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## ASX ANNOUNCEMENT / MEDIA RELEASE

Archer Exploration Limited  
ABN 64 123 993 233  
Level 1, 28 Greenhill Road  
Wayville, SA 5034  
Australia  
Telephone +61 (0)8 8272 3288  
Facsimile +61 (0)8 8272 3888  
[info@archerexploration.com.au](mailto:info@archerexploration.com.au)  
[www.archerexploration.com.au](http://www.archerexploration.com.au)

### **Simple Wet Screening Significantly Upgrades Manganese at Salt Creek**

#### **Highlights**

- **Simple wet screening of drill samples upgrades manganese values by over 200%.**
- **Rock chip sampling confirms northern extension of manganese enriched limbs.**
- **High potential within the Salt Creek syncline for manganese enrichment.**
- **>40% Mn recorded in rock chips from the eastern limb.**
- **Drill testing of the syncline and the high grade eastern limb will be conducted following the 2011 harvest.**

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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. Results from that drilling were released to the market in April 2011.

Archer informed that market that metallurgical work was to commence to investigate the potential to upgrade the grade of the ore via simple screening.

Five samples were selected to represent a variety of mineralisation styles intersected during drilling.

• Sample 1	Manganese enriched schist	(SLRC011-002 14-29m)
• Sample 2	Clay and Manganese	(SLRC011-003 25-37m)
• Sample 3	Clay and manganese	(SLRC011-003 40-53m)
• Sample 4	Sand and Manganese nodules	(SLRC011-004 21-37m)
• Sample 5	Banded Iron Formation (BIF) and Manganese	(SLRC011-005 1-12m)

The five samples comprised composite sampling of a number of continuous drill intervals enriched in manganese. Samples 1-3 and 5 were crushed to 5mm. Sample 4, being mostly sand did not require crushing. All samples were then wet screened into 5 size fractions: +3.35mm; -3.35mm +2mm; -2mm +1mm; -1mm +0.5mm; and -5mm.

	Head Assay			Recovery %	Recovery Assay		
	MnO%	SiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %		MnO%	SiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %
SAMPLE 1	11	18.7	36.2	18.94	23.59	8.31	41.93
SAMPLE 2	8.1	24.3	44.7	25.42	18.56	7.62	52.51
SAMPLE 3	14.1	21.7	39.4	35.95	21.78	16.84	40.84
SAMPLE 4	6.3	70.3	7.81	23.48	20.20	53.39	11.21
SAMPLE 5	15.1	18.2	39.5	30.42	21.24	14.29	39.12

**Table 1. Initial upgrade from wet screening of selected drill intervals**

### Sample 1

Sample 1 consisted of 15 drill intervals from hole SCRC11\_002 from 15 to 29m down hole and was made up of weathered sediments (schists).

SIZE FRACTION	Recovery %	MnO%	Fe <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %
+3.35mm	1.47	27.3	33.2	8.81	8.30
-3.35 +2.00mm	4.24	28.0	35.0	7.59	7.44
-2.00 +1.00mm	7.14	26.5	36.7	7.48	7.33
-1.00 +0.50mm	6.09	16.2	55.0	9.67	2.90
-0.50mm	81.06	6.9	36.7	21.80	16.60
<b>Total +0.5mm</b>	<b>18.94</b>	<b>23.6</b>	<b>41.9</b>	<b>8.31</b>	<b>6.01</b>
<b>Head Assay</b>	<b>11.0</b>	<b>36.2</b>	<b>18.7</b>	<b>14.50</b>	

**Table 2. Size fraction results and assays for screening of Sample 1.**

The test demonstrates that significant upgrading in manganese can be achieved through wet screening with silica and aluminium preferentially reporting to the fines (-0.5mm). It is believed that additional Dense Media Separation will improve the manganese grades.

### Sample 2

This sample comprised of 12 drill intervals from hole SCRC11\_003 from 25 to 37m down hole. The material consisted of weathered sediments and the material screened off was dominated by clays.

SIZE FRACTION	Recovery %	MnO%	Fe <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %
+3.35mm	3.52	17.2	55.1	9.06	2.55
-3.35 +2.00mm	6.60	16.8	56.3	7.78	2.71
-2.00 +1.00mm	8.50	15.5	58.5	7.12	2.84
-1.00 +0.50mm	6.81	24.8	40.0	7.36	6.88
-0.50mm	74.58	5.6	41.6	29.8	8.91
<b>Total +0.5mm</b>	<b>25.42</b>	<b>18.6</b>	<b>52.5</b>	<b>7.62</b>	<b>3.85</b>
<b>Head Assay</b>	<b>8.1</b>	<b>44.7</b>	<b>24.30</b>	<b>7.82</b>	

**Table 3. Size fraction results and assays for screening of Sample 2.**

Of note is the tenor of the iron, which reports >55% in the +1mm and coarser fractions. Iron at 52.51% Fe<sub>2</sub>O<sub>3</sub>% in the plus 0.5mm fraction confirms that iron and manganese are mineralogically associated.

### Sample 3

This sample comprised of 12 drill intervals from hole SCRC11\_003 from 40 to 53m down hole. This sample is a downhole continuation of sample 2, to the end of mineralisation.

SIZE FRACTION	Recovery %	MnO%	Fe <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %
+3.35mm	3.29	23.7	38.5	16.80	3.30
-3.35 +2.00mm	10.41	23.3	38.9	17.20	3.51
-2.00 +1.00mm	12.76	21.3	41.8	16.60	3.57
-1.00 +0.50mm	9.48	20.1	42.5	16.80	3.76
-0.50mm	64.05	10.5	38.7	24.70	10.4
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<b>Total +0.5mm</b>	<b>35.95</b>	<b>21.8</b>	<b>40.8</b>	<b>16.84</b>	<b>3.58</b>
<b>Head Assay</b>		<b>14.1</b>	<b>39.4</b>	<b>21.70</b>	<b>8.28</b>

**Table 4. Size fraction results and assays for screening of Sample 3.**

When sample 2 and 3 are combined they comprise some 25m at 30% recovery with 20% MnO and 46% Fe<sub>2</sub>O<sub>3</sub>, not including the 3m of waste separating the two mineralised horizons.

### Sample 4

This sample comprised of 16 drill intervals from hole SCRC11\_004 from 21 to 37m downhole. This interval ended in mineralisation, in which manganese nodules have precipitated in transported sands.

SIZE FRACTION	Recovery %	MnO%	Fe <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %
+6.30mm	3.96	22.7	9.1	52.8	2.02
-6.30 +3.35mm	4.55	22.9	10.2	51.5	2.04
-3.35 +2.00mm	4.05	21.7	12.4	49.6	2.50
-2.00 +1.00mm	5.57	20.8	14.0	47.8	3.15
-1.00 +0.50mm	5.35	14.3	9.8	64.1	2.44
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-0.50mm	76.52	3.1	6.64	76.1	7.96
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<b>Total +0.5mm</b>	<b>23.48</b>	<b>20.2</b>	<b>11.2</b>	<b>53.4</b>	<b>2.47</b>
<b>Head Assay</b>		<b>6.3</b>	<b>7.8</b>	<b>70.3</b>	<b>7.39</b>

**Table 5. Size fraction results and assays for screening of Sample 4.**

Although there is considerable upgrade in the MnO values the residual silica values indicate that further upgrading is likely. It appears that sand is still attached to the nodules which can be liberated, possibly through fine crushing and screening.

### Sample 5

This sample comprised of 12 drill intervals from hole SCRC11\_005 from 1 to 12m down hole. This sample is of weathered BIF and is considered to be common for the mineralisation encountered at the surface on the western limb.

SIZE FRACTION	Recovery %	MnO%	Fe <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %
-6.30 +3.35mm	1.85	19.9	36.4	16.9	3.76
-3.35 +2.00mm	7.93	20.6	38.0	15.4	3.75
-2.00 +1.00mm	11.38	21.6	38.9	14.3	3.64
-1.00 +0.50mm	9.27	21.6	40.9	12.8	3.75
-0.50mm	69.58	12.6	39.9	20.3	9.65
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<b>Total +0.5mm</b>	<b>30.42</b>	<b>21.2</b>	<b>39.1</b>	<b>14.3</b>	<b>3.71</b>
<b>Head Assay</b>		<b>15.1</b>	<b>39.5</b>	<b>18.2</b>	<b>7.77</b>

Table 6. Size fraction results and assays for screening of Sample 5.

### Discussion

Figure 1 below, shows the upgraded intervals in respect to their location in drill sections and in their interpreted mineralised units. Samples 1, 2 and 3 are representative of the manganese enriched sediments, which are believed to be the westerly dipping limb of an antiformal structure.

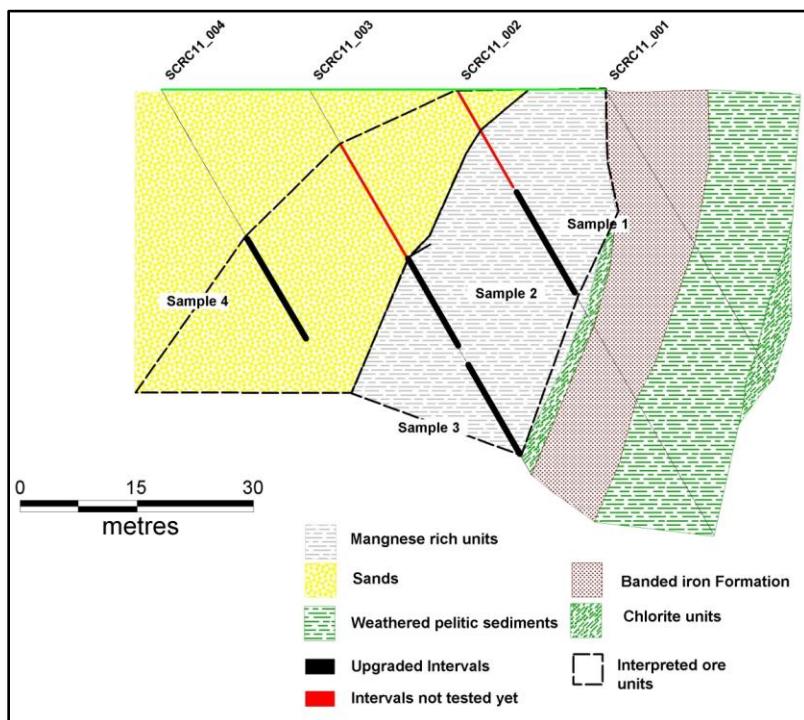
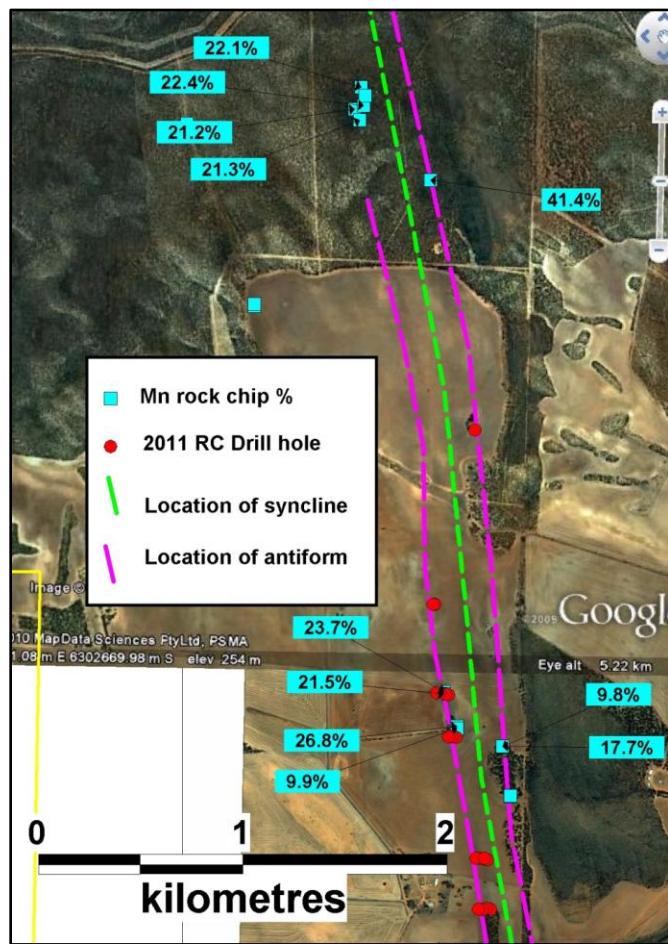


Figure 1. Cross section of southerly line showing location of samples taken for beneficiation

Figure 2 below shows the extension of the syncline, as well as the two sheared antiformal limbs from the southerly drill section. These sheared antiforms are referred to as the eastern limb and the western limb respectively.

The drilling conducted in April 2011 focused only on the southern end of the western limb. At the time of drilling a series of rock chip samples were taken from outcropping manganese to the north of the drilling area to confirm the extensions of these mineralised limbs. Most samples returned assays >21% Mn.

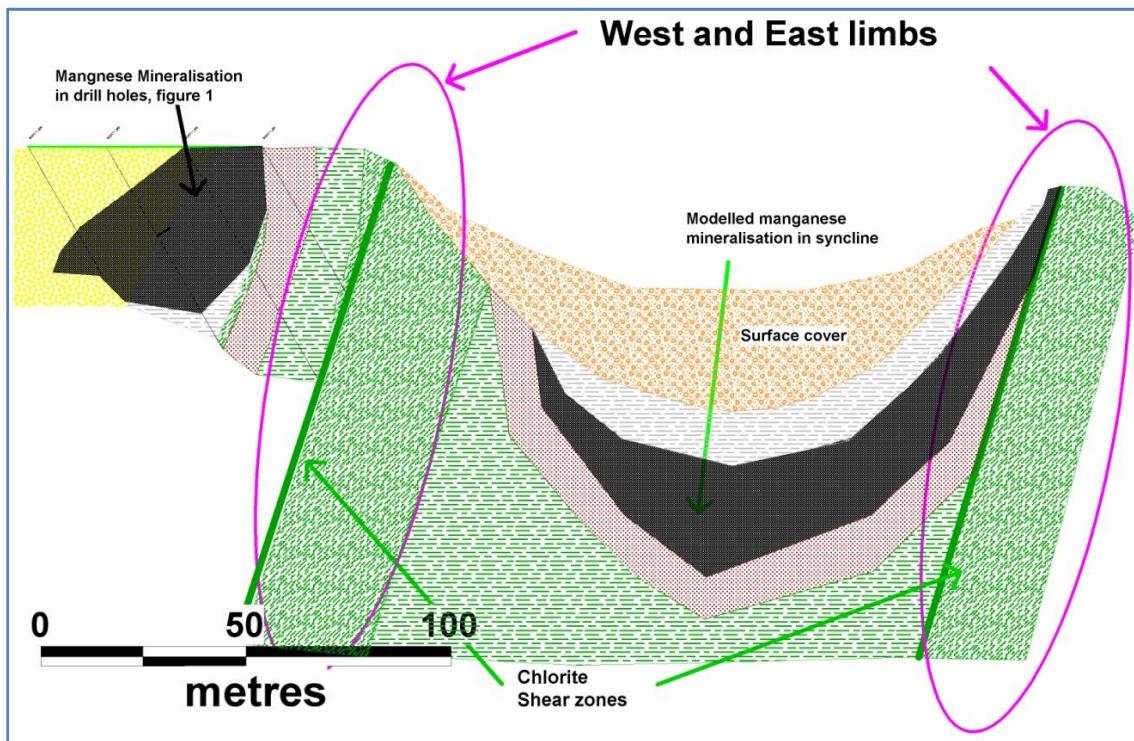
One sample from the undrilled eastern limb reported 41.4% Mn. The limited sampling of the eastern limb has identified elevated REE to 0.15%. The western limb does not have REE enrichment.



**Figure 2. Location of northern samples, showing approximate location sheared antiformal limbs**

During drilling it was noticed that both the manganese and iron have been mobilised by weathering as evidenced by the presence of manganese nodules in the sands and the leached BIF's.

It is believed that the syncline, shown in Figure 3, has potential to host manganese mineralisation that has been weathered out of both the east and west sheared limbs.



**Figure 3. A simple cross section of the modelled mineralisation hosted in the syncline**

#### **The next steps**

Dense media separation tests will be conducted to determine if the same samples can be upgraded through the removal of free silica and clays.

Drill testing of the syncline and the high grade eastern limb will be conducted following the 2011 harvest.

For further information please contact:

Mr Greg English  
Chairman  
Archer Exploration Limited  
Tel: (08) 8272 3288

Mr Gerard Anderson  
Managing Director  
Archer Exploration Limited  
Tel: (08) 8272 3288

*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.*