

Hematite (Martite)- Kenomagnetite at Bon Accord North





Iron Ore Exploration in the Norseman District

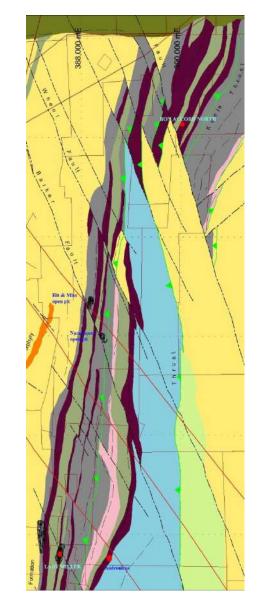
- Historically very little exploration for iron ore .
- Since 2008 exploration for oxide deposits in altered Sedimentary Iron Formation(SIF) and magnetite deposits in unaltered SIF focused on the Noganyer Formation some 5-6 km east of Norseman.
- Noganyer Formation is host to numerous gold deposits and mines on the footwall contacts of SIF horizons.

 Main tenement holders over the Noganyer Formation are Norseman Gold PLC (gold mining and exploration)- largest tenement holder Matsa Resources Ltd (actively exploring for iron deposits) Accent Resources NL (gold exploration).

- Norseman Gold have tenure over the thickest portions of the Noganyer Formation Sedimentary Iron Formations (SIF) (elsewhere termed BIF).
- Norseman Gold have tenure over all 7 identified SIF units in the Noganyer Formation.

•Norseman Gold have conducted limited testing of the Lady Miller, Atlee and Bon Accord SIF units for iron mineralisation.





- Largest tenement holder of Noganyer Formation SIF units (7) in Norseman district.
- All Norseman Gold Tenements covering the Noganyer Formation have been approved for iron exploration.
- More than 27kms of strike length covered over a width of 1.8kms.
- SIF vary in widths from 40 240m
- Regional westerly dip of ~45° to steep dips in structural folded areas.
- Structural thickening due to folding and or faulting accounts for increased widths.
- Significant tonnage potential for magnetite deposits circa 500m t and lesser oxide deposits of hematite.
- Infra structure nearby at Norseman
- Gas pipeline, major highways and rail transport all nearby.





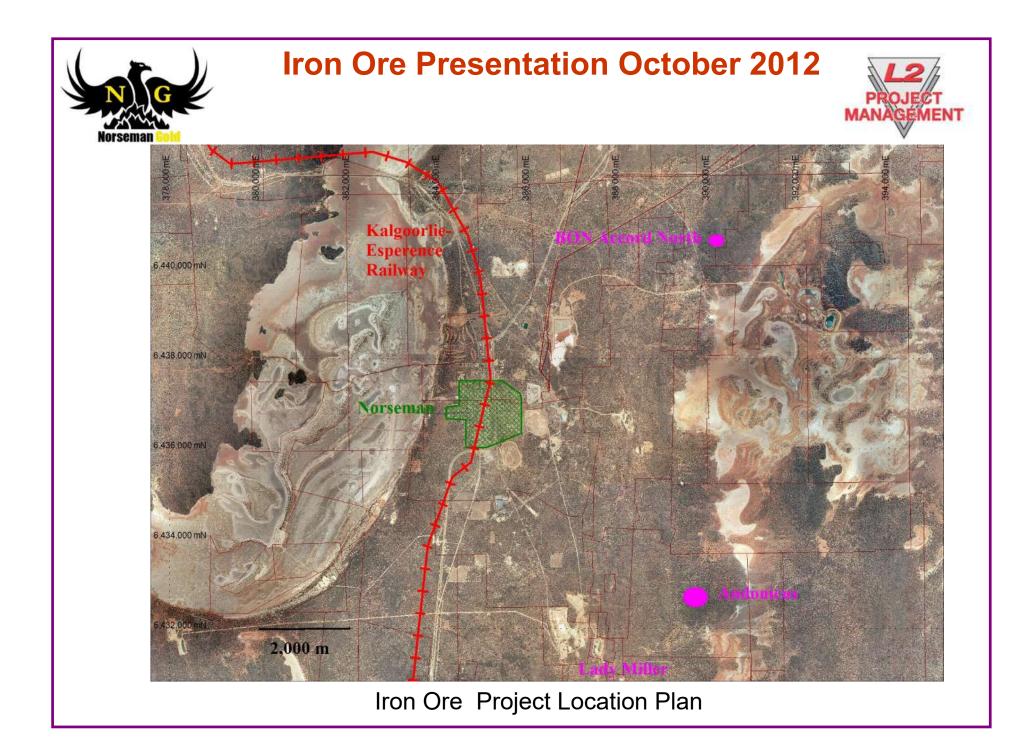
Norseman – Esperance Railway ~ 200km runs parallel to the Norseman-Esperance highway. Iron Ore currently being transported on railway line via Kalgoorlie & Norseman to Esperance Port.

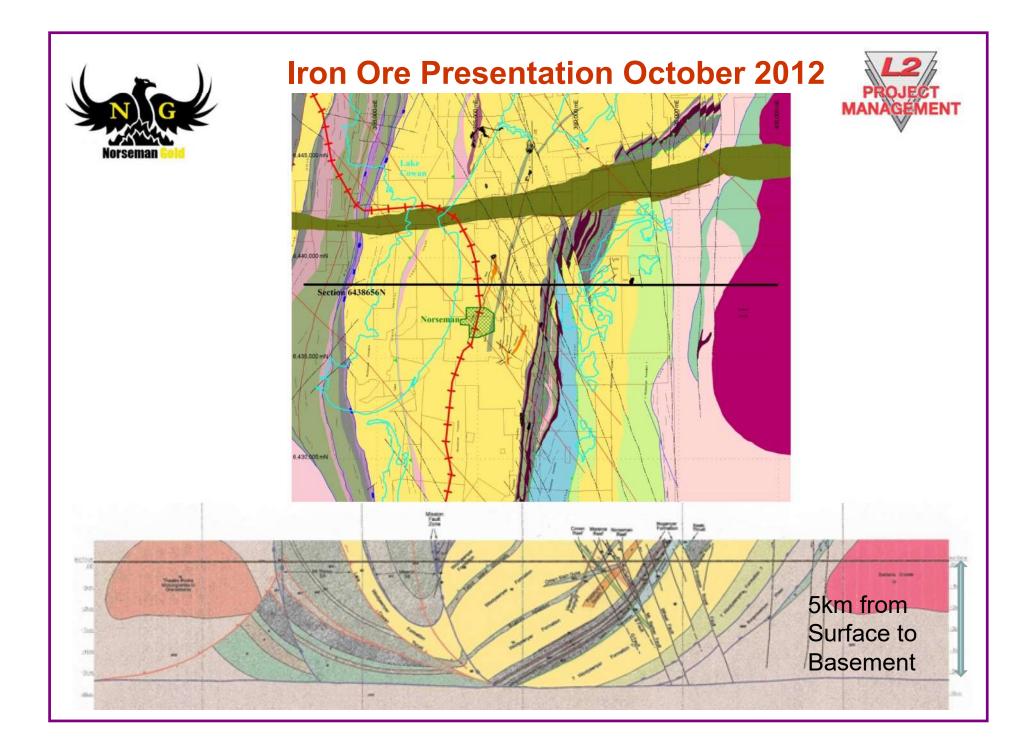




Norseman Gold Plc History of Iron Evaluation

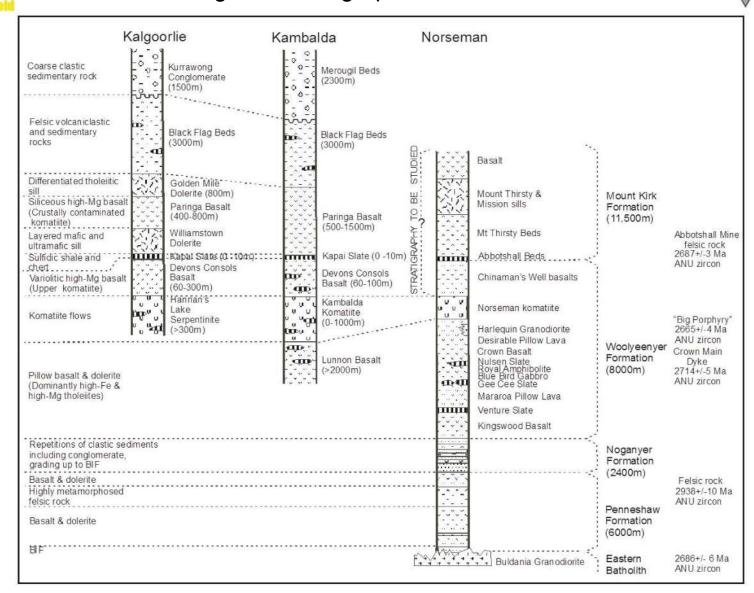
- Literature & database review March-April 2008.
- Noganyer Formation Iron Potential Memorandum 22nd April 2008.
- Submit 91 RC pulps from Lady Miller RC holes LMRC010, LMRC011, LMRC013 and LMRC020 for Davis Tube separation and XRF analysis (head & concentrate).
- Field inspection of the Andronicus SIF ~1km east of Lady Miller in May 2008
- Re organise & catalogue drilling pulps held in storage to link with the database. This work commenced in July 2008 and is ongoing.
- The Noganyer Formation has been extensively drilled for gold mineralisation . Assaying of pulps held in storage for iron mineralisation is a cost effective method to quickly ascertain zones of interest requiring further drilling for iron mineralisation.
- Drilling two diamond holes (BAND001 &BAND002) at the Bon Accord North prospect testing the Atlee and Bon Accord SIF for iron Mineralisation in April 2010.
- Metallurgical test work on SIF samples from DDH holes BAND001 (Bon Accord North) and LM 27 & LM30 (Lady Miller).





Regional Stratigraphic Columns

Norsemai







Noganyer Formation:

• The lower contact is gradational to faulted (greenschist abutting amphibolite facies rocks) with the underlying Penneshaw Formation.

• Consists of a sedimentary sequence of sandstone, siltstone, shale, SIF {thinly bedded turbidite sequences of silicified sandstone- siltstone interbedded with iron rich shale horizons and jaspilite (chert with < 7% hematite)}.

• The SIF and jaspilite units form topographic highs and act as easily identifiable stratigraphic marker horizons.

• Varies in thickness from over 1000m in the north to 200m in the south and generally dips 50° - 60° west and through to vertical to steep east dipping.

• Intruded by mafic/ ultramafic sills and dykes which as presumably being equivalents to the overlying Woolyeenyer Formation.

• Contains 11 lithological units of which 7 are SIF units, 2 are schist units, 1 is a gabbro unit and 1 is an ultramafic unit.

• The stratigraphic sequence is folded into an upright anticline and syncline pair (W-E respectively) with the Sawpit Member as the basal unit and the Holstein Jaspilite as the upper unit.

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Iron Ore Presentation October 2012



Noganyer Stratigraphy East - West

•Sawpit Member: Composed of fine grained schists with minor dolerite forming the lowest member of the formation.

•Bon Accord Jaspilite: N-S striking SIF horizon composed of re- silicified iron oxide rich quarzites. Minor gold mineralisation is associated with this unit.

•Bon Accord Ultramafic: Pyroxene ultramafic with weathering to talc- amphibole and talc-chlorite schists.

•Raggedy Member: Sedimentary sequence of SIF, siltstone, sandstone and conglomerate.

•Atlee Jaspilite: SIF unit consisting of silicified iron rich sediments rich in amphiboles hosting the Naracoorte gold mineralisation.

• Marell Schist: Varies from mica schist to an amphibole(grunerite (Fe rich)) schist.

•Lady Miller Jaspilite: Silicified iron rich quartzites hosting the majority of goldsulphide mineralisation in the Noganyer Formation i.e. The Lady Miller open pit.

•Lady Mary Gabbro: Intrusive sill consisting of multiple intrusions of dolerite and gabbro with a total thickness up to 290m covering 20km of strike. Gold mineralisation is associated with this unit hosted by quartz veins.

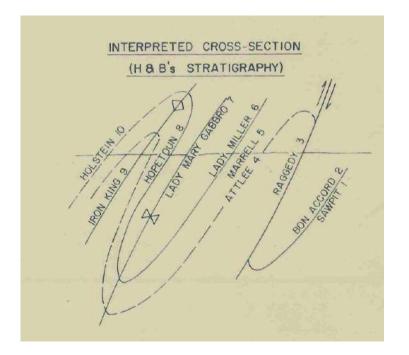
•Hopetoun Jaspilite: Sulphide bearing SIF horizons interbedded with sedimentary units intruded by mafic dykes and sills. Gold mineralisation is associated with the unit i.e. Hit and Miss open pit.



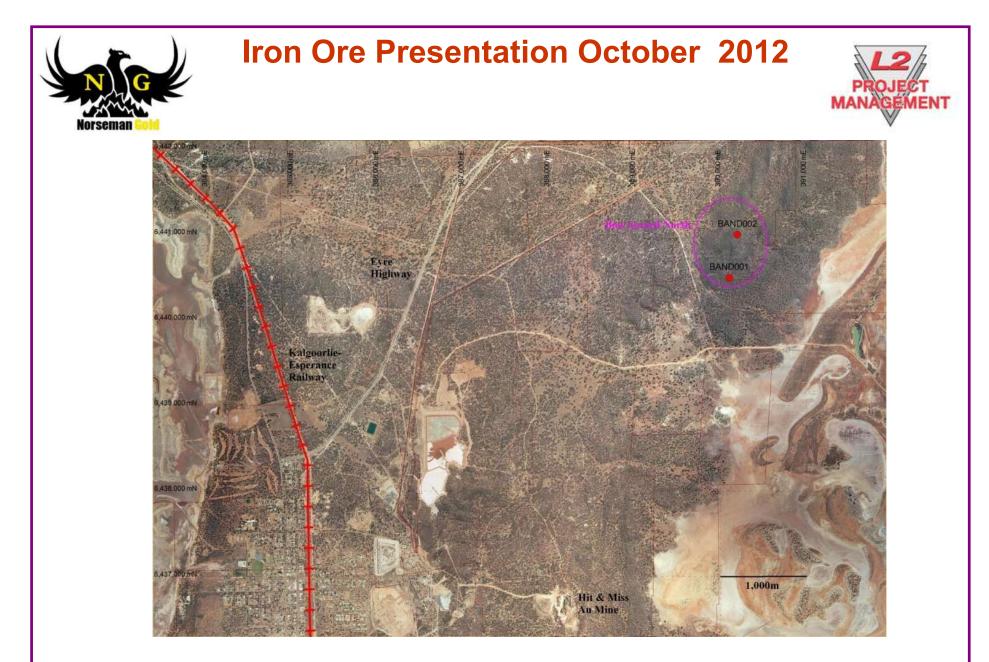


•Iron King Member: A sequence of SIF, sandstone and conglomerate horizons intruded by mafic dykes and sills. The unit hosts gold mineralisation associated with massive sulphide horizons. Mining has focused both on gold and sulphides (sulphuric acid production) i.e. at the Iron King and Red, White and blue open pits.

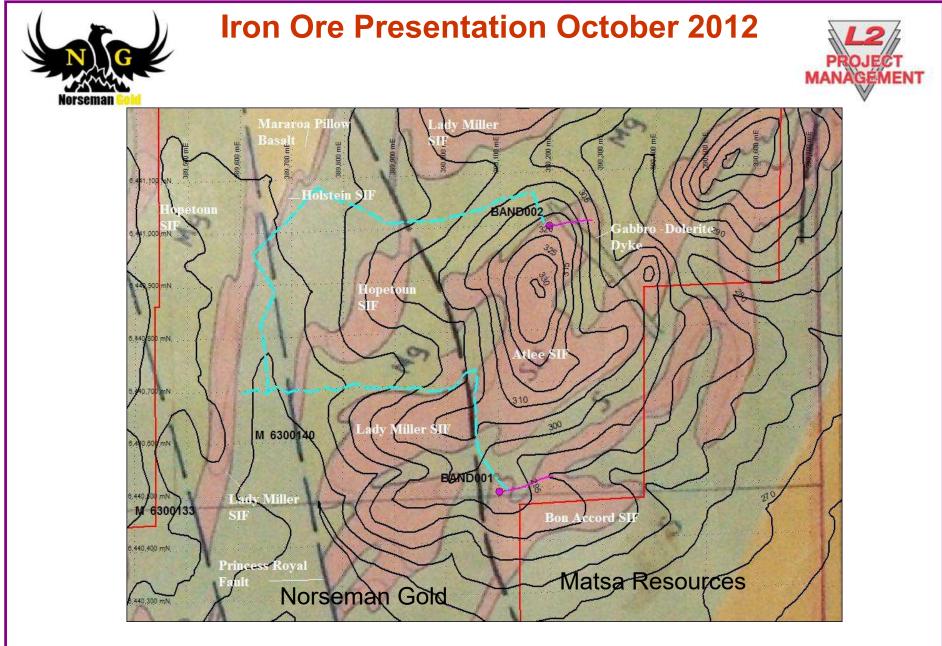
•Holstein Jaspilite: Sequence of SIF, sandstone and minor basalt flows.



Tectonic folding in the Noganyer Formation



Bon Accord North – Location (5.5km NE of Norseman)

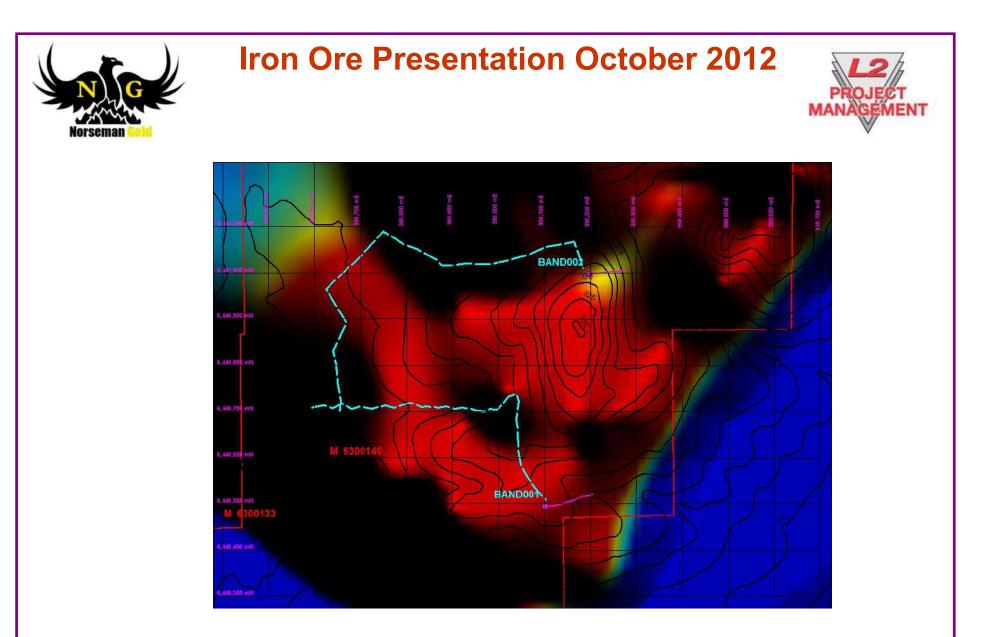


Bon Accord North Interpreted Geology

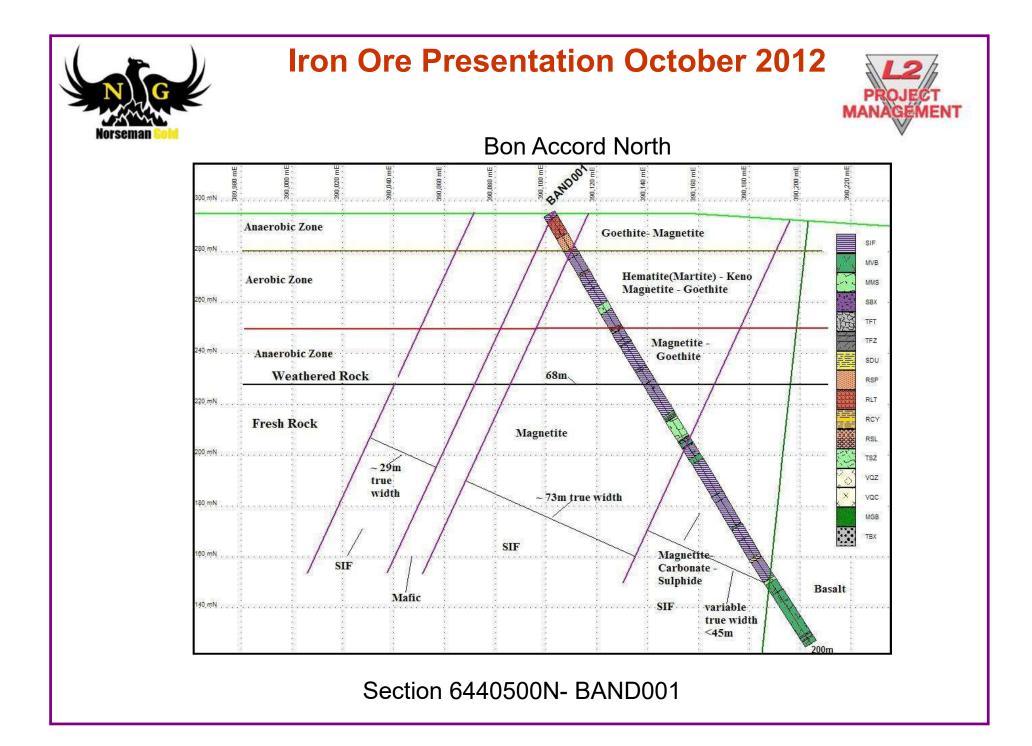


Lady Miller SIF – Bon Accord North area

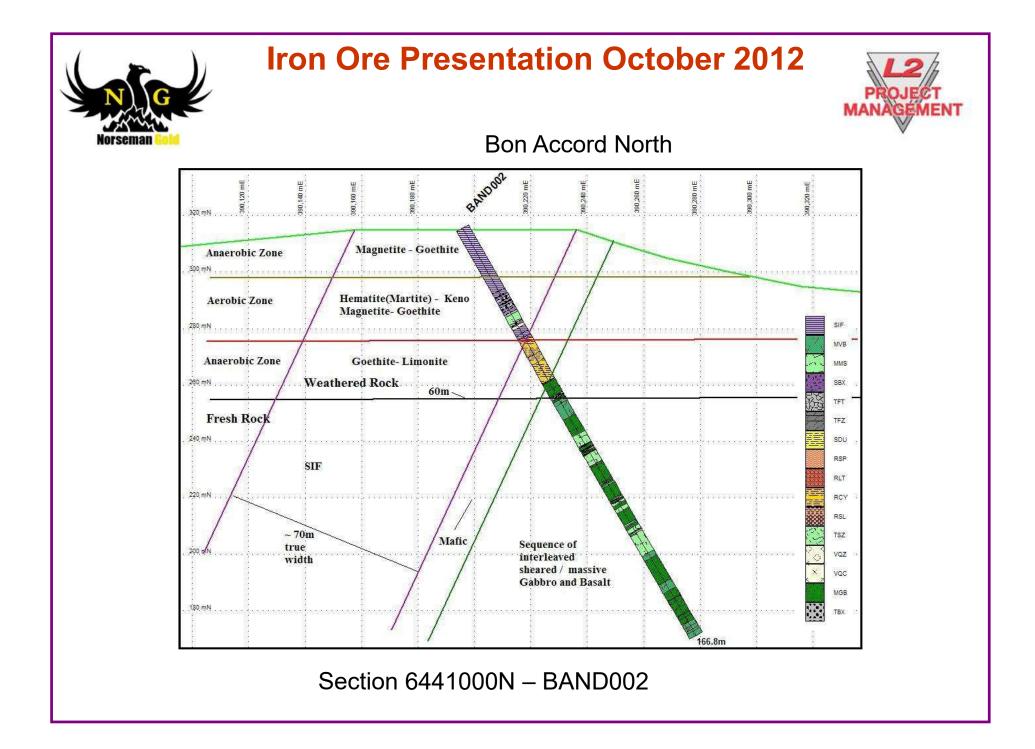
Iron Ore Presentation October 2012 Oxidation of Magnetite oxidation by HEMATITE addition of 0_2 (MARTITE) MAGNETITE Fe203 Fe304 oxidation by removal of $Fe^{2^+} \xrightarrow{KENOMAGNETITE} Fe_{3-x} \square_{x} O_{4}$ Kenomagnetite Hematite (Martite) Silica (cherty)

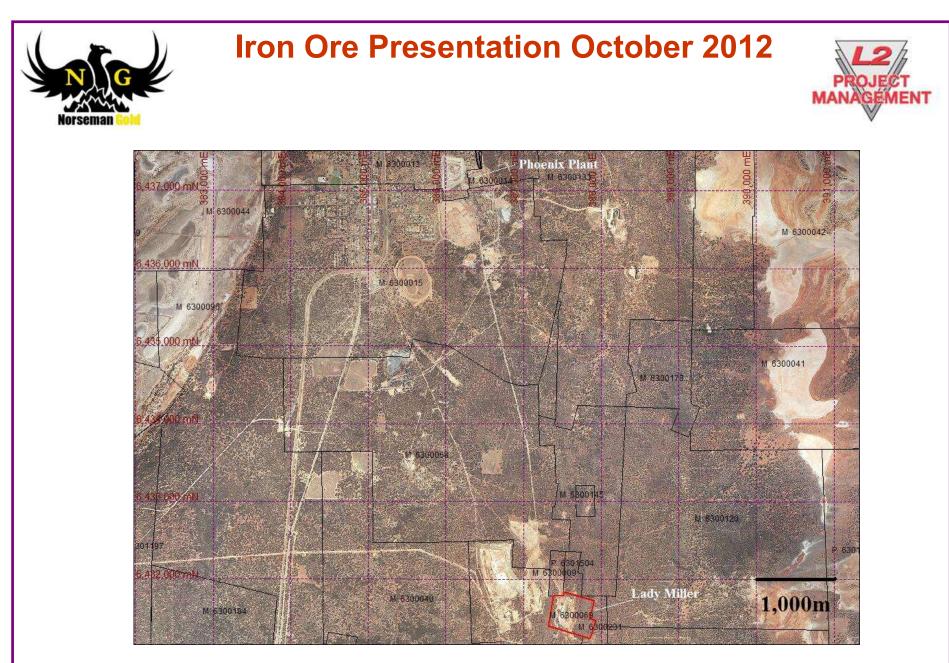


Bon Accord North TMI composite- pseudocolour

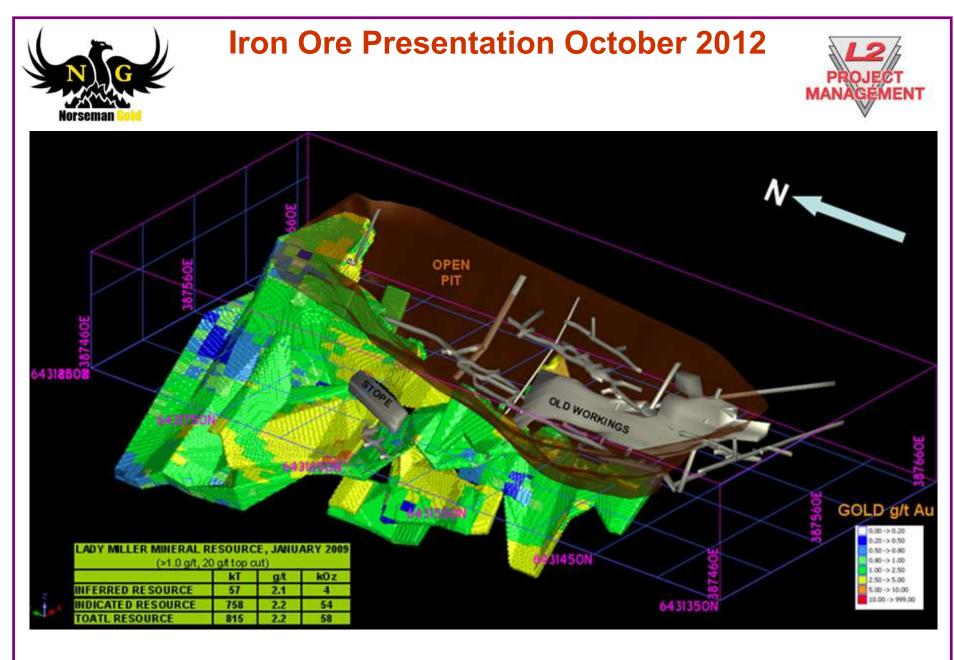




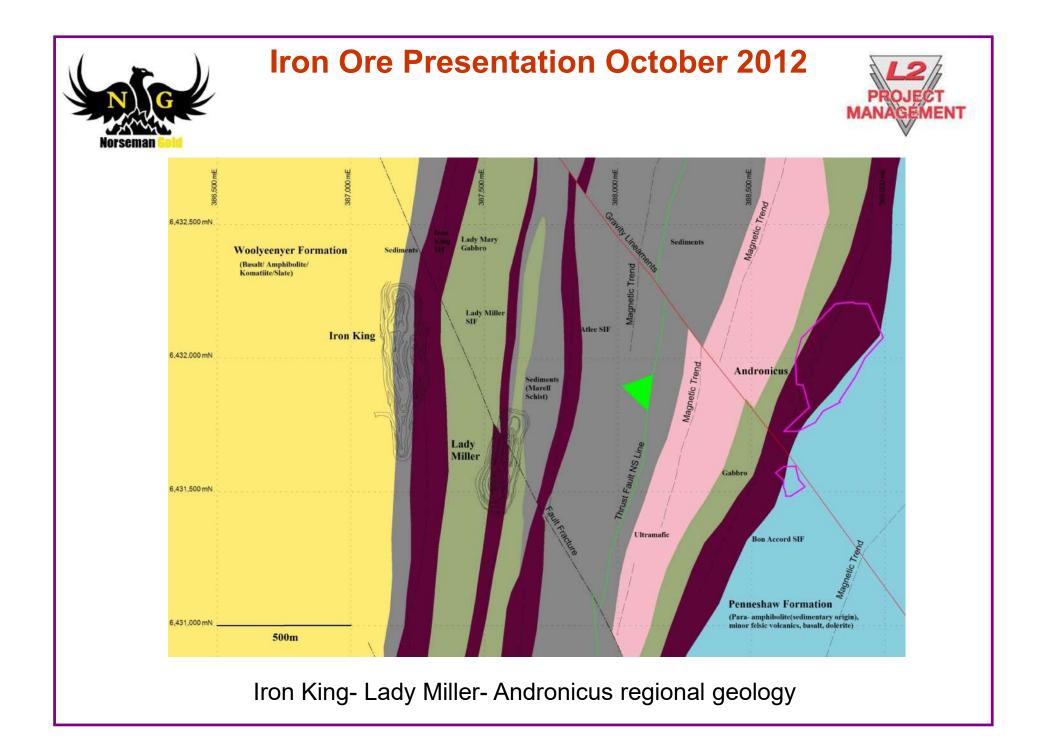


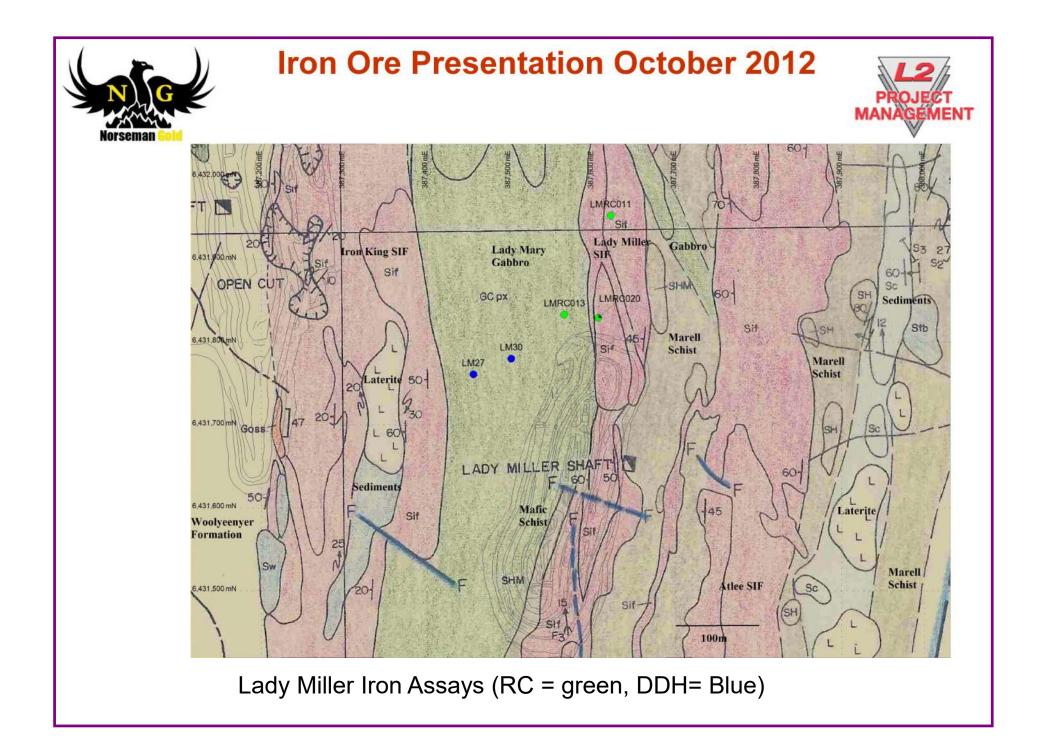


Lady Miller Location (5.9km SE of Norseman)



Lady Miller Resource Model January 2009









HoleID	From(m)	To(m)	Interval(m)	Fe %	SiO2 %	AI2O3 %	TiO2 %	Mn %	CaO %	P XRF	% S XRF %	MgO %	K20 %	LOI1000 %	Geology
LMRC011	33	40	7	31.42	46.16	2.86	0.19	0.01	0.09	0.035	0.049	0.58	0.129	4.62	Oxidised Lady Miller SIF
LMRC011	69	78	9	22.91	43.16	4.01	0.31	0.18	3.90	0.043	1.181	7.72	0.150	6.47	Fresh Atlee SIF
LMRC013	25	84	59	28.12	48.50	2.63	0.14	0.12	3.04	0.050	0.771	3.20	0.287	0.86	Oxidised - fresh Lady Miller SIF
LMRC020	65	69	4	16.29	45.65	8.43	0.63	0.17	3.49	0.035	0.633	10.40	0.077	5.89	Oxidised Marell Schist
LMRC020	69	90	21	18.91	49.32	2.53	0.24	0.36	6.79	0.030	1.825	5.78	0.186	5.37	Fresh Atlee SIF

Lady Miller Significant RC Head Assays

HoleID	From(m)	To(m)	Interval(m)	Fe %	SiO2 %	AI2O3 %	TiO2 %	Mn %	CaO %	P XRF	S XRF 9	6 MgO %	K20 %	LOI1000 %	Geology
LMRC010	33	40	7	57.35	13.90	0.20	0.04	0.00	0.01	0.037	0.106	0.02	0.007	IS	Oxidised Lady Miller SIF
LMRC011	69	78	9	59.56	13.07	0.49	0.27	0.05	0.73	0.015	0.498	0.92	0.015	-2.13	Fresh Atlee SIF
LMRC013	25	84	59	64.62	7.15	0.38	0.06	0.03	0.30	0.020	1.454	0.46	0.023	-2.10	Oxidised - fresh Lady Miller SIF
LMRC020	65	69	4	59.65	7.63	1.49	0.14	0.07	1.06	0.020	0.471	1.82	0.018	IS	Oxidised Marell Schist
LMRC020	69	90	21	64.23	4.79	0.17	0.06	0.06	0.54	0.011	6.344	0.44	0.014	0.08	Fresh Atlee SIF

Lady Miller Significant RC Davis Tube Assays





HoleID	depth	fro depth to	Sample	Fe	SiO2	AI203	TiO2	Mn	CaO	P XRF	S XRF	MgO	K20	LOI1000	Au Pref	Rock type	Weathering
Units	1.00		S. 32	%	%	%	%	%	%	%	%	%	%	%	ppm		10
LMRC013	25	30	NA302309 Head	30.83	48.78	1.36	0.07	0.08	0.99	0.053	0.395	3.46	0.171	0.26	0.021	SIF	SW
LMRC013	30	31	NR109040 Head	39.51	40.96	0.56	0.03	0.05	1.04	0.067	0.102	1.93	0.035	-1.00	0.007	SIF	SW
LMRC013	31	35	NA302310 Head	30.01	50.33	1.39	0.05	0.06	1.69	0.050	0.211	2.82	0.122	0.27	0.003	SIF	SW
LMRC013	35	40	NA302311 Head	30.38	49.41	1.71	0.06	0.08	1.52	0.048	0.239	3.57	0.219	-0.27	0.007	SIF(35-39) MMU(39-40)	SW
LMRC013	40	45	NA302312 Head	29.46	50.65	1.80	0.15	0.10	1.24	0.050	0.149	3.57	0.078	-0.09	0.005	MMU(40-42) SIF(42-45)	fr
LMRC013	45	50	NA302313 Head	33.55	46.44	0.70	0.03	0.08	1.83	0.050	0.158	2.66	0.068	-0.28	0.007	SIF	fr
LMRC013	50	55	NA302314 Head	33.20	47.09	0.76	0.03	0.09	1.74	0.047	0.160	2.92	0.068	-0.35	0.005	SIF	fr
LMRC013	55	60	NA302315 Head	32.09	48.29	0.76	0.03	0.10	1.87	0.047	0.229	3.23	0.076	-0.25	0.007	SIF	fr
LMRC013	60	61	NR109071 Head	31.85	48.85	0.59	0.03	0.09	1.75	0.043	0.109	3.02	0.042	-0.60	0.000	SIF	fr
LMRC013	61	62	NR109072 Head	32.56	47.21	0.91	0.03	0.06	2.18	0.046	0.155	2.81	0.048	-0.38	0.000	SIF	fr
LMRC013	62	63	NR109073 Head	34.13	46.03	0.54	-0.01	0.07	2.08	0.053	0.192	2.63	0.036	-0.33	0.000	SIF	fr
LMRC013	63	64	NR109074 Head	25.99	53.03	2.75	0.10	0.11	1.45	0.048	0.851	4.44	0.039	0.16	0.010	SIF	fr
LMRC013	64	65	NR109075 Head	33.83	45.03	0.65	0.03	0.11	2.59	0.049	0.188	2.50	0.059	-0_18	0.000	SIF	fr
LMRC013	65	66	NR109076 Head	34.02	43.47	0.56	0.03	0.09	3.06	0.043	0.176	2.98	0.056	-0.01	0.000	SIF	fr
LMRC013	66	67	NR109077 Head	31.16	48.97	0.77	0.03	0.13	2.20	0.054	0.352	3.69	0.047	-0.56	0.000	SIF	fr
LMRC013	67	68	NR109078 Head	29.02	49.32	2.35	0.09	0.11	1.79	0.066	0.795	4.58	0.041	-0.07	0.016	SIF	fr
LMRC013	68	69	NR109079 Head	29.71	50.67	1.34	0.05	0.10	1.91	0.053	0.545	3.14	0.036	-0.49	0.003	SIF	fr
LMRC013	69	70	NR109080 Head	31.53	47.39	0.98	0.04	0.09	2.67	0.049	0.428	3.14	0.057	-0.41	0.042	SIF	fr
LMRC013	70	71	NR109081 Head	31.12	46.03	1.07	0.05	0.14	2.65	0.054	1.830	3.08	0.159	1.69	0.361	SIF	fr
LMRC013	71	72	NR109082 Head	23.04	49.50	5.18	0.23	0.18	2.69	0.063	2.470	4.15	1.334	2.88	0.078	SIF	fr
LMRC013	72	73	NR109083 Head	20.42	49.62	8.81	0.41	0.09	0.93	0.037	2.430	4.09	2.729	3.45	0.183	SIF	fr
LMRC013	73	74	NR109084 Head	20.99	51.03	3.61	0.17	0.18	6.42	0.043	2.030	2.43	0.881	2.80	0.014	SIF	fr
LMRC013	74	75	NR109085 Head	14.06	52.10	2.28	0.11	0.20	12.15	0.060	1.720	1.70	0.519	6.03	0.008	SIF	fr
LMRC013	75	76	NR109086 Head	20.52	53.76	6.07	0.24	0.15	2.27	0.055	2.350	2.48	0.560	3.01	0.007	SIF	fr
LMRC013	76	77	NR109087 Head	20.94	55.99	2.87	0.12	0.17	5.05	0.054	1.560	1.81	0.193	1.32	0.006	SIF	fr
LMRC013	77	78	NR109088 Head	22.60	49.62	5.81	0.35	0.15	4.51	0.058	1.170	2.94	0.180	2.24	0.004	SIF	fr
LMRC013	78	79	NR109089 Head	26.23	46.37	5.68	0.38	0.19	4.75	0.051	0.587	3.70	0.086	1.22	0.004	SIF	fr
LMRC013		80	NR109090 Head	28.23	45.21	3.41	0.23	0.16	5.24	0.043	0.538	2.88	0.075	0.82	0.010	SIF	fr
LMRC013		81	NR109091 Head	31.32	42.91	2.13	0.13	0.15	5.26	0.044	0.695	2.22	0.065	1.09	0.004	SIF	fr
LMRC013		82	NR109092 Head	31.20	43.65	3.37	0.25	0.16	3.67	0.040	0.464	2.86	0.117	0.43	0.000	SIF	fr
LMRC013		83	NR109093 Head	19.92	50.15	6.01	0.37	0.10	4.66	0.036	0.410	4.99	0.270	2.84	0.002	SIF	fr
LMRC013	83	84	NR109094 Head	16.35	54.25	7.38	0.45	0.12	3.51	0.042	0.974	6.08	0.731	2.26	0.003	SIF	fr
LMRC013	84	85	NR109095 Head	11.32	49.48	12.54	0.57	0.12	4.22	0.028	0.328	9.79	1.581	2.59	0.003	MMU	fr
	Averag	e Head Grad	le for LMRC013	27.61	48.53	2.93	0.15	0.12	3.08	0.049	0.757	3.40	0.327	0.91	0.025		2

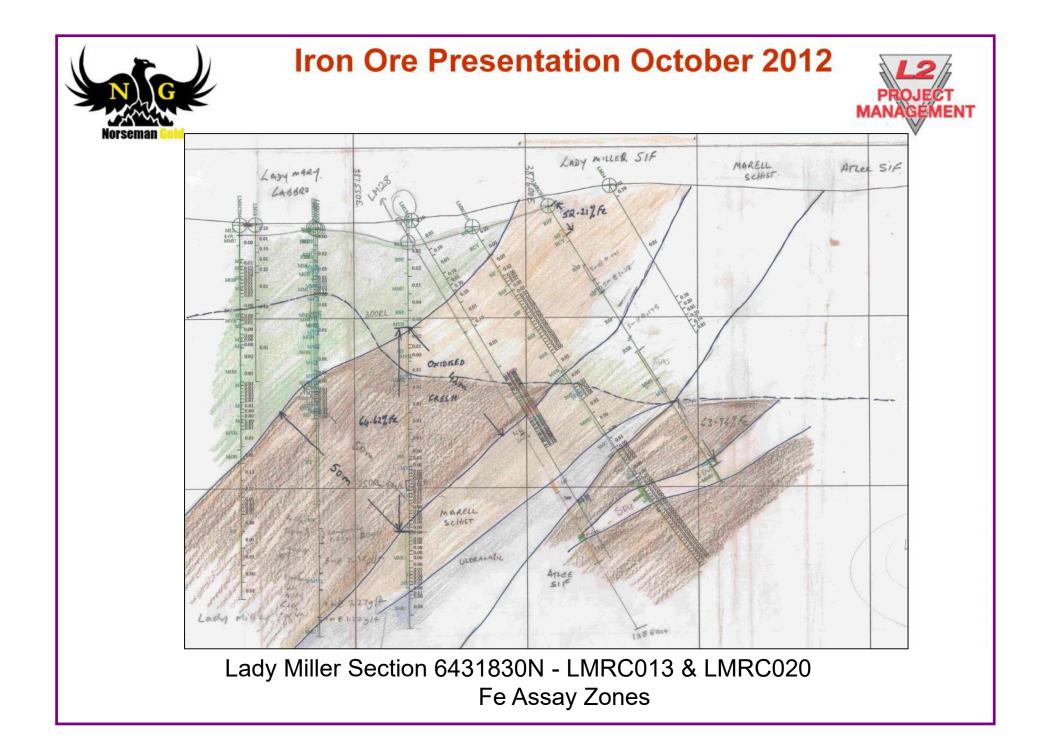
Lady Miller LMRC013 Head Assays

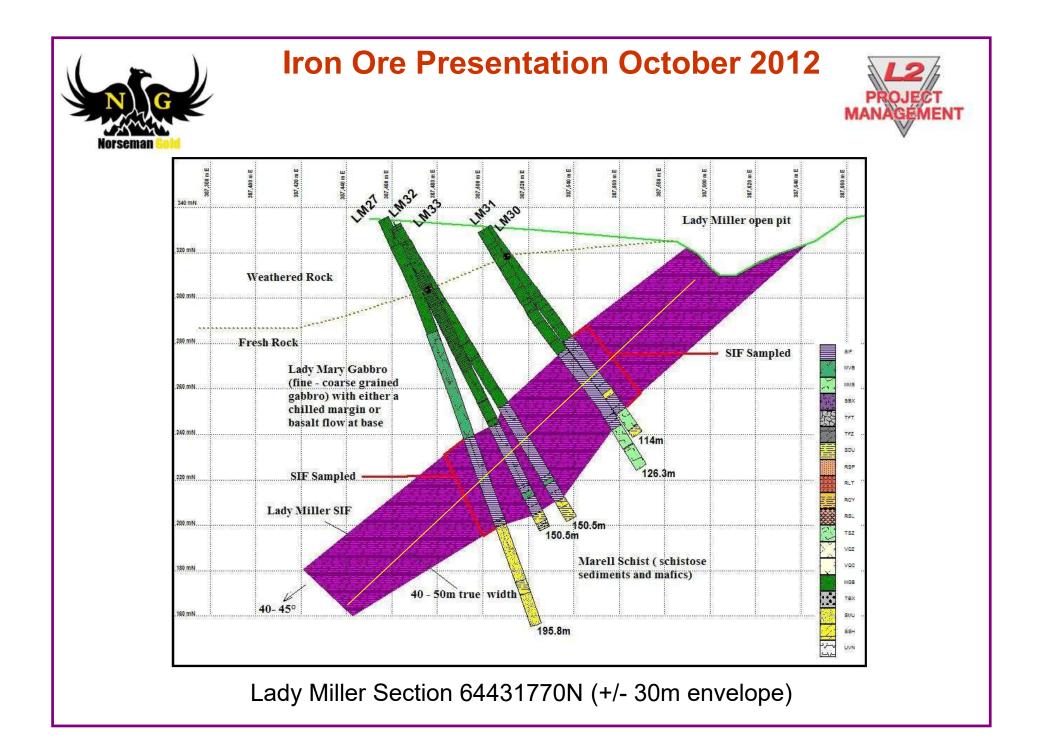




	Constant Aller Sec.	depth_fro depth_to	Sample	Fe	SiO2	AI203	3 TiO2 I	Mn	CaO P	XRF	S XRF	MgO	K20	LOI1000	Grind 1	Grind 2	Grind 3	Grind 4	Head weight	Con weigh	it % recover
	Units	m m		%	%	%	% 9	%	% %		16	%	%	%	grams	grams			grams	grams	%
Base of Partial Oxidation at 25m	LMRC013	25 30	NA302309	61.24	12.85	0.47	0.03 0	0.02	0.30 0	.032 (0.071		0.044		39.18	10.83	3.25			6.258	30.90
Magnetic vfgr chips, limonite altered chert bands, bow tie texture	LMRC013	30 31	NR109040	65.43	8.15	0.20	0.01 0	0.02	0.21 0	.029 (0.020	0.35	0.013	-2.79	42.09	7.41	2.07			9.964	49.70
Magnetic vfgr chips, limonite altered chert bands, bow tie texture	LMRC013	31 35	NA302310	63.40	10.18	0.47	0.03 0	0.02	0.31 0	.034 0	0.031	0.52	0.028	-2.56	36.13	9.88	2.94		20.56	4.031	19.60
Mafic/ultramafic, magnetic + SIF	LMRC013	35 40	NA302311	60.41	13.80	0.78	0.04 0	0.02	0.43 0	035 (0.049	0.71	0.049	-2.58	34.22	9.31	2.91		20.18	6.402	31.70
Mafic/ultramafic, magnetic + SIF	LMRC013	40 45	NA302312	60.32	13.71	0.83	0.08 0	0.03	0.35 0	.033 (0.039	0.91	0.031	-2.58	42.51	12.71	3.88		20.20	6.337	31.40
Fine and vf banding, prominent chert banding	LMRC013	45 50	NA302313	60.05	15.12	0.32	0.01 (0.02	0.36 0	023 (0.041	0.65	0.017	-2.59	37.22	9.37	2.87		20.29	8.972	44.20
Fine and vf banding, prominent chert banding	LMRC013	50 55	NA302314	60.23	14.20	0.32	0.02 0	0.03	0.34 0	021 (0.172	0.70	0.015	-2.61	35.11	10.04	2.92		20.60	8.373	40.60
Fine and vf banding, prominent chert banding	LMRC013	55 60	NA302315	61.60	12.37	0.24	0.02 0	0.03	0.38 0	023 (0.439	0.80	0.015	-2.64	43.33	9.81	2.97		20.37	6.766	33.20
Fine and vf banding, prominent chert banding	LMRC013	60 61	NR109071	63.29	10.63	0.13	0.01 0	0.03	0.30 0	.022 (0.202	0.70	0.008	-2.79	43.54	11.40	3.44		20.81	6.724	32.30
Fine and vf banding, prominent chert banding	LMRC013	61 62	NR109072	63.39	9.93	0.22	0.02 0	0.02	0.43 0	.019 (0.302	0.65	0.009	-2.74	53.61	13.71	4.50		20.51	7.270	35.40
Fine and vf banding, prominent chert banding	LMRC013	62 63	NR109073	62.87	10.45	0.15	0.01 0	0.03	0.39 0.	.021 0	0.298	0.74	0.007	-2.67	54.61	13.10	3.86		20.37	7.690	37.80
Fine and vf banding, prominent chert banding	LMRC013	63 64	NR109074	62.39	9.22	0.45	0.06 0	0.04	0.26 0	024	2.680	0.80	0.008	-1.55	47.24	13.09	4.54		20.41	3.664	18.00
Fine and vf banding, prominent chert banding	LMRC013	64 65	NR109075	64.03	8.89	0.14	0.01 0	0.04	0.40 0	016).385	0.57	0.012	-2.95	44.33	10.42	3.57		20.49	7.537	36.80
Fine and vf banding, prominent chert banding	LMRC013	65 66	NR109076	66.12	7.20	0.11	0.02 0	0.03	0.38 0	015 ().414	0.60	0.009	-2.97	38.42	8.77	2.63		20.06	6.767	33.70
Fine and vf banding, prominent chert banding	LMRC013	66 67	NR109077	66.11	6.66	0.17	0.06 0	0.03	0.25 0	018	1.350	0.63	0.010	-2.61	45.10	11.31	3.61		20.16	3.431	17.00
Fine and vf banding, prominent chert banding	LMRC013	67 68	NR109078	65.78	5.58	0.38	0.11 0	0.03	0.25 0	029 2	2.370	0.65	0.009	-1.89	42.25	11.55	3.66		20.36	3.231	15.90
Fine and vf banding, prominent chert banding	LMRC013	68 69	NR109079	66.72	5.65	0.28	0.06 0	0.02	0.24 0	022	1.640	0.48	0.009	-2.39	41.79	10.41	3.06		20.01	4.300	21.50
Fine and vf banding, prominent chert banding	LMRC013	69 70	NR109080	67.38	4.94	0.20	0.07 0	0.02	0.24 0	.019	1.450	0.42	0.012	-2.55	38.35	8.91	2.83		20.09	4.480	22.30
Fine and vf banding, prominent chert banding	LMRC013	70 71	NR109081	67.92	3.36	0.10	0.05 0	0.02	0.19 0.	017	3.630	0.20	0.021	-1.26	53.10	11.30	3.48		20.10	4.072	20.30
Fine and vf banding, prominent chert banding	LMRC013	71 72	NR109082	65.13	3.05	0.25	0.05 0	0.02	0.17 0	015	3.050	0.26	0.048	2.16	43.24	10.75	3.63		20.06	3.036	15.10
Fine and vf banding, prominent chert banding	LMRC013	72 73	NR109083	61.70	2.74	0.49	0.04 0	0.02	0.10 0	011	1.590	0.26	0.095	IS	42.77	8.63	2.83		20.48	1.975	9.60
Fine and vf banding, prominent chert banding	LMRC013	73 74	NR109084	66.86	2.33	0.15	0.03 0	0.02	0.19 0	013	2.340	0.08	0.032	1.43	49.73	12.49	4.12		20.22	3.205	15.90
Fine and vf banding, prominent chert banding	LMRC013	74 75	NR109085	66.56	1.71	0.18	0.07 0	0.03	0.41 0	020	1.840	0.08	0.028	IS	65.01	20.90	8.32	2.53	20.43	1.338	6.50
Fine and vf banding, prominent chert banding	LMRC013	75 76	NR109086	61.13	6.20	0.97	0.12 (0.05	0.30 0.	017	2.770	0.35	0.077	IS	63.53	20.16	7.74	2.45	20.07	0.869	4.30
Fine and vf banding, prominent chert banding	LMRC013	76 77	NR109087	66.78	3.02	0.29	0.08 0	0.02	0.21 0	015	3.820	0.04	0.016	0.02	46.31	14.08	5.60	1.92	20.39	2.553	12.50
Fine and vf banding, prominent chert banding	LMRC013	77 78	NR109088	64.49	4.74	0.73	0.19 0	0.04	0.34 0	.018 (5.220	0.20	0.020	IS	59.01	18.44	7.08	2.05	20.40	1.865	9.10
Fine and vf banding, prominent chert banding	LMRC013	78 79	NR109089	66.29	4.32	0.96	0.23 (0.04	0.49 0	017	2.330	0.44	0.012	-2.05	47.35	16.74	6.00	2.50	20.27	2.678	13.20
Fine and vf banding, prominent chert banding	LMRC013	79 80	NR109090	69.25	2.55	0.39	0.15 0	0.02	0.25 0	014	1.540	0.19	0.007	-2.59	41.32	15.80	5.91	2.25	20.23	4.252	21.00
Fine and vf banding, prominent chert banding	LMRC013	80 81	NR109091	68.37	3.04	0.33	0.08 0	0.02	0.39 0	012	1.010	0.18	0.008	-2.75	40.49	13.40	4.78		20.33	5.939	29.20
Fine and vf banding, prominent chert banding	LMRC013	81 82	NR109092	69.21	3.00	0.41	0.08 0	0.03	0.21 0	013 (0.402	0.23	0.009	-2.96	37.33	13.07	4.45		20.02	5.940	29.70
Fine and vf banding, prominent chert banding	LMRC013	82 83	NR109093	67.26	4.34	0.65	0.09 0	0.03	0.30 0	013 (0.623	0.42	0.018	-2.83	47.75	15.19	4.94		20.04	2.992	14.90
Fine and vf banding, prominent chert banding	LMRC013	83 84	NR109094	65.97	4.91	0.45	0.09 0	0.03	0.19 0	013	3.400	0.27	0.030	IS	39.74	12.66	4.60		20.40	1.691	8.30
Some magnetic chips, foliated mafic, some feld (?)	LMRC013	84 85	NR109095	IS	IS	IS	IS I	S	S IS	3 1	S	IS	IS	IS	31.25	7.99	2.70		20.46	0.158	0.80
Average Grind, Head, Conc weights and Recovery							1								44.45	12.23	4.11	2.28	20.29	4.690	23.10
Average Davis Tube Grade LMRC013	-			64 62	7.15	0.38	0.06 0	0.03	0 20 0	020	1 454	0.45	0.023	2.10			1.1.1.1.1.1		1 - 1	and the second second	100000

Lady Miller LMRC013 Davis Tube Assays







Lady Miller LM27 – magnetite zone 122.3m – 127.4m



Lady Miller Magnetite Zone LM27 – 120m





Magnetite Metallurgical Test 2010 A Pilot Study

Principal Metallurgist Mike Reed requested the Exploration Department to provide magnetite material for metallurgical test work from two different areas of SIF one of which was to be from the Lady Miller Mine area. Mike had requested archived drill core from Lady Miller and core from two diamond holes from the other area (Bon Accord North).

Fresh magnetite and fresh magnetite- siderite- sulphide core was sampled from Lady Miller DDH holes LM27 and LM30.

Oxidised magnetite- hematite (martite)- goethite, fresh magnetite and fresh magnetite-siderite-sulphide core was sampled from Bon Accord North DDH hole BAND001.

The metallurgical test involved the fresh hosted iron in one sample and sulphide enriched iron in the other by combining these zones from LM27, LM30 and BAND001. The metallurgical test was conducted with a purpose to determine if blending from multiple sources was to achieve a commercial product. The results are as follows.





Magnetite Metallurgical Test

Head Assays

-95.4	FRESH M	AGNETITE	SIDERITE/ SULPHIDE				
ASSAY (%)	HEAD	CALC'D AVE	HEAD	CALC'D AVE			
FE	21.1	21.5	20.3	20.7			
SIO ₂	66.1	66.0	66.8	66.3			
AL ₂ O ₃	0.08	0.11	0.47	0.46			
P	0.004	0.005	0.014	0.015			
S	0.06	0.064	0.38	0.37			
FEO	14.0	13.6	19.0	17.7			
LOI 1000	-0.15	-0.08	-0.35	0.03			
TIO ₂	0.05	0.05	0.06	0.05			
MNO	0.32	0.30	0.45	0.44			
CAO	1.33	1.11	0.98	0.77			
MGO	1.56	1.49	1.78	1.72			
K ₂ O	0.008	0.010	0.052	0.050			
NA ₂ O	0.010	0.015	0.040	0.027			
ZN	0.003	0.004	0.004	0.004			





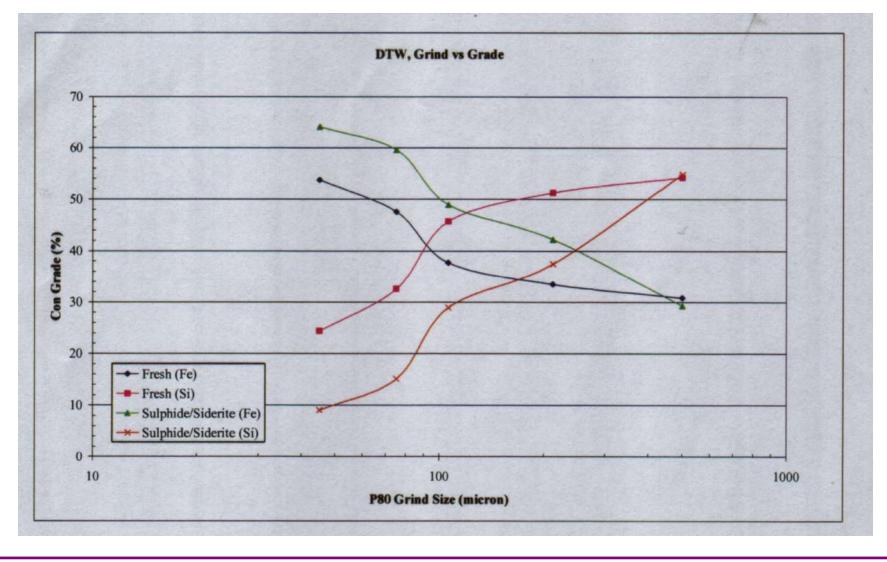
]	Fresh Magno	etite DTW S	ummary		
P80 (M	ICRON)	500	212	106	75	45
CO	C P	61.7	53.1	44.6	35.1	30.5
		30.9	33.5	37.7	47.6	53.8
ES	SIO ₂	54.2	51.3	45.7	32.6	24.4
CON (%)	AL ₂ O ₃	0.11	0.07	0.07	0.06	0.04
	P	0.004	0.004	0.004	0.003	0.003
0	S	0.06	0.06	0.06	0.06	0.06
N OVE (%)	FE	87.7	83.8	79.9	77.1	75.7
	SIO ₂	51.2	41.0	30.6	17.4	11.3
CON SCOL	AL ₂ O ₃	52.5	44.2	28.7	13.4	14.9
REC	Р	56.3	47.5	39.2	21.3	18.0
H	S	57.0	50.3	39.8	31.0	29.1
	FE	21.7	21.2	21.1	21.7	21.7
D E C	SIO ₂	65.4	66.4	66.6	65.7	66.0
HEAD RADE (%)	AL ₂ O ₃	0.13	0.08	0.11	0.16	0.08
HEAD GRADES (%)	P	0.004	0.004	0.005	0.005	0.005
0	S	0.06	0.06	0.06	0.07	0.06





P80 (M)	(CRON)	500	212	106	75	45	
CON	WT. ERY (%)	53.7	30.6	23.0	19.1	16.4	
	FE	29.3	42.3	49.0	59.6	64.2	
GRADES (%)	SIO ₂	54.9	37.5	29.0	15.1	9.1	
RADI (%)	AL ₂ O ₃	0.12	0.07	0.08	0.13	0.05	
	P	0.013	0.013	0.012	0.009	0.007	
0	S	0.46	0.74	0.92	1.09	1.29	
OVE (%)	FE	76.9	62.1	55.5	53.6	50.8	
	SIO ₂	44.2	17.4	10.0	4.4	2.3	
TI.	AL ₂ O ₃	15.0	4.5	4.0	5.3	1.8	
RYRE	P	50.1	27.7	18.3	11.8	7.5	
*	S	73.5	59.4	55.6	53.2	55.8	
	FE	20.5	20.9	20.3	21.3	20.8	
ES	SIO ₂	66.6	66.1	66.9	65.7	66.3	
HEAD RADE (%)	AL ₂ O ₃	0.43	0.47	0.46	0.47	0.45	
HEAD GRADES (%)	P	0.014	0.014	0.015	0.015	0.015	
0	S	0.33	0.38	0.38	0.39	0.38	



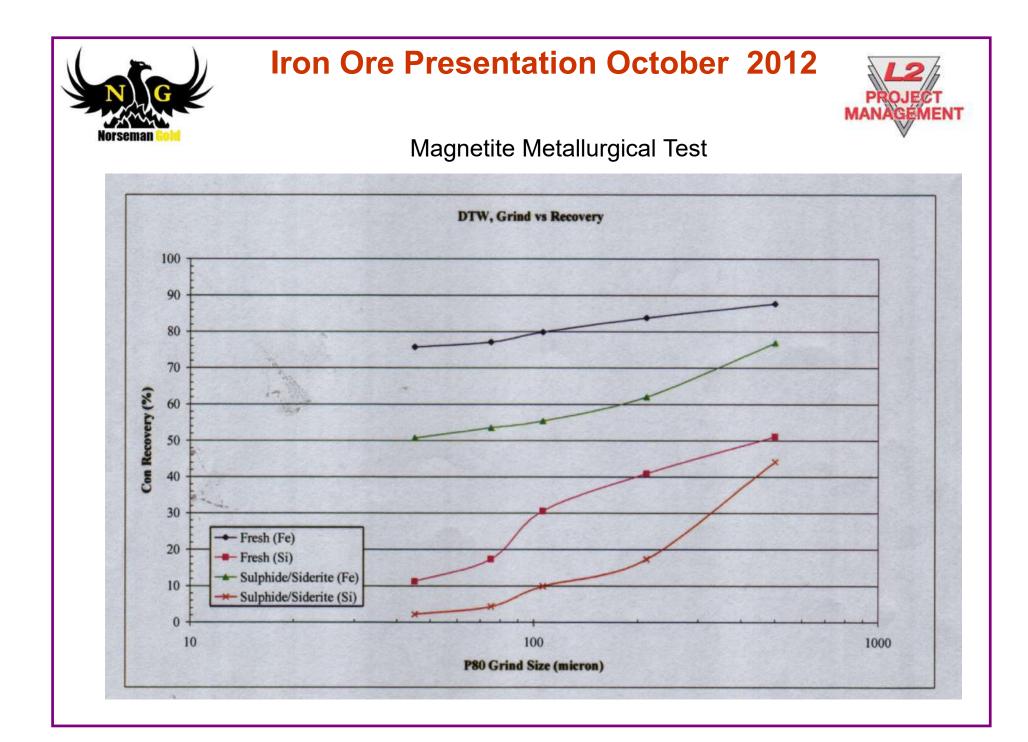


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Iron Ore Presentation October 2012



P80 (M)	ICRON)	500	212	106	75	45	
CON	WT. ERY (%)	53.7	30.6	23.0	19.1	16.4	
	FE	29.3	42.3	49.0	59.6	64.2	
CON GRADES (%)	SIO ₂	54.9	37.5	29.0	15.1	9.1	
6 P 8	AL ₂ O ₃	0.12	0.07	0.08	0.13	0.05	
O H C	Р	0.013	0.013	0.012	0.009	0.007	
•	S	0.46	0.74	0.92	1.09	1.29	
CON RECOVE RY (%)	FE	76.9	62.1	55.5	53.6	50.8	
	SIO ₂	44.2	17.4	10.0	4.4	2.3	
000	AL ₂ O ₃	15.0	4.5	4.0	5.3	1.8	
RY	Р	50.1	27.7	18.3	11.8	7.5	
*	S	73.5	59.4	55.6	53.2	55.8	
	FE	20.5	20.9	20.3	21.3	20.8	
ES	SIO ₂	66.6	66.1	66.9	65.7	66.3	
HEAD GRADES (%)	AL ₂ O ₃	0.43	0.47	0.46	0.47	0.45	
H N C	Р	0.014	0.014	0.015	0.015	0.015	
0	S	0.33	0.38	0.38	0.39	0.38	







HEAD ASSAYS

•The head assays of the two mineralisation types are in general quite similar. Both have iron grades (20-21%) that would be considered at the lower end for a magnetite deposit and high silica grades (66%).

•Correlation between the head assays and calculated heads from the DTW tests were very strong and don't show any concerns.

•All other deleterious elements for the Fresh Magnetite composite was present in low grades and shouldn't present any issues.

•Alumina, phosphorus and sulphur were all significantly higher in the Siderite/ Sulphide composite.

•Alumina and phosphorus were still within limits and won't be a process issue, however the sulphur grade is higher than acceptable and if it carries into the magnetic concentrate will pose an issue.

FRESH MAGNETITE CONCENTRATE

•Mass recovery was initially quite high due to entrainment of silica.

•Recovery was reduced to approximately 30% at 45 micron; however there was still a high amount of entrained silica. If silica were reduced to a saleable grade (5%) the mass recovery would be reduced to around 20%.

•Iron recoveries were quite good, tailing off to approximately 76% at 45 micron. The drop in recovery from the coarser grind size is explained by non-magnetic iron being rejected as it becomes increasingly liberated from the magnetic iron.

•Iron grades were generally poor, reaching a maximum of 54% at 45 micron, which would need to be increased by 10% or more to achieve product grades.

•Silica grade were very high right down to the finest grind size tested. Industry standard is for 4.5% silica to achieve blast furnace grade, which is still 20% off at 45 micron.

•No issues with other deleterious elements (Al₂O₃, P, S, etc.) were presented.





FRESH MAGNETITE - SIDERITE/ SULPHIDE CONCENTRATE

•Mass recoveries were lower across the board, indicating that less of the iron present is magnetite and less silica is being entrained. The lower magnetic iron content is expected to be accounted for by the siderite.

•Iron recoveries were significantly lower for this composite, dropping to around 51% at 45 micron. Again there is a large drop from the initial recovery based on the liberation of non-magnetic iron at finer grind sizes.

•The tails iron grade is also much higher (average 11.6% compared to 7.4%) again confirming that more iron is present as non-magnetic species in this mineralisation type.

•Iron grades were better across the board compared to the Fresh Magnetite composite. At 45 micron the grade of 64% Iron is approaching an economic level required to go forward which is generally 68% iron.

•Reduction in silica grade is better for this composite, but still high until the finest grind size is used. Silica would still need to be reduced to <5%. This could be achieved with a simple cleaner magnetic separation setup at 45 micron.

•Sulphur grades were quite high at the finer grind sizes, tripling in grade from 500 to 45 micron and with recoveries still >50%. This is to be expected with increasing liberation and indicates at least a proportion of the sulphide is present as pyrrhotite which will be recovered in the magnetic concentrate. Sulphur grades <0.1% are generally required in a magnetite concentrate.

•No issues with other deleterious elements (Al₂O₃, P, etc.) were presented.





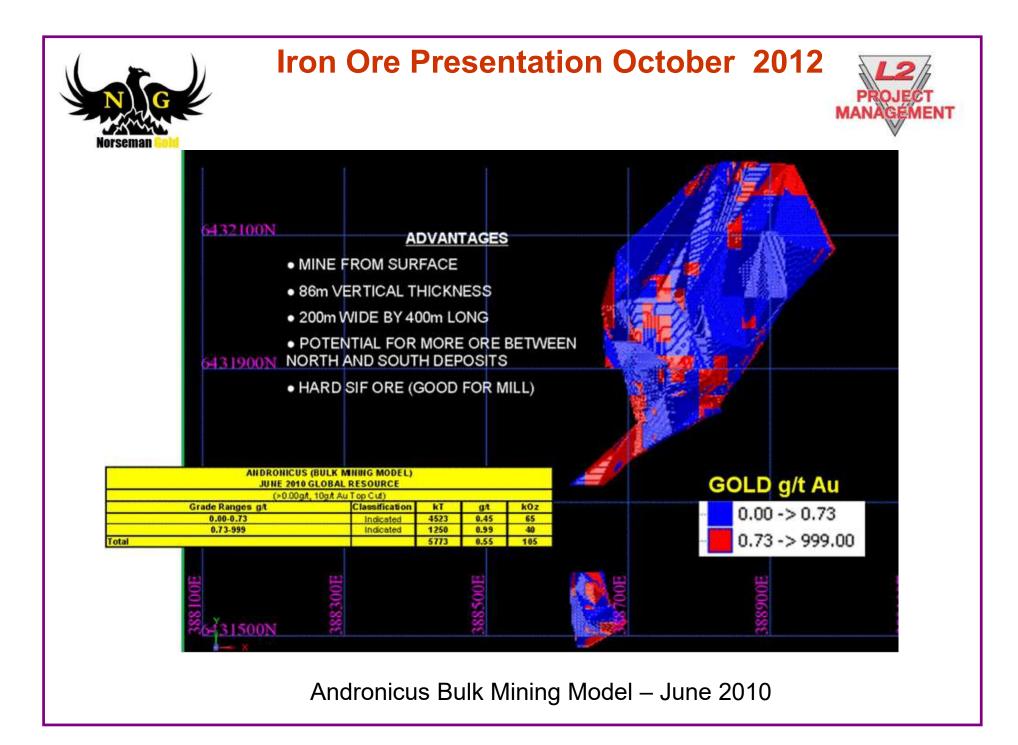
Metallurgist Mike Reed in his report made the following conclusions on the limited test work.

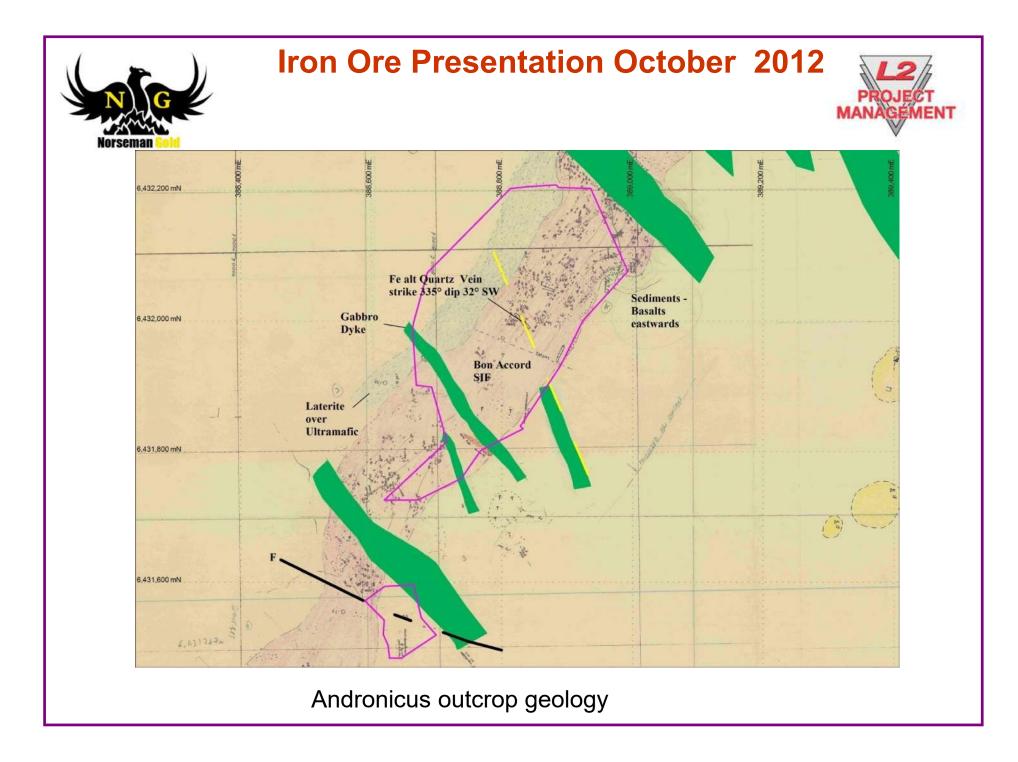
METALLURGICAL TEST WORK CONCLUSION

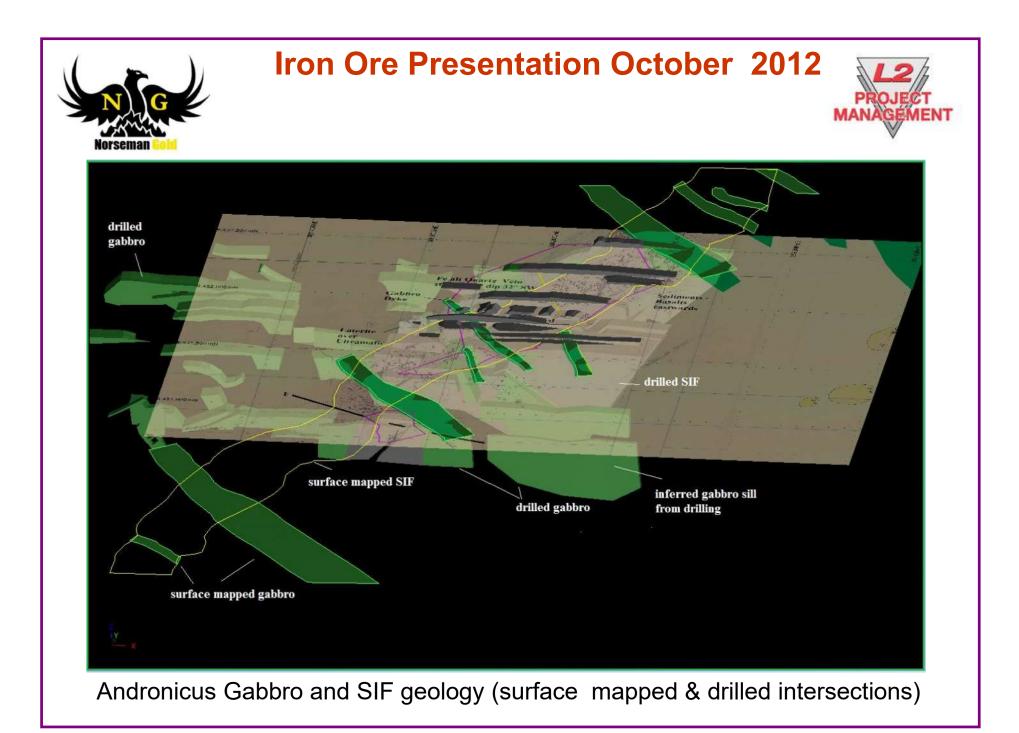
The data infers that 20% iron in the head grade and 60% in the concentrate against between 30-32% and 67% respectively compared to other magnetite projects currently under consideration in Australia places the Norseman leases at the lower end of the spectrum however there is sufficient upside to increase extractable iron to warrant further investigation. This test work is based on two samples and grade may rise with additional drilling.

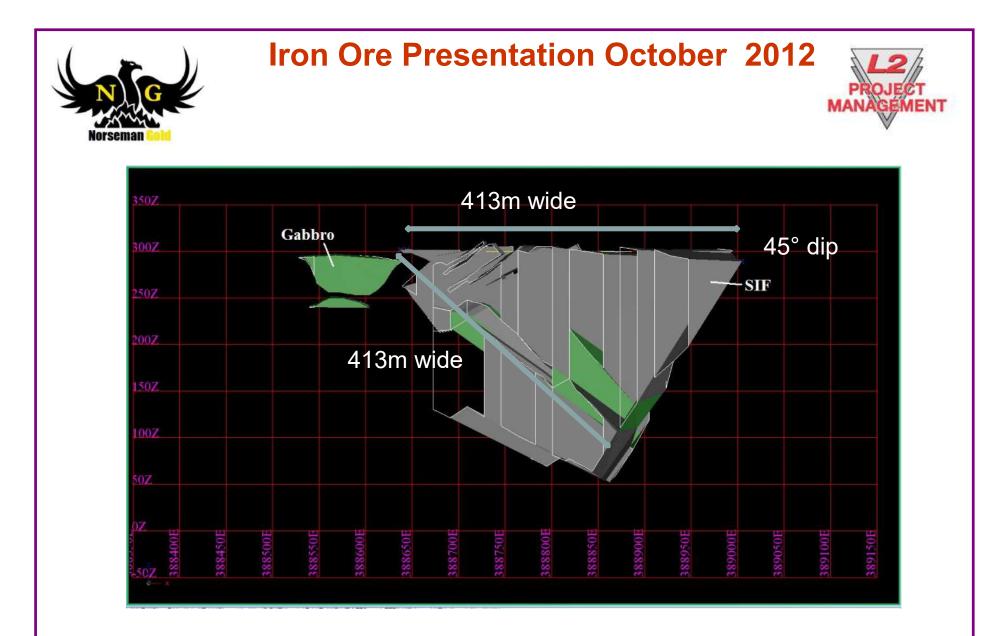
There will be some additional processing units required to extract a saleable amount of iron due to the high levels of silica which involves reverse flotation however the metallurgical understanding of these processes is well known and will not require updated technology to implement.

Additional test work will be required to ascertain a better understanding of the ore body structure chemically however there is enough evidence to proceed to the next level. **Overall the foundations for an economic extraction and sale of iron are solid allowing for capital considerations.** The addition of gold credits would only strengthen this position.

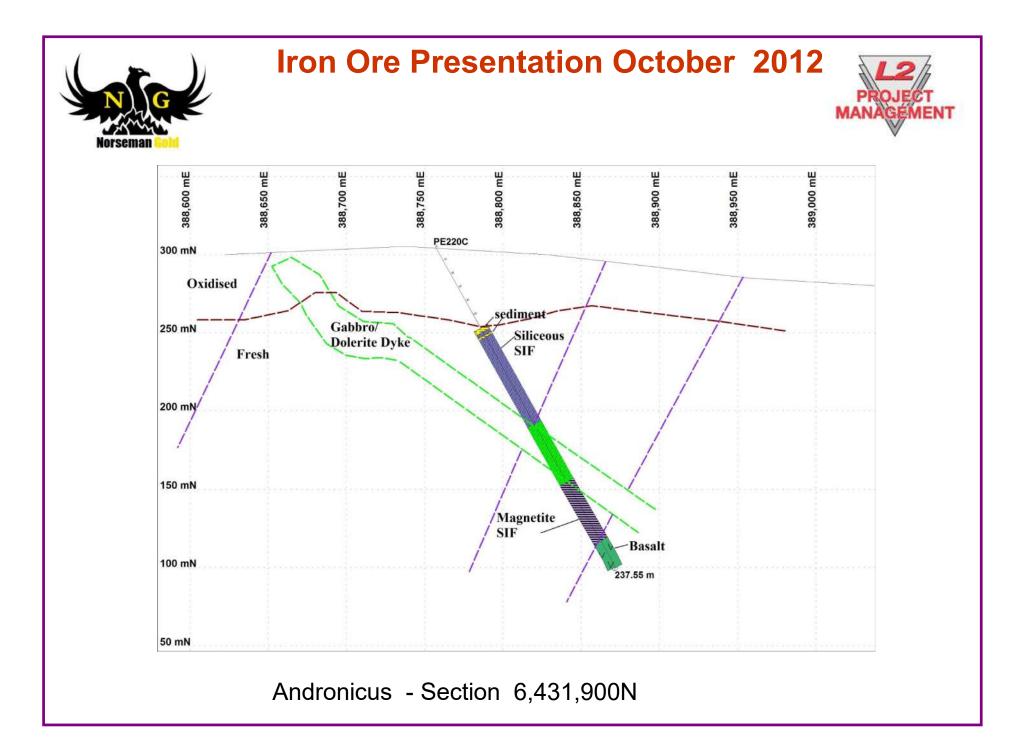




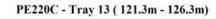


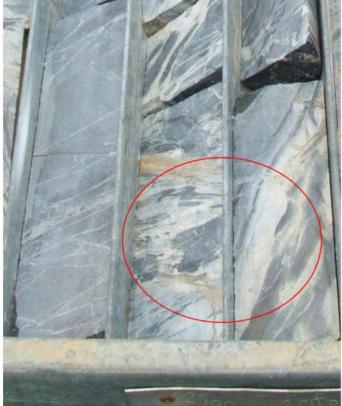


Andronicus SIF unit widths intersected by drilling







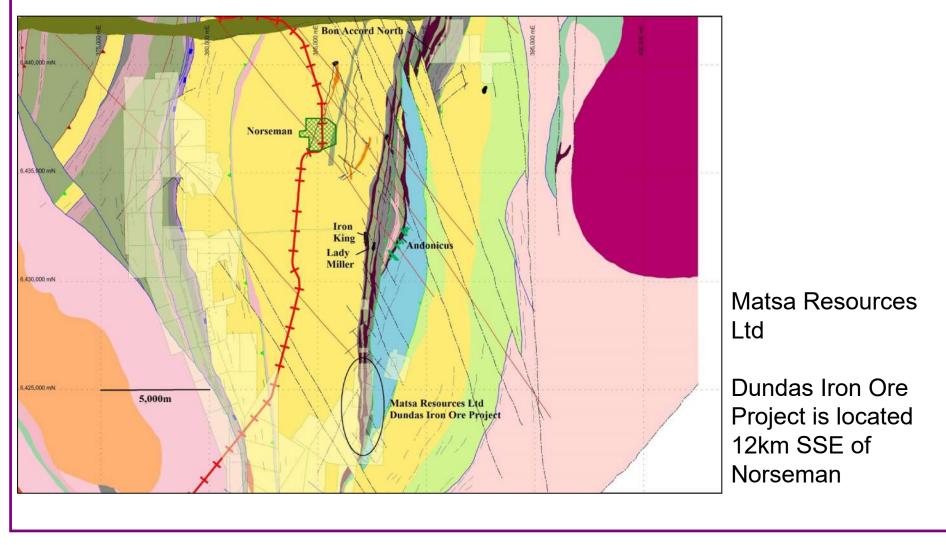


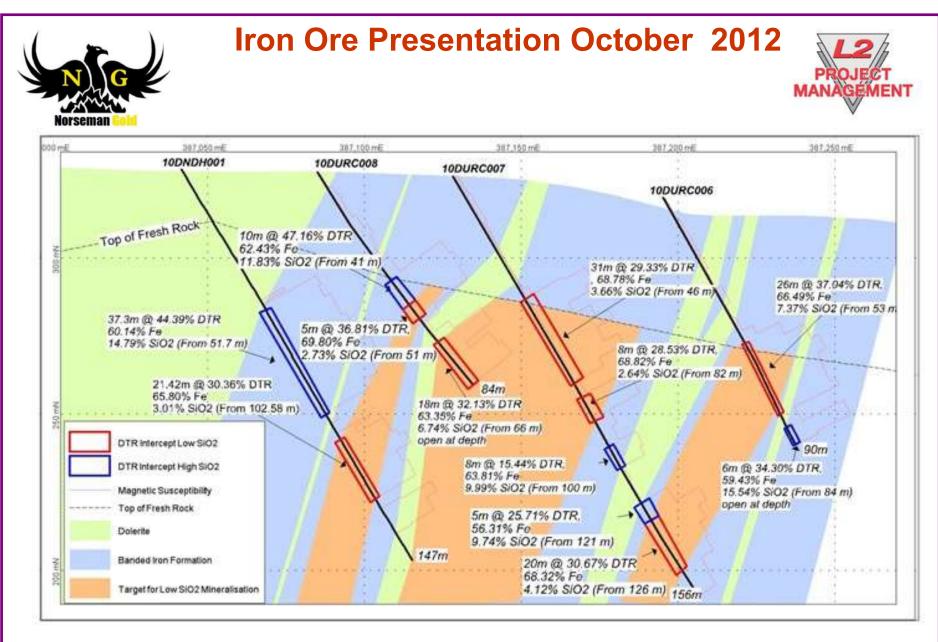






Competitor Iron Exploration within the Noganyer Formation





Matsa Resources Ltd Drill Section (public released)





	Intercept meters	DTR %	Heads Fe %	Concentrate				
				Fe %	SiO2 %	AI2O3 %	P %	S%
All Intercepts	643.52	33.47	30.36	63.38	9.74	0.34	0.019	0.317
Type 1 Low Silica Intercepts (<8% SiO2)	323.67	33.67	32.02	67.04	5.34	0.25	0.009	0.353
Type 2 High Silica Intercepts (>8% SiO2)	319.85	33.27	28.67	59.68	14.19	0.42	0.029	0.280

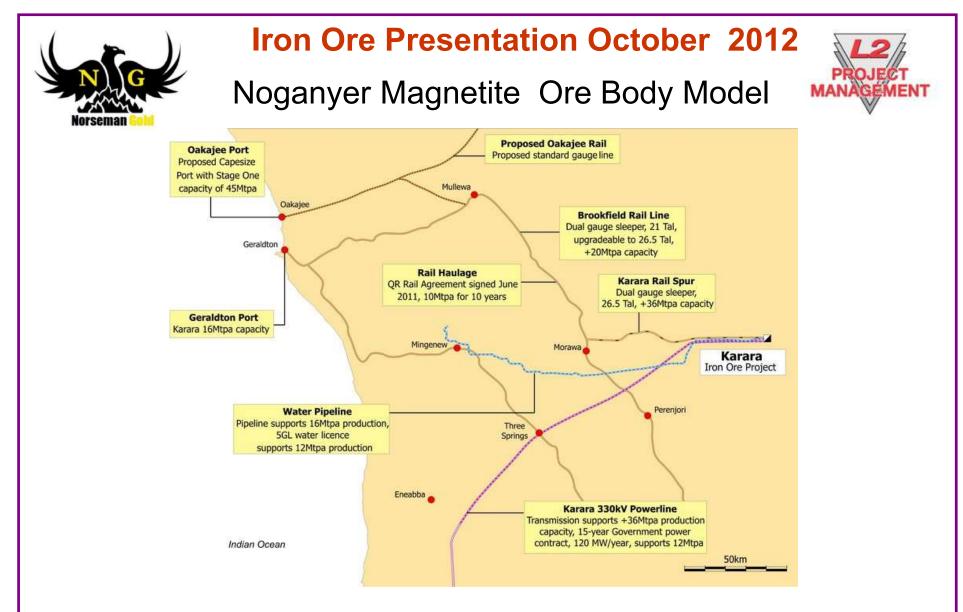
Davis Tube Recovery Summary

Type 1 and Type 2 Magnetite BIF - Global DTR Averages

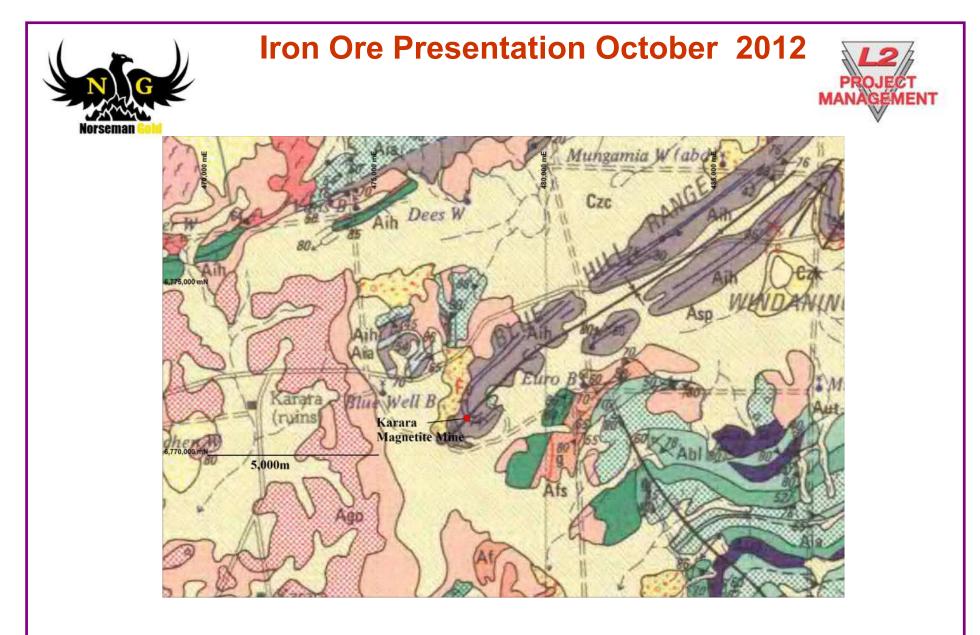
Matsa Resources Ltd Davis Tube Assays (public released)

Comparing Lady Miller LMRC013 Davis Tube results are as follows for a vertical 60m intercept.

Head: 27.61% Fe, 48.53%SiO₂, 2.93% Al₂O₃, 0.049%P,0.757%S Concentrate : 64.62% Fe , 7.15% SiO₂, 0.38% Al₂O₃, 0.020%P, 1.454%S Recovery : 23.1%



Gindalbie Metals Ltd is developing the Karara Magnetite Deposit located approx 215km ESE of Geraldton.



Karara Magnetite Deposit – Regional Geology



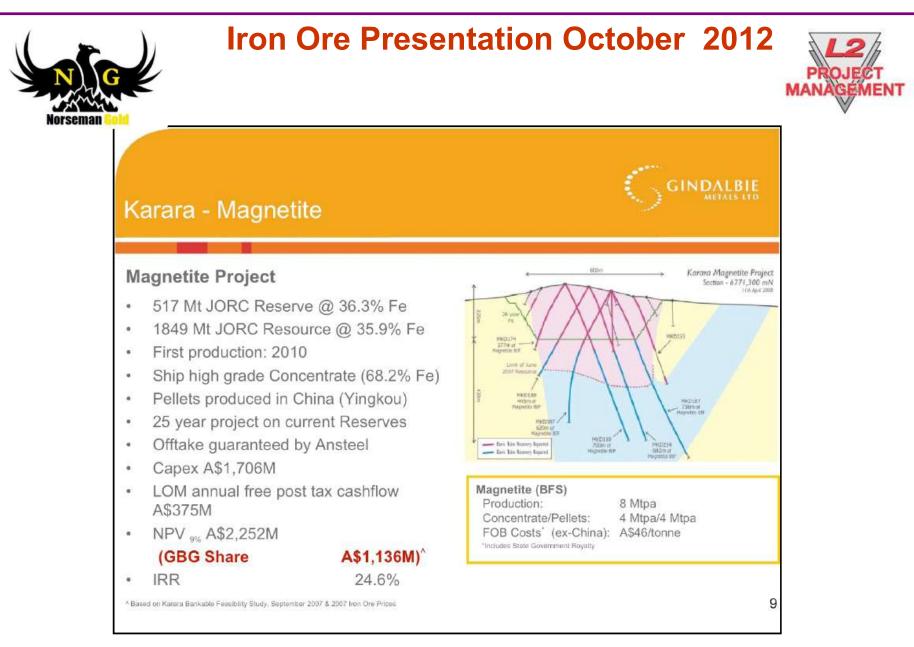


The Karara mine is hosted within the Yalgoo-Singleton Archaean greenstone belt. The belt is characterised by a huge magnetite banded ironstone formation (BIF) unit that extends over a strike length of more than 3km.

The western branch of the unit is over 400m wide and more than 350m deep. The eastern limb is comparatively narrower and outcrops as a chain of 100m-wide haematiteenriched hills along an adjacent north-south trending fault.

The BIFs create a series of isolated peaks and ridges in an otherwise plain landscape. Iron is hosted within the Windanning Formation as a sequence of several jasperlitic BIF and grey-white chert units that lay above the Gabanintha Formation.

The deposit is up to 150m thick and is substantially dominated by interbedded layers of shales and BIF. Dolerite and kaolinite clays are also found in irregular areas within the deposit.



Bon Accord North and Andronicus have the potential to be another Karara Magnetite Deposit



Bon Accord North Project



- Immediately south of the Jimberlana Dolerite Dyke.
- Structural thickening of the SIF up to 890m wide across strike.
- True widths averaging 575m based on detailed outcrop mapping.

Target Strategy

- To prove up a Fe magnetite resource
- SIF block on average 750m wide x 150m thick x 500m strike length x 3.34 SG (Lady Miller).
- 187.88 million tonnes of SIF @ 27.61% Fe (average Lady Miller head grade).
- Similar in target size and grade to Cape Lambert South Project.
- Recovery based on Lady Miller Pilot Study = 23% (average) with best recovery of 49.7%.
- Potential magnetite concentrate = 43.21million tonnes @ 64.62% Fe (av Lady Miller concentrate grade).

Andronicus Project



- Approximately 1- 1.5Km E-NE of Lady Miller.
- Structural thickening of the SIF up to 413m wide (drilling) across strike.
- True widths averaging 413m based on detailed outcrop mapping and drilling.

Target Strategy

- To prove up a Fe magnetite resource
- SIF block on average 290m wide x 150m thick x 500m strike length x 3.34 SG (Lady Miller).
- 73 million tonnes of SIF @ 27.61% Fe (average Lady Miller head grade).
- Recovery based on Lady Miller Pilot Study = 23% (average) with best recovery of 49.7%.
- Potential magnetite concentrate = 16.8 million tonnes @ 64.62% Fe (av Lady Miller concentrate grade).





Moving Forward

A low priority P/T program will be undertaken to compile more detail on individual SIF units to improve our knowledge. This program will comprise the following tasks with a review of progress in January 2013 to see if we wish to accelerate the program at that point.

- Compile data on the drill holes into the SIF units.
- Catalogue drill pulps in the sample shed for re assay for Fe.
- Surface mapping and sampling of the SIF to define high Fe grade zones.

More advanced metallurgical test work is to be focused on areas defined from the above programs.

In addition monitor competitor activity for iron mineralisation exploration and development on Noganyer Formation SIF units.



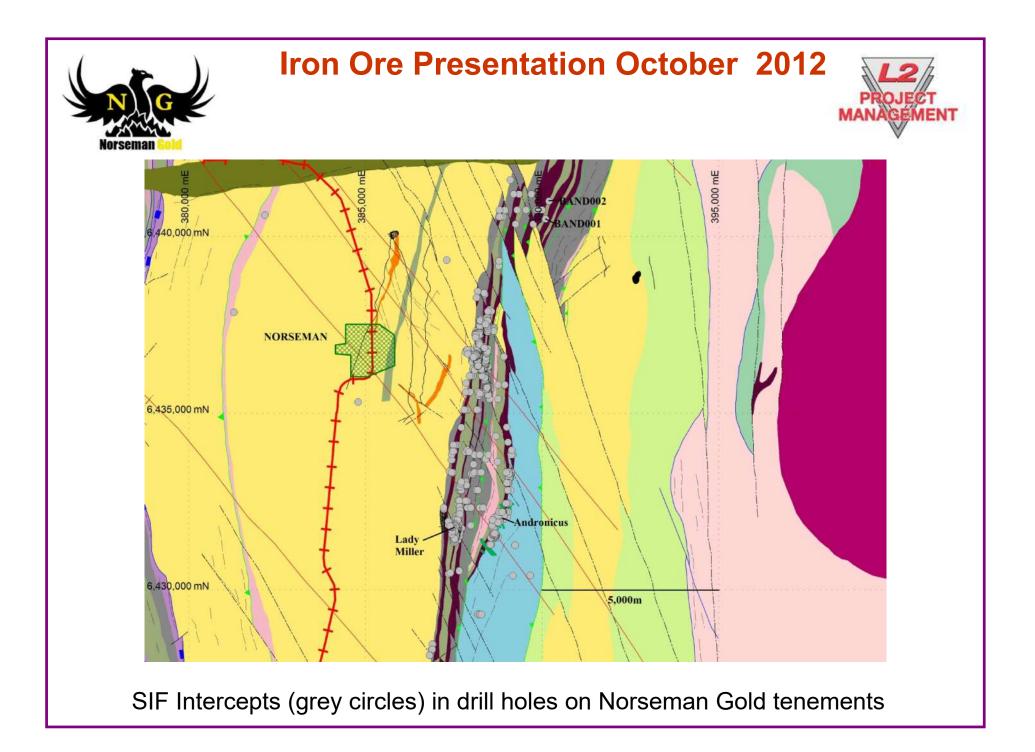


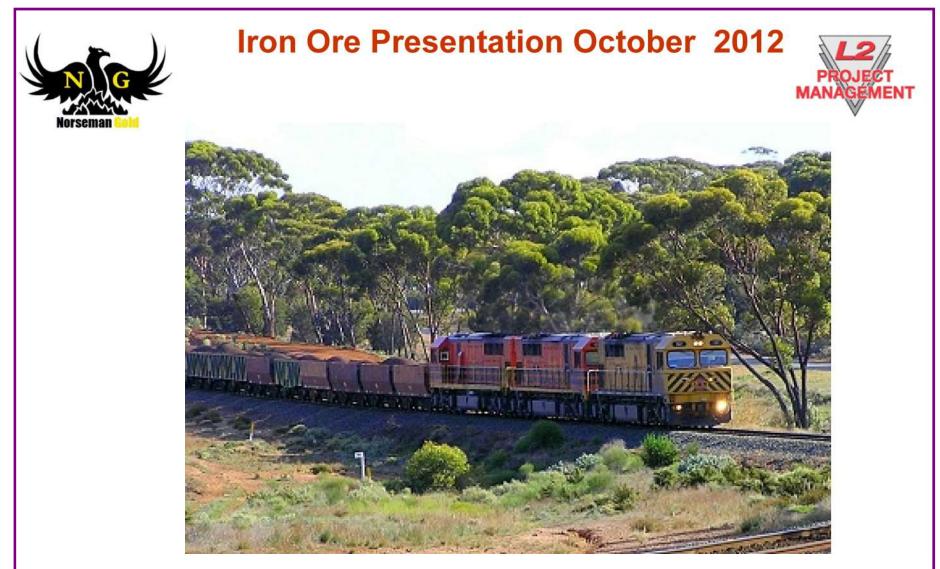




Pulp Storage Shed June 2008 before re organisation

Pulp Storage Shed August 2008 after re organisation





Iron ore from the Koolyanobbing Iron Ore Mine to the Esperance Port via Kalgoorlie and Norseman