

MEDIA / ASX RELEASE

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## SOUTH WOODIE WOODIE METALURGICAL TEST RESULTS

**+40% Manganese product achieved via simple metallurgical processing**

- Samples from Contact North can produce Lump Product grades of up to 44.6% Mn
- Samples from Contact can produce Lump Product grades of up to 41.6% Mn
- Testwork shows the samples are skewed towards lump concentrate production
- Favourable yield returns from simple processing techniques were seen in all samples
- Combined Contact/Contact North JORC resource expected in the first quarter 2012

Spitfire Resources Limited (ASX: **SPI** – "Spitfire") is pleased to announce that it has received the metallurgical test results for its Contact and Contact North manganese deposits located in the East Pilbara region of Western Australia.

Favourable results have been returned from the metallurgical test work program which is based on diamond core samples from the Contact and Contact North deposits.

The results of the Dense Media processing of the samples show that the samples taken from the Contact deposit produced a manganese lump product of up to 41.6% Mn. Samples taken from the larger Contact North deposit can produce a lump product of up to 44.6% manganese.

### Background

Following the encouraging results of prior upgrade test work at the Contact and Contact North deposits (see *ASX Announcement 28 January 2011*), 11 PQ Diamond holes were drilled in 2010/11 to provide manganese samples for the metallurgical test work program. Nine composite samples were compiled for the test work.

Deposit	Hole ID	Easting	Northing	Composite No	Interval	Head Grade %Mn	Lump Grade %Mn	Lump Yield %	Fines Grade %Mn	Fines Yield %
<b>Contact 2.9 SG</b>	CDD002	311504	7536852	2	12-34 m	24.3	32.3	19.3	34.8	32.3
	CDD003	311547	7536846	3	12-30 m	25.1	39.8	35.1	34.7	13.5
	CDD004	311601	7536809	456	29-35 m	27.9	41.6	35.0	37.6	20.1
	CDD005	311495	7536905	456	8-13 m					
	CDD006	311453	7536894	456	25-31 m					
	CDD007	311453	7536849	7	9-19 m	26.7	41.4	41.0	32.5	15.9
	CDD008	311399	7536897	8	8-25 m	21.5	27.1	19.1	31.1	16.3
	CDD009	311394	7536954	9	5-18 m	16.1	23.0	24.5	23.1	14.1
	<b>Contact North 2.7 SG</b>	CDD001	311104	7537503	1	52-67 m	40.5	44.6	60.1	44.5
CDD010		311204	7537857	10	55-64 m	30.9	42.1	62.2	38.1	12.1
CDD011		311345	7537455	11	38-45 m	34.0	41.6	39.8	39.8	37.0

Table 1: Composite sample locations and results

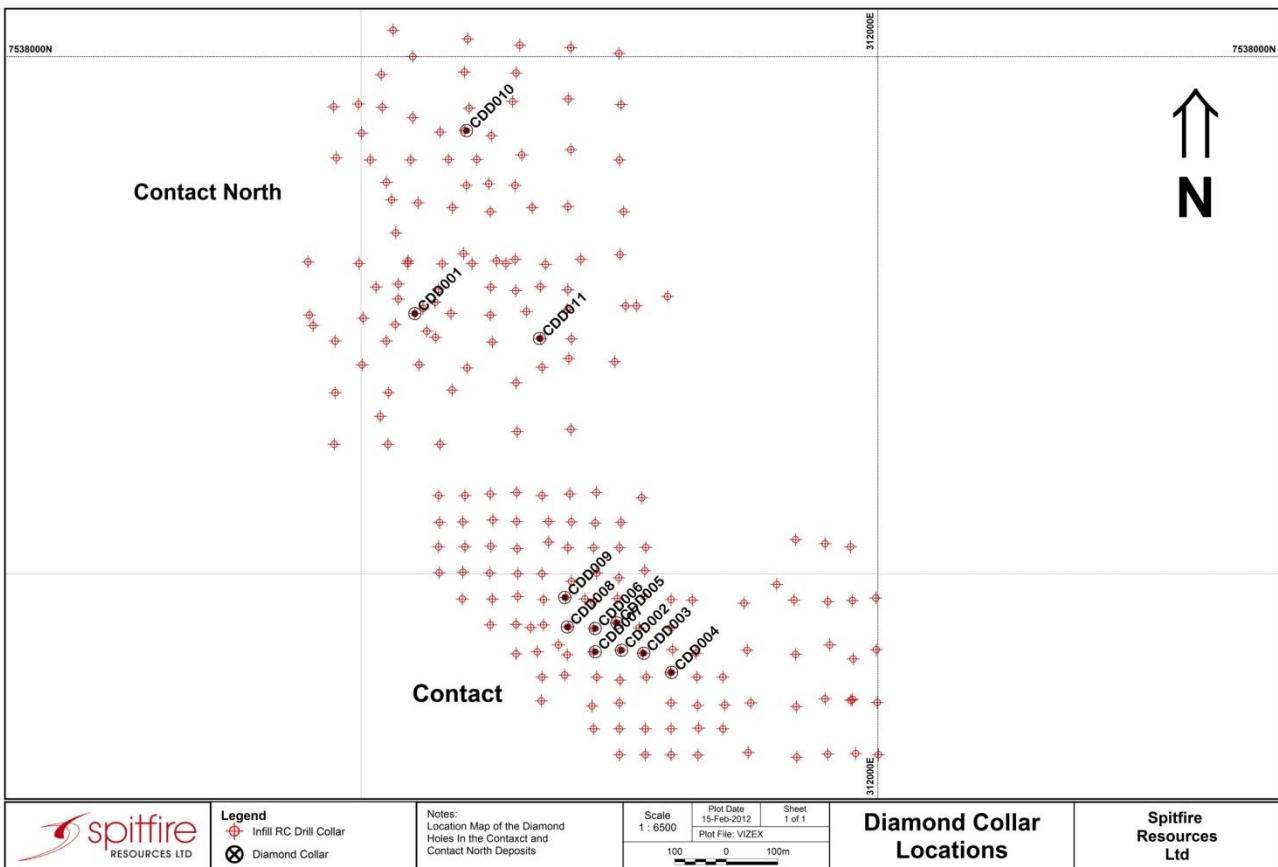


Figure 1: Location map of the diamond drill holes

Metallurgical test work on the diamond core was performed by Nagrom under supervision from Mineral Engineering Technical Services Pty Ltd ("METS"). METS developed the test plans in association with direction from Spitfire Resources. The aim of the program was to explore processing options for the Contact and Contact North deposits and to determine if a high grade (greater than 40%) manganese product was achievable.

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Steps in the test work programme included:

- Core samples were assayed to determine manganese grades per metre and determine in-situ specific gravities
- Samples were assayed by size to determine manganese grades in the different size fractions
- Samples were wet scrubbed to remove the slimes (-1 mm material) from the ore
- Dense Medium Separation was used on lump and fines to determine manganese product grades and recoveries

### **Results summary**

The test-work showed that the samples extracted from the Contact North deposit can produce a Mn lump product at grades of up to 44.6% Mn with lump yields of 60.1% and fines grades of up to 44.5% Mn and fines yield on 19.7% at SG of 2.7 (see Table 1).

The test-work showed that the samples extracted from the Contact deposit can produce a Mn lump product at grades of up to 41.6% Mn with lump yields of 35.0% and fines grades of up to 37.6% Mn and fines yield on 20.0% at SG of 2.9 (see Table 1).

Following the initial scalping stage, high manganese grades were seen in the waste product (Floats) in the Contact North Lump assay results. The Lump floats were reprocessed at a lower SG of 2.7 and this increased the yield by 18.8% but only dropped the Contact North lump manganese grade by 2%. Combining the results for the Contact North lump at the lower 2.7 SG cut-off achieved an overall manganese grade of 41.6% Mn and recovered 70.7% of the sample tested.

The Fines produced at Contact/Contact North could potentially grade above 40% Manganese and could still be produced as a viable product in addition to the overall Lump product tonnes for the Deposits. The beneficiation characteristics of manganese slimes/sands (<1mm) was not examined as part of the test work.

Drilling and metallurgical analysis has shown the Contact/Contact North deposits to be low grade but could potentially upgrade to manganese grades similar to some Direct Shipping Ore (DSO) deposits.

Spitfire's Managing Director, John Mackenzie, said the Company was extremely pleased with the results of the metallurgical testing:

"We are very encouraged by the results of the metallurgical test work which indicates that the Contact and Contact North deposits can potentially deliver a product of greater than 40% Mn with good yields and low concentrations of deleterious material making the product attractive to potential customers. The test-work also confirmed the metallurgical assumptions made in the internal scoping study carried out in 2011.

Our goal in 2012 is to find more of these types of deposits at South Woodie Woodie so we can rapidly advance the project towards a Bankable Feasibility Study. We are planning a very large Gradient Array IP program this year over geological hot spots to find more targets for drilling in the same way we discovered Contact and Contact North."

**ENDS**

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Further enquiries should be directed to:

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### **Competent Person's Statement**

*The information in this report relating to exploration results and mineral resources is based on information compiled by Mr. N. Cull who is a Member of the Australian Institute of Geoscientists. Mr. Cull is a senior geological consultant for Spitfire Resources Ltd, and consents to the inclusion in this type of report of the information as presented. He has sufficient experience relevant to the style of mineralisation and to the type of activity described to qualify as a competent person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.'*

### **About Spitfire Resources**

*Spitfire Resources Limited (ASX Code: SPI) is an emerging Australian resource development company focused on the carbon steel materials sector. Spitfire's flagship asset is the South Woodie Woodie Manganese Project, which is located approximately 70km down-strike to the south from the 1.2Mtpa Woodie Woodie Manganese Mine in the East Pilbara region of Western Australia.*

*Spitfire's principal focus will remain the exploration and evaluation of manganese deposits in the East Pilbara, although it has also acquired a portfolio of prospective base metals tenure in the Northern Territory which offers the potential for future diversification.*

### **References**

*SPITFIRE RESOURCES LIMITED South Woodie Woodie Manganese Project Metallurgical Testwork Management Report, Document No: J553-P-RP-000-000-0, Mineral Engineering Technical Services Pty Ltd*

## Appendix A: Tables

### Scrubbing Results- Contact Deposit

Lump (-31.5 +6.3)	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	kg	%	%	%	%	%	%	%
Comp 2	44.0	33.1	24.3	17.5	3.0	0.037	26.5	0.002
Comp 3	46.0	26.6	25.1	21.4	2.5	0.023	19.8	0.004
Comp 456	46.0	35.7	27.9	13.5	3.9	0.030	25.6	0.003
Comp 7	56.0	57.1	26.2	14.0	4.9	0.026	26.8	0.005
Comp 8	42.0	39.3	21.5	15.0	3.6	0.029	34.9	0.002
Comp 9	44.0	50.6	16.1	19.4	5.6	0.045	32.9	0.008
Total	278.0							
Lump Grade			23.7	16.7	4.0	0.031	27.6	0.004
Lump Grade (excl. Composites 8 & 9)			25.9	16.5	3.7	0.029	24.8	0.004

**Table 2: Contact deposit Scrubbing results from the lump (32mm – +6.3mm)**

Fines (-6.3 +1.0)	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	kg	%	%	%	%	%	%	%
Comp 2	38.8	29.2	21.5	20.7	3.4	0.042	25.8	0.006
Comp 3	23.4	13.5	15.8	23.4	3.7	0.039	30.1	0.002
Comp 456	27.2	21.1	20.6	18.6	3.9	0.043	28.8	0.002
Comp 7	18.2	18.6	22.5	16.4	5.1	0.028	28.6	0.007
Comp 8	20.0	18.7	15.8	18.2	4.9	0.034	37.2	0.003
Comp 9	20.6	23.7	9.5	20.4	8.3	0.055	38.3	0.010
Total	148.3							
Fines Grade			18.1	19.8	4.6	0.041	30.7	0.005
Fines Grade (excl. Composites 8 & 9)			20.2	20.0	3.9	0.039	28.0	0.004

**Table 3: Contact deposit scrubbing results from the fines (-6.3mm – 1.0mm)**

Slimes (-1.0)	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	kg	%	%	%	%	%	%	%
Comp 2	50.2	37.7	5.3	16.6	13.2	0.035	43.4	0.002
Comp 3	103.6	59.9	4.8	16.6	12.6	0.038	45.6	0.001
Comp 456	55.8	43.2	6.2	17.1	9.9	0.038	45.1	0.001
Comp 7	23.8	24.3	7.1	11.5	10.0	0.020	53.7	0.002
Comp 8	45.0	42.1	3.4	11.8	11.8	0.024	57.3	0.001
Comp 9	22.4	25.7	2.0	9.9	14.8	0.030	56.7	0.004
Total	300.7							
Slimes Grade			4.9	15.1	12.0	0.034	48.3	0.001
Slimes Grade (excl. Composites 8 & 9)			5.5	16.2	11.8	0.036	45.8	0.001

**Table 4: Contact deposit scrubbing results from the slimes (-1.0mm)**

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Lump Grade	36.0	25.9	16.5	3.7	0.0288	24.8	0.0036
Fines Grade	20.2	20.2	20.0	3.9	0.0393	28.0	0.0043
Slimes Grade	43.8	5.5	16.2	11.8	0.0358	45.8	0.0013
Total	100.0						
Head Grade		15.8	17.1	7.3	0.0340	34.6	0.0027
Product Grade (+1 mm)	56.2	23.9	17.7	3.7	0.0326	25.9	0.0038

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Lump Distribution	36.0	59.0	34.7	18.2	30.5	25.8	47.3
Fines Distribution	20.2	25.8	23.7	10.8	23.3	16.3	31.6
Slimes Distribution	43.8	15.2	41.6	71.1	46.1	57.9	21.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Product Distribution (+1 mm)		84.8	58.4	28.9	53.9	42.1	78.9

**Table 5: Contact deposit overall Grade and distribution from the scrubbing tests**

### Scrubbing Results- Contact North Deposit

Lump (-31.5 +6.3)	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	kg	%	%	%	%	%	%	%
Comp 1	47.0	46.1	40.5	13.3	1.7	0.043	7.1	0.002
Comp 10	22.6	41.9	31.0	12.9	1.6	0.037	23.0	0.001
Comp 11	4.5	22.5	34.0	15.9	1.6	0.023	15.5	0.006
Total	74.2							
Lump Grade			37.2	13.3	1.7	0.040	12.5	0.002

**Table 6: Contact North deposit Scrubbing results from the lump (32mm – +6.3mm)**

Fines (-6.3 +1.0)	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	kg	%	%	%	%	%	%	%
Comp 1	18.5	18.2	32.9	16.8	2.1	0.051	14.3	0.002
Comp 10	8.5	15.8	19.1	16.4	1.8	0.056	37.6	0.006
Comp 11	4.9	24.6	32.9	16.8	1.8	0.027	15.8	0.005
Total	32.0							
Fines Grade			29.2	16.7	1.9	0.049	20.7	0.004

**Table 7: Contact North deposit Scrubbing results from the fines (-6.3mm – 1.0mm)**

Slimes (-1.0)	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	kg	%	%	%	%	%	%	%
Comp 1	36.5	35.7	6.7	23.5	8.5	0.082	37.6	0.001
Comp 10	22.9	42.3	3.8	21.6	7.3	0.093	46.6	0.001
Comp 11	10.6	52.8	6.2	22.9	11.6	0.048	36.0	0.008
Total	69.9							
Slimes Grade			5.8	22.9	8.7	0.081	39.8	0.001

**Table 8: Contact North deposit scrubbing results from the slimes (-1.0mm)**

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Lump Grade	42.1	37.2	13.3	1.7	0.040	12.5	0.002
Fines Grade	18.2	29.2	16.7	1.9	0.049	20.7	0.004
Slimes Grade	39.7	5.8	22.9	8.7	0.081	39.8	0.001
Total	100.0						
Head Grade		23.3	17.7	4.5	0.058	24.8	0.002
Product Grade (+1 mm)	60.3	34.8	14.3	1.8	0.042	14.9	0.002

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Lump Distribution	42.1	67.2	31.6	15.8	29.0	21.2	41.9
Fines Distribution	18.2	22.8	17.1	7.8	15.4	15.2	32.9
Slimes Distribution	39.7	10.0	51.3	76.4	55.6	63.7	25.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Product Distribution (+1 mm)		90.0	48.7	23.6	44.4	36.3	74.9

**Table 9: Contact North deposit overall Grade and distribution from the scrubbing tests**

### Dense Media Test Results (DMS) - Contact Deposit

Sinks 2.9	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 2	2360.3	54.0	34.8	16.3	3.0	0.032	12.3	0.005
Comp 3	1723.2	36.4	34.7	16.5	2.8	0.035	12.0	0.002
Comp 456	2374.6	48.0	37.6	14.3	2.6	0.036	11.2	0.004
Comp 7	2431.4	55.9	32.5	16.2	4.3	0.031	14.2	0.009
Comp 8	1882.8	37.8	31.1	16.2	3.4	0.029	17.6	0.005
Comp 9	1404.9	31.1	23.1	22.6	4.3	0.058	18.5	0.011
Total	12177.2							
Sinks Grade			33.0	16.6	3.4	0.036	13.9	0.006
Sinks Grade (excl. Composites 8 & 9)			34.9	15.8	3.2	0.033	12.5	0.005

**Table 10: Contact deposit DMS results from the Sinks (-6.3mm – 1.0mm)**

Floats 2.9	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 2	2009.1	46.0	7.9	24.4	3.7	0.048	41.7	0.007
Comp 3	3015.0	63.6	6.8	26.8	4.1	0.040	38.7	0.005
Comp 456	2574.5	52.0	9.4	21.3	4.8	0.047	41.3	0.002
Comp 7	1919.7	44.1	10.7	16.3	6.1	0.028	46.2	0.008
Comp 8	3100.7	62.2	7.9	19.9	5.3	0.036	46.6	0.004
Comp 9	3108.5	68.9	4.9	21.4	8.8	0.056	43.6	0.004
Total	15727.5							
Floats Grade			7.7	21.9	5.6	0.043	42.9	0.005
Floats Grade (excl. Composites 8 & 9)			8.5	22.7	4.6	0.041	41.6	0.005

**Table 11: Contact deposit DMS results from the Floats (-6.3mm – 1.0mm)**

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Sinks Grade	43.6	34.9	15.8	3.2	0.033	12.5	0.0052
Floats Grade	56.4	8.5	22.7	4.6	0.041	41.6	0.0052
Total	100.0						
Head Grade		20.0	19.7	4.0	0.038	28.9	0.0052

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Sinks Distribution	43.6	76.0	35.0	35.0	38.7	18.8	43.8
Floats Distribution	56.4	24.0	65.0	65.0	61.3	81.2	56.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 12: Contact deposit overall Grade and distribution from the DMS tests

### Dense Media Test Results (DMS) - Contact North Deposit

Sinks 2.9	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 1	3415.6	68.2	44.5	10.9	1.7	0.044	5.5	0.002
Comp 10	1542.0	35.3	38.1	14.4	2.0	0.063	9.1	0.001
Comp 11	1386.7	72.0	39.8	15.1	1.7	0.025	7.7	0.006
Total	6344.3							
Sinks Grade			41.9	12.7	1.8	0.044	6.8	0.003

Table 13: Contact North deposit DMS results from the Sinks (-6.3mm – 1.0mm)

Floats 2.9	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 1	1593.9	31.8	11.6	24.5	2.9	0.058	35.4	0.004
Comp 10	2826.9	64.7	8.4	16.9	1.5	0.046	55.2	0.006
Comp 11	540.0	28.0	15.4	20.5	2.2	0.030	37.5	0.005
Total	4960.8							
Floats Grade			10.2	19.7	2.0	0.048	46.9	0.005

Table 14: Contact North deposit DMS results from the Floats (-6.3mm – 1.0mm)

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Sinks Grade	56.1	41.9	12.7	1.8	0.044	6.8	0.003
Floats Grade	43.9	10.2	19.7	2.0	0.048	46.9	0.005
Total	100.0						
Combined Grade		28.0	15.8	1.9	0.046	24.4	0.004

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Sinks Distribution	56.1	84.0	45.1	52.9	54.3	15.7	39.1
Floats Distribution	43.9	16.0	54.9	47.1	45.7	84.3	60.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 15: Contact North deposit overall Grade and distribution from the DMS tests



## Ericsson Cone (EC) Results- Contact Deposit

Sinks 2.9	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 2	1440.8	30.4	32.3	17.8	2.6	0.033	14.0	0.007
Comp 3	1801.1	36.9	39.8	14.7	1.9	0.018	7.5	0.006
Comp 456	1737.1	41.2	41.6	10.3	2.1	0.023	11.7	0.003
Comp 7	1757.3	37.9	41.4	8.9	3.9	0.018	11.8	0.002
Comp 8	783.7	18.7	27.1	18.4	2.8	0.041	21.0	0.003
Comp 9	1138.8	26.0	23.0	19.6	4.2	0.045	23.1	0.006
Total	8658.8							
Sinks 2.9 Grade			35.9	14.1	2.8	0.027	13.6	0.004
Sinks 2.9 Grade (excl. Composites 8 & 9)			39.1	12.7	2.6	0.023	11.1	0.004

**Table 16: Contact deposit EC results from the Sinks 2.9 SG (32mm – +6.3mm)**

Floats 2.9 Sinks 2.7	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 2	625.3	13.2	28.9	21.1	2.6	0.041	13.2	0.001
Comp 3	733.0	15.0	26.8	17.7	3.3	0.047	21.3	0.001
Comp 456	268.8	6.4	30.0	15.6	3.5	0.033	18.5	0.004
Comp 7	518.4	11.2	26.9	18.3	5.0	0.032	18.6	0.008
Comp 8	723.5	17.3	13.1	28.9	4.5	0.063	24.0	0.019
Comp 9	987.3	22.5	28.2	14.1	3.8	0.031	24.5	0.002
Total	3856.3							
Floats 2.9 Sinks 2.7 Grade			25.2	10.3	2.0	0.042	10.0	0.002
Floats 2.9 Sinks 2.7 Grade (excl. Composites 8 & 9)			27.8	18.6	3.5	0.040	17.9	0.003

**Table 17: Contact deposit EC results from the Sinks (-2.9 +2.7 SG) (32mm – +6.3mm)**

Floats 2.7	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 2	2678.6	56.5	20.1	18.9	3.3	0.043	29.9	0.001
Comp 3	2347.5	48.1	10.8	24.1	3.3	0.028	37.0	0.001
Comp 456	2209.2	52.4	18.5	18.1	5.2	0.043	30.8	0.002
Comp 7	2356.4	50.9	17.3	16.3	5.6	0.026	36.1	0.006
Comp 8	2681.6	64.0	15.9	16.5	3.8	0.033	40.8	0.002
Comp 9	2260.9	51.5	11.4	20.3	6.0	0.054	38.2	0.003
Total	14534.2							
Floats 2.7 Grade			15.8	12.8	2.8	0.038	22.0	0.002
Floats 2.7 Grade (excl. Composites 8 & 9)			16.8	19.4	4.3	0.035	33.4	0.002

**Table 18: Contact deposit EC results from the Floats 2.7 SG (32mm – +6.3mm)**

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Sinks 2.9 Grade	32.0	39.1	14.1	2.8	0.0272	13.6	0.0045
Floats 2.9 Sinks 2.7 Grade	14.3	27.8	10.3	2.0	0.0419	10.0	0.0015
Floats 2.7	53.7	16.8	12.8	2.8	0.0378	22.0	0.0016
Total	100.0						
Head Grade		25.5	12.9	2.7	0.0350	17.6	0.0025
Total Sinks 2.7 Grade		35.6	13.0	2.6	0.0317	12.5	0.0036

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Sinks 2.9 Distribution	32.0	49.1	35.2	33.5	24.9	24.7	56.8
Floats 2.9 Sinks 2.7 Distribution	14.3	15.6	11.5	10.3	17.1	8.1	8.7
Floats 2.7 Distribution	53.7	35.3	53.4	56.3	58.1	67.3	34.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Sinks 2.7 Distribution	46.3	64.7	46.6	43.7	41.9	32.7	65.5

Table 19: Contact deposit overall Grade and distribution from the EC tests

### Ericsson Cone (EC) Results- Contact North Deposit

Sinks 2.9	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 1	2945.2	57.6	46.9	9.6	1.4	0.035	3.5	0.002
Comp 10	2413.9	48.0	39.8	11.9	1.4	0.041	11.4	0.000
Comp 11	521.7	49.7	42.2	11.1	1.1	0.016	11.3	0.005
Total	5880.8							
Sink 2.9 Grade			43.6	10.7	1.4	0.036	7.4	0.001

Table 20: Contact North deposit EC results from the Sinks (32mm – +6.3mm)

Floats 2.9 Sinks 2.7	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 1	911.8	17.8	37.1	15.5	1.7	0.059	8.5	0.001
Comp 10	1001.3	19.9	34.1	13.5	1.4	0.038	15.5	0.002
Comp 11	121.7	11.6	41.8	11.9	1.4	0.021	9.4	0.005
Total	2034.8							
Floats 2.9 Sinks 2.7 Grade			35.9	14.3	1.5	0.046	12.0	0.002

Table 21: Contact North deposit EC results from the Sinks (-2.9 +2.7 SG) (32mm – +6.3mm)

Floats 2.7	Weight	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	g	%	%	%	%	%	%	%
Comp 1	1253.4	24.5	20.3	21.2	2.9	0.045	25.4	0.001
Comp 10	1614.6	32.1	15.0	13.8	1.4	0.027	48.7	0.002
Comp 11	405.4	38.7	21.6	24.4	1.9	0.036	21.5	0.007
Total	3273.4							
Floats 2.7 Grade			17.8	18.0	2.0	0.035	36.4	0.002

**Table 22: Contact North deposit EC results from the Sinks (-2.9 +2.7 SG) (32mm – +6.3mm)**

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Sinks 2.9 Grade	52.6	43.6	10.7	1.4	0.064	7.4	0.001
Floats 2.9 Sinks 2.7 Grade	18.2	35.9	14.3	1.5	0.082	12.0	0.002
Floats 2.7 Grade	29.3	17.8	18.0	2.0	0.061	36.4	0.002
Total	100.0						
Combined Grade		34.6	13.5	1.6	0.066	16.7	0.002
Total Sinks 2.7 Grade		41.6	11.6	1.4	0.069	8.6	0.002

	Weight	Mn	Fe	Al <sub>2</sub> O <sub>3</sub>	P	SiO <sub>2</sub>	S
	%	%	%	%	%	%	%
Sinks 2.9 Distribution	52.6	66.1	41.7	45.4	50.5	23.4	43.9
Floats 2.9 Sinks 2.7 Dist'n	18.2	18.8	19.3	17.6	22.4	13.0	18.2
Floats 2.7 Distribution	29.3	15.1	39.0	37.0	27.1	63.6	37.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Sinks 2.7 Distribution	70.7	84.9	61.0	63.0	72.9	36.4	62.2

**Table 23: Contact North deposit overall Grade and distribution from the EC tests**