0.56%
Middlings	8.64%	<b>33.67</b>	16.65%	3.65	7.61%	18.68	4.02%
Waste	76.79%	11.96	52.56%	4.53	83.91%	47.11	90.21%
<b>Calculated Head</b>	<b>100.00%</b>	<b>17.47</b>	<b>100.00%</b>	<b>4.15</b>	<b>100.00%</b>	<b>40.11</b>	<b>100.00%</b>

**Table 2. Dense media and gravity results for K1 composite manganese drill sample**

The resultant upgraded manganese has low iron and high manganese. The test work also demonstrated that the already high nickel, cobalt, copper, zinc and rare earth elements grades in Ketchowla manganese can be substantially increased through the beneficiation process. Upgrading of the Ni (0.258% to 0.412%); Co (0.175% to 0.296%); Cu (0.226% to 0.377%) and Zn (0.164% to 0.277%) was achieved in the combined coarse and fine concentrate and the middlings products. Yttrium similarly increased from 113.2ppm to 204ppm.

A ground gravity survey has been completed at Ketchowla. The gravity data is being processed with the aim of identifying areas of manganese under surficial cover for subsequent drill testing.

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*The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr. Wade Bollenhagen, Exploration Manager of Archer Exploration Limited. Mr. Bollenhagen is a Member of the Australasian Institute of Mining and Metallurgy who has more than sixteen years experience in the field of activity being reported. Mr. Bollenhagen consents to the inclusion in the report of matters based on his information in the form and context in which it appears.*