



Free State tailings

MINERAL RESOURCES

GOLD

		MEAS	URED			INDIC	ATED			INFE	RRED			TO.	TAL	
OPERATIONS	Tons	g/t	Gold ('000	Gold ('000	Tons	g/t	Gold ('000	Gold ('000	Tons	g/t	Gold	Gold ('000	Tons	g/t	Gold	Gold ('000
OFERATIONS	(Mt)		kg)	oz)	(Mt)		kg)	oz)	(Mt)		('000 kg)	oz)	(Mt)		('000 kg)	oz)
Surface																
Free State (Phoenix)	130.8	0.27	36	1,148		-	-		5.3	0.26	1	44	136.1	0.27	37	1,192
Free State (St Helena)	289.6	0.25	72	2,327		-	-		-	-	-		289.6	0.25	72	2,327
Free State (Other)	421.8	0.22	93	2,985	142.0	0.33	47	1,500	195.1	0.23	45	1,444	759.0	0.24	184	5,929
Total	842.2	0.24	201	6,459	142.0	0.33	47	1,500	200.5	0.23	46	1,488	1,184.6	0.25	294	9,447

MODIFYING FACTORS

OPERATIONS	MCF (%)	Dilution(%)	PRF (%)
Free State (Phoenix)	100	-	47
Free State (St Helena)	100	-	47
Free State (Other)	100	-	47

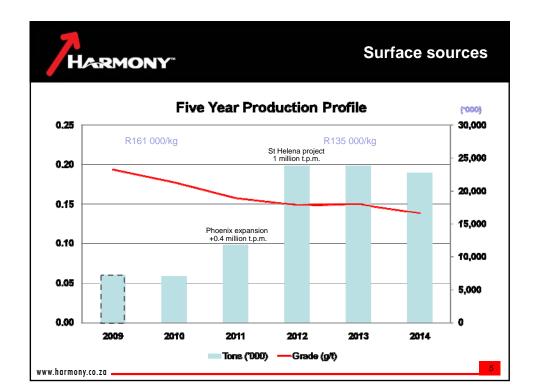
ORE RESERVES

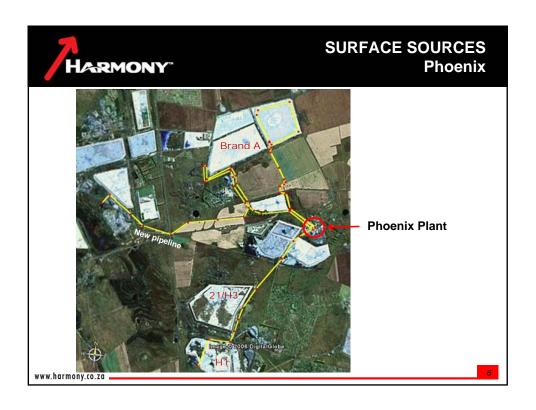
	PROVEN			PROBABLE				TOTAL				
OPERATIONS	Tons (Mt)	g/t	Gold ('000 kg)	Gold ('000 oz)	Tons (Mt)	g/t	Gold ('000 kg)	Gold ('000 oz)	Tons (Mt)	g/t	Gold ('000 kg)	Gold ('000 oz)
Surface												
Free State (Phoenix)	130.8	0.27	36	1,148	-	-	-	-	130.8	0.27	36	1,148
Free State (St Helena)	289.6	0.25	72	2,327	-	-	-	-	289.6	0.25	72	2,327
Free State (Other)	421.8	0.22	93	2,985	101.7	0.26	26	845	523.6	0.23	119	3,830
Total	842.2	0.24	201	6,459	101.7	0.26	26	845	943.9	0.24	227	7,304
			·	·		·	·				·	·



Surface sources

- FY09
 - LTIFR improve 31% to 3.09, RIFR improve 43% to 1.34
 - · Phoenix:
 - Tons sustained (3% down water and contractor labor issues)
 - Grade at 0.12g/t (H1 lower values & 44% recovery vs. 47%)
 - R150 356/kg and R17.70/t all costs included (mainly reagents, some up 40%)
 - Waste Rock:
 - 1.2 million tons at 0.56g/t
 - R178 171/kg and R99/t all costs (fuel costs increases)
 - Secured deposit capacity through new pipeline
 - Secured water from dam 13
 - · Capitalize 3rd pump station for leap frog
 - · Complete Phoenix Expansion and St Helena feasibility studies





HARMONY" financial parameters

Parameter	Unit	Value	
Gold price	R/kg	225 000	
Uranium price	\$/lb	60	
Discount rate	%	7.5	
Exchange rate	R/\$	9.13	

Projects:

Note: All values shown before tax



HARMONY

Phoenix – Surface tailings

- Proof of concept
 - Saaiplaas plant currently treats 500 000 tpm of slime.
 - Results for year ended June 09:

Head grade (g/t)	0.273
Recovered grade (g/t)	0.118
Average tpm	480 000
Operating cost (R/tonne)	17.43
Operating cost (R/kg)	148 139
Electrical power demand (MW)	3.68
Total compliment	98



Surface

Project Phoenix phase 2

• Increase throughput of Saaiplaas plant from 500,000 tpm to 900,000 tpm

	Saaiplaas
Ave grade g/t (rec)	0.123
LOM tonnes (Mt)	48
Rec gold LOM (t)	5.9
Power requirements (MW)	5
Capex (R millions)	204
Opex (R/t)	17.8
Opex (R/kg)	144 700

Status

- Feasibility is presently being completed.
- Capital approved of R4 million to complete a feasibility study.
- Uranium potential under investigation.
- Existing tailings capacity sufficient for 2 years and is being expanded

www.harmony.co.za



Attractiveness - Phoenix upgrade

Financial analysis (Incremental increase)

Parameter	Unit	R 180,000	R 225,000	R 250,000
Capital expenditure	R'm	204	204	204
Operating cost	R/t	17.8	17.8	17.8
NPV	R'm	76.5	385.0	568.6
IRR	%	21.6	74.4	117.9
Payback	Months	59	29	21
Max neg. cash flow	R'm	148.5	115.5	97.1
Production costs	R/kg	144 700	144 700	144 700
Monthly profit	R'm	3.9	8.9	11.7
LOM	Years	9	9	9

Note: Financial analysis based on pre-feasibility study completed during March 09



Attractiveness - Phoenix upgrade

- 1. Availability of power require 5 MVA (already allocated by Eskom)
- 2. Availability of tailings facility re-commission old facilities with spare capacity (10 years)
- 3. Availability of processing water see Saints comment

www.harmony.co.za



St Helena tailings – Surface tailings

- Constraints
 - · Large tailings storage facilities secured adequate land
 - Availability of process water plans in place to mitigate
 - · Regulatory and permitting approval timelines
 - · Electric power
 - Sensitive to costs, grade and gold price
- Benefits/Advantages
 - Safety
 - Time to market
 - Low capital where existing plants can be converted
 - Potential for environmental clean-up
 - · High degree of confidence in financial and reserve models
 - Simple, proven technology for gold (not the case for uranium)



Project Saints

Conversion of the St Helena plant to treat 1M tpm of slime

	Year 1-8	Year 1-20
Ave grade g/t (rec)	0.148	0.144
LOM tonnes (Mt)	82	226
Rec Gold LOM (t)	12.16	32.6
Power requirements	9.5	9.5
Capex (R millions)	662	1 007
Opex (R/t)	17.82	17.82
Opex (R/kg)	120 530	123 430
Time to first gold (mths)	15	15

Status:

- · Feasibility study completed
- Environmental Impact Assessment submitted during May 09
- Uranium potential under investigation
- · North dams tailings capacity sufficient for 8 years
- Implementation in 2 phases

www.harmony.co.za



Attractiveness – Project Saints

Financial analysis - Years 1 to 20

Parameter	Unit	R 180,000	R 225,000	R 250,000
Capital expenditure	R'm	1 007	1 007	1 007
Operating cost	R/t	17.82	17.82	17.82
NPV	R'm	41	701.8	1 076
IRR	%	9	23	30
Payback	Months	135	57	49
Max neg. cash flow	R'm	589.8	589.8	589.9
Production costs	R/kg	123 430	123 430	123 430
Monthly profit	R'm	8.1	14.5	18.1
LOM	Years	20	20	20

Note: Financial analysis based on Feasibility completed in July 09 capex updated



Attractiveness – Project Saints

- 1. Availability of power require 9.5 MVA (allocated by Eskom)
- 2. Time to Record of Decision (RoD) for tailings facility submitted May 09 anticipate RoD September 09
- 3. Free state water balance has been updated
- 4. Obtained approval from DWA to continue with project whilst formal water license application being processed
- 5. Sufficient water available to initiate project
- 6. Sustainable water sources have been identified for the life of the project

