

18 February 2014

## **Alara Resources**

# AUQ A\$0.07/share

## Oman breakthrough

Heavy Media Separation (HMS) test work on the Washihi resource has been completed and has been successful in providing a breakthrough for the project. HMS is shown to increase the copper grade from 0.9-1.0% to 1.8-2.0%. An options analysis study is expected to be completed this month and an updated scoping study incorporating the HMS circuit is due in March. The HMS circuit has the potential to significantly enhance the value of the Oman assets. We maintain our BUY on AUQ with NPV of A\$0.55/share, comprising just \$0.02/share for Oman.

## HMS breakthrough at Washihi (70-75%)

- ALS and Meagabest successfully complete HMS work.
- Ore from Washihi North, Central and South tested.
- Test work results comprise:
  - Mass balance 45-50% to final process plant feed
  - Cu Grade 1.5 to 2.0 times grade enhancement
  - o Metal losses 8-10% overall metal loss
- In summary copper grade rises to ~2.0% after rejecting half the mass with metal loss of 10%.
- HMS circuit of 1-2Mtpa estimated at A\$5M-8M capex.
- Resources comprise 11Mt @ 0.9% Cu (0.5% cut-off).

## The way forward

- Further testing to confirm optimal crush size.
- Options analysis study to include HMS circuit.
- Scoping study to include HMS circuit.

## Options for development

AUQ is evaluating the following options:

- 1Mtpa conventional floatation.
- HMS followed by 1Mtpa conventional floatation.
- HMS followed by 0.5Mtpa conventional floatation.
- Off-site toll treatment (Sohar smelter ~250km NW).
- On-site conventional heap leach.
- On-site contained/vat leach.

## Comment

- HMS has potential to significantly improve economics.
- Options exist for low cost development or sale.
- Several parties remain interested in the Oman assets.
- AUQ's main focus remains Khnaiguiyah in Saudi.
- Discussions continue with the JV partner Manajem.
- We remain confident on resolution of JV issues soon.
- Options to MD & Prince Al Saud (3.3M & 10M respectively) subject to resolution of JV by the end of March.

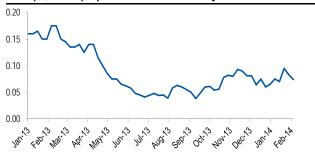
Company Data	
Shares – ordinary	242.0M
Options (\$0.10-0.70/share – out of the money)	36.8M
Market Cap	\$17.7M
12 month low/high	\$0.04 / \$0.21
Average monthly turnover	\$1.0M
Average monthly volume	9.7M

#### **Financial Summary**

Year end June	2013A	2014F	2015F	2016F	2017F
Revenue (\$M)	0.0	0.0	0.0	19.5	130.7
Costs (\$M)	6.9	4.8	5.1	15.2	70.7
EBITDA (\$M)	(6.9)	(4.8)	(5.1)	4.3	59.9
NPAT (\$M)	(6.7)	(4.7)	(8.4)	(5.3)	32.5
EPS (¢ps)	(2.9)	(1.9)	(3.5)	(2.2)	13.4
EPS Growth (%)	na	na	na	na	>100
PER (x)	na	na	na	na	0.5
Cashflow (Gross-\$M)	(3.6)	(4.7)	(8.4)	(3.6)	51.5
CFPS (¢ps)	(1.5)	(1.9)	(3.5)	(1.5)	21.3
PCFPS (x)	na	na	na	na	0.3
Enterprise Value (\$M)	6	15	126	193	144
EV / EBITDA (x)	na	na	na	44.5	2.4

Substantial Shareholders (FPO)	Shares (M)	(%)
Antares	23.3	9.6%
Acorn	23.0	9.5%
Northcape	21.8	9.0%

## AUQ (A\$/share) - performance over one year



## Disclosure and Disclaimer

This report must be read with the disclosure and disclaimer on the final page of this document.

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## **Heavy Media Separation Process**

HMS is one of the simplest and well known gravity separation methods.

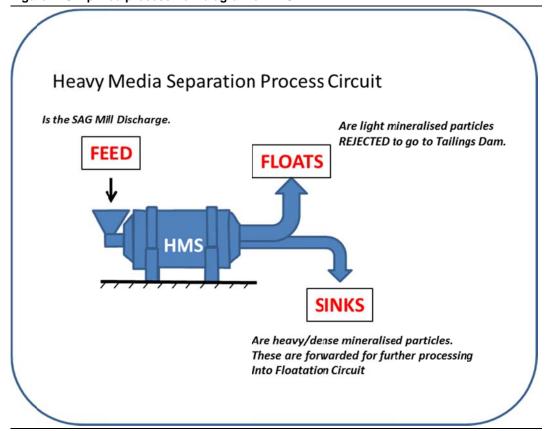
Heavy (or dense) media separation (HMS), often referred to as the sink-float process, is one of the simplest gravity separation methods used in mineral processing (Fig. 1). The HMS process uses a heavy medium (fluid) with a density set between the dense and light particles in the feed ore. When the feed ore is passed through the heavy medium, the heavier, more mineralised particles will tend to sink thus resulting in the lighter non-economic material to float out of the circuit.

The HMS pre-concentration process is common in base metals flotation processing plants and is applicable where there is a significant density contrast between the metal sulphides presented as stringer/stockwork, and the waste rock. The process is suited to the Washihi deposit where there is a sharp distinction between the dense chalcopyrite sulphide mineralisation and the less dense waste rock.

## Key points on HMS:

- HMS dense medium is a mixture of very find high grade ferrosilicon and water
- It is a pre-concentration process that upgrades the ore metal to be processed by removing a large proportion of the waste rock prior to flotation
- The metal sulphides are significantly softer in comparison to the siliceous waste rock
- There is significant power saving in grinding and upgrading the ore going forward to the flotation plant
- Overall it is a low capital and operating cost process expected to deliver significant benefits.

Figure 1: Simplified process flow diagram of HMS



Source: Alara Resources



## **Economic Parameters**

An HMS circuit of 1-2Mtpa throughput (thus a 0.5-1.0Mtpa discharge to the flotation circuit) has an estimated capital cost range of A\$5-8M and can be operated at an estimated cost of between A\$1.00-1.50/tonne of feed to the HMS plant.

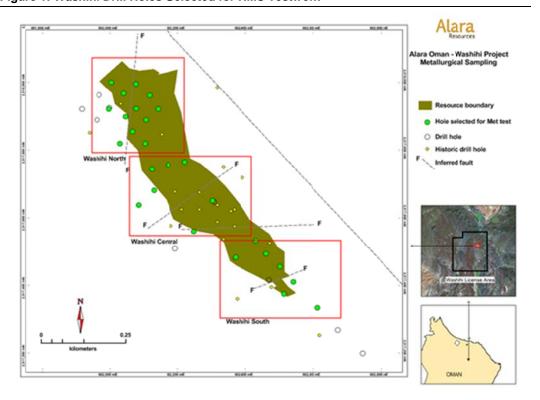
## Washihi HMS Test Work Results

Test work was carried out by ALS Ammtec Labs and Megabest Metallurgy Consulting. Washihi North Composite:

- Sinks Ore = 52.6%Wt @ 2.0% Cu at 86% recovery, 0.45g/t Au at 71.3% recovery
- Float Tails = 47.4% Wt @ 0.35% Cu at 14% recovery, 0.11g/t Au at 16% recovery Washihi Central Composite:
- Sinks Ore = 47.3%Wt @ 2.26 Cu at 94.3% recovery, 0.57g/t Au at 87% recovery
- HLS Tails = 52.7% Wt @ 0.12% Cu at 5.7% recovery, 0.07g/t Au at 12.2% recovery Washihi South Composite:
- Sinks Ore = 46.3%Wt @ 1.62% Cu at 90.7% recovery, 0.51g/t Au at 84.8% recovery
- HLS Tails = 53.7% Wt @ 0.14% Cu at 9.3% recovery, 0.07g/t Au at 12.9% recovery

Figure 1: Washihi Drill Holes Selected for HMS Testwork

Representative samples from three mineralised zones (Washihi North, Central and South) were composited and used for HMS test work.



Source: Alara Resources



## **Analysis**

ALARA RESOURCES (AUQ) 18-Feb-14							Share Price Iss. Shares Iss. Options (unlisted)	(\$) (M) (M)	0.07 242.0 36.8 E	x @ \$0.10-\$0	C.	ETRA A P I T A L the money	N
							Equity	(M)	242.0				
Year End 30 June	A\$						Mkt Cap.	(\$M)	17.7				
PROFIT & LOSS	\$M	2013A 0.0	2014F 0.0	2015F 0.0	2016F 19.5	2017F 130.7	RESERVES / RESOURCES		2013A	2014F	2015F	2016F	2017F
Sales Revenue Other Income	\$M	0.0	0.0	0.0	0.0	0.0	Reserves Tonnes	Mt	29.99	29.99	29.99	29.59	27.42
Operating Costs	SM	3.9	4.8	5.1	15.2	70.7	Copper	%	0.24	0.24	0.24	0.24	0.23
Exploration	\$M	3.1	0.0	0.0	0.0	0.0	Zinc	%	3.30	3.30	3.30	3.29	3.17
Other	\$M	0.0	0.0	0.0	0.0	0.0	Resources						
EBITDA	\$M	(6.9)	(4.8)	(5.1)	4.3	59.9	Tonnes	Mt	35.00	35.00	35.00	34.60	32.43
Dep. & Amort.	\$M	0.0	0.0	0.0	1.7	15.3	Copper	%	0.25	0.25	0.25	0.25	0.24
EBIT	\$M	(6.9)	(4.8)	(5.1)	2.6	44.6	Zinc	%	3.10	3.10	3.10	3.09	2.98
Net Interest Pre-Tax Profit	\$M <b>\$M</b>	(0.2)	(0.0)	3.3	7.9 (5.3)	8.5 <b>36.2</b>	PRODUCTION (100%)						
Tax	\$M	( <b>6.7</b> ) 0.0	( <b>4.7</b> ) 0.0	( <b>8.4)</b> 0.0	0.0	3.6	Khnaiguiyah Tonnes	Mt	0.00	0.00	0.00	0.40	2.17
Minorities	SM	0.0	0.0	0.0	0.0	0.0	Copper	%	0.00	0.00	0.00	0.35	0.40
Net Profit	\$M	(6.7)	(4.7)	(8.4)	(5.3)	32.5	Zinc	%	0.00	0.00	0.00	4.00	4.80
Abnormal	\$M	(0.2)	0.0	0.0	0.0	0.0	Metal in concentrate (pre-ch	arges)					
Reported Profit	\$M	(6.9)	(4.7)	(8.4)	(5.3)	32.5	Cu in concentrate	Т	C	0	0	1,246	7,812
Dividends	\$M	0.0	0.0	0.0	0.0	0.0	Zn in concentrate	Т	C	0	0	14,560	95,827
Adjustments	\$M	0.0	0.0	0.0	0.0	0.0	ATTRIBUTABLE REVENUE	(post smelte	r charges)				
Retained Earnings	\$M	(29.3)	(34.0)	(42.4)	(47.8)	(15.2)	Project					40.5	400 7
CASH FLOW Revenue	SM	0.0	0.0	0.0	19.5	130.7	Khnaiguiyah Other	A\$M A\$M	0.0 0.0	0.0	0.0	19.5	130.7
Costs	SM	(3.9)	(4.8)	(5.1)	(15.2)	(70.7)	Total	A\$M A\$M	0.0	0.0	0.0	19.5	130.7
Net Interest	\$M	0.3	0.0	(3.3)	(7.9)	(8.5)	Commodity		0.0	0.0	0.0	10.0	.00.7
Tax Paid	\$M	0.0	0.0	0.0	0.0	0.0	Copper	A\$M	0.0	0.0	0.0	4.5	27.3
<b>Gross Cash Flow</b>	\$M	(3.6)	(4.7)	(8.4)	(3.6)	51.5	Zinc	A\$M	0.0	0.0	0.0	15.0	103.4
Net Capex	\$M	(10.3)	(1.7)	(102.9)	(63.1)	(2.1)	Other	A\$M	0.0	0.0	0.0	0.0	0.0
Exploration	\$M	0.0	0.0	0.0	0.0	0.0	Total	A\$M	0.0	0.0	0.0	19.5	130.7
Dividends	SM	0.0	0.0	0.0	0.0	0.0	ATTRIBUTABLE COSTS (ii						
Other	\$M	0.0	4.4	0.0	0.0	0.0	Khnaiguiyah	A\$M	3.4	2.8	3.1	13.2	68.7
Free Cashflow	\$M	(13.9)	(2.0)	(111.3)	(66.7)	49.3	Corporate and Other	A\$M	0.4	2.0	2.0	2.0	2.0
Equity Issues Net Borrowings	SM SM	7.5 0.0	0.0 3.0	0.0 115.0	70.0	0.0 (45.0)	Total Cash Costs (pre credits)	A\$M US\$/lb	3.9 0.00	4.8 0.00	5.1 0.00	15.2 0.81	70.7 0.63
Net Investments	\$M	0.0	0.0	0.0	0.0	0.0	Cash Costs (after credits)	US\$/lb	0.00	0.00	0.00	0.53	0.88
Surplus Cash Flow	\$M	(6.4)	1.0	3.7	3.3	4.3	Cash Costs (all-in)	US\$/lb	0.00	0.00	0.00	0.79	0.42
BALANCE SHEET	****	(51.1)					ATTRIBUTABLE CAPEX						
Cash	\$M	4.5	5.5	9.2	12.5	16.8	Khnaiguiyah	A\$M	8.8	1.7	102.9	63.1	2.1
Other Current	\$M	1.3	0.0	0.0	0.4	2.5	Other	A\$M	1.5	0.0	0.0	0.0	0.0
<b>Total Current</b>	\$M	5.8	5.5	9.2	12.9	19.3	Total	A\$M	10.3	1.7	102.9	63.1	2.1
Fixed Assets	\$M	29.5	31.2	134.1	195.4	182.2	ATTRIBUTABLE DEPRECI				77.77		
Exploration	\$M	0.0	0.0	0.0	0.0	0.0	Khnaiguiyah	A\$M	0.0	0.0	0.0	1.7	15.3
Intangibles	\$M	0.0	0.0	0.0	0.0	0.0	Other	A\$M	0.0	0.0	0.0	0.0	0.0
Other Total NC Assets	\$M <b>\$M</b>	5.7 <b>35.3</b>	1.3 32.5	1.3 135.4	1.3 <b>196.7</b>	1.3 183.5	Total HEDGING	A\$M	0.0	0.0	0.0	1.7	15.3
TOTAL ASSETS	\$M	41.0	38.0	144.6	209.6	202.9	Copper hedged	t	C	0	0	0	0
Total Debt	\$M	0.0	3.0	118.0	188.0	143.0	Currency nedged	A\$/US\$	Q	0	0	0	0
Current Liab	SM	1.8	1.8	1.8	1.8	5.4	Hedged price	US\$/Ib	0	0	0	0	0
Non Current Liab	\$M	1.8	0.5	0.5	0.8	3.0	Hedged price	A\$/Ib	C	0	0	0	0
TOTAL LIAB	\$M	3.6	5.3	120.3	190.6	151.4	Sales hedged	%	0%	0%	0%	0%	0%
NET ASSETS	\$M	37.5	32.7	24.3	19.0	51.5	Ave.price delivCu	US\$/lb	3.47	3.21	3.10	2.88	2.75
SH/HLDRS FUNDS	\$M	37.5	32.7	24.3	19.0	51.5	Ave.price delivCu	A\$/lb	3.39	3.54	3.54	3.42	3.33
RATIO ANALYSIS	4	(2.0)	(4.0)	(2.5)	(2.2)	12.4	Zinc hedged	4	0	0	0	0	0
EPS PER	¢	(2.9) na	(1.9) na	(3.5) na	(2.2) na	13.4	Currency nedged Hedged price	A\$/US\$ US\$/Ib	0	0	0	0	0
EPS Growth	%	na	na	na	>100	>100	Hedged price	A\$/lb	o o	0	o	0	0
EBITDA per share	¢	(3.0)	(2.0)	(2.1)	1.8	24.8	Sales hedged	%	0%	0%	0%	0%	0%
EBITDA Multiple	×	(1.5)	(3.7)	(3.4)	4.1	0.3	Ave.price delivZn	US\$/lb	0.87	0.88	0.93	0.93	0.95
EV/EBITDA	×	(0.9)	(3.2)	(24.6)	44.5	2.4	Ave.price delivZn	A\$/lb	0.85	0.97	1.06	1.10	1.15
CFPS	¢	(1.5)	(1.9)	(3.5)	(1.5)	21.3							
PCFR	×	na	na	na	na	0.3	ASSUMPTIONS						
DPS	¢	0.0	0.0	0.0	0.0	0.0	Exchange Rate	A\$/US\$	1.02	0.91	0.88	0.84	0.83
Yield Erapking	% %	0.0	0.0	0.0 100	0.0 100	0.0 100	Zinc Lead	US\$/lb US\$/lb	0.87 0.97	0.88	0.93	0.93	0.95
Franking Payout Ratio	%	0%	0%	0%	0%	0%	Copper	US\$/Ib	3.47	3.21	3.10	2.88	2.75
Gearing D/E	%	na	na	447.8	925.7	245.0	Gold	US\$/oz	1595	1275	1250	1250	1238
Interest Cover	×	30.7	120.8	na	0.3	5.3	Silver	US\$/oz	28.82	20.55	20.00	20.00	19.00
EBITDA Margin	%	na	na	na	22.3	45.9	90 day Bank Bills	%	3.15	2.61	2.55	2.63	2.88
EBIT Margin	%	na	na	na	13.3	34.2	10 Yr Bond rate	%	3.29	4.01	3.75	3.38	3.38
Return On Assets	%	(16.9)	(12.5)	(3.6)	1.2	22.0	Int. Rate Charged	%	4.29	5.01	4.75	4.38	4.38
Return On Equity	%	(17.9)	(14.4)	(34.7)	(28.2)	63.2	VALUATION					A\$M	A\$ps
Eff Tax rate	%	0	0	0	0	10	Khnaiguiyah - Saudi					133.8	\$0.55
OTHER DATA	12.00	Co. No	1000	9 <u>2</u> 55 × 1×	12.75	1200	Washihi - Oman					5.0	\$0.02
Share Price	\$/sh.	0.05	0.07	0.07	0.07	0.07	Exploration					5.0	\$0.02
Number of shares	M	231	242	242	242	242	Corporate and Other						\$ (0.07)
Market Capitalisation EV	SM SM	10	18	18	18	18	Net Cash (Debt)					5.5	\$0.02
F M	\$M	6	15	126	193	144	Total					132.2	\$0.55

Source: Petra Capital



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