



MSP ENGINEERING PTY LTD

WHITE WELL GOLD PROJECT PROCESS PLANT PRE-FEASIBILITY STUDY REPORT





TABLE OF CONTENTS

1.	SUMMARY1
2.	PROCESS DESCRIPTION & DESIGN CRITERIA2
4.	9
5. 5.	PROJECT IMPLEMENTATION
APPI	ENDIX A PROCESS FLOW DIAGRAMS AND DESIGN CRITERIA11
	12
	13
APPI	ENDIX D PROJECT SCHEDULE14
	TABLES OF TABLES
	7
	9
	TABLES OF FIGURES
Fi	gure 2-1 Average Sizing Distribution for Quartz Content in Ore
Fi	gure 2-2 Process Flow Diagram5
Fi	gure 2-3 Site Layout Drawing6

APPENDICES

Appendix A Process Flow Diagrams and Design Criteria











1. SUMMARY

The White Well Gold Project (WWGP) deposit is located approximately 30 km east of Cue in the Murchison district of WA. MSP Engineering (MSP) and other parties are considering the potential development of this open pit gold mineral resource.

The gold mineralisation at WWGP is free gold hosted in quartz veins. The quartz veins are contained within a non mineralised kaolin clay. Due to this type of deposit, the recovery of the quartz and the rejection of the kaolin waste is the initial key processing step in the overall process flowsheet.

Based on recent testwork performed by MSP and historical work by previous owners, the total process flowsheet consists of drum scrubbing, desliming (clay removal) via screening, hydrocyclones and gravity concentration to recover the quartz and liberated free gold. This quartz product is then processed via conventional ball milling and a CIL circuit.

Previous testwork indicates that the quartz fraction down to a particle size of 212 microns varies between 15 to 30% of the ore. The process plant throughput for the grinding and CIL circuit has been constrained to a maximum throughput rate of 30 tph (244,000 tpa at 93% utilisation) due to the strategy of applying a modular design, with the majority of fabrication performed off-site

The drum scrubber/deslime circuit ore supply via front end loader (FEL) from ROM stockpiles will operate at a targetted throughput rate of 100 tph (815,000 tpa at 93% utilisation) and provides an average feed rate of 30 tph of quartz rich material to the grinding/CIL circuit.

The capital cost for the deslime and grinding/CIL circuit with carbon processing off-site (elution/reactivation by an off-site custom facility) has been estimated at AUD \$22.22M. The accuracy of this estimate is \pm 20- 25% as at Q4, 2019. The capital cost estimate for the drum scrubber circuit, tailings storage facility (TSF) , bore water supply and offices/maintenance/stores facilities, camp and power plant are the responsibility of MSP.

An operating cost for the proposed total process plant, excluding borewater supply, TSF, the feed loader and contract crushing of a portion of the quartz product has been estimated at AUD \$16.98/tonne to an estimated accuracy of \pm 20-25% as at Q4, 2019. This estimate is based on the feed rate to the drum scrubber circuit.

A project schedule for the process plant facility incorporating the design, procurement, fabrication, construct and commission to first gold pour has been estimated at 9 months duration. The key assumptions are that the ball mill and other long lead items can be procured and delivered to site within 22 weeks. This schedule precludes the design and construct for the borefield, TSF, power supply, all site buildings and the camp facility.





2. PROCESS DESCRIPTION & DESIGN CRITERIA

The pictorial flowsheet and the site layout drawing for the proposed WWGP process facility is presented in Figure 2-2 and Figure 2-3 respectively.

The process flow diagrams and the associated design criteria for the WWGP process facility is presented in Appendix A

Open pit ore that provides feed to the process plant is described in the summary section of this report. ROM ore is fed by FEL into a ROM bin, whereby it is withdrawin via an apron feeder at a controlled rate. The apron feeder discharges onto a conveyor that feeds a vibrating grizzly which has an average aperture of 100 mm. Grizzly oversize material (O/S) will initially discharge via a conveyor onto a small stockpile. At a later date an impact crusher may be installed to crush the O/S and return to the drum scrubber feed conveyor.

Grizzly undersize material (U/S) is conveyed to a drum scrubber (3 m diam x 4.5 m length, tyre drive with a 315 kW motor). Oversize material (+12 mm) discharges by a trommel screen fitted to the end of the scrubber. This material is conveyed to a small stockpile which will be periodically removed by FE loader onto a larger capacity stockpile (2,500 tonne capacity). The intent is to contract crush this material to approximately 100 % passing 10 mm on a campaign basis every 2 weeks. This crushed material will be stockpiled (2,500 tonne capacity) and then fed by FEL into a reclaim bin, which will feed the grinding circuit.

Trommel U/S slurry exiting the scrubbing circuit is pumped to a vibrating screen fitted with 2mm urethane screen panels. The O/S material discharges onto the feed conveyor to the grinding circuit and the U/S slurry from the vibrating screen is pumped to the deslime circuit for removal of the fine kaolin material. The scrubbing circuit inclusive to the ROM bin as described above has been sourced as second hand equipment and will be re-conditioned and installed by MSP.

The deslime circuit consists of two stages of hydrocyclones with the first stage (400 mm diam - 4 of 3 operating) cyclone overflow reporting to the second stage cyclones (250 mm diam - 6 of 4 operating). The second stage deslime cyclone overflow (estimated at P80 @ -38 microns) reports to the final taings pumps for delivery to the TSF.

Both stages of the deslime cyclone underflow product reports to a StackSizer vibrating screen consisting of 5 screen decks fitted with urethane screen panels. The StackSizer U/S (-212 micron slurry) reports via a slurry pump to a hydrocyclone whereby the underflow stream reports to a Knelson gravity concentrator (KC-CVD20) which will recover free gold as a continuous concentrate stream. The StackSizer O/S material will combine with the Knelson concentrate stream and be transferred via a slurry pump to the grinding circuit. The hydrocyclone (2 x 250 mm diam - 1 operating) prior to the Knelson gravity concentrator dewaters and provides further removal of clay material, with the resultant overflow product reporting to the final tails pumps.

The grinding circuit consists of a ball mill (3.8 m diam x 5m EGL fitted with a 800 kW motor) in closed circuit with hydrocyclones (5 of 250 mm diam – 3 operating). Cyclone overflow gravitates to a trash vibrating screen prior to reporting the leach/CIL circuit. Cyclone U/F gravitates back to the ball mill feed chute.

The leach/CIL circuit consists of 1 leach and 6 CIL tanks (4.5 m diam x 5.9 m height - 100 m³ capacity) with the CIL tanks fitted with Kemix interstage screens (MPS 100). Loaded carbon will be removed daily and carbon advance through the tanks will be via airlifts. Loaded carbon (in bulka-bags) will be transported to a custom stripping facility for the recovery of gold, with the barren carbon reactivated before returning to site.





The trash, loaded carbon and safety screens (0.9 m x 2.4 m length) are all the same equipment size and are fitted with 0.8mm aperture urethane screen panels.

The supply/storage of reagents/consumables and dosage are based on the following criteria:

- Quicklime in 1 tonne bulka-bags will be transferred into a 1 tonne capacity silo fitted with a rotary valve. This silo straddles the grinding circuit feed conveyor with lime addition controlled via a VSD drive on the rotary valve onto the conveyor to meet the target operating pH in the leach tank.
- Grinding media will be transported in 200 steel drums to site. The drums will be lifted via an electric hoist to a cradle adjacent to the ball mill feed chute. Media addition will be made to maintain the target power draw of the ball mill.
- Liquid cyanide via Isotainers will be delivered to site and directly connected to the dosing pump inlet piping manifold. Positive displacement pumps with VSD control will meter the cyanide solution direct to the leach tank to maintain the target cyanide concentration.
- Liquid oxygen (LOX) will be delivered to site and stored in a liquid oxygen vessel fitted with a vaporisor. The oxygen gas via SS piping will be metered and sparged down the agitator shafts into the slurry.

The key design criteria applied to the process plant facility are as follows:

The estimated average sizing distribution of the quartz content within the ore is presented in Figure 2-1. This sizing distribution was used to predict the quantity of quartz material that reported from the drum scrubber oversize, +2 mm material from the vibrating screen and the +212 micron material from the StackSizer screen. All of these streams plus the Knelson gravity concentrate reports to the grinding/CIL circuit.



Figure 2-1 Average Sizing Distribution for Quartz Content in Ore.





- A Bond Ball Work Index (BBWi) of 18 kW/h was assumed for the quartz material. A grind liberation size of P₈₀ 106 microns was the assumed leach feed sizing.
- A leach/CIL retention time of 12 hours was assumed to be sufficient for maximum gold recovery at a slurry density at 40% (w/w).
- A loaded carbon Au grade of 3000 g/t can be achieved from an estimated gold leach feed head grade 2 g/t.





Figure 2-2 Process Flow Diagram

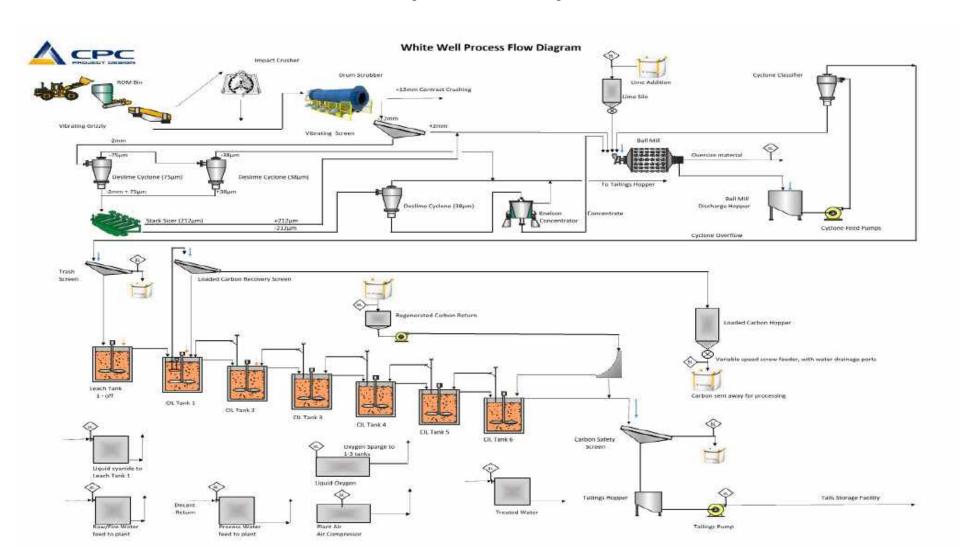
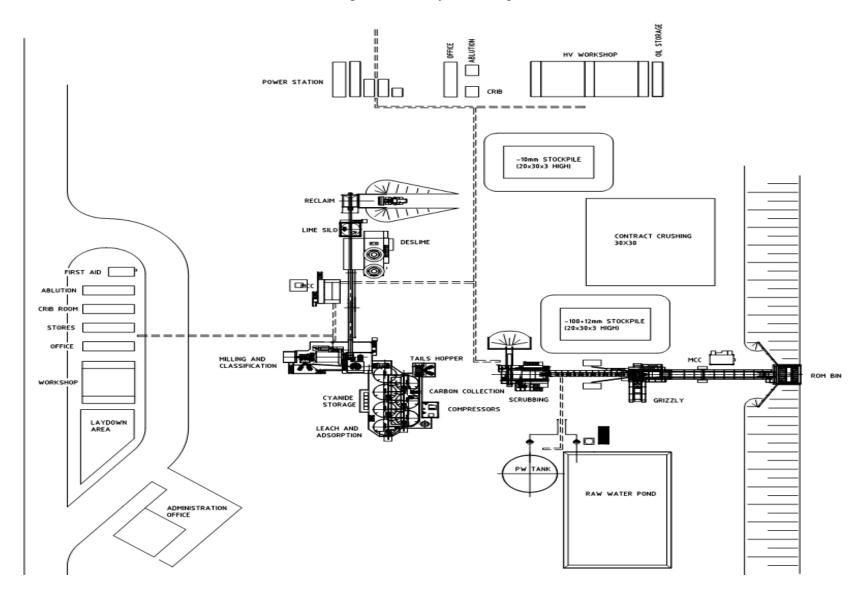




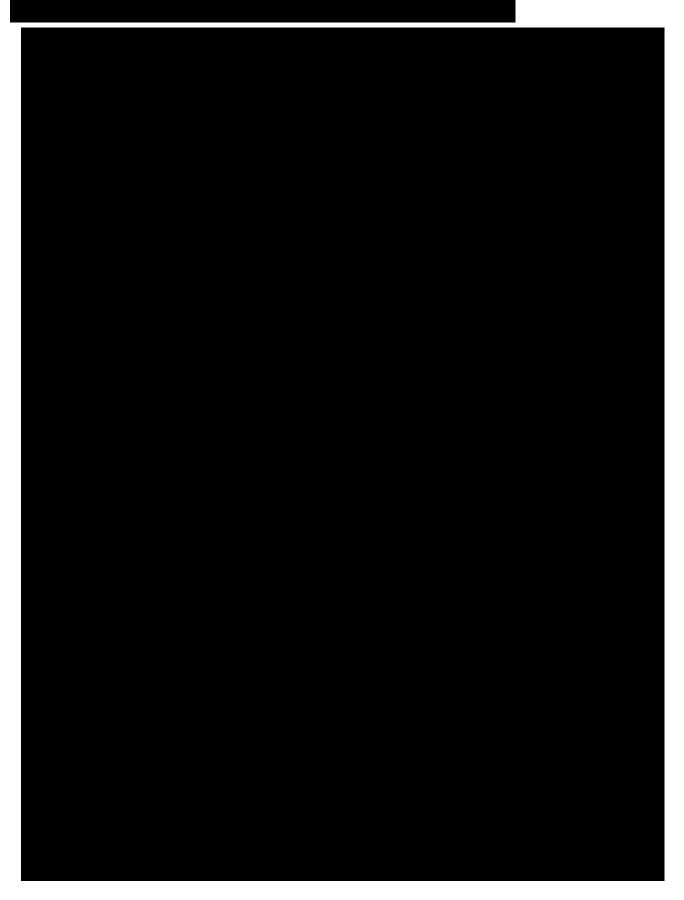


Figure 2-3 Site Layout Drawing













3.1 Estimate Structure

The structure of the estimate was based on the following major categories:

- Direct costs
- Indirect costs
- EPCM costs
- Contingency.

3.1.1 Estimation Methodology and Accuracy

The capital estimation methodology was based on:

- Estimates based on Australian dollars
- EPCM factored from the direct cost estimate
- Mechanical and electrical equipment pricing obtained by recent historical cost data and escalated if required
- Preliminary engineering designs to enable Bill of Material schedules for concrete, structural steel, platework
- Development of instrument list, cable schedule to enable estimation of costs
- Piping material supply and installation has been factored against mechanical equipment
- Pricing for structural steel and platework fabrication rates obtained from recent project purchase orders
- Pricing for onsite concrete construction rates obtained from recent project purchase orders
- Labour and construction equipment rates based on recent project purchase orders
- Freight and spares have been factored against mechanical equipment supply

Based on the level of engineering a 20% contingency has been included, whereby the expected accuracy of the capital cost estimate is within the range of \pm 20-25% as at Q 4, 2019.





4. OPERATING COST ESTIMATE

The summarised operating costs for the total process plant facility (ROM bin,drum scrubber, deslime, grinding, and CIL circuits) are presented in Table 4-1.

The operating cost is estimated in Australian dollars as at Q4, 2019 and contains a contingency. The estimated accuracy of the perating cost is

The data in support of the operating cost estimate is presented in Appendix C.



The operating cost estimate excludes the following items:

- First fill consumables which form part of the capital cost estimate
- Sustaining capital costs associated with the replacement of depreciated equipment
- Costs associated with maintenance or ongoing construction of the tailings storage facility
- Costs for FEL to feed ROM ore or manage the grizzly and drum scrubber O/S material
- Costs for borefield raw water supply, TSF decant return water
- Recruitment, relocation and HR costs
- Health safety and environmental personnel and costs.





5. PROJECT IMPLEMENTATION

5.1 Project Schedule

A 38 week project schedule from project approval and award of an EPCM contract is estimated to complete the CPC assigned scope of work to the first gold pour. It is assumed that the MSP activities (supply/install/construct drum scrubber circuit,TSF, bore water supply and offices/maintenance/stores facilities, camp and power plant) can be completed within this estimated schedule.

It is also assumed that all statutory approvals from the Department of Mines, Industry Regulation and Safety (DMIRS) as well as the Environmental Protection Authority (EPA) are completed prior to project approval.

Critical primary activities which were identified as those that determine the overall Project Schedule are as follows:

- A 7 week duration has been assumed to complete the tender, procurement of the long lead items re: Ball mill, Hydrocyclones, Stacksizer and Knelson concentrator
- A delivery duration to
- site of 22 weeks has been assumed for the long lead items
- An estimated total duration of 24 weeks has been estimated for the construction site works
- Site works will start within 8 weeks from project approval
- A commissioning period of 6 weeks has been allowed, from the commencement of ore feed to first gold pour.

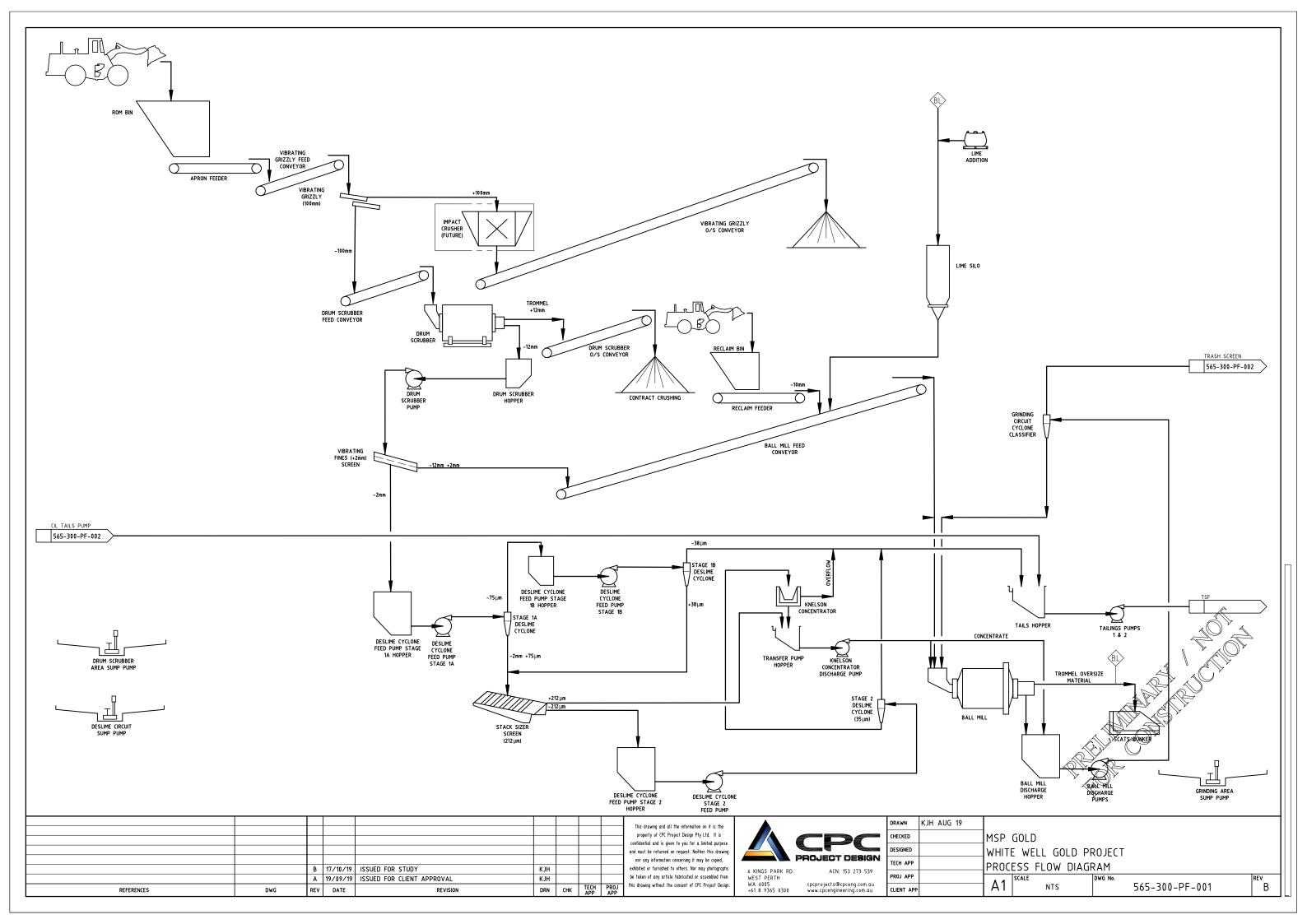
The WWGP project schedule is presented in Appendix D.

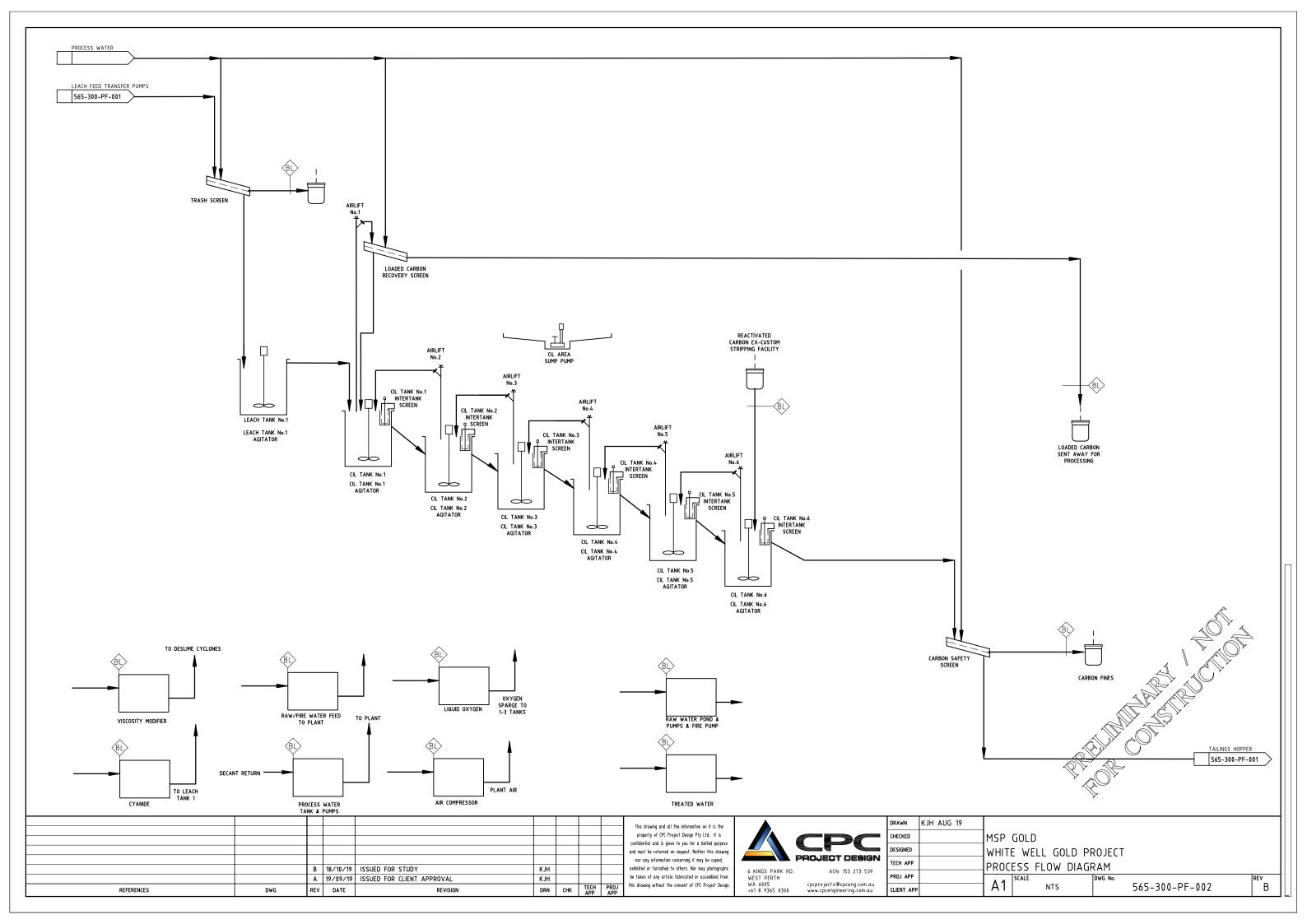




APPENDIX A PROCESS FLOW DIAGRAMS AND DESIGN CRITERIA

29 October 2019 Revision B









Client:

MSP ENGINEERING

Project:

WHITE WELL GOLD PROJECT

Document Name:

Process Design Criteria / Mass Balances

Document Code:

56501-DC-R-001

PROCESS DESIGN CRITERIA

Client:	Lake Austin Mining Pty Ltd	Ву	John Fodor
Project:	White Well Gold Project	Reviewed	
Project No:	56501	Revision:	С

The design criteria presented below is based on the following sources:

Reference	Description
A	Testwork reports
В	Data Base / Experience
С	Client reference documents
D	Client Advice
E	Calculated
F	Assumption requiring verification
G	Vendor specification
Н	To be determined (To be Supplied)
	Tender documents
J	Public domain
K	Industry standard

Parameter	Units	Design Value	Design Value	Ref	Source	Notes	Re
SITE CHARACTERISTICS							
Location		Cue, Western Australia		С	Client reference documents		А
Altitude	mAMSL	453		J	Public domain	BOM	А
Ambient temperatures							А
Monthly max mean (dry bulb, in shade)	°C (Jan)	37.8		J	Public domain	BOM	А
	°C (July)	18.4		J	Public domain	BOM	А
Monthly min mean (dry bulb, in shade)	°C (Jan)	22.8		J	Public domain	BOM	А
	°C (July)	6.9		J	Public domain	BOM	А
Site wind classification (from AS1170 Part 2)		TBC		н	To be determined (To be Supplied	1)	А
Seismic acceleration coefficient (a)		TBC		н	To be determined (To be Supplied	1)	Α
Seismic site factor (s)		TBC		н	To be determined (To be Supplied	1)	Α
Mean annual rainfall	mm/y	284.1		J	Public domain	вом	А

2.0 ORE CHARACTERISTICS

1.1 Typical Particle Size Distribution (% Retained)

	+31.5mm	%	2.1 - 3.4	Α	Testwork reports	Pimple Bulk Ore Composites (BOC) - Mutiny and MPS - 3 off	Α
	+10.0mm	%	2.3 - 11	Α	Testwork reports		Α
	+3.35mm	%	4.5 - 7.3	Α	Testwork reports		Α
	+0.212mm	%	7.1 - 11.7	Α	Testwork reports		Α
	-0.212mm	%	72.0 - 83.5	Α	Testwork reports		Α
2.2	Ore Composition						
	Kaolin	%	22.6	Α	Testwork reports	Mutiny Gold. (2008). White Wells Kaolin	Α
	Muscovite	%	28.0	Α	Testwork reports		Α
	Quartz	%	47.6	Α	Testwork reports		Α
	Other	%	1.8	Α	Testwork reports		Α

2.3	Ore Properties
	Kaolin SG
	Quartz SG
	Gold SG

Radiii 33	t/m	2.00	0	Data Base / Experience
Quartz SG	t/m ³	2.60	В	Data Base / Experience A
Gold SG	t/m3	19.00	В	Data Base / Experience A
Oxide ore stockpile grade	g/t Au	1.31	D	Client Advice Jon Lily via email - Exec Summary Comparison_20170402.xlsx A
Oxide ore mined grade	g/t Au	0.65	D	Client Advice Jon Lily via email - Exec Summary Comparison_20170402.xlsx A
Transitional ore grade	g/t Au	0.64	D	Client Advice Jon Lily via email - Exec Summary Comparison_20170402.xlsx A
Average mined ore grade	g/t Au	0.66	E	Calculated
Feed solids SG	t/m ³	2.70	F	Assumption requiring verification A
Ore bulk density	t/m ³	1.80	F	Assumption requiring verification A
Feed ore moisture content	%	13.00	F	Assumption requiring verification A
Angle of repose / rill angle	deg	30	F	Assumption requiring verification A
Angle of surcharge	deg	TBC	F	Assumption requiring verification A
Bond crushing work index, CWi - Whole of ore	kWh/t	10.00	F	Assumption requiring verification A
Bond crushing work index, CWi - Quartz only	kWh/t	15.00	F	Assumption requiring verification A
Bond ball mill work index, BWi - Quartz only	kWh/t	18.00	F	Assumption requiring verification A
Abrasion index	g	0.30	F	Assumption requiring verification A

3.0 MINING SCHEDULE

3.1 Operating Schedule						
Total BCM mined	bcm	7,732,000	D	Client Advice	Jon Lily via email - Exec Summary Comparison_20170402.xlsx	A
Waste : Ore ratio	-	1.9	D	Client Advice	Jon Lily via email - Exec Summary Comparison_20170402.xlsx	A
Existing oxide ore stockpile	kt	81	D	Client Advice	Jon Lily via email - Exec Summary Comparison_20170402.xlsx	A
Tonnes oxide ore mined to ROM	kt	3,784	D	Client Advice	Jon Lily via email - Exec Summary Comparison_20170402.xlsx	A
Tonnes transitional ore mined to ROM	kt	890	D	Client Advice	Jon Lily via email - Exec Summary Comparison_20170402.xlsx	A
Total ROM ore mined	kt	4,755	E	Calculated		A
Tonnes waste mined	t	9,034	E	Calculated		A
Total tonnes mined	t	13,789	E	Calculated		A
Au ounces mined	OZ	100.949	E	Calculated		A

Parameter	Units	Design Value	Design Value	Ref	Source	Notes	
ASHPLANT OPERATING SCHEDULE							
perating Schedule							
otal ore processed	kt	4,755		E	Calculated		
rocessing Rate	dt/h	100		D	Client Advice		
lant utilisation and availability	%	93.0		D	Client Advice		
perating hours - annual run time	h/y	8,147		E	Calculated	Based on 365d/y & 24h/d	
otal operating period	months	70		E	Calculated		
OARSE ORE CIRCUIT							
brating Grizzly							
rizzly feed rate	dt/h	111		E	Calculated		
perture	mm	100		В	Data Base / Experience		
ass yield to O/S	%	10.00		F	Assumption requiring verification	LAM to advise	
ass yield to U/S	%	90.00		E	Calculated	D III to durino	
		•					
rusher rusher type		Impact Crusher/Sizer		В	Data Base / Experience	Trailer mounted hire unit	
rusher feed rate	t/h	11.11		E	Calculated	Trailer mounted fill 6 drift	
usiler reed rate	UII	11.11			Galculateu		
rum Scrubber with Trommel crubber		Max +212 μm	Min -212 μm	1			
crubber Scrubber feed rate	dt/h	400	400		Calculated		
ocrupper reeu rate		100	100	E	Calculated		
O	m³/h	187	187	E			
Scrubber feed pulp density	%(w/w)	40	40	В	Data Base / Experience	ACCOR LED COO F F	
Scrubber diameter	m	3.00	3.00	С	Client reference documents	10601-J-RP-003_F Eneabba Equipment Assessment	
Scrubber length	m	4.50	4.50	С	Client reference documents	10601-J-RP-003_F Eneabba Equipment Assessment	
Scrubber live volume	m ³	7.4	7.4	F	Assumption requiring verification	0000-P-DC-001 White Wells Scrubber Trommel	
Scrubber residence time	s	142.7	142.7	F	Assumption requiring verification		
	min	2.4	2.4	F	Assumption requiring verification		
rommel							
Screen aperture	mm	12mm square	12mm square	С	Client reference documents		
Mass yield to O/S	%	15	5	A	Testwork reports	Max -12mm from BOC 2 - Mutiny testwork, overall range 5-15% of feed	
Mass yield to U/S	%	85	95	E	Calculated		
O/S pulp density	%(w/w)	90	90	В	Data Base / Experience		
U/S pulp density	%(w/w)	34	36	E	Calculated		
Trommel spray water requirements	m³/h	20	20	F	Assumption requiring verification		
rum Scrubber O/S Stockpile (+12.0mm)	t/h	15		E	Calculated		
roduction rate		15	5				
umber of stockpiles	#	1	1	В	Data Base / Experience		
	days	2	2	В	Data Base / Experience		
tockpile volume	m ³	400	133	E	Calculated		
tockpile diameter	m	17	12	E	Calculated		
Stockpile height	m	5	5	E	Calculated		
NET SCREEN & DESLIME CIRCUIT							
ibrating Screen @ 2mm aperture							
eed rate	t/h	85	95	Е	Calculated		
eck aperture	mm	2.00	2.00	В	Data Base / Experience	Urethane Slot for maximising open area	
Mass yield to O/S	%	7.00	8.00	A	Testwork reports	Approx. 7% of feed -10mm to +2mm re: BOC sizing data	
lass yield to U/S	%	93.00	92.00	Ē	Calculated	e e e e e e e e e e e e e e e e e e e	
0/S pulp density	%(w/w)	85.00	85.00	В	Data Base / Experience		
Spray water requirement	m³/h	10.00	10.00	F	Assumption requiring verification		
		*					
				Е	Calculated		
	1/0	77				<u> </u>	
	t/h m³/h	77 196	87 293				
Cyclone feed rate	m³/h	196	293	E	Calculated		
Syclone feed rate Syclone feed pulp density	m³/h %(w/w)	196 25	293 25	E A	Calculated Testwork reports		
cyclone feed rate cyclone feed pulp density ut point	m³/h	196 25 75	293 25 75	E A A	Calculated Testwork reports Testwork reports		
cyclone feed rate Cyclone feed pulp density uit point rrangement	m³/h %(w/w) μm	196 25 75 Manifold	293 25 75 Manifold	A A B	Calculated Testwork reports Testwork reports Data Base / Experience	NCD DOC. By Testural accommon	
yclone feed rate yclone feed pulp density ut point rangement ass yield to O/F	m ³ /h %(w/w) µm	196 25 75 Manifold 80.00	293 25 75 Manifold 80	E A A B A	Calculated Testwork reports Testwork reports Data Base / Experience Testwork reports	MSP BOC - BY Testwork programme	
cyclone feed rate cyclone feed pulp density ut point rangement lass yield to O/F lass yield to U/F	m³/h %(w/w) µm %6	196 25 75 Manifold 80.00 20.00	293 25 75 Manifold 80 20	E A A B A A	Calculated Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports	MSP BOC - BV Testwork programme	
Destime Cyclone Cluster 1A - target split @ P80 75 microns Cyclone feed rate Cyclone feed pulp density Full pulp density	m ³ /h %(w/w) µm	196 25 75 Manifold 80.00	293 25 75 Manifold 80	E A A B A	Calculated Testwork reports Testwork reports Data Base / Experience Testwork reports	MSP BOC - BV Testwork programme	
Cyclone feed rate Cyclone feed pulp density Lut point Tarrangement Alass yield to OUF JIF pulp density Cyclone Cluster 1B - Target split at 38 microns.	m ² /h %(w/w) μm % %	196 25 75 Manifold 80.00 20.00 65.00	293 25 75 Manifold 80 20 65	E A A B A A A	Calculated Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports Testwork reports Testwork reports	MSP BOC - BV Testwork programme	
Cyclone feed rate Cyclone feed pulp density Dut point Trangement Hass yield to O/F Alass yield to U/F J/F pulp density	m³h %(whw) µm % % % % % % % % %	196 25 75 Manifold 80.00 20.00 65.00	293 26 75 Manifold 80 20 65	E A A B A A A	Calculated Testwork reports Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports Testwork reports Testwork reports Calculated	MSP BOC - BV Testwork programme	
Cyclone feed rate Cyclone feed pulp density Urt point Tarraignment dass yield to OIF JIF pulp density UFF JIF pulp density Cyclone Cluster 1B - Target split at 38 microns.	m ² /h %(w/w) μm % %	196 25 75 Manifold 80.00 20.00 65.00	293 25 75 Manifold 80 20 65	E A A B A A A	Calculated Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports Testwork reports Testwork reports	MSP BOC - BV Testwork programme	
Cyclone feed rate Cyclone feed pulp density Lut point Tarrangement Alass yield to OUF JIF pulp density Cyclone Cluster 1B - Target split at 38 microns.	m³h %(whw) µm % % % % % % % % %	196 25 75 Manifed 80.00 20.00 65.00 62 246	293 25 75 Manifold 80 20 65 77 304	E A A A A A E E E	Calculated Testwork reports Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports Testwork reports Testwork reports Calculated	MSP BOC - BV Testwork programme	
Cyclone feed rate Cyclone feed pulp density ut point framagement flass yield to O/F flass yield to U/F cyclone Cluster 1B - Target split at 38 microns. Cyclone Cluster 1B - Target split at 38 microns.	m²h %(w/w) pm % % % % % % % % % th m²h %(w/w)	196 25 75 Manifold 80.00 20.00 65.00	293 26 75 Manifold 80 20 65	E A A B A A A	Calculated Testwork reports Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports Testwork reports Testwork reports Testwork reports Calculated Calculated Calculated	MSP BOC – BV Testwork programme	
Cyclone feed rate Cyclone feed pulp density Lut point Turnagment flass yield to O/F flass yield to U/F J/F pulp density Cyclone Cluster 1B - Target split at 38 microns. Cyclone feed rate Cyclone feed pulp density	m³h %6(w/w) µm %6 %6 %6 %6 %6 %6 %6 %6 %6 %6 //h	196 25 75 Manifold 80.00 20.00 65.00	293 25 75 Manifold 80 20 65 70 304 20	E A A A A A A A A A A A	Calculated Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports Testwork reports Testwork reports Testwork reports Calculated Calculated Testwork reports	MSP BOC - BV Testwork programme	
cyclone feed rate cyclone feed pulp density ut point trangement tass yield to O/F tass yield to U/F U/F pulp density cyclone Cluster 1B - Target split at 38 microns. cyclone feed rate cyclone feed pulp density ut point	m²h %(w/w) pm % % % % % % % % % th m²h %(w/w)	196 25 75 Manifold 80.00 20.00 65.00 62 246 20 38	293 26 75 Manifold 80 20 65 70 304 20 38	E A A A A A A B B B B B B B B B B B B B	Calculated Testwork reports Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports Testwork reports Testwork reports Calculated Calculated Testwork reports Data Base / Experience		
yclone feed rate yclone feed pulp density ut point rangement lass yield to O/F lass yield to U/F //F pulp density yclone Cluster 18 - Target split at 38 microns. yclone feed rate yclone feed pulp density ut point	m²h %(w/w) µm % % % % % % % th m²h %(w/w) µm pm	196 25 75 Manifold 80.00 20.00 65.00 62 246 20 38 Manifold	293 25 75 Manifold 80 20 65 77 304 20 38 Manifold	E A A A A A A B B B B B	Calculated Testwork reports Testwork reports Data Base / Experience Testwork reports Testwork reports Testwork reports Testwork reports Testwork reports Calculated Calculated Testwork reports Data Base / Experience Data Base / Experience	MSP BOC - BV Testwork programme MSP BOC - BV Testwork programme	

Parameter	Units	Design Value	Design Value	Ref	Source	Notes	
StackSizer							
StackSizer feed rate	t/h	22	24	Е	Calculated		
StackSizer feed pulp density	%(w/w)	40.00	40.00	В	Data Base / Experience		
Deck aperture	/α(w/w) μm	240.00	240.00	В	Data Base / Experience		
Mass yield to O/S	%	36.7	8.2		Testwork reports	MSP BOC - BV Testwork programme	
				A		MSP BOC - BV Testwork programme	
Mass yield to U/S	%	63.3	91.8	E	Calculated		
O/S pulp density	%(w/w)	85.00	85.00	В	Data Base / Experience		
Spray water requirement	m ³ /h	5.00	5.00	F	Assumption requiring verification		
Knelson Concentrator						T	
Knelson concentrator feed rate	t/h	14	22	E	Calculated		
Knelson concentrator feed pulp density	%	28	35	E	Calculated		
Mass yield to concentrate	t/h	1.00	1.00	F	Assumption requiring verification		
Concentrate pulp density	%(w/w)	30	30	F	Assumption requiring verification		
Fluidising water rate	m ³ /h	5	5	F	Assumption requiring verification		
GRINDING CIRCUIT							
Ball Mill							
Ball Mill Configuration		Single stage ball mill with cyclones		E	Calculated		
Ball Mill Feed rate	tph	30		E	Calculated		
	tpa	244,400		E	Calculated		
Mill D/C Densilty	%(w/w)	75		E	Calculated		
Ball Mill feed F80	mm	8		В	Data Base / Experience		
Target Grind Size P80	microns				Testwork reports		
		106		A			
Recirculating load	%	300		В	Data Base / Experience	1	
Cyclone Classifier							
Cyclone feed rate	tph	95		Е	Calculated		
Cyclone O/F slurry density	%(w/w)	40		В	Data Base / Experience		
Cyclone U/F slurry density	%(w/w)	75		В	Data Base / Experience		
Target Cyclone O/F P80	microns	106		Α	Testwork reports		
•		*				<u> </u>	
LEACH CIL CIRCUIT							
	-						
Trash Screen							
Feed rate	tph	30		E	Calculated		
Feed Density	%(w/w)	40		E	Calculated		
Slurry Flowrate	m3/h	59		E	Calculated		
		0.80					
Screen aperture	mm	0.80		В	Data Base / Experience		
Leach/CIL							
Configuration		1 Leach / 6 CIL		В	Data Base / Experience		
Retention Design Slurry Flow	m3/h	66		E	Calculated		
Feed Density	%(w/w)	40		В	Data Base / Experience		
Discharge Density	%(w/w)	37		В	Data Base / Experience		
Overall retention time	hrs	12		Α	Testwork reports		
Effective Leach/CIL Volume	m3	789		E	Calculated		
Au Feed Grade	g/t	2.0		E	Calculated		
Esimated Au Recovery	%	95		Α	Testwork reports		
Loaded Carbon Grade	g/t	3000		В	Data Base / Experience		
Barren Carbon Grade		50					
	g/t	50		В	Data Base / Experience		
Carbon Concentration	g/t g/l			В	Data Base / Experience		
	g/l	15 10.1		B B	Data Base / Experience Data Base / Experience		
Carbon Concentration Carbon Inventory - Leach/CIL Tanks Only Loaded Carbon Transfer	g/I t	15 10.1		B B E	Data Base / Experience Data Base / Experience Calculated		
Carbon Inventory - Leach/CIL Tanks Only Loaded Carbon Transfer	g/l	15		B B E	Data Base / Experience Data Base / Experience		
Carbon Inventory - Leach/CIL Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate	g/l t hrs m3/h	15 10.1 4.0 10		B B E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated		
Carbon Inventory - Leach/CIL Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate	g/l t hrs	15 10.1 4.0		B B E	Data Base / Experience Data Base / Experience Calculated Calculated		
Carbon Inventory - Leach/Cil. Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate Loaded Carbon Transfer	g/l t hrs m3/h	15 10.1 4.0 10		B B E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated		
Carbon Inventory - Leach/CIL Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate Loaded Carbon Transfer Carbon Safety Screen	g/l t hrs m3/h t/d	15 10.1 4.0 10 0.50		B B E E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate Loaded Carbon Transfer Loaded Carbon Transfer Conden Carbon Transfer Feed rate	g/l t hrs m3/h t/d	15 10.1 4.0 10 0.50		B B E E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated		
Carbon Inventory - Leach/CIL Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate Loaded Carbon Transfer Carbon Safety Screen Feed rate Feed Tale	g/l t hrs m3/h t/d tph (w/w)	15 10.1 4.0 10 0.59		B B E E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate Loaded Carbon Transfer Carbon Safety Screen Feed Tane	g/l t hrs m3/h t/d tph (w/w) m3/h	15 10.1 4.0 10 0.50		B B E B B E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Calculated Calculated		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate Loaded Carbon Transfer Loaded Carbon Transfer Carbon Safety Screen Feed Tate Feed Tate Feed Tate Slurry Flowrate	g/l t hrs m3/h t/d tph (w/w)	15 10.1 4.0 10 0.59		B B E E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Sturry Flowrate Loaded Carbon Transfer Loaded Carbo	g/l t hrs m3/h t/d tph (w/w) m3/h	15 10.1 4.0 10 0.50		B B E B B E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Calculated Calculated		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Carbon Safety Screen Feed Tate Feed Density Stury Flowrate Screen aperture Loaded Carbon Screen	9/1 t hrs m3/h t/d tph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80		B B E E B E B B B B	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Slurry Flowrate Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Safety Screen Feed rate Feed Density Slurry Flowrate Screen aperture Loaded Carbon Screen Feed rate	97 t hrs ns/h brd 1 tph \$5(w/w) ms/h mm ms/h ms/h	15 10.1 4.0 10 0.50 30 37 66 0.80		B	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience Calculated Calculated Calculated Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Calculated Calculated		
Carbon Inventory - Leach/Cli Tanks Only Loaded Carbon Transfer Loaded Carbon Safety Screen Loaded Carbon Safety Screen Loaded Carbon Screen	9/1 t hrs m3/h t/d (ph (ph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80		B B E E B B B B B B	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience Data Base / Experience Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Safety Screen Feed Jensity Shurry Flowarte Screen aperture Loaded Carbon Screen Feed Tate	9/1 t hrs n3/h t/d tph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80		B B E B E B E B E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Data Base / Experience Calculated Data Base / Experience Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Carbon Safety Screen Feed rate Feed Density Sturry Flowarte Screen aperture Loaded Carbon Screen Feed rate	9/1 t hrs m3/h t/d (ph (ph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80		B B E E B B B B B B	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience Data Base / Experience Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Carbon Safety Screen Feed rate Feed Density Slurry Flowrate Screen aperture Loaded Carbon Screen Feed rate Feed Tante	9/1 t hrs n3/h t/d tph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80		B B E B E B E B E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Data Base / Experience Calculated Data Base / Experience Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Carbon Safety Screen Feed rate Feed Density Slurry Flowrate Screen aperture Loaded Carbon Screen Feed rate Feed Density Slurry Flowrate Screen aperture	9/1 t hrs n3/h t/d tph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80		B B E B E B E B E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Carbon Safety Screen Feed rate Feed Density Slurry Flowrate Screen aperture Loaded Carbon Screen Feed rate Feed Tante	9/1 t hrs n3/h t/d tph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80		B B E B E B E B E E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Data Base / Experience Calculated Data Base / Experience Calculated Data Base / Experience		
Carbon Inventory - Leach/CIL Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Coded Carbon Transfer Coded Carbon Transfer Ced rate Feed rate Sizer Special State Special State Special	9/1 t hrs m3/h td tph %(w/w) m3/h mm m3/h mm M3/h ks/(w/w) m3/h mm	15 10.1 4.0 10 0.59 30 37 66 0.80		B B E E B B E B E B E B E B E B E B B	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience		
Carbon Inventory - Leach/CIL Tanks Only Coaded Carbon Transfer Coaded Carbon Serven	97 t t hrs m3/h t/d tph \$\frac{\(\text{tph} \)}{\(\text{tph} \)}\$ \$\frac{\(\text{tph} \)}{\(\text{tph} \)}\$	15 10.1 4.0 10 0.50 30 37 66 0.80 10 37 10 0.75 183		B B E B B E B B E B E B E B E B E E	Data Base / Experience Data Base / Experience Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Carbon Safety Screen Feed rate Feed rate Sury Flowrate Sury Flowrate Screen aperture Loaded Carbon Screen Feed atte Feed Density Sibury Flowrate Screen sperture REAGENTS/CONSUMABLES - STORAGE and DOSAGE Grinding Media - 200 L drums	91 t hrs m3/h 1/d tph %(w/w) m3/h mm m3/h mm kg/t tpa kg/t tpa	15 10.1 4.0 10 0.59 30 37 66 0.80 10 37 10 10 1.00		B B E B B B B B E B B	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Carbon Safety Screen Feed Tate Feed Tate Surry Flowrate Screen aperture Loaded Carbon Screen Feed Tate Feed Tat	97 t t hrs m3/h t/d (ph %(w/w) m3/h mm m3/h %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 37 66 0.60 10 37 10 0.75 183 2.00 489		B	Data Base / Experience Data Base / Experience Calculated Data Base / Experience Calculated Data Base / Experience Data Base / Experience Calculated Data Base / Experience		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Carbon Safety Screen Feed Tale Feed Tale Surry Flowrate Screen aperture Loaded Carbon Screen Feed or Tale Feed Tale F	91 t hrs m3/h 1/d 1ph %(w/w) m3/h mm m3/h mm m3/h tph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80 10 37 10 1.00 1.00 489 0.30		B	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience		
Carbon inventory - Leach/Cit Tanks Only Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Loaded Carbon Transfer Carbon Safety Screen Feed trate Feed Density Shury Flowrate Screen aperture Loaded Carbon Screen Feed Jane Feed Jane Feed Tatle Screen aperture Readed Carbon Screen Feed Jane	97 t t hrs m3/h t0 (ph %(w/w) m3/h mm m3/h %(w/w) m3/h mm kg/t tpa m3/t tpa	15 10.1 4.0 10 0.50 30 37 66 0.80 10 37 10 0.75 183 2.00 489 0.30 105		B B E E B B E E B B E E B B E E B E E B E E B E E B E E B E E B E E B E E B E E B E E B E E B E E E B E E E B E E E B E E E B E E E B E E E B E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E B E E E E E B E	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience Calculated		
Carbon Inventory - Leach/CLI Tanks Only Loaded Carbon Transfer Carbon Safety Screen Feed Tate Feed Tate Surry Flowrate Screen aperture Loaded Carbon Screen Feed Tate Feed Tat	91 t hrs m3/h 1/d 1ph %(w/w) m3/h mm m3/h mm m3/h tph %(w/w) m3/h mm	15 10.1 4.0 10 0.50 30 37 66 0.80 10 37 10 1.00 1.00 489 0.30		B	Data Base / Experience Data Base / Experience Calculated Calculated Calculated Calculated Calculated Calculated Data Base / Experience		



MASS BALANCE 30% +212 Microns

STREAM		2	4	6	8	10	12	14	16	18	20	22	24
DESCRIPTION	Units	ROM Feed	Vibrating Grizzly Feed	Vibrating Grizzly O/S (+100mm)	Vibrating Grizzly U/S (-100mm)	Drum Scrubber Feed	Drum Scrubber Trommel O/S (+12.0mm)	Drum Scrubber Trommel U/S (-12.0mm)	Vibrating Screen O/S	Vibrating Screen U/S	Deslime Cyclone 1A Feed	Deslime Cyclone 1A O/F	Deslime Cyclone 1A U/F
SOLIDS	dt/h	111.1	111.1	11.1	100.0	100.0	15.0	85.0	7.8	77.2	77.2	61.8	15.4
PD SOLIDS	w/w	87.0	87.0	87.0	87.0	40.0	90.0	33.6	85.0	31.6	25.0	21.7	65.0
SG SOLIDS	t/m3	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
WATER	t/h	16.6	16.6	1.7	14.9	150.0	1.7	168.3	1.4	166.9	231.6	223.3	8.3
FLOW	Q(m3/hr)	57.7	57.7	5.8	52.0	187.0	7.2	199.8	4.3	195.5	260.2	246.2	14.0
FLOW	l/sec	16.0	16.0	1.6	14.4	51.9	2.0	55.5	1.2	54.3	72.3	68.4	3.9
SLURRY	t/h	127.7	127.7	12.8	114.9	250.0	16.7	253.3	9.1	244.2	308.9	285.1	23.8
SG SLURRY	t/m3	2.2	2.2	2.2	2.2	1.3	2.3	1.3	2.2	1.2	1.2	1.2	1.7

STREAM		26	28	30	32	34	36	38	40	42	44	46	48	50	52
DESCRIPTION	Units	Deslime Cyclone 1B Feed	Cyclone 1B O/F	Cyclone 1B U/F	StackSizer Feed	StackSizer U/S (-212µm)	StackSizer O/S (+212µm)	Knelson Concentrator Feed	Knelson Concentrator Concentrate	Knelson Concentrator Tailings	Ball Mill New Feed	Ball Mill D/C	Cyclone Classifier Feed	Cyclone Classifier O/F	Cyclone Classifier U/F
SOLIDS	t/h	61.8	55.6	6.2	21.6	13.7	7.9	13.7	1.0	12.7	31.7	95.1	95.1	31.7	63.4
PD SOLIDS	w/w	20.0	18.7	55.0	40.0	27.5	85.0	27.5	30.0	23.6	75.0	75.0	58	40.0	75.0
SG SOLIDS	t/m3	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
WATER	t/h	247.1	242.0	5.1	32.4	36.0	1.4	36.0	2.3	41.0	10.6	31.7	68.7	47.6	21.1
FLOW	Q(m3/hr)	270.0	262.6	7.3	40.4	41.1	4.3	41.1	2.7	45.7	22.3	66.9	103.9	59.3	44.6
FLOW	l/sec	75.0	73.0	2.0	11.2	11.4	1.2	11.4	0.8	12.7	6.2	18.6	28.9	16.5	12.4
SLURRY	t/h	308.9	297.6	11.2	54.1	49.7	9.3	49.7	3.3	53.7	42.3	126.8	163.8	79.3	84.6
SG SLURRY	t/m3	1.1	1.1	1.5	1.3	1.2	2.2	1.2	1.2	1.2	1.9	1.9	1.6	1.3	1.9

STREAM		54	56	58	60	62	64	66	68	70	72	74	76	78	80
DESCRIPTION	Units	Trash Screen Feed	Carbon Safety Screen Feed	Tailings to TSF											
SOLIDS	t/h	31.7	31.7	100.0											
PD SOLIDS	w/w	40.0	37.0	20.5											
SG SOLIDS	t/m3	2.7	2.7	2.7											
WATER	t/h	47.6	54.0	337.1											
FLOW	Q(m3/hr)	59.3		374.1											
FLOW	l/sec	16.5	18.3	103.9											
SLURRY	t/h	79.3	85.7	487.7											
SG SLURRY	t/m3	1.3	1.3	1.3											

PROCESS WATER

STREAM		300	314	316	317	320	321	321	322	326	328	330
DESCRIPTION	Units	Process Water Requirement	Drum Scrubber Feed Dilution Water	Drum Scrubber Trommel Spray Water	Drum Scrubber Trommel U/S Hopper Makeup Water	Deslime Cyclone 1A Feed Water	Deslime Cyclone 1B Feed Water	StackSizer Feed Dilution Water	StackSizer Spray Water	Knelson Concentrator Fluidising Water	Ball Mill Feed Water	Cyclone Classifier Feed Dilution Water
SOLIDS	t/h											
PD SOLIDS	w/w											
SG SOLIDS	t/m3											
WATER	t/h	315	135	20	0	65	24	19	5	5	5	37
FLOW	Q(m3/hr)	315	135	20	0	65	24	19	5	5	5	37
FLOW	l/sec	88	38	6	0	18	7	5	1	1	2	10



MASS BALANCE 15% +212 microns

STREAM		2	4	6	8	10	12	14	16	18	20	22	24
DESCRIPTION	Units	ROM Feed	Vibrating Grizzly Feed	Vibrating Grizzly O/S (+100mm)	Vibrating Grizzly U/S (-100mm)	Drum Scrubber Feed	Drum Scrubber Trommel O/S (+12.0mm)	Drum Scrubber Trommel U/S (-12.0mm)	Vibrating Screen O/S	Vibrating Screen U/S	Deslime Cyclone 1A Feed	Deslime Cyclone 1A O/F	Deslime Cyclone 1A U/F
SOLIDS	dt/h	111.1	111.1	11.1	100.0	100.0	5.0	95.0	8.0	87.0	87.0	69.6	17.4
PD SOLIDS	w/w	87.0	87.0	87.0	87.0	40.0	90.0	35.9	90.0	34.0	25.0	21.7	65.0
SG SOLIDS	t/m3	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
WATER	t/h	16.6	16.6	1.7	14.9	150.0	0.6	169.4	0.9	168.5	261.0	251.6	9.4
FLOW	Q(m3/hr)	57.7	57.7	5.8	52.0	187.0	2.4	204.6	3.9	200.8	293.2	277.4	15.8
FLOW	l/sec	16.0	16.0	1.6	14.4	51.9	0.7	56.8	1.1	55.8	81.4	77.1	4.4
SLURRY	t/h	127.7	127.7	12.8	114.9	250.0	5.6	264.4	8.9	255.5	348.0	321.2	26.8
SG SLURRY	t/m3	2.2	2.2	2.2	2.2	1.3	2.3	1.3	2.3	1.3	1.2	1.2	1.7

STREAM		26	28	30	32	34	36	38	40	42	44	46	48	50	52
DESCRIPTION	Units	Deslime Cyclone 1B Feed	Cyclone 1B O/F	Cyclone 1B U/F	StackSizer Feed	StackSizer U/S (-212µm)	StackSizer O/S (+212µm)	Knelson Concentrator Feed	Knelson Concentrator Concentrate	Knelson Concentrator Tailings	Ball Mill New Feed	Ball Mill D/C	Cyclone Classifier Feed	Cyclone Classifier O/F	Cyclone Classifier U/F
SOLIDS	t/h	69.6	62.6	7.0	24.4	22.4	2.0	22.4	1.0	21.4	16.0	48.0	48.0	16.0	32.0
PD SOLIDS	w/w	20.0	18.7	55.0	40.0	35.2	85.0	35.2	30.0	31.6	75.0	75.0	58	40.0	75.0
SG SOLIDS	t/m3	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
WATER	t/h	278.4	272.7	5.7	36.5	41.2	0.4	41.2	2.3	46.2	5.3	16.0	34.7	24.0	10.7
FLOW	Q(m3/hr)	304.1	295.9	8.3	45.6	49.5	1.1	49.5	2.7	54.1	11.3	33.8	52.4	29.9	22.5
FLOW	l/sec	84.5	82.2	2.3	12.7	13.7	0.3	13.7	0.8	15.0	3.1	9.4	14.6	8.3	6.3
SLURRY	t/h	348.0	335.3	12.7	60.9	63.5	2.3	63.5	3.3	67.5	21.3	64.0	82.6	40.0	42.7
SG SLURRY	t/m3	1.1	1.1	1.5	1.3	1.3	2.2	1.3	1.2	1.2	1.9	1.9	1.6	1.3	1.9

STREAM		54	56	58	60	62	64	66	68	70	72	74	76	78	80
DESCRIPTION	Units	Trash Screen Feed	Carbon Safety Screen Feed	Tailings to TSF											
SOLIDS	t/h	16.0	16.0	100.0											
PD SOLIDS	w/w	40.0	37.0	20.0											
SG SOLIDS	t/m3	2.7	2.7	2.7											
WATER	t/h	24.0	27.2	346.1											
FLOW	Q(m3/hr)	29.9	33.2	383.1											
FLOW	l/sec	8.3	9.2												
SLURRY	t/h	40.0	43.2	499.5											
SG SLURRY	t/m3	1.3	1.3	1.3											

PROCESS WATER

STREAM		300	314	316	317	320	321	322	326	328	330	331
DESCRIPTION	Units	Process Water Requirement	Drum Scrubber Feed Dilution Water	Drum Scrubber Trommel Spray Water	Drum Scrubber Trommel U/S Hopper Makeup Water	Deslime Cyclone 1A Feed Water	Deslime Cyclone 1B Feed Water	StackSizer Feed Dilution Water	StackSizer Spray Water	Knelson Concentrator Fluidising Water	Ball Mill Feed Water	Cyclone Classifier Feed Dilution Water
SOLIDS	t/h											
PD SOLIDS	w/w											
SG SOLIDS	t/m3											
WATER	t/h	326	135	20	0	92	27	5	5	21	19	2
FLOW	Q(m3/hr)	326	135	20	0	92	27	5	5	21	19	2
FLOW	l/sec	91	38	6	0	26	7	1	1	6	5	0





APPENDIX B

29 October 2019 Revision B





Client:

MSP Engineering

Project:

White Well Gold Project

Document Name:

Mechanical Equipment List

Document Code:

0565-LS-M-001





-	Certified kW
1,994	Total kW
	% of kW Certified (including futures)
ng futures): 0%	Total number of drives that are certified (includi

MSP Engineering
White Well Gold Project
Mechanical Equipment List
0565-LS-M-001
Revision E

EQU	IP NUM	IBER	EQUIPMENT	TITLE	PACKAGE	SUPPLIER	MODEL	SPECIFICATION			ELEC	CTRICAL		<u> </u>	REMARKS	<u> </u>
	 	MBEI	NUMBER OTHER EQUIPMENT		NUMBER											R
4	MENT	D N L	NUMBER						DUTY /	DRIVE	POWER	MOTOR	INSTALLED kW	EMERGENCY		
ARI	QUIP!	NTIA							STANDBY / INTERMITTENT		STATUS	COUNT	TOTAL	POWER		
	ŭ⊔	GUE														
212		S	240													
310	BN	101		ROM Bin	MSP	LAM	2nd hand	Vol. = 50 m3, drive over feed bin								
310	FD	101	310-FD-101	Apron Feeder	MSP	LAM	2nd hand	Motorac motor: 22kW, 1470rpm, D180L. Feeder width: 1500mm. Gearbox: bonfiglioli P180	Duty	VVVF	Prelim	1	22			
310	CR	101	310-CR-101	Impact Crusher	MSP	TBC		Future Installation								
310	СН	101	310-CH-101	Apron Feeder Transfer Chute	MSP	LAM	2nd hand	C/S Rubber lined								
310	GR	101	310-GR-101	Vibrating Grizzly	MSP	LAM	2nd hand	Motorac motor: 55kW, 1450rpm, D250S				1	55		Iluka ref: MU05-S01-025	А
310	СН	102	310-CH-102	Vibrating Grizzly Feed Conveyor Head Chute	MSP	LAM	2nd hand	C/S Rubber lined								
	СН				MSP			C/S Rubber lined								
				Vibrating Grizzly Feed Chute		LAM	2nd hand									
310	СН	104	310-CH-104	Vibrating Grizzly O/S Chute	MSP	LAM	MSP Design	C/S Rubber lined								
310	СН	105	310-CH-105	Vibrating Grizzly U/S Chute	MSP	LAM	2nd hand	C/S Rubber lined								
310	СН	106	310-CH-106	Vibrating Grizzly O/S Conveyor Head Chute	MSP	LAM	MSP Design	C/S Rubber lined								
310	СН	107	310-CH-107	Scrubber Conveyor Head Chute	MSP	LAM	MSP Design	Carbon steel, partially lined 400BHN wear plate								
310	CV	101	310-CV-101	Vibrating Grizzly Feed Conveyor	MSP	LAM	2nd hand	Motorac motor: 55kW, 1450rpm, D250S Gearbox: fenner M20 20:1	Duty	DOL	Prelim	1	55			
								Conveyor belt: 60000 X 1500mm wide								
				Vibrating Grizzly O/S Conveyor	MSP	LAM	2nd hand	Gec Motor, Ac: 7.5kw, 1450rpm, 4p, D132m, Foot Gearbox: Renold 8/0 50:1 Conveyor belt: 28000 X 1400mm Wide	_				7.5			
310	SC	101	310-SC-101	Scrubber	MSP	LAM	2nd hand	Motorac motor: 315kW, 960rpm, Foot Mount Gearbox: Hansen D821ct 16:21:1 Diameter: 3037mm					315		Iluka ref: MU05-S01-031	A
310	CV	103	310-CV-103	Drum Scrubber Feed Conveyor	MSP	LAM	2nd hand	Pope Motor, Ac: 45kW, 1460rpm, 4p, D225m, Foot Gearbox: Reynold Smh8 13:1 Conveyor belt: 55500 X 1000mm Wide					45			
310	CV	104	310-CV-104	Drum Scrubber O/S Conveyor	MSP	LAM	2nd hand	Gec motor: 22kw, 1450rpm, Foot, **Replaced** Gearbox: Benzier Tv122 19.44:1					22			
310	СН	108	310-CH-108	Drum Scrubber Feed Chute	MSP	LAM	2nd hand	Conveyor belt: 34000 X 1200mm Wide C/S Rubber lined								
310	СН	109	310-CH-109	Drum Scrubber O/S Chute	MSP	LAM	MSP Design	C/S Rubber lined								
				Drum Scrubber O/S Conveyor Head Chute	MSP	LAM	2nd hand	C/S Rubber lined								
310	HP	101	310-HP-101	Drum Scrubber Discharge Hopper	MSP	LAM	2nd hand	C/S Rubber lined								
310	PP	101	310-PP-101	Drum Scrubber Discharge Pump		Keto Pumps	100 K-VS	365mm 5VC U38 Impeller	Duty	DOL	Prelim	1	15			
310	PP	102	310-PP-102	Drum Scrubber Area Sump Pump		Keto Pumps	65 K-VS	Vertical spindle sump pump	Intermittent	DOL	Prelim	1	5.5			
310	XM	101	310-XM-101	Drum Scrubber Area Sump Pump Frame												
320	DV	201		GRINDING AND DESLIME CIRCUIT Vibrating Fines Screen Feed Box				Carbon Steel rubber lined								
320	SC	201	320-SC-201	Vibrating Fines (+2mm) Screen		Minspec (Oreflow)	MIN-HS 1500/3600	Vibrating Screen	Duty	VVVF	Prelim	2	2.2			
320	СН	201	320-CH-201	Vibrating Fines Screen U/S Chute				Carbon Steel rubber lined								
320	СН	208	320-CH-208	Vibrating Fines Screen O/S Chute				Carbon steel, partially lined 400BHN wear plate								
320	HP	201	320-HP-201	Deslime Cyclone Feed Pump Stage 1A Hopper			2m3 LV	Carbon steel, rubber lined, 1.475m dia x 2.2m H, 950kg mass								
320	PP	201		Deslime Cyclone Feed Pump Stage 1A		Keto Pumps	100 K-VS	C/S Rubber lined. Centrifugal horizontal slurry pump	Duty	VVVF	Prelim	1	55			
320	CY			Deslime Cyclones Stage 1A		Weir	400CVX10	4 x 400mm CAVEX cyclones, 3 operating, 1 spare			-					
						vv eil										
320	HP	202	320-HP-202	Deslime Cyclone Feed Pump Stage 1B Hopper			2m3 LV	Carbon steel, rubber lined, 1.475m dia x 2.2m H, 950kg mass								
320	PP	202	320-PP-202	Deslime Cyclone Feed Pump Stage 1B		Keto Pumps	100 K-VS	C/S Rubber lined. Centrifugal horizontal slurry pump	Duty	VVVF	Prelim	1	55			
320	CY	202	320-CY-202	Deslime Cyclones Stage 1B		Weir	250CVX10	6x 250mm CAVEX cyclones, 4 operating, 2spare								
320	SC	202	320-SC-202	Stacksizer Screen		Landsky		Landsky Screen - 5 Deck, c/w O/S cute, U/S chute and 5-way feed distributor	Duty	DOL	Prelim	2	2		Includes feed and discharge boxes	
320	HP	203	320-HP-203	Deslime Cyclone Feed Pump Stage 2 Hopper			2m3 LV	Carbon steel, rubber lined, 1.475m dia x 2.2m H, 950kg mass								
						Koto Dumor -			D. t.	\\\\	Droller	4	20			
320				Deslime Cyclone Feed Pump Stage 2		Keto Pumps	100 K-VS	C/S Rubber lined. Centrifugal horizontal slurry pump	Duty	VVVF	Prelim	1	30			
320	CY	203	320-CY-203	Deslime Cyclones Stage 2		Weir	250CVX10	2x 250mm CAVEX cyclones, 1 operating,1spare								
320	ВХ	202	320-BX-202	Knelson Concentrator Bypass Box				Carbon Steel rubber lined								
320	GC	201	320-GC-201	Knelson Concentrator		Consep	KC-CVD20	Knelson Concentrator	Duty	VVVF	Prelim	1	11			
320	HP	206	320-HP-206	Knelson Concentrator Discharge Hopper			2m3 LV	Carbon steel, rubber lined, 1.475m dia x 2.2m H, 950kg mass								
320	PP	205	320-PP-205	Knelson Concentrator Discharge Pump		Keto Pumps	1.5/1	Centrifugal horizontal slurry pump	Duty	DOL	Prelim	1	5			
				Reclaim Bin		r-		Carbon steel, partially lined 400BHN wear plate, 20m3 (30t ore)	,		-					
	BN															
320	СН	202	320-CH-202	Reclaim Bin Feeder Feed Chute				Carbon steel, partially lined 400BHN wear plate								
320	СН	203	320-CH-203	Reclaim Bin Feeder Discharge Chute		_		Carbon steel, partially lined 400BHN wear plate	_							
1	1	ī	i İ	•			1						1	i	i de la companya de	

EQUIP NUMBER									ELECTRICAL			
JER JER	EQUIPMENT NUMBER	OTHER	TITLE PACKAGE NUMBER	SUPPLIER	MODEL	SPECIFICATION					REMARKS	REV
AREA EQUIPMENT IDENTIFIER EQUENTIAL NUME		EQUIPMENT NUMBER					DUTY / STANDBY / INTERMITTENT	DRIVE TYPE	POWER MOTOR STATUS COUNT	INSTALLED kW EMERGENCY TOTAL POWER		
320 CH 204	320-CH-204		Ball Mill Feed Conveyor Head Chute			Carbon steel, partially lined 400BHN wear plate						
320 CH 205	320-CH-205		Ball Mill Feed Chute			Retractable feed chute					Included with ball mill supply	1
320 CH 206	320-CH-206		Ball Mill Scats Chute			Carbon steel						
320 CH 207	320-CH-207		Ball Mill Discharge Chute			Carbon steel, rubber lined						
320 CV 201	320-CV-201		Ball Mill Feed Conveyor			600m wide, 30t/h	Duty	DOL	Prelim 1	7.5		
320 CY 204	320-CY-204		Grinding Circuit Cyclone Cluster	Weir	250CVX10	5x 250mm CAVEX cyclones, 3 operating, 2 spare						
320 FE 201	320-FE-201		Reclaim Bin Feeder			Pan Feeder	Duty	VVVF	Prelim 2	4.5		
320 ML 201	320-ML-201		Ball Mill	Ersel		3.2m dia x 5.8m EGL	Duty	SOFT	Prelim 1	800	Includes PLC and control cabinet	
320 HP 205			Ball Mill Discharge Pump Hopper		2m3 LV	Carbon steel, rubber lined, 1.475m dia x 2.2m H, 950kg mass						
320 PP 206			Ball Mill Discharge Pump No.1	Keto Pumps		Centrifugal horizontal slurry pump	Duty		Prelim 1	37		
320 PP 207			Ball Mill Discharge Pump No.2	Keto Pumps		Centrifugal horizontal slurry pump	Standby	VVVF		37		
320 PP 208	320-PP-208		Grinding Circuit Sump Pump	Keto Pumps	65 K-VS	Vertical spindle sump pump	Intermittent	DOL	Prelim 1	5.5		
320 XM 201	320-XM-201		Grinding Circuit Sump Pump Frame		AF 17117	Martine London III						
320 PP 209			Deslime Circuit Sump Pump	Keto Pumps	65 K-VS	Vertical spindle sump pump	Intermittent	DOL	Prelim 1	5.5		
320 XM 202			Deslime Circuit Sump Pump Frame									
320 SS 201			Mill Area Safety Shower 1	Ashley	ASE 680	Combination saferty shower & eyewash, c/w light and anti scald valve						
320 SS 202			Mill Area Safety Shower 2	Ashley	ASE 680	Combination saferty shower & eyewash, c/w light and anti scald valve						
320 SS 203	320-SS-203		Deslime Area Safety Shower	Ashley	ASE 680	Combination saferty shower & eyewash, c/w light and anti scald valve						
340 AG 401	340 340-AG-401		LEACH & CIL	Mixtec	1147		Dutte	DOL	Prelim 1	15		
			Leach Tank No.1 Agitator				Duty					
340 AG 402			CIL Tank No.1 Agitator	Mixtec	1147		Duty	DOL	Prelim 1	15		
340 AG 403			CIL Tank No.2 Agitator	Mixtec	1147		Duty	DOL	Prelim 1	15		
340 AG 404			CIL Tank No.3 Agitator	Mixtec	1147		Duty	DOL	Prelim 1	15		
340 AG 405			CIL Tank No.4 Agitator	Mixtec	1147		Duty	DOL	Prelim 1	15		
340 AG 406			CIL Tank No.5 Agitator	Mixtec	1147		Duty	DOL	Prelim 1	15		
340 AG 407			CIL Tank No.6 Agitator	Mixtec	1147		Duty	DOL	Prelim 1	15		
340 AL 401	340-AL-401		Airlift No.1	CPC		DN25 pipe with DN15 air inlet					Loaded carbon recovery airlift	
340 AL 402	340-AL-402		Airlift No.2	CPC		DN25 pipe with DN15 air inlet						
340 AL 403	340-AL-403		Airlift No.3	CPC		DN25 pipe with DN15 air inlet						
340 AL 404	340-AL-404		Airlift No.4	CPC		DN25 pipe with DN15 air inlet						
340 AL 405	340-AL-405		Airlift No.5	CPC		DN25 pipe with DN15 air inlet						
340 AL 406	340-AL-406		Airlift No.6	CPC		DN25 pipe with DN15 air inlet						
340 HP 401	340-HP-401		Tailing Hopper		2m3 LV	Carbon steel, rubber lined, 1.475m dia x 2.2m H, 950kg mass						
340 PP 401	340-PP-401		Tailing Pump No.1	Keto Pumps	100 K-VS	Centrifugal horizontal slurry pump	Duty	VVVF	Prelim 1	30		
340 PP 402	340-PP-402		Tailing Pump No.2	Keto Pumps	100 K-VS	Centrifugal horizontal slurry pump	Standby	VVVF	Prelim 1	30		
340 PP 403	340-PP-403		CIL Area Sump Pump No. 1	Keto Pumps	65 K-VS	Vertical spindle sump pump	Intermittent	DOL	Prelim 1	5.5		
340 XM 401	340-XM-401		CIL Area Sump No. 1 Pump Frame									
340 PP 404	340-PP-404		CIL Area Sump Pump No. 2	Keto Pumps	65 K-VS	Vertical spindle sump pump	Intermittent	DOL	Prelim 1	5.5		
340 XM 402	340-XM-402		CIL Area Sump No. 2 Pump Frame									
340 SC 401	340-SC-401		Trash Screen	Sepro Australia	HB38	Single deck screen, 0.9m x 2.4m, c/w feed box, OS chute, US chute	Duty	DOL	Prelim 2	5	2-off 2.5kW vibratory motors	
340 SC 402	340-SC-402		Loaded Carbon Recovery Screen	Sepro Australia	HB38	Single deck screen, 0.9m x 2.4m, c/w feed box, OS chute, US chute	Duty	DOL	Prelim 2	5	2-off 2.5kW vibratory motors	
340 SC 403	340-SC-403		Carbon Safety Screen	Sepro Australia	HB38	Single deck screen, 0.9m x 2.4m, c/w feed box, OS chute, US chute	Duty	DOL	Prelim 2	5	2-off 2.5kW vibratory motors	_
340 SC 405	340-SC-405		CIL Tank No.1 Interstage Screen	Kemix	MPS 100 (P)	Pumping style screen, 316s/s wedge wire, 1m ² screen area, 0.8mm aperture	Duty	DOL	Prelim 1	3		_
340 SC 406	340-SC-406		CIL Tank No.2 Interstage Screen	Kemix		Pumping style screen, 316s/s wedge wire, 1m ² screen area, 0.8mm aperture	Duty	DOL	Prelim 1	3		
340 SC 407			CIL Tank No.3 Interstage Screen	Kemix		Pumping style screen, 316s/s wedge wire, 1m ² screen area, 0.8mm aperture	Duty	DOL	Prelim 1	3		
340 SC 408			CIL Tank No.4 Interstage Screen	Kemix		Pumping style screen, 316s/s wedge wire, 1m ² screen area, 0.8mm aperture	Duty	DOL	Prelim 1	3		
340 SC 409			CIL Tank No.5 Interstage Screen	Kemix		Pumping style screen, 316s/s wedge wire, 1m ² screen area, 0.8mm aperture	Duty	DOL	Prelim 1	3		
340 SC 410			CIL Tank No.6 Interstage Screen	Kemix		Pumping style screen, 316s/s wedge wire, 1m ² screen area, 0.8mm aperture	Duty	DOL	Prelim 1	3		
340 SC 410			Interstage Screen - Spare	Kemix		Pumping style screen, 316s/s wedge wire, 1m screen area, 0.8mm aperture Pumping style screen, 316s/s wedge wire, 1m² screen area, 0.8mm aperture	July		1			
340 SS 401	340-SS-401		Leach Area Safety Shower	Ashley	ASE 680	Combination saferty shower & eyewash, c/w light and anti scald valve						

EQUIP N	IUMB										ELE	CTRICAL				
AREA	IDENTIFIER		EQUIPMENT NUMBER OTHEI EQUIPMI NUMBE	ENT	PACKAGE NUMBER	SUPPLIER	MODEL	SPECIFICATION	DUTY / STANDBY / INTERMITTENT	DRIVE TYPE	POWER STATUS	MOTOR COUNT	INSTALLED kW TOTAL	EMERGENCY POWER	REMARKS	VA
340 S	S	402 3	340-SS-402	CIL Area Safety Shower		Ashley	ASE 680	Combination saferty shower & eyewash, c/w light and anti scald valve								
340 TI	K	401 3	340-TK-401	Leach Tank No.1		Fremantle Steel		5.2m dia x 5.8m H, 113m ³							Approx. 7.8t total mass	
340 TI	K	402 3	340-TK-402	CIL Tank No.1		Fremantle Steel		5.2m dia x 5.8m H, 113m ³							Approx. 7.8t total mass	
340 TI	K	403	340-TK-403	CIL Tank No.2		Fremantle Steel		5.2m dia x 5.8m H, 113m ³							Approx. 7.8t total mass	
340 TI	K	404 3	340-TK-404	CIL Tank No.3		Fremantle Steel		5.2m dia x 5.8m H, 113m ³							Approx. 7.8t total mass	
340 TI	K	405	340-TK-405	CIL Tank No.4		Fremantle Steel		5.2m dia x 5.8m H, 113m ³							Approx. 7.8t total mass	
340 TI	K .	406	340-TK-406	CIL Tank No.5		Fremantle Steel		5.2m dia x 5.8m H, 113m ³							Approx. 7.8t total mass	
340 TI	K	407 3	340-TK-407	CIL Tank No.6		Fremantle Steel		5.2m dia x 5.8m H, 113m ³							Approx. 7.8t total mass	
350			350	CARBON HANDLING												
350 XI	M :	501 3	350-XM-501	Loaded Carbon Frame for Bulka Bag												
370			370	REAGENTS												
370 P	Р	701 3	370-PP-701	Cyanide Dosing Pump 1		Dynapumps		Positive displacement dosing pump	Duty	DOL	Prelim	1	0.75		Mechanical variator for speed control	\top
370 P	Р	702	370-PP-702	Cyanide Dosing Pump 2		Dynapumps		Positive displacement dosing pump	Duty	DOL	Prelim	1	0.75		Mechanical variator for speed control	
370 PI	Р	703	370-PP-703	Cyanide Dosing Pump 3		Dynapumps		Positive displacement dosing pump	Duty	DOL	Prelim	1	0.75		Mechanical variator for speed control	
370 A	т -	701 (370-AT-701	Lime Bin Activator				Quicklime	Duty	DOL	Prelim	1	0.75			
370 BI	N ·	701	370-BN-701	Lime Bin				1000 kg quicklime storage								
370 FI	E .	701 (370-FE-701	Lime Rotary Valve				30 kg/h	Duty	VVVF	Prelim	1	0.3			
370 XI	M ·	701 3	370-XM-701	NaCN bulki container holding frame												
380			380	SERVICES												
380 AI	R	801 3	380-AR-801	Air Receiver		Atlas Copco	VAR 1000	1000L air receiver								\top
380 C	P	801 3	380-CP-801	Plant Air Compressor 1		Atlas Copco	GA 30P-8.5	300 m3/h FAD @ 850kPag	Duty	FDR	Prelim	1	30			
380 C	P	802	380-CP-802	Plant Air Compressor 2		Atlas Copco	GA 30P-8.5	300 m3/h FAD @ 850kPag	Standby	FDR	Prelim	1	30			
380 DI	R	801 3	380-DR-801	Plant Air Compressor 1 Dryer		Atlas Copco	CD 90	Dessicant dryer								
380 DI	R	802 3	380-DR-802	Plant Air Compressor 2 Dryer		Atlas Copco	CD 90	Dessicant dryer								
380 PI	P	801 (380-PP-801	Process Water Pump 1		Pentair - Southern Cross		88 LPS @ 40m TDH	Duty	DOL	Prelim	1	55			
380 PI	P	802 3	380-PP-802	Process Water Pump 2		Pentair - Southern Cross		88 LPS @ 40m TDH	Standby	DOL	Prelim	1	55			
380 PI	P	803 3	380-PP-803	Raw Water Pump 1		Dynapumps			Duty	DOL	Prelim	1	4		Included in fire water skid	
380 P	P	804 3	380-PP-804	Raw Water Pump 2		Dynapumps			Standby	DOL	Prelim	1	4		Included in fire water skid	
380 P	P	805	380-PP-805	Fire Water Skid		Dynapumps		Includes duty/standby electric pumps plus diesel pump							Supplying water for pump glands & fire water low demand. Skid mounted	
380 PI	P	806	380-PP-806	Treated Water Pump 1		Dynapumps		Centrifugal diesel pump	Standby	DOL	Prelim	1			Supplying water for safety showers. Skid mounted	
380 PI	Р	807	380-PP-807	Treated Water Pump 2		Dynapumps		Centrifugal electric pump	Duty	DOL	Prelim	1	4		Supplying water for safety showers. Skid mounted	
380 TI	K	801 3	380-TK-801	Process Water Tank		Pioneer Water Tanks	640 kL	24 hr, 12.7m dia x 5.31m H, 673kL total								+
380 TI	K	803	380-TK-803	Treated Water Tank		i ains	9000 L	9000L MDPE tank								



DOCUMENT STATUS

Document Title:

WHITE WELL GOLD PROJECT

Document Type:

Document Code:

56501-EC-G-001_C



Unique	Type	Discipline	Project WIIS	Commodity Code	Area	Area No.	EQ	SN 4th Equipment No	Title / Description	Model	Specification	Qny Link	Jnit Mat/Equip Total &	lot/ Equip Mont	m/unit Productivity Total	Testoll Hours Testoll hously rate	Total Install Cost Freight as N of	Total Freight Cost Tax & Duty Rate Total	Tax & Duty Cost Total Bare Cost
													Cost	Cost			Meterials		
2	Direct Direct Direct Direct Direct Direct	Concrete	0.3.10 -Beneficiation 0.3.10 -Beneficiation 0.3.10 -Beneficiation 0.3.10 -Beneficiation	C.A.A. Blinding Concrete C.A.B. Structure Footings C.A.C. Equipment Footings C.A.D. Ground Slabs	Secrification Sensitiation Sensitiation Sensitiation Sensitiation Sensitiation	0310 0310 0310 0310 0310		210 210 210 210	Beneficiation - Concrete Beneficiation - Concrete Beneficiation - Concrete Beneficiation - Concrete			0 M3 0 M3 0 M3 0 M3	\$622 \$1,852 \$2,032 \$1,722 \$2,752 \$2,752	50 50	0 1	0 \$110 0 \$110 0 \$110 0 \$110 0 \$110	\$0 0% \$0 0% \$0 0% \$0 0%	\$0 0% \$0 0% \$0 0% \$0 0%	50 50 50 50
4 5	Direct	Concrete Concrete	0.3.1.0-Beneficiation 0.3.1.0-Beneficiation	C.A.D Ground Slabs C.A.E Walls	Beneficiation Beneficiation	0910		310 310	Beneficiation - Concrete Beneficiation - Concrete			0 M3 0 M3	\$1,722 \$2,752	50 50	0 1 0 1	0 \$110 0 \$110	\$0 0% \$0 0%	\$0 0% \$0 0%	50 50 50 50
6 7		Concrete Concrete Sub Total	0.3.10-Beneficiation	CAE-Walls		0910		310	Beneficiation - Concrete			0 M3 0 M3		50 50	0 1	0 S110 0	50 0% 50	50 0% 50	\$0 90 \$0
9	Direct	Structural Steel Structural Steel Structural Steel Structural Steel Structural Steel Structural Steel	03.10-Seneficiation 03.10-Seneficiation	S.A.A Light Structural Steel, <55kg/m S.A.B Medium Structural Steel +65kg/m S.A.C Heavy Structural Steel +65kg/m S.S Structural Grating S.C.F Treads	Secrification Secrification Secrification Secrification Secrification Secrification	0910		310 310	Seneficiation - Steel Seneficiation - Steel Seneficiation - Steel Seneficiation - Steel Seneficiation - Steel			0 TN	\$8,100 \$6,900	50 50	04 ±	0 \$110	\$0 6% 50 6%	50 0% 50 0%	50 50 50 50
11 12	Direct Direct Direct Direct Direct Direct	Structural Steel Structural Steel	0.3.10-Beneficiation 0.3.10-Beneficiation 0.3.10-Beneficiation 0.3.10-Beneficiation 0.3.10-Beneficiation	S.A.C - Heavy Structural Steel +65kg/m S.F - Structural Gratine	Beneficiation Beneficiation	0310 0310 0310 0310 0310		210 210 210 210 210	Beneficiation - Steel Beneficiation - Steel			0 TN 0 M2	\$8,100 \$6,900 \$5,900 \$290 \$75 \$310	50 50	16 1 3 1	0 \$110 0 \$110 0 \$110 0 \$110 0 \$110	50 6% 50 6% 50 6% 50 6%	\$0 0% \$0 0% \$0 0% \$0 0%	50 50 50 50
13 14	Direct	Structural Steel Structural Steel	0.3.1.0 Geneficiation 0.3.1.0 Geneficiation	S.C.F - Treads S.C.B - Handra'il	Beneficiation Beneficiation	0910		310 310	Beneficiation - Steel Beneficiation - Steel			0 EACH 0 LM	\$75 \$310	50 50	5 1 5 1	0 \$110 0 \$110	50 6% 50 6%	SD ON	\$0 \$0 \$0 \$0
15 16		Structural Steel Structural Steel Sub Total										0 TN		50		0	\$0	\$0	50
17	Direct	Fizitawork	0.11.0 -Beneficiation	O.L.C Hoods & Chatrwork O.L.C Hoods & Chatrwork O.L.C Hoods & Enterwork O.L.C Hoods & Enterwork O.L.C Hoods & Chatrwork	Beneficiation	0310 0310 0310 0310 0310 0310 0310 0310	CH	201 210-8W-201 200 210-0-1-0-1 210-0-1-0-1 210-0-1-0-1 202 210-0-1-0-1 203 210-0-1-0-1 205 210	BOM Bin Agons Feeder Transfer Chude Withersing Costin) Feed Conveyor Head Chude Withersing Costin) Feed Chude Withersing Costin) QIS Chude Withersing Costin) QIS Chude Withersing Costin) QIS Chude Withersing Costin) QIS Conveyor Head Chude Chude Scotland Feed Chude Chun Scotlander Feed Chude Chun Scotlander Off Costweyor Head Chude Chun Scotlander Off Costweyor Head Chude	Miles	Mild Storel Bissilory Lined Mild Storel Bissilory Lined Bissilory Lined Mild Storel Bissilory Lined Mild Storel Bissilory Lined Mild Storel Mild Storel Mild Storel Mild Storel Gram Nubber Lined Mild Storel Gram	0 TN 0 M2	\$12,000 \$420 \$12,000 \$420 \$12,000 \$420 \$420 \$12,000 \$420 \$420 \$420 \$420 \$420 \$420	50 50	10 1 0 1	0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110 0 \$110	50 6% 50 6% 50 6% 50 6%	50 0% 50 0%	\$0 \$0 \$0 \$0
19 20	Direct Direct	Platework Platework	0.3.1.0 Geneficiation 0.3.1.0 Geneficiation	O.L.CHoods & Chutework O.L.CHoods & Chutework	Beneficiation Beneficiation	0910 0910	CH CH	201 210 CH - 201 202 210 CH - 102 203 210 CH - 102 203 210 CH - 102 204 210 CH - 105 205 210 CH - 105 205 210 CH - 105 207 210 CH - 105 207 210 CH - 108 209 210 CH - 108 209 210 CH - 108	Vibrating Grizzly Feed Conveyor Head Chute Vibrating Grizzly Feed Chute	MSP MSP	Mild Steel Bisalloy Lined	0 TN 0 M2	\$12,000 \$420	90 90	0 1 0 1	0 S110 0 S110	50 6% 50 6%	\$0 0% \$0 0%	50 50 50 50
22	Direct	Platework Platework	03.10-Seneficiation	O.L.CHoods & Chatework O.L.CHoods & Chatework	Beneficiation Beneficiation	0910	CH CH	105 310-CH-105	Vibrating Grizzly U/S Chute Vibrating Grizzly U/S Chute	MSP MSD	Bisalloy Lined Mild Oped	0 M2	\$420 50	50 50	0 1	0 S110 0 S110	50 6% 50 6%	SD ON	50 50 50 50
24 25	Direct Direct	Platework Platework	03.10 Geneficiation 03.10 Geneficiation	O.L.C - Hoods & Chutework O.A.A - Natural Rubber	Beneficiation Beneficiation	0910	CH CH	107 310-CH-107 108 310-CH-108	Scrubber Conveyor Head Chute Drum Scrubber Feed Chute	MSP MSP	Mild Steel Grom Rubber Lined	0 TN 0 M2	\$12,000 \$420	50 50	0 1	0 \$110 0 \$110	50 6% 50 6%	\$0 0% \$0 0%	50 50 50 50
26 27	Direct Direct	Platework Platework	0.3.1.0-Beneficiation 0.3.1.0-Beneficiation	O.L.C - Hoods & Chutework O.A.A - Natural Rubber	Beneficiation Beneficiation	0910 0910	CH	109 310-CH-109 110 310-CH-110	Drum Scrubber O/S Chube Drum Scrubber O/S Conveyor Head Chube	MSP MSP	Mild Steel 6mm Rubber Lined	0 TN 0 M2	\$12,000 \$420	50 50	10 1 0 1	0 \$110 0 \$110	\$0 6% \$0 6%	\$0 0% \$0 0%	\$0 \$0 \$0 \$0
28 29	Direct	Platework Platework	0.3.1.0-Beneficiation 0.3.2.0- Grinding & Deslime	O.L.C - Hoods & Chutework O.L.C - Hoods & Chutework	Beneficiation Beneficiation	0910 0910	HP XM	201 210-HP-101 201 210-XM-101	Drum Scrubber Discharge Hopper Drum Scrubber Area Sump Pump Frame	MSP MSP	Steel Steel	0 TN	\$12,000 \$12,000	\$0 \$4,200	12 1 10 1	0 \$110 11 \$95	\$0 6% \$998 7%	\$0 0% \$294 0%	50 50 50 55,492
30 31		Platework Sub Total	0.3.1.0-Beneficiation	M.A Process Equipment		0310	FD	221 310-FD-101	Apron Feeder			0 TN 1 EACH	\$0	\$4,200 50	0 1	0 5110	\$998 50 6%	\$294 \$0 0%	\$5,492 S0 S0
2	Direct	Mechanica Equipment			Beneficiation		FU		Apron Helder	MSP	Motorac motor: 22kW, 5470rpm, D180L. Feeder width: 1500mm. Gearbox: borfiglioli 9180 Future Installation		30	30	9 1				50 50
33 34	Direct Direct	Mechanical Equipment Mechanical Equipment	0.3.1.0-Beneficiation 0.3.1.0-Beneficiation	M.A Process Equipment M.A Process Equipment	Beneficiation Beneficiation	0910 0910	CR GR	201 310-CR-101 201 310-GR-101	Impact Crusher Vibrating Grizzly	MSP MSP	Future Installation Motorac motor: 37kW, 1450rpm, D180L	1 EACH 1 EACH	50 50	50 50	0 1	0 \$110 0 \$110	50 6% 50 6%	\$0 0% \$0 0%	50 50 50 50
25	Direct	Mechanical Equipment	0.3.1.0-Beneficiation	M.A - Process Equipment	Beneficiation	0910	cv	201 310-CV-101	Vibrating Grizzly Feed Conveyor	MSP	Motorac motor: SSkW, MS0rpm, 02505	1 EACH	50	50	0 1	0 \$110	50 6%	50 0%	50 50
					Beneficiation						Gearbox: fenner M20 20:1 Conveyor belt: 60000 X 1500mm wide								
36	Direct	Mechanical Equipment	0.3.1.0-Beneficiation	M.A - Process Equipment		0910	cv	310-CV-102	Vibrating Grizzly O/S Conwyor	MSP	Gec Motor, Ac: 7.5kw, 1450rpm, 4p,	1 EACH	so	50	0 1	0 \$110	50 6%	SD 0%	50 50
					Beneficiation						DS32m, Foot Gearbox: Renold 8/0 S0:1 Conveyor belt: 28000 X 1400mm Wide								
37	Direct	Mechanical Equipment	0.3.1.0-Beneficiation	M.A - Process Equipment	Reneficiation	0910	SC	310-50-101	Scrubber	MSP	Motorac motor: 315kW, 96Grpm, Foot Mount Gearbox: Hansen D821ct 16:21:1	1 EACH	so	50	0 1	0 \$110	\$0 6%	\$0 0%	\$0 50
20	Direct	Mechanical Equipment	0.3.1.0-Beneficiation	M.A - Process Equipment		0310	cv	103 310-CV-103	Drum Scrubber Feed Conveyor	MSP	Diameter: 3037mm Pope Motor, Ac: 45kW, 1460rpm, 4p,	1 EACH	\$0	50	0 1	0 \$110	\$0 6%	\$0 0%	S0 S0
					Beneficiation						0225m, Foot Gearbox: Reynold Smh8 13:1 Conveyor belt: 55500 X 1000mm								
39	Direct	Mechanical Equipment	0.3.1.0-Beneficiation	M.A - Process Equipment		0910	cv	310-CV-104	Drum Scrubber O/S Conveyor	MSP	Wide Gec motor: 22kw, 1450rpm, Foot,	1 EACH	so	50	0 1	0 \$110	\$0 6%	\$0 0%	\$0 50
					Beneficiation						**Replaced** Gearbox: Benzier Tv122 19.46:1 Conveyor belt: 34000 X 1200mm								
40	Direct	Mechanical Equipment Mechanical Equipment	0.3.1.0-Beneficiation 0.3.1.0-Beneficiation	M.A Process Equipment M.A Process Equipment	Beneficiation Beneficiation	0310	PP DD	201 310-PP-101 202 310-PP-102	Drum Scrubber Discharge Pump Drum Scrubber Area Sump Pump	100 K-VS 65 K-VS	Wide 365mm SVC U38 Impeller Vertical spindle sump pump	1 EACH	\$17,017	\$17,017 \$10,290	28 1 12 1	28 \$110	\$3,080 6% \$1,220 6%	\$1,021 0% \$610 0%	50 \$21,118 50 \$12,277
42		Mechanical Equipment Mechanical Equipment Sub Total		· · · · · · · · · · · · · · · · · · ·				. autridi				DACA.	Jan., 199	\$27,316	•	40	\$4,400	\$1,629	\$33,355
44 45		Total Area 0330 - Beneficiation Circuit		-						· · · · · · · · · · · · · · · · · · ·				\$31,516		51	\$5,299	\$1,922	\$20,847
46 47	Direct	Concrete	0.3.2.0 - Grinding & Deslime	C.A.D Ground State & Beams	Grinding & Deslime	0320		320	Mil feed conveyor tail end			43 M3	\$1,722	\$7,405	1	985	so on	50 on	\$0 \$7,405
49	Direct	Concrete	0.110- Grinding & Deslites 0.110- Grinding & Grinding 0.110- Grinding & Grinding 0.110- Grinding & Grinding	C.A.D Ground Salos & Basens C.A.D Specture Footings C.A.D Specture Footings C.A.B Specture Footings C.A.B Specture Footings C.A.B Specture Footings C.A.D Ground Salos & Basens C.A.D Ground Salos & Basens C.A.D Ground Salos & Basens C.A.D Specture Footings C.A.D Ground Salos & Basens C.A.D Specture Footings C.A.C Ground Salos & Basens C.A.C Salos Concreter C.A.L Sanota	Grinding & Destina	0326 0326 0326 0326 0326 0326 0326 0326		220 220 220 220 220 220 220 220 220 220	MBI free conveyor tall end MBI free conveyor tall end MBI free conveyor End with statuture Recident best statuture Conclore area Conclored Conclor			43 M3 12.4 M3 11.1 M3 11.1 M3 12.5 M3 12.5 M3 11.6 M3	\$1,722 \$1,852 \$1,852 \$1,852 \$2,002 \$1,722 \$2,752 \$622 \$1,852 \$2,002 \$1,852 \$2,002 \$1,722 \$1,722 \$1,722 \$2,752 \$2,752	57,405 522,905 520,557 520,557 520,450 527,432 537,145 50,357 50 548,800 518,288 5149,814 50 512,0058	1	595 595	\$0 0% \$0 0% \$0 0% \$0 0%	50 0% 50 0%	50 57,465 50 523,565 50 523,557 50 523,557 50 527,452 50 527,452 50 527,155 50 523,255 50 564,600 50 564,600 5
50 51	Direct	Concrete	u.s.zu- Grinding & Deslime 0.3.2.0 - Grinding & Deslime	C.A.B Structure Footings C.A.B Structure Footings	unnding & Decline Grinding & Decline	0920 0920		320 320	secon bin structure Desime area			11.1 M3 17.5 M3	\$1,852 \$1,852	\$40,557 \$69,450	1	985 985	50 0% 50 0%	50 0% 50 0%	S0 \$20,557 \$0 \$69,450
53 54	Direct	Concrete	0.3.2.0 - Grinding & Desime 0.3.2.0 - Grinding & Desime 0.3.2.0 - Grinding & Desime	C.A.D Equipment Hoosings C.A.D Ground Slabs & Beams C.A.G Walls Concrete	Grinding & Desime Grinding & Desime	0920		320 320	Desime area			116 M3	\$4,044 \$1,722 \$3.763	\$27,842 \$37,195 \$9.357	1	985 985	50 ON	50 0% 50 0%	50 \$27,432 \$0 \$37,195 \$0 \$37,295
2	Direct	Concrete Concrete	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	C.A.A Blinding Concrete C.A.B Structure Footings	Grinding & Decline Grinding & Decline	0920		320 320	Ball mill area Ball mill area			Ma	\$622 \$1,852	50 596,860	1	985 985	50 0% 50 0%	50 0% 50 0%	50 50 50 50 50 50
57 58	Direct Direct	Concrete Concrete	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	C.A.C Equipment Footings C.A.D Ground Stabs & Beams	Grinding & Deslime Grinding & Deslime	0920		320 320	Ball mill area Ball mill area			9 M3 9 M3 87 M3	\$2,032 \$1,722	\$18,288 \$149,814	1	995 995	\$0 0% \$0 0%	\$0 0% \$0 0%	SD S18,288 SD S149,814
59 60	Direct Direct	Concrete Concrete	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	C.A.E Suspended Slabs & Beams C.A.G Walls Concrete	Grinding & Desime Grinding & Desime	0920		320 320	Ball mill area Ball mill area		1	M3 16.3 M3	\$1,722 \$2,752	50 \$320,058	1 1	995 995	\$0 0% \$0 0%	\$0 0% \$0 0%	\$0 \$0 \$0 \$330,058
61 62	Direct	Concrete Concrete Concrete Sub Total	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	C.A.H Tunnel Concrete C.A.J Tank Ring Beam	Grinding & Deslime Grinding & Deslime	0920		320 320	Ball mill area Ball mill area			M3 M3	\$2,752 \$2,822	50 50	1	995 995	\$0 0% \$0 0%	\$0 0% \$0 0%	50 50 50 50 5799,927
G 64												380 M3		\$799,927		•	\$0	SO.	
66	Direct	Structural Steel Structural Steel Structural Steel Structural Steel Structural Steel Structural Steel	0.3.2.0 - Grinding & Desime 0.3.2.0 - Grinding & Desime	S.A.A Light Einvaluni Stani, - GSlagim S.A.B Modelmi Shrustani Share 25-778g/m S.A.B Share Share Share Share Share Share Share Share Share Share Share S.A.B Constite S.C.B Inscript S.A.B Share Share Share Share Share S.C.F Tenda S.A.B Share Share Share Share Share S.A.B Share br>Share Share Sha	Grinding & Desime Grinding & Desime	0326 0326 0326 0326 0326 0326 0326 0326		320 320 320 320 320	Affing even Milling even Millin			6.4 TN 16.3 TN 3.9 TN	\$6,900	\$51,840 \$112,470	M 1 10 1	154 595 326 595	\$14,592 7% \$30,970 7%	\$3,629 0% \$7,873 0%	50 \$30,061 50 \$151,313
68	Direct	Structural Steel Structural Steel	0.3.2.0 - Grinding & Desime 0.3.2.0 - Grinding & Desime	S.A.I - Floor Plate S.A.I - Gratine	Grinding & Desline Grinding & Desline	0920		320 320	Miling area Miling area			TN 30.8 M2	\$310 \$290	50 : 566.932	5 1 3 1	0 595 692 595	50 7% 565.778 7%	\$0 0% \$4,685 0%	50 50 50 5137,385
70 71	Direct Direct	Structural Steel Structural Steel	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	S.C.B - Handra'll Mill Guards	Grinding & Desime Grinding & Desime	0920		320 320	Miling area Miling area			367 LM 30 M2	\$310 \$290	\$76,570 \$8,700	5 1 3 1	371 595 90 595	\$35,198 7% \$8,550 7%	\$5,360 0% \$609 0%	\$0 \$117,127 \$0 \$17,859
72	Direct Direct	Structural Steel	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	S.C.F Treads S.A.A Light Structural Steel. <25km/m	Grinding & Deslime Grinding & Deslime	0920		320 320	Miling area Mil feed conveyor			65 EACH 6.0 TN	\$90 \$8,100	\$5,850 \$48,665	5 i	98 595 944 595	59,263 7% 513,698 7%	\$410 OK \$3,407	50 \$15,522 \$65,770
74 75	Direct Direct	Structural Steel Structural Steel	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	S.A.B - Medium Structural Steel 25-75kg/m S.A.I - Grating	Grinding & Deslime Grinding & Deslime	0920 0920		320 320	Mill feed conveyor Mill feed conveyor			0.7 TN 100 M2	\$6,900 \$290	\$4,678 \$29,232	10 1 3 1	14 595 302 595	\$1,288 7% \$28,728 7%	\$327 \$2,046	\$6,294 \$60,006
76 77	Direct	Structural Steel Structural Steel	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	S.A.A - Light Structural Steel, <25kg/m S.A.B - Medium Structural Steel 25-75kg/m	Grinding & Dealine Grinding & Dealine	0920 0920		320 320	Deslime area Deslime area			4.7 TN 9.7 TN	\$8,100 \$6,900	\$38,070 \$66,930	14 1 20 1	113 595 194 595	\$10,716 7% \$18,430 7%	\$2,665 0% \$4,685 0%	\$0 \$51,451 \$0 \$90,045
78 79	Direct	Structural Steel Structural Steel	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	S.A.I - Grating S.C.B - Handra'il	Grinding & Deslime Grinding & Deslime	0920 0920		320 320	Deslime area Deslime area			153 M2 140 LM	\$290 \$310	\$44,270 \$43,400	1 5 1	459 595 210 595	\$49,605 7% \$19,950 7%	\$3,106 ON \$3,038 ON	50 591,081 50 566,388
81	Direct	Structural Steel Structural Steel	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	S.C.F - Treads S.A.A - Light Structural Steel, <25lig/m	Grinding & Deslime Grinding & Deslime	0920		220 220 220 220 220 220	Declime area Reclaim bin structure			150 M2 140 LM 35 EACH 1.1 TN 1.9 TN 17 M2	\$90 \$8,100	\$3,150 \$8,910	5 1 N 1	53 595 26 595	\$4,988 7% \$2,508 7%	\$221 0% \$624 0%	50 58,358 50 512,042
83	Direct	Structural Steel	6.11.2 Groding & Gristine 6.11.2.1 Groding & Gristine 6.11.2	S.A.A Light Structural Steel, <25Ag/m S.A.B Medium Structural Steel 25-75kg/m S.A.I Grating S.C.B Handrall S.C.S Tomete	Gooding & Dorline	0320 0320 0320 0320 0320 0320		320 320	Reclaim bin structure Reclaim bin structure			17 M2	\$6,000 \$5,000 \$130 \$130 \$130 \$130 \$50 \$6,000 \$130 \$5,000 \$130 \$5,000 \$130 \$50 \$6,000 \$130 \$50 \$50 \$50 \$110 \$50 \$110 \$50 \$110 \$11	\$51,960 \$112,670 \$2,000 \$6,632 \$75,570 \$3,000 \$5,850 \$5,850 \$5,850 \$5,850 \$5,850 \$6,678 \$32,222 \$32,070 \$64,27	1 1	51 995	\$4,000 776 \$0,00	\$1,129 10 00 00 00 00 00 00 00 00 00 00 00 00	50 ITAMAS 50 STAILER 50 STAI
85 86	Direct	Structural Steel	0320 - Grinding & Deslime	S.C.FTreads	Grinding & Deslime	0920		320	Reclaim bin structure			30 EACH S1 TN	590	\$2,700 \$662,507	i i	45 595 3485	\$4,275 7% \$331,051	\$189 OK \$46,375	50 \$7,164 \$1,039,934
87 88	Direct Direct	Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.L.C.Hoods & Chutework O.L.R.A.2 Bissiloy 400 SHN 16mm	Grinding & Desline	0320 0320	an an	201 320-8N-201 201 320-8N-201	Reclaim Bin Reclaim Bin		Mild steel, painted	14.5 TN 50 M2	\$12,000 \$700	\$174,000 \$25,000	10 1	435 595 0 595	\$41,325 7% \$0 7%	\$12,180 0% \$2,450 0%	50 \$227,505 50 \$37,450
29					Grinding & Desime Grinding & Desime						Mild steel, partially lined with 16thk 4008HN				0 1				50 \$37,450
90 91	Direct Direct	Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.L.C. Hoods & Chutework O.L.B.A. 1 Bisalloy 400 BHN 12mm	Grinding & Deslime Grinding & Deslime	0920 0920	CH	202 320-CH-202 202 320-CH-202	Reclaim Bin Feeder Feed Chute Reclaim Bin Feeder Feed Chute		Mild steel, partially lined with 12thk	1.52 TN 4.5 M2	\$12,000 \$700	\$6,216 \$3,150	0 1	16 595 0 595	\$1,476 7% \$0 7%	\$435 0% \$221 0%	50 \$8,127 50 \$1,371
92	Direct Direct	Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.L.C Hoods & Chatework O.L.B.A.1 Bhalloy 400 SHN 12mm	Grinding & Desime Grinding & Desime	0920 0920	CH	203 320-CH-203 203 320-CH-203	Reclaim Bin Feeder Discharge Chute Reclaim Bin Feeder Discharge Chute		Mild steel, painted	3.40 TN 3.2 M2	\$12,000 \$700	\$4,836 \$2,240	1 1	12 595	\$1,149 7% \$0 7%	\$339 OK	50 \$6,323 50 \$2,387
94	Direct Direct	Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.L.C. Hoods & Chatework O.L.B.A.1 Shalloy 400 BHN 12mm	Grinding & Desime Grinding & Desime	0320	CH CH	204 220-CH-204 204 320-CH-204 204 320-CH-204	Ball MII Feed Conveyor Head Chute Ball MII Feed Conveyor Head Chute			1.40 TN 3.2 M2	\$12,000 \$700	\$4,836 \$2,240		12 595	51,149 7% 50 7%	5257 ON	50 SE323
95		Platework Platework	0.3.2.0 - Grinding & Deslime	O. L.B.A. 1 Bissiloy 400 BHN 12mm	Grinding & Deslime		CH		Ball Mill Feed Conveyor Head Chute		Mild steel, partially lined with 12thk 4008HN	3.2 M2			0 1	0 595	50 7%	\$157 0%	50 \$6,323 50 \$2,397
96 97	Direct Direct Direct	Platework Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.L.C - Hoods & Chutework O.L.S.A.3 Situality 400 SHN 25mm O.L.S.A.1 Situality 400 SHN 12mm	Grinding & Decline Grinding & Decline	0920 0920 0920	DH DH	205 320-CH-205 206 320-CH-206 206 320-CH-206	Ball Mill Feed Chute Ball Mill Scats Chute Ball Mill Scats Chute		Mild State) Mild state), patiend Mild state), patiend Mild state), patiend Mild state), patiend Mild state), mild mild Mild state), mild mild Mild state), mild mild Mild state), mild mild Mild state) Mild state), mild mild Mild state), mild mild Mild state), mild mild Mild state), mild mild Mild state), milder insed Shik Mild state), milder insed Shik Mild states, milder insed Shik	u TN 0.6 TN	\$12,000 \$12,000 \$700	\$0 \$7,200 \$1,400	m 1 10 1	u 595 18 595	\$0 7% \$1,710 7% \$0 7%	50 0% 5504 0%	\$0 \$0 \$0 \$8,434 \$1,498
98		Proceedition (Contraction Contraction Cont	0.3.2.0. Growing & Destine	O. L. C. Monda & Chataranh	Grinding & Desline Grinding & Desline		CH CH	200 CH 200			wind steer, partially lined with 12thk 40084N Mild steel painted	. M2			v 1	47 ~~		50M 51303 ~~	\$1,498 50 534
100	Direct	Platework Platework	0.1.2.0 - Grinding & Deslime 0.1.2.0 - Grinding & Deslime	O.L.C. Hoods & Chatrwork O.A.A.6. Natural Rubber Living 6 mm O.L.C Hoods & Chatework O.A.A Natural Rubber Living 6 mm O.L.C. Hoods & Chatework O.A.A.6. Natural Rubber Living 6 mm O.L.C. Hoods & Chatework O.A.A.6. Natural Rubber Living 6 mm O.L.C. Hoods & Chatework O.A.A.6. Natural Rubber Living 6 mm	Grinding & Decline Grinding & Decline	0920	CH HP	207 320-CH-207 205 320-HP-105	Ball Mill Discharge Chute Ball Mill Discharge Chute Ball Mill Discharge Pump Hopper Ball Mill Discharge Pump Hopper Ball Mill Discharge Pump Hopper Vabrating Fines Exreen Feed Box Vabrating Fines Exreen Feed Box Vabrating Fines Exreen LyC Chute Vabrating Fines Exreen LyC Chute Vabrating Fines Exreen LyC Chute		Mild steel, rubber lined 6thk Mild Steel	1.55 TN 16 M2 1 TN	\$420 \$12,000	\$6,720 \$12,000	0 1	0 595 30 595	50 7% \$2,850 7%	\$470 ON \$840 ON	\$0 \$7,190 \$0 \$15,600
102 109	Direct Direct	Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.A.A - Natural Rubber O.L.C Hoods & Chutework	Grinding & Dealine Grinding & Dealine	0920	HP BX	205 320-HP-205 201 320-8X-201	Ball Mill Discharge Pump Hopper Vibrating Fines Screen Feed Box		6mm Rubber Lined Mild steel, rubber lined 6thk	10 M2 1.96 TN	\$420 \$12,000	\$4,200 \$11,520	0 1 10 1	0 595 29 595	50 7% 52,736 7%	\$294 0% \$806 0%	\$0 \$4,494 \$0 \$15,062
104 105	Direct Direct	Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.A.A.G Natural Rubber Lining 6 mm O.L.C Hoods & Chatework	Grinding & Declime Grinding & Declime	0920 0920	CH	201 320-8X-201 201 320-CH-201	Vibrating Fines Screen Feed Box Vibrating Fines Screen U/S Chute		Mild steel, rubber lined 6thk Mild steel, rubber lined 6thk	6 M2 LS4 TN	\$420 \$12,000	\$2,520 \$18,480	0 1 10 1	0 595 46 595	\$0 7% \$4,389 7%	\$176 0% \$1,294 0%	\$0 \$2,696 \$0 \$24,163
106 107	Direct	Platewark	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.A.A.G Natural Rubber Lining 6 mm O.L.C Hoods & Chutework O.L.B.A.1 Skalloy 400 SHN 12mm	Grinding & Desline	0320 0320 0320 0320 0320 0320 0320 0320	CH	207 220-CH-207 207 220-CH-207 206 220-HP-205 206 220-HP-205 201 220-BV-206 201 220-BV-306 201 220-CH-201 201 220-CH-201 201 220-CH-201 201 220-CH-201 201 220-CH-201	Vibrating Fines Screen U/S Chute Vibrating Fines Screen O/S Chute		Mild steel, rubber lined 6thk Mild steel, painted	10 M2 196 TN 6 M2 156 TN 8 M2 162 TN	\$12,000 \$420 \$12,000 \$420 \$12,000 \$420 \$12,000 \$420 \$12,000 \$420 \$420	\$18,600 \$4,720 \$12,000 \$4,200 \$11,520 \$2,520 \$18,480 \$7,862 \$798	0 1 10 1	0 595 18 595	9.448 75 75 75 75 75 75 75 75 75 75 75 75 75	\$1,000 ON \$410 ON \$1840 ON \$1940 ON \$1954 ON \$1056 ON \$176 ON \$1,244 ON \$2325 ON \$51,70 ON \$51,70 ON \$51,70 ON \$55,70 ON \$55	50 514,230 50 71,800 50 511,600 50 54,464 50 51,062 50 52,066 50 54,161 50 54,165 50 58,665 50 58,665 50 58,665
108		Proceedition (Contraction Contraction Cont	0.3.2.0. Growing & Destine	O.L. E.A. 1 MISSERY 400 BHN 12mm	Crisding & Desline Grinding & Desline		LH HP		Designs Curious Search Committee 14 No.		Mild steel, painted (Mild steel, partially lined with 12thic 400HM) Mild Steel (Steel Steel Mild Steel Ste	. # M2			v 1	20 000			50 S854
120 120	Direct Direct	Platework Platework	0.3.2.0 - Grinding & Destine 0.3.2.0 - Grinding & Destine	O.A.A. Natural Rubber O.L.CHoods & Chutmannik	Grinding & Decline Grinding & Decline	0320	HP HP	201 320-HP-201 202 320-HP-201	Desline Cyclone Feed Pump Stage 1A Hopper Desline Cyclone Feed Pump Stage 1A Hopper Desline Cyclone Feed Pump Stage 15 Mar		Smm Rubber Lined Mild Steel	10 M2	\$420 \$420	\$4,200 \$12,000	0 1 0 1	0 595 30 605	50 7% S2.850 7%	\$294 0% \$840 0%	50 \$4,494 \$0 \$1,494
112 113	Direct	Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.A.A - Natural Rubber O.L.C - Hoods & Chutework	Grinding & Decline Grinding & Decline	0920 0920	HP HP	202 320-HP-202 203 320-HP-203	Desline Cyclone Feed Pump Stage 18 Hopper Desline Cyclone Feed Pump Stage 18 Hopper Desline Cyclone Feed Pump Stage 2 Hopper Desline Cyclone Feed Pump Stage 2 Hopper		6mm Rubber Lined Mild Steel	10 M2 1 TN	\$420 \$12,000	\$4,200 \$12,000	0 1 10 1	0 595 30 595	50 7% \$2,850 7%	\$294 ON \$840 ON	\$0 \$4,494 \$0 \$25,690 \$0 \$25,690
114 115	Direct Direct	Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.A.A - Natural Rubber O.L.C - Hoods & Chutework	Grinding & Deslime Grinding & Deslime	0920 0920	HP HP	203 320-HP-203 205 320-HP-205	Deslime Cyclone Feed Pump Stage 2 Hopper Ball Mill Discharge Pump Hopper		6mm Rubber Lined Mild Steel	10 M2 1 TN	\$420 \$12,000	\$4,200 \$12,000	0 i 80 i	0 595 30 595	50 7% 52,850 7%	\$294 0% \$840 0%	\$0 \$4,494 \$0 \$15,690
115 117	Direct	Platework Platework	0.3.2.0 - Grinding & Deslime 0.3.2.0 - Grinding & Deslime	O.A.A - Natural Rubber O.L.C - Hoods & Chutework	Grinding & Deslime Grinding & Deslime	0920	HP HP	205 320-HP-205 206 320-HP-206	Ball Mill Discharge Pump Hopper Knelson Concentrator Discharge Hopper		6mm Rubber Lined Mild Steel	10 M2 1 TN	\$420 \$12,000	\$4,200 \$12,000	0 1 10 1	0 595 30 595	\$0 7% \$2,850 7%	\$294 0% \$840 0%	\$0 \$4,494 \$0 \$15,690
118 129	Direct Direct	Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric Fizitamoric	2.1.2. Gertaley & Destries 0.1.2.0. Gertaley & Gestries 0.1.2.0. Gertaley & Gestries 0.1.2.0. Gertaley & Destries 0.1.2.0. Gertaley & Destries 0.1.2.0. Gertaley & Destries 0.1.2.0. Gertaley & Gestries 0.1.2.0. Gertaley & Gestries 0.1.2.0. Gertaley & Gestries 0.1.2.0. Gertaley & Gestries	O.L.C Neode & Charterock O.A.A. Natural Rubber O.A.A. Natural Rubber O.L.C Neode & Charterock O.L.C Neode & Charterock O.L.C Neode & Charterock O.A.A Natural Rubber O.L.C Neode & Charterock O.A.A Natural Rubber O.L.C Neode & Charterock O.A.A Natural Rubber	urnding & Desime Grinding & Desime	0326 0336 0336 0336 0336 0336 0336 0336	HP EX	201 220-HP-201 201 220-HP-201 202 420-HP-202 202 202 HP-202 203 202 HP-203 203 202 HP-203 203 202 HP-203 205 202 HP-205 205 202 HP-205 206 202 HP-205 206 202 HP-205 206 202 HP-205 206 202 HP-205 202 202 HP-205 202 202 HP-205 202 202 HP-205 203 407 202 202 HP-205 203 202 HP-205 203 407 202 202 402 402 402 402 402 402 402 402	xnelson Concentrator Discharge Hopper Kneson Concentrator Bypass Box		Germ Rubber Lined Mild Steel rubber Lined	10 M2 1.75 TN 4 M2 1.35 TN	\$12,000 \$420 \$12,000 \$420 \$12,000 \$420 \$12,000 \$420 \$420 \$420 \$420 \$12,000 \$420 \$420 \$420 \$420 \$420 \$420 \$420 \$	\$12,000 \$4,200 \$12,000 \$4,200 \$12,000 \$4,200 \$12,000 \$4,200 \$4,200 \$4,200 \$4,200 \$4,200 \$4,200 \$4,200 \$4,200 \$4,200 \$4,200	u 1	0 985 23 985	\$2,850 7% \$2,850 7% \$50 7% \$50 7% \$2,850 7% \$2,850 7% \$2,850 7% \$2,850 7% \$2,850 7% \$2,850 7% \$50 7% \$900 7%	\$840 05 5344 05 54 54 54 54 54 54 54 54 54 54 54 54 54	\$0 \$4,494 \$0 \$11,768
120 121 133	Direct	Platework Platework	0.3.2.0 - Grinding & Destime 0.3.2.0 - Grinding & Destime 0.3.2.0 - Grinding & Destime	O.A.A.6 Natural Rubber Lining 6 mm O.L.C - Hoods & Chutework O.L.C - Hoods & Chutework	Grinding & Declime Grinding & Declime Grinding & Declime	0320 0320	XM XM	202 320-8M-201 201 320-8M-201 202 320-8M-202	Kneson Concentrator Bypass Bos Grinding Circuit Sump Pump Frame Deslime Circuit Sump Pump Frame		Steel Control of the Control of the Control of Control	1.35 TN	\$12,000 \$12,000	\$4,200 \$4,200	0 1 0 1	11 995 11 005	30 /% \$998 7% \$998 7%	\$294 0% \$294 0%	50 51,500 50 54,464 50 51,600 50 51,600 50 51,600 50 51,600 50 51,600 50 51,600 50 51,600 50 51,700 50 51,700
123 124						0020	AM					29 TN	912,000	\$4,200 \$426,788		856	\$81,229	\$294 0% \$29,875	
125 126	Direct Direct	Mechanical Equipment Mechanical Equipment	0.3.2.0 - Grinding & Classification 0.3.2.0 - Grinding & Classification	M.A - Process Equipment M.A - Process Equipment	Grinding & Declime Grinding & Declime	0920 0920	CV	201 320-CV-201 201 320-CV-201	Ball MII Feed Conveyor Desilme Cyclores Stage 1A Desilme Cyclores Stage 1B Desilme Cyclores Stage 1B Grieding Circuit Cyclore Guster Reclaim Bin Feeder Knelson Concentrator Ball MIII	600mm 400CVK10		1 EACH 1 EACH	\$175,000 \$110,000	\$175,000 \$110,000	10 1 15 1	20 595 45 595 45 595	\$1,900 7% \$4,276 7%	\$12,250 0% \$7,700 0%	\$0 \$189,150 \$0 \$121,975
127 128	Direct	Mechanical Equipment Mechanical Equipment	0.3.2.0 - Grinding & Classification 0.3.2.0 - Grinding & Classification	M.A Process Equipment M.A Process Equipment	Grinding & Deslime Grinding & Deslime	0920	CY	202 320-CY-202 203 320-CY-203	Deslime Cyclones Stage 18 Deslime Cyclones Stage 2	600mm 400CVK10 250CVK10 250CVK10 250CVK10		1 EACH 1 EACH	\$112,000 \$58,000	\$112,000 \$58,000	15 1 20 1	45 595 20 595	\$4,276 7% \$1,900 7%	\$7,840 0% \$4,060 0%	\$0 \$134,115 \$0 \$61,960
129 130	Direct	Mechanical Equipment Mechanical Equipment	u.s.zu - Grinding & Classification 0.3.2.0 - Grinding & Classification	M.A. Process Equipment M.A. Process Equipment	urnding & Decline Grinding & Decline	0920 0920	E CY	204 320-CY-204 201 320-FE-201	unnang Circuit Cyclone Cluster Reclaim Bin Feeder		Panfeeder	1 EACH 1 EACH	\$112,000 \$70,669	\$112,000 \$70,669	n 1 10 1	65 595 30 595	\$4,275 7% \$2,850 7%	\$7,840 0% \$4,947 0%	\$0 \$134,115 \$0 \$78,466
131 132 133	Direct Direct	Mechanical Equipment Mechanical Equipment	0.3.2.0 - Grinding & Classification 0.3.2.0 - Grinding & Classification 0.3.2.0 - Grinding & Classification	M.A. Process Equipment M.A. Process Equipment M.A. Process Equipment	uniting & Decline Grinding & Decline Grinding & Decline	0920 0920	ML DD	201 320-9C-201 201 320-ML-201 201 320-8E-201		3.2m da x 5.8m EGL	Ersel Sintingetal contributed sharp name	1 DACH	5414,143 \$1,016,800 \$17,017	#12,14# \$1,016,800 3 \$17,017	20 1 20 1	ac 595 3500 595 30 595	\$2,000 7% \$332,500 10% \$7,000 7%	\$23,850 0% \$101,680 0% \$1,191 0%	50 \$1,450,980 50 \$1,450,980
134 135	Direct Direct	Mechanical Equipment Mechanical Equipment	0.3.2.0 - Grinding & Classification 0.3.2.0 - Grinding & Classification	M.A Process Equipment M.A Process Equipment	Grinding & Decline Grinding & Decline	0920 0920	pp pp	202 320-PP-202 203 320-PP-211	Desline Cyclone Feed Pump Stage 18 Desline Cyclone Feed Pump Stage 2	100 K-VS 100 K-VS	Horizontal centrifugal slurry pump Horizontal centrifugal slurry pump	1 EACH 1 EACH	\$17,017 \$17,017	\$17,017 \$17,017	0 1 0 1	30 595 30 595	\$2,850 7% \$2,850 7%	\$1,191 ON \$1,191 ON	\$0 \$21,058 \$0 \$21,068
136 137	Direct Direct	Mechanical Equipment Mechanical Equipment	0.3.2.0 - Grinding & Classification 0.3.2.0 - Grinding & Classification	M.A - Process Equipment M.A - Process Equipment	Grinding & Deslime Grinding & Deslime	0920 0920	pp pp	205 320-PP-205 206 320-PP-206	Knelson Concentrator Discharge Pump Ball Mill Discharge Pump No.1	1/1.5 100 K-VS	Horizontal centrifugal slurry pump Horizontal centrifugal slurry pump	1 EACH 1 EACH	\$5,640 \$17,017	\$5,640 \$17,017	10 1 10 1	30 595 30 595	\$2,850 7% \$2,850 7%	\$395 ON \$1,191 ON	\$0 \$8,885 \$0 \$21,068
134 125 136 127 138 129 140	Direct	Mechanical Equipment Mechanical Equipment	0.3.2.0 - Grinding & Classification 0.3.2.0 - Grinding & Classification	M.A Process Equipment M.A Process Equipment	Grinding & Decline Grinding & Decline	0920 0920	pp pp	207 320-PP-207 208 320-PP-208	Desilme Cyclone Feed Pump Stage 18 Desilme Cyclone Feed Pump Stage 18 Desilme Cyclone Feed Pump Stage 2 Knelson Concentator Disknage Pump Ball Mill Discharge Pump Mo. 1 Ball Mill Discharge Pump Mo. 2 Gerinding Circuit Sump Pump Desilme Circuit Sump Pump Desilme Circuit Sump Pump	100 K-VS 65 K-VS	Vertical spindle sump pump Vertical spindle sump pump	1 EACH 1 EACH	\$17,017 \$10,299	\$17,017 \$10,299	10 1 12 1	30 595 12 595	\$2,850 7% \$1,140 7%	\$1,191 0% \$721 0%	50 \$21,058 50 \$12,160
140 141	Direct	Mechanical Equipment Mechanical Equipment	0.3.1.0 - Gerinding & Chastification	M.A - Process Equipment M.A - Process Equipment	Grinding & Destines	0326 0326 0326 0326 0326 0326 0326 0326	pp SC	201 23.0 CV-200. 202 23.0 CV-201. 203 23.0 CV-201. 203 23.0 CV-201. 204 23.0 CV-201. 205 23.0 CV-201. 206 23.0 CV-201. 201 23.0 CV-201. 201 23.0 GV-201. 201 23.0 GV-201. 201 23.0 GV-201. 202 23.0 FF-201. 203 23.0 FF-201. 203 23.0 FF-201. 204 23.0 FF-201. 205 23.0 FF-201. 206 23.0 FF-201. 207 23.0 FF-201. 208 23.0 FF-201. 209 23.0 FF-201. 209 23.0 FF-201. 209 23.0 GV-201. 200 23.0 GV-201. 201 23.0 GV-201. 202 23.0 GC-201. 202 23.0 GC-201. 202 23.0 GC-201.	Deslime Circuit Sump Pump Vibrating Fines (+2mm) Screen	3.2m dia x 5.8m EGL 100 E-VS 100 E-VS 100 E-VS 1/1.5 100 E-VS 100 E-VS 65 E-VS 65 E-VS MIN-HS 1500/1600 Landsky ASE 680	Vertical spindle sump-pump Vibrating Screen	1 BACH 1	\$175,000 \$110,000 \$120,000 \$12,000 \$12,000 \$12,000 \$12,017 \$17	\$275,000 \$112,000 \$112,000 \$112,000 \$112,000 \$112,000 \$112,000 \$112,000 \$112,000 \$112,017 \$17,	12 1 15 1	12 595 45 595	\$1,000 76 5477 77 78 5477 78 78 5477 78 78 5477 78 5470 78 547	\$12350 00 to \$12550 00 to \$1255	50 SERRIO 50 SER
142 143	Direct Direct	Monkholde Egylamet Mohkolde Egylamet	0.3.2.0 - Grinding & Classification 0.3.2.0 - Grinding & Classification	M.A Process Capinment M.A Process Capinm	Grinding & Deslime Grinding & Deslime	0920	SC SS	202 320-5C-202 201 320-55-201	Stackstarr Screen Mill Area Safety Shower 1	Landsky ASE 680	Five Stack Screens Combination saferty shower & eyewash, of a liable and sort are to the	1 EACH 1 EACH	\$167,577 \$3,082	\$167,577 \$3,082	80 1 8 1	90 SRS 8 SRS	\$8,550 7% \$760 7%	\$11,730 0% \$216 0%	\$0 \$187,857 \$0 \$4,058
144	Direct	Mechanical Equipment	0.3.2.0 - Grinding & Classification	M.A Process Equipment		0120	ss	302 320-55-202	MII Area Safety Shower 2	ASE 680	Combination safety shower & symmeth	1 EACH	\$3,082	\$3,082		8 595	5760 7%	\$216 0%	\$0 \$4,058
					Grinding & Decline		-				c/w light and anti scald valve						"	WI	
145	Direct	Mechanical Equipment	0.3.2.0 - Grinding & Classification	M.A Process Equipment	Grinding & Deslime	0920	55	203 320-55-203	Deslime Area Safety Shower	ASE 680	Combination saferty shower & eyewash, c/w light and anti-scald valve	1 EACH	\$3,082	\$3,082		8 585	\$760 7%	\$216 0%	\$0 \$4,058
146		Mechanical Equipment Sub Total												\$2,825,508		4092	\$389,210	\$193,290	\$2,908,108
147 148	Direct.	Total Area 0320 - Grinding & Declime	6346 (CAL Materian		man		340	lands (Cit ann				-	\$4,214,740		8439	\$801,700	\$269,540	\$5,285,981
149	Direct	Concrete	0.3.4.0 - Leaching 0.3.4.0 - Leaching	C.A.A Blinding Concrete C.A.B Structure Footings	Leaching Leaching	0340		.40	July Line areas			M4	\$622 \$1,852	50 \$14,816	1	- 30	ev Uh	, UN	~

Page 2 of January 1997 White Was God Physical Stool 1995 K Commercial Challenge (SSS) 45-0-01, C-DVPC, JF days

151 Direct 152 Direct 153 Direct 154 Direct 155 Direct 156 Direct	Concrete Concrete Concrete Concrete Concrete	0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching	C.A.B Equipment Footings C.A.D Ground Stabs & Beams C.A.E Suspended Stabs & Beams C.A.E Suspended Stabs & Beams C.A.H Tunnel Conceste C.A.H Tunnel Conceste	Leaching Leaching Leaching Leaching Leaching Leaching	0340 0340 0340 0340			340 340 340 340	Leach / Oil anns Leach / Cill anns Leach / Cill anns Leach / Cill anns Leach / Cill anns			8 MS 52.7 MS MS 6.7 MS	\$1,852 \$1,722 \$1,722 \$2,752 \$2,752 \$2,552 \$2,652	\$14,816 \$90,749 \$0 \$18,438	1 1 1	0	30 30 30 30	\$0 0% \$0 0% \$0 0% \$0 0% \$0 0%	50 50 50 50	0% 0% 0% 0%	50 S 50 S 50 S 50 S	14,816 160,780 21,441 2007 21,441 2007 21,441 2007 21,441 2007 21,441 2007 200,414 200
	Concrete Concrete Sub Total Structural Steel	03.40 - Leaching 03.40 - Leaching			0340			240	Leach / OL area			31.9 M3 107.3 M3 8.4 TN		\$90,022 \$228,842 \$68,040 2	<u> </u>	0 0 202	96	50 0% 50 610 157 76	50 \$0 \$4.763	0%	50 S	10,022 28,842 91,955
159 Direct 160 Direct	Structural Steel Structural Steel	24.00 - Learning 24.40 - Learning	A. It is the second beautiful and the second b	Learching Learch	0340 0340 0340 0340 0340 0340			340 340 340 340 340 340 340 340 340	Cit top of task platform (7 lanks stati) Cit top of task platform Trash arrene platform Trash arrene platform			7 TN 0 TN	\$4,100 \$6,900 \$5,900 \$3,900 \$110 \$6,900 \$4,900 \$4,900 \$110 \$4,000 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$110 \$6,900 \$	\$48,300 2 50 1	1	940	995 995	\$13,300 7% \$0 7%	\$3,381 \$0	0%	50 50	90 50
162 Direct 163 Direct	Structural Steel Structural Steel	0.3.4.0 - Leaching 0.3.4.0 - Leaching	S.A.I - Grating S.C.B Handrall	Leaching Leaching	0340 0340			340 340	Cit. top of tank platform Cit. top of tank platform			101.5 M2 126 LM	\$290 \$310	\$29,435 3 \$29,060 1 \$0 2		305 189	985 985	\$28,928 7% \$17,955 7% \$0 7%	\$2,060 \$2,734	0%	50 50 50	10,423 59,749
165 Direct 166 Direct	Structural Steel Structural Steel	0.3.4.0 - Leaching 0.3.4.0 - Leaching	S.C.FTreads S.A.ALight Structural Steel, <25kg/m	Leaching Leaching	0340 0340			340 340	Cit. top of tank platform Trash screen platform			0 EACH 0.6 TN	\$90 \$8,100	50 I. \$4,860 2		0			50 \$340	ON6 ON6	50 50	50 56,568
167 Direct 168 Direct 169 Direct	Structural Steel Structural Steel Structural Steel	0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching	S.A.B - Medium Structural Steel 25-75kg/m S.A.I - Grating S.C.B - Handrall	Leaching Leaching Leaching	0340 0340 0340			340 340	Trash screen platform Trash screen platform Trash screen platform			0.5 TN 7 M2 9 LM	\$6,900 \$290 \$310	\$2,030 2 \$2,030 1	1 1	10 21 14	595 595 595	\$950 7% \$1,995 7% \$1,283 7%	\$342 \$342 \$385	0%	50 50 50	4,642 34,167 54,268
170 Direct 171 Direct 172 Direct	Structural Steel Structural Steel Structural Steel	0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching	S.A.A Light Structural Steel, <25kg/m S.A.B Medium Structural Steel 25-75kg/m S.A.C Heavy Structural Steel 75-125kg/m	Leaching Leaching Leaching	0340 0340 0340			340 340 340	Stair tower to top of CIL tanks (2 towers total) Stair tower to top of CIL tanks (2 towers total) Stair tower to top of CIL tanks (2 towers total)			2.6 TN 7 TN 0 TN	\$8,100 \$6,900 \$5,900	50 1. \$4,800 2 \$3,450 2 \$2,030 3 \$2,780 1. \$21,000 2 \$48,300 2		62 160 0	985 985 985	\$0 7% \$1,388 7% \$950 7% \$1,985 7% \$1,283 7% \$2,288 7% \$2,289 7% \$0 7%	\$1,474 \$3,381 \$0	0% 0%	50 S 50 S	.8,462 64,981 50
173 Direct 174 Direct 175 Direct	Structural Steel Structural Steel Structural Steel	0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching	S.A.I - Floor plate S.A.I - Grating S.C.D Handrall	Leaching Leaching	0340 0340 0340			340 340	Stair tower to top of CIL tanks (2 towers total) Stair tower to top of CIL tanks (2 towers total) Stair towards top of CIL tanks (2 towers total)			0 TN 14 M2 96 IM	\$310 \$290 \$310	\$0 1. \$4,060 2 \$29,760 1	1 1	0 42	985 985 985	\$0 7% \$3,990 7% \$13,680 7%	\$0 \$284 \$3.083	0%	50 50 50	50 58,334 45 533
176 Direct 177 Direct	Structural Steel Structural Steel	0.3.4.0 - Leaching 0.3.4.0 - Leaching	S.C.D Ladder S.C.F Treads	Leaching Leaching	G346 G346 G346 G346 G346 G346 G346 G346			340 340	Cit top of task platform Transh towers platform Transh towers platform Transh towers platform East Young platform Sair Young Sair Yo			0 LM 102 EACH	\$290 \$90	\$4,060 1 \$29,760 1 \$0 3 \$4,80 1 \$4,80 2 \$2,030 3		0 153	985 985	\$1,900 7% \$13,600 7% \$13,600 7% \$0 7% \$44,535 7% \$1,368 7% \$1,965 7%	\$0 \$643	0%	50 50 5	50 24,358
179 Direct 190 Direct	Structural Steel Structural Steel	0.3.4.0 - Leaching 0.3.4.0 - Leaching	S.A.B - Medium Structural Steel 25-75kg/m S.A.I - Grating	Leaching Leaching	0340 0340			340 340	Carbon safety screen platform			0.5 MT 7 M2	\$6,900 \$290		1	10 21	985 985	\$950 7% \$1,995 7%	\$342 \$342	0%	\$0 \$0	14,642 54,167
199	Steeland Bard St		S.C.BHandrall O.L.TTanks	Leaching		нР	400	340 HP-401	Casion safey crees platform Tables Happer Tables Happer Tables Happer Cit. Area Sampho. 1 Pump Frame Cit. Area Sampho. 2 Pump Frame Land Tables Li Cit. Tabl	2 m3 LV	Carbon steel, rubber lined, 1.475m dia x	9 LM 26 TN 1 TN		\$2,790 1. \$22,465 \$12,000 2 \$4,000 0 \$4,000 3 \$4,000 3 \$511,025 6 \$111,025 6 \$111,025 6 \$111,025 6 \$111,025 6	1 1	14 1494 24	595 595	51,283 7% 148,699 52,280 7% 50 7% 5088 7% 5088 7% 5,700 5,700 5,700 5,700 5,700 5,700 5,700 5,700 5,700 5,700 5,700 5,700 5,700 5,700 5,700	\$22,642 \$840	0%	50 50 50 5	4,268 18,065 15,120
186 Direct 185 Direct 186 Direct	Platework Platework Platework	0.3.40 - Leaching 0.3.40 - Leaching	O.L.T. Tanks O.A.A. Nitumi Rubber O.L.C. Hoods & Chatework O.L.C. Hoods & Chatework O.L.T. Tanks	Leaching	0340 0340 0340 0340 0340 0340 0340 0340	XM XM	400 400 402	340 HP-401 340 HP-401 340 336-601 340 336-602 340 TK-612 340 TK-612 340 TK-613 340 TK-603 340 TK-605	Tailing Hopper Cit. Area Sump No. 1 Pump Frame Cit. Area Sump No. 2 Pump Frame		Carbon steel, rubber lined, 1.475m dia x 6mm Rubber Lined Seel Seel Sc. 2m x 5.8m4, mild steel, painted SS. 2m x 5.8m4, candon steel SS. 2m x 5.8m4, candon steel SS. 2m x 5.8m4, candon steel SS. 2m x 5.8m4, candon steel	10 M2 0.35 TN 0.35 TN 1 EACH	\$12,000 \$12,000 \$12,000 \$11,005 \$111,005 \$111,005 \$111,005 \$111,005 \$111,005	\$4,200 0 \$4,200 3 \$4,200 3	1 1	0 11 11	595 595 595	50 7% 5998 7% 5998 7%	\$22,642 \$860 \$294 \$294 \$21,800 \$31,800 \$31,800 \$31,800 \$31,800 \$31,800 \$31,800	016 016	50 50 50	35,492 \$5,492
187 Direct 188 Direct 189 Direct	Platework Platework Platework	0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching	O.L.TTanks O.L.TTanks O.L.TTanks	Leaching Leaching Leaching	0340 0340 0340	TK TK TK	400 402 403	340-TK-622 340-TK-622 340-TK-623	Leach Tank No. 1 CIL Tank No. 1 CIL Tank No. 2	113 m3 LV 113 m3 LV 113 m3 LV	\$5.2 m x 5.8mH, mild steel, painted \$5.2 m x 5.8mH, carbon steel \$5.2 m x 5.8mH, carbon steel	1 EACH 1 EACH 1 EACH	\$111,035 \$111,035 \$111,035	\$111,035 G \$111,035 G \$111,035 G	1 1	60 60	595 595 595	55,700 55,700 55,700	\$11,800 \$11,800 \$11,800	0%	50 S1 50 S1 50 S1	8,535 28,535 28,535
190 Direct 191 Direct 192 Direct	Platework Platework Platework	0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching	O.L.T - Tanks O.L.T - Tanks O.L.T - Tanks	Leaching Leaching Leaching	0340 0340 0340	TK TK TK	404 405 406	340-TK-406 340-TK-405 340-TK-406	CIL Tank No. 3 CIL Tank No. 4 CIL Tank No. 5	113 m3 LV 113 m3 LV 113 m3 LV 113 m3 LV 113 m3 LV 113 m3 LV	\$5.2 m x 5.8mH, carbon steel \$5.2 m x 5.8mH, carbon steel \$5.2 m x 5.8mH, carbon steel	1 EACH 1 EACH 1 EACH	\$111,035 \$111,035 \$111,035	\$111,035 6 \$111,035 6 \$111,035 6	1	60	985 985 985	\$5,700 \$5,700 \$5,700	\$11,800 \$11,800 \$11,800	0% 0%	50 SI 50 SI 50 SI	.8,535 28,535 28,535
193 Direct 194 195					0340	TK	407				\$5.2 m x S.BmH, carbon steel	1 EACH 2 TN	\$111,035	\$111,035 6 \$801,847	1	60 465	995	\$5,700 \$44,175	\$11,800 \$84,322	0%		
196 Direct 197 Direct	Mechanical Equipment Mechanical Equipment	0.3.4.0 - Leaching 0.3.4.0 - Leaching	M.A Process Equipment M.A Process Equipment	Leaching Leaching	034D 034D	AG AG	401 402	340 AG-401 340 AG-402	Leach Tank No.1 Agitator Cit. Tank No.1 Agitator	Mixtec 1147 Mixtec 1147	Dual axial flow impeller, rubber lined shaft & blades Dual axial flow impeller, rubber lined	1 EACH 1 EACH	\$24,518 \$24,518	\$24,518 10 \$24,518 10	0 1	100		59,500 7% 59,500 7%	\$1,716 \$1,716	0%		35,734 35,734
198 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A Process Equipment	Leaching	0340	AG	403	340-AG-923	CIL Tank No. 2 Agitator	Mistec 1147	Dual a sial flow impeller, rubber lined shaft it blades Dual a sial flow impeller, rubber lined shaft it blades Dual a sial flow impeller, rubber lined shaft it blades	1 EACH	\$24,518	\$24,518 10	0 1	100	985	59,500 7%	\$1,716	0%	S0 S	35,734
199 Direct 200 Direct	Mechanical Equipment Mechanical Equipment	0.3.4.0 - Leaching 0.3.4.0 - Leaching	M.A - Process Equipment M.A - Process Equipment	Leaching Leaching	0340	AG AG	404	340 AG-404 340 AG-405	Cit. Tank No.3 Agitator Cit. Tank No.4 Agitator	Mistec 1147 Mistec 1147	Dual axial flow impeller, rubber lined shaft & blades Dual axial flow impeller, rubber lined	1 EACH 1 EACH	\$24,518 \$24,518	\$24,518 10 \$24,518 10	0 1	100		59,500 7% 59,500 7%	\$1,716 \$1,716	0%		35,734 35,734
201 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A - Process Equipment	Leaching	0340	AG	406	340-AG-406	CIL Tank No.5 Agitator	Mintec 1147	shaft & blades Dual axial flow impeller, rubber lined shaft & blades	1 EACH	\$24,518	\$24,518 10	0 1	100		59,500 7%	\$1,716	0%	\$0 S	35,734
202 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A Process Equipment	Leaching	0340	AG .	407	340-AG-407	CIL Tank No.6 Agitator	Mistec 1147	Dual saial flow impeller, rubber lined shaft & blades	1 EACH	\$24,518	\$24,518 10	0 1	100	995	59,500 7%	\$1,716	0%	50 S	25,734
204 Direct 205 Direct	Mechanical Equipment Mechanical Equipment	0.3.4.0 - Leaching 0.3.4.0 - Leaching	M.A - Process Equipment M.A - Process Equipment	Leaching Leaching	0340 0340	AL AL	402 403	340-AL-622 340-AL-623	Ar LPt No.2 Ar LPt No.3		DN25 pipe with DN15 air inlet DN25 pipe with DN15 air inlet	1 EACH 1 EACH	\$4,000 \$4,000	\$4,000 I \$4,000 I		15 15	985 985	\$1,425 7% \$1,425 7%	\$280 \$280	0%	\$0 \$0	\$5,705 \$5,705
209 Direct 209 Direct	Mechanical Equipment Mechanical Equipment	0.3.4.0 - Leaching 0.3.4.0 - Leaching 0.3.4.0 - Leaching	M.A Process Equipment M.A Process Equipment M.A Process Equipment	Leaching Leaching Leaching	0340 0340	AL AL	405 406	340-AL-425 340-AL-426	AF LET NO. 5 AF LET NO. 5 AF LET NO. 6		DN25 pipe with DN15 air inlet DN25 pipe with DN15 air inlet DN25 pipe with DN15 air inlet	1 EACH 1 EACH	\$4,000 \$4,000	\$4,000 I \$4,000 I		15 15 15	585 585	51,425 75 51,425 76	\$280 \$280	016	50 50	35,705 \$5,705
203 Direct 204 Direct 205 Direct 205 Direct 207 Direct 208 Direct 209 Direct 220 Direct 211 Direct 212 Direct 213 Direct 213 Direct 213 Direct 213 Direct	Michael Liquiment Michael Liqu	0.1.40 - Leaching 0.1.40 - Leaching	м. А - Россия Саратем М. В - Россия М. В - Россия	Leaching	0340 0340 0340 0340 0340 0340 0340 0340	99 99	400 402 403	340 AL-621 340 AL-623 340 AL-623 340 AL-626 340 AL-626 340 FP-621 340 FP-622 340 FP-623 340 FP-623 340 FP-623	Ar LET No. 1 Ar LET No. 2 Ar LET No. 2 Ar LET No. 3 Ar LET No. 3 Ar LET No. 4 Ar LET No. 5 Ar LET No. 5 Ar LET No. 5 Talling Pump No. 1 Talling Pump No. 1 Call Area Samp Pump No. 1 Call Area Samp Pump No. 2 Talling Pump No. 2	100 K-VS 65 K-V5 65 K-V5 H238	Centrifugal horizontal slurry pump Centrifugal horizontal slurry pump Vertical spindle sump pump	1 EACH	\$5,500 \$4,000 \$4,000 \$4,000 \$4,000 \$4,000 \$17,017 \$17,017 \$10,199 \$10,299 \$40,253	\$5,500 1 \$4,000 1 \$4,000 1 \$4,000 1 \$4,000 1 \$17,017 3 \$17,017 3 \$17,017 3 \$10,299 1 \$48,323 4	1	30 30 12	595 595 595	\$1,425 7% \$1,425 7% \$1,425 7% \$1,425 7% \$1,425 7% \$1,425 7% \$1,425 7% \$2,850 7% \$2,850 7% \$1,140 7% \$1,140 7%	\$1,191 \$1,191 \$721	DAR DAR	50 50 50	\$7,100 \$5,705 \$5,705 \$5,705 \$5,705 \$5,705 \$1,058 21,058 21,058 12,160 12,160 56,012
	Mechanical Equipment Mechanical Equipment	0.3.4.0 - Leaching 0.3.4.0 - Leaching	M.A - Process Equipment M.A - Process Equipment			SC SC	404 401	340-97-404 340-92-401	Cit. Area Sump Pump No. 2 Trash Screen		Vertical spindle sump pump Single deck screen, 0.9m x 2.4m, c/w feed box, OS chute, US chute				1	12 45			\$721 \$1,385	0%	50 S	.2,160 46,012
214 Direct 215 Direct	Mechanical Equipment Mechanical Equipment	0.3.4.0 - Leaching 0.3.4.0 - Leaching	M.A - Process Equipment M.A - Process Equipment	Leaching Leaching	0340	SC SC	402	340-5C-402 340-5C-403	Loaded Carbon Recovery Screen Carbon Safety Screen	H228 H228	Single deck screen, 0.9m x 2.4m, c/w feed box, OS chute, US chute Single deck screen, 0.9m x 2.4m, c/w	1 EACH	\$48,353 \$48,353	\$48,353 4 \$48,353 4		45		\$4,275 7% \$4,275 7%	\$3,385 \$3,385	0%	50 S	56,012 56,012
216 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A Process Equipment	Leaching	0340	sc	405	340-5C-405	Cit. Tank No.1 intenstage Screen	MPS 100 (P)	Ober der Germann und der Germa	1 EACH	\$23,050	\$33,050 4		45		\$4,275 7%	\$2,314	0%	so s	19,639
217 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A Process Equipment	Leaching	0340	sc	406	340-5C-406	Cit. Tank No. 2 intenstage Screen	MPS 100 (P)	Pumping style screen, 216s/s wedge wire, 1m2 screen area, 0.8mm aperture	1 EACH	\$33,050	\$33,050 4		45	985	\$4,275 7%	\$2,314	0%	so s	19,639
218 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A - Process Equipment	Leaching	0340	sc	407	340-5C-407	Cit. Tank No.3 Intentage Screen	MPS 100 (P)	Pumping style screen, 216s/s wedge wire, 1m2 screen area, 0.8mm aperture	1 EACH	\$23,050	\$33,050 4		45	985	\$4,275 7%	\$2,314	0%	so s	19,639
229 Direct	Mechanical Equipment	0.3.4.0 - Leuching	M.A - Process Equipment	Leaching	0340	sc	408	340-SC-408	CIL Tank No.4 Intenstage Screen	MPS 100 (P)	Pumping style screen, 216s/s wedge wire, 1m2 screen area, 0.8mm aperture	1 EACH	\$23,050	\$33,050 4	1	45	985	54,275 7%	\$2,314	0%	\$0 S	19,639
220 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A - Process Equipment	Leaching	0340	sc	409	340-5C-409	Cit. Tank No. 5 Intenstage Screen	MPS 100 (P)	Pumping style screen, 316s/s wedge wire, 1m2 screen area, 0.8mm a perture	1 EACH	\$23,050	\$33,050 4		45	595	\$4,275 7%	\$2,314	ON	so s	19,629
221 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A - Process Equipment	Leaching	0340	sc	432	340-SC-410	Cit. Tank No.6 Intenstage Screen	MPS 100 (P)	Pumping style screen, 216s/s wedge wire, 1m2 screen area, 0.8mm a perture	1 EACH	\$23,050	\$33,050 4	1	45	\$85	\$4,275 7%	\$2,314	0%	so s	19,639
222 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A - Process Equipment	Leaching	0340	sc	411	340-SC-411	Intentage Screen - Spare	MPS 100 (P)	Pumping style screen, 216s/s wedge wire, 1m2 screen area, 0.8mm aperture	1 EACH	\$23,050	\$23,050	1	0	\$85	\$0 7%	\$2,314	0%	50 S	15,364
223 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A Process Equipment M.A Process Equipment	Leaching	0340	SS	400	340-55-401	Leach Area Safety Shower	ASE 680	Combination saferty shower & eyewash, c/w light and anti scald valve	1 EACH	\$3,082	\$3,082 8	1		985	\$760 7% \$760 7%	\$216	0%	\$0	+4,05B
224 Direct	Mechanical Equipment	0.3.4.0 - Leaching	M.A - Process Equipment	Leaching	0340	55	402	340-55-402	Cit. Area Safety Shower	ASE 680	Combination saferty shower & eyewash, c/w light and anti scald valve	1 BACH	\$3,082	\$3,082 8	1		595	\$760 7%	\$216	ON	50	4,058
226 227 238	Total Area 0340 - Leaching													\$1,988,473		2254		109,159	\$151,367		52,4	12,999
229 Direct 230 Direct 231 Direct 232 Direct	Concrete Concrete	0.3.5.0 - Carbon Handling 0.3.5.0 - Carbon Handling 0.3.5.0 - Carbon Handling 0.3.5.0 - Carbon Handling	C.A.B Structure Footings C.A.C Equipment Footings C.A.D Ground Sabs C.A.E Walls	Carbon Handling Carbon Handling Carbon Handling Carbon Handling	0350 0350 0350 0350			350 350				0 M3 0 M3	\$1,852 \$2,032 \$1,722 \$2,752	50 50		0	50 50	\$0 0% \$0 0% \$0 0%	\$0 \$0	0% 0%	50 50	50 50
244	Concrete Concrete Sub Total							350				0 M3 0 M3		90	i		90	50 0% 50	50 50	0%	50	50 50
235 Direct 236 Direct	Structural Steel Structural Steel	0.3.5.0 - Carbon Handling 0.3.5.0 - Carbon Handling	S.A.A Light Structural Steel, <25kg/m S.A.B Medium Structural Steel 25-65kg/m	Carbon Handling Carbon Handling Carbon Handling Carbon Handling Carbon Handling	0350 0350			350 350				0 TN 0 TN 0 TN 0 N2	\$8,100 \$6,900	90 2 90 2 90 1 90 1		0	\$110 \$110 \$110 \$110 \$110 \$110	50 6% 50 6% 50 6% 50 6% 50 6%	\$0 \$0	ONE ONE ONE	\$0 \$0	50 50
235 Direct 236 Direct 237 Direct 238 Direct 238 Direct 240 Direct 240	Structural Steel Structural Steel Structural Steel Structural Steel Structural Steel Structural Steel Structural Steel Structural Steel	0.2.5.0 - Carbon Handling 0.2.5.0 - Carbon Handling	S.A.A Light Structural Steel, «Skiglim S.A.B Medium Structural Steel 25-GSiglim S.A.C Heavy Structural Steel 65-12Siglim S.F Structural Garding S.C.B Handridl S.C.B Treeds	Carbon Handling Carbon Handling	0350 0350 0350 0350 0350 0350			350 350 350				0 M2 0 LM 0 EACH	\$8,100 \$6,900 \$5,900 \$290 \$310 \$90	90 I		0	\$110 \$110 \$110	50 6% 50 6%	50 50 50	0% 0%	50 50 50	50 50 50
241 242 243	Structural Steel Sub Total Platework Platework Sub Total	0.3.5.0 - Carbon Hundling	O.L.C - Hoods & Chutework	Carbon Handling	0350			350				0 TN		90		0		50	50			50
245 245 246 Direct	Platework Sub Total Mechanical Equipment	0.3.5.0 - Carbon Handling	M.AProcess Equipment	Carbon Handling	0350	xM	501	350 KM-501	Loaded Carbon Frame for Bulks Bag			0 TN 1 EACH	\$5,000	\$0 \$5,000 1 \$5,000	. 1	15	595	\$1,425 6%	\$0 \$300	ONG	50	56,725 56,725
247 248 249	Mechanical Equipment Sub Total Total Area 0350 - Carbon Handling													\$5,000		15		\$1,425	\$300			\$6,725
269 250 251 Direct 252 Direct 253 254	Concrete Concrete Concrete Sub Total	0.2.7.0 - Reagerts 0.2.7.0 - Reagerts	C.A.D Ground Sabs C.A.G Walls Concrete	Reagents Reagents	0370 0370			370 370	Reagents - Cyanide bulki storage Reagents - Cyanide bulki storage			19 M3 0.7 M3	\$1,722 \$2,752	\$3,272 \$1,926	1	0	50 50	\$0 0% \$0 0%	\$0 \$0	0% 0%	\$0 \$0	\$3,272 \$1,936 \$5,198
254 256 255 Direct		0.3.7.0 - Raugents	S.A.A Light Structural Seel, <25kg/m	Reagents	0370			370	NaCN bulki container holding frame			1.15 TN	\$8,100	59,315 2	1 1	25	595	52,404 6%	5559	0%	\$0 S	12,277
257 Direct 258 Direct	Structural Steel Structural Steel	0.2.7.0 - Reagents 0.3.7.0 - Reagents	S.A.A Light Structural Street, <25kg/m S.A.I Grating S.A.A Light Structural Street, <25kg/m S.A.B Medium Structural Street 25-75kg/m S.A.I Grating S.C.B Hundrall S.C.F Treeds	Reagents Lime Lime Lime Lime Lime Lime Lime Lime	0370 0370 0370 0370 0370 0370 0370			270 270 270 270 270	NaCN bulki container holding frame NaCN bulki container holding frame Lime bin Lime bin Lime bin			2.4 TN 3.8 TN	\$8,100 \$290 \$8,100 \$6,900 \$290 \$310	\$9,315 2 \$2,900 3 \$19,440 2 \$26,220 2 \$4,060 3 \$21,700 1		53 76	505 505 505 505 505	\$2,404 6% \$3,850 6% \$5,056 6% \$7,220 6% \$1,990 6% \$9,975 6%	\$550 \$174 \$1,166 \$1,573 \$244 \$1,302	016	50 S	12,277 \$5,934 25,622 35,013 \$8,294 32,977 \$3,569 23,636
255 Direct 256 Direct 257 Direct 258 Direct 259 Direct 260 Direct 260 Direct			S.A.I - Grating	Lime	0270			270 270	Lime bin			14 M2 70 LM	\$290 \$310	\$4,060 2 \$21,700 1		42 105 23	985 985 985	\$3,990 6% \$9,975 6% \$7,138 6%	\$344 \$1,302 \$81	0%	50 50 5 50	JB,294 J2,977 S3,569
	Structural Steel Structural Steel Structural Steel	0.2.7.0 - Reagents 0.2.7.0 - Reagents	S.C.FTreads	Lime	0370			370	Lime bin			15 EACH										
263 264 Direct	Structural Steel	0.170 - Reagents 0.170 - Reagents 0.170 - Reagents 0.170 - Reagents 0.170 - Reagents 0.170 - Reagents 0.170 - Reagents	S.C.S - Treeds O.L.C - Hoods & Chutework	Lime	0370	an	301	370 an-301	Lime bin		Mild steel, painted	15 EACH 7 TN 128 TN	\$13,000	\$84,985	1 1	254	595	\$2,918 6%	5004	0%	50 5	10,557
265	Platework Platework Sub Total	0.2.7.0 - Reagerts	O.L.C Hoods & Chatrwork	Lime	0370	gn AT	305 705		Lime bin Lime bin Lime Bin Activator		Mild steel, painted	15 EACH 7 TN 1.28 TN 1.3 TN 1 EACH	\$13,000	\$84,985 \$16,640 2 \$16,640	1	254 21 21 20		\$33,592 \$2,918 \$2,918 \$2,850 \$65	5008 5008 5008 51,000	0%	50 5 50 5	20,557 10,557 14,650
265	Platework Sub Total Mechanical Equipment Mechanical Equipment Mechanical Equipment Mechanical Equipment	0.17.0 -Reagerts 0.17.0 -Reagerts 0.17.0 -Reagerts 0.17.0 -Reagerts 0.17.0 -Reagerts	O.L.C Hoods & Chatrwork	Lime	0370	BN AT FE PP PP	300 700 700 700 700 700	270 8N-200 270 4N-200 270 47-700 270 FE-701 270 FP-701 270 FP-701	Lime bin Lime bin Lime bin Lime Sin Activator Lime Scary Valve Cyanido Dosing Pump 1 Cyanido Dosing Pump 2		Mild steel, painted 20 kg/h Positive displacement docing pump Positive displacement docing pump	15 EACH 7 TN 128 TN 13 TN 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH	\$13,000	\$84,985 \$16,640 2 \$16,640 \$31,000 3 \$6,000 2 \$3,402 1 \$3,402 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	354 31 30 30 24 16 16		\$2,850 6% \$2,280 6% \$1,520 6% \$1,520 6%	\$5,000 \$998 \$998 \$1,000 \$160 \$104 \$104	0% 0% 0% 0% 0%	\$0 \$ \$ \$0 \$ \$0 \$0 \$0	20,557 20,557 20,557 14,650 18,640 15,126 5,126
362 364 Direct 365 366 267 Direct 268 Direct 270 Direct 271 Direct 272 Direct 273				Line Line Line Line Reggett Reggett Reggett		AT FE PP PP PP	306 706 706 706 706 706 706		Lime bin Lime bin Lime Bin Activate: Lime Bin		Mild steel, painted 20 ligh Positive displacement dooling pump Positive displacement dooling pump Positive displacement dooling pump Positive displacement dooling pump	15 DACH 2 TN 128 TN 1.3 TN 1.3 TN 1 DACH	\$13,000 \$13,000 \$6,000 \$3,602 \$3,602 \$3,602 \$3,402	\$84,985	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	354 31 32 30 34 16 16 16 16				0% 0% 0% 0% 0% 0%	50 5 50 5 50 50 50 50 50 50	20,557 20,557 34,650 58,640 55,126 55,126 55,126
265 266 267 Direct 268 Direct 269 Direct 270 Direct 271 Direct 272 273 234	Platework Sub Total Platework Sub Total Mechanics Equipment Total Mechanics Equipment Total Area 0270 - Bioagents	0.170 - Rangerts	O.L.C - Noode & Chutework M.A - Process Equipment	Lime Lime Lime Lime Reagents Reagents Reagents	0370 0370 0370 0370 0370	2N AT FE PP PP PP	300 700 700 700 700 700 700	270-AT-700 270-FE-701 270-FP-701 270-FP-701 270-FP-701	Cyanda Debag vunp 3			1 EACH	\$13,000 \$10,000 \$6,000 \$3,602 \$3,602 \$3,602	\$16,640 2 \$16,640 2 \$16,640 2 \$10,000 2 \$4,000 1 \$2,402 1 \$2,402 1 \$2,402 1 \$46,206	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	254 21 21 20 24 16 16 16 25 22 486		\$2,850 6% \$2,280 6% \$1,500 6% \$1,500 6% \$1,500 6% \$1,500 6% \$6,690		0%	50 5 50 5 50 50 50 50 50 50	20,557 20,557 34,650 58,640 55,126 55,126 55,126
265 266 267 Direct 268 Direct 269 Direct 270 Direct 271 Direct 272 273 234	Platework Sub Total Platework Sub Total Mechanics Equipment Total Mechanics Equipment Total Area 0270 - Bioagents	0.170 - Rangerts	O.L.C - Noode & Chutework M.A - Process Equipment	Lime Lime Lime Lime Reagents Reagents Reagents	0370 0370 0370 0370 0370	AT 55 59 59 59 59	306 706 706 706 700 700 700	270-AT-700 270-FE-701 270-FP-701 270-FP-701 270-FP-701	Cyanda Debag vunp 3			1 EACH	\$13,000 \$10,000 \$6,000 \$3,602 \$3,602 \$3,602	\$16,640 2 \$16,640 2 \$16,640 2 \$10,000 2 \$4,000 1 \$2,402 1 \$2,402 1 \$2,402 1 \$46,206		364 31 30 30 30 16 16 16 16 322 486		\$2,850 6% \$2,280 6% \$1,500 6% \$1,500 6% \$1,500 6% \$1,500 6% \$6,690		0%	50 5 50 5 50 50 50 50 50 50	20,557 20,557 34,650 58,640 55,126 55,126 55,126
265	Printerich Modischei Grügment Modischei Mod	0.17.0 -Reagerts 0.17.0 -Reagerts 0.17.0 -Reagerts 0.17.0 -Reagerts 0.17.0 -Reagerts	O.L.C Hoods & Chatrwork	Lime	0370	BN AT FE PP PP PP PP	300 700 700 700 700 700 700		Lime Bo . Are compressed data Francia data trush foliaseed data Francia data trush foliaseed data Francia canter too . Lime Bo			15 EACH 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$13,000	50,000 2 516,600 2 516,600 2 530,000 3 540,000 2 53,000 2 53,002 3 54,002 3 54,002 5 54,002 5 54,002 5 54,000 5 54	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	264 21 38 30 30 30 30 30 30 30 30 30 30 30 30 30		\$2,850 6% \$2,280 6% \$1,520 6% \$1,520 6%		OS OS OS OS OS OS OS	50 S S S S S S S S S S S S S S S S S S S	20,557 20,557 14,650 56,640 55,136 55,136 55,136 55,136 55,136 55,136 55,136 56,668 90,668 90,668 90,668 56,560 56,560 56,560 56,560 56,560 56,560 56,560
266 267 268 268 269 269 269 269 270 270 271 271 272 273 274 275 277 277 277 277 278 278 279 279 270 271 271 271 271 272 273 274 275 276 277 277 278 278 278 278 278 278 278 278	Plymouth Planetals had food Monthaid Copinets Monthaid Control C	6.170 - Respects 6.110 - Services 6.110	O.L.C. Hoods & Charsenin MA. Proces Egyptive CA.E. Springer CA.E. Sprin	Lime Lime Lime Lime Lime Lime Regents Regents Regents Sectors	0370 0370 0370 0370 0370 0370 0380 0380	2N AT EE 90 90 90	306 706 706 700 700 700 206	270-AT-700 270-FE-701 270-FP-701 270-FP-701 270-FP-701	Cyanida Lotting Pump J Air compressor slab Treated water task hickaned slab Pump plottes Process water task ning bears Raw water task ning bears General Process Plant Pupe Rack Concrete Footings		Mill rane, justed Si ligh Publish diploment lining prop Direct des 1.2 2 Index plan 2 Index plan 2 Index plan 2 Index plan 3 Index plan 3 Index plan 4 Index plan 4 Index plan 5 Index 5 Index plan 5 Index 5 Ind	1 EACH	\$13,000 \$10,000 \$6,000 \$3,402 \$3,402 \$3,402 \$1,402 \$1,402 \$1,402 \$1,702 \$1,702 \$1,702 \$1,702 \$1,702 \$1,702 \$1,702 \$1,702 \$1,702 \$1,702 \$1,702	\$64,985 2 \$55,640 2 \$55,640 2 \$54,000 3 \$4,000 1 \$4,000 1 \$53,000 1 \$54,000		264 31 32 30 32 30 20 31 55 55 56 56 60 0 0 0 0 0 0 0 0 44 44 280	585 585 585 585 585 58 58 58 58 58 58 58	\$3,820 6% 75,230	\$1,800 \$100 \$204 \$204 \$204 \$2,772 \$4,870 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	0%	50 5 5 50 50 50 50 50 50 50 50 50 50 50	20,557 20,557 14,650 14,650 55,136 55,136 55,136 55,136 55,136 55,136 56,660 56
265 266 267 268 268 269 269 279 279 279 279 274 275 275 275 276 276 277 277 278 278 278 278 278 278 278 278	Rymerch Rements has Total Mechanical Conjuncts Mechanical Mechanical Conjuncts Constitute Constitute Constitute Constitute Constitute Constitute Constitute Mechanical Mechanica	0.118 Janperts 0.118 Janperts 0.119	OLC - Node & Charent M.A. Proven Egipment M.A. Pro	Lime Lime Lime Lime Lime Lime Regards Regards Regards Sendors	0370 0370 0370 0370 0370 0370 0370 0380 038	2M AT 55 PP	300 700 700 700 700 700 700 700 700	270-AT-706 270-FE-701 270-FF-701 270-FF-701 270-FF-701 270-FF-701 280 280 280 280 280 280 280	cyntosis dosing runny s Ar compressor risks Treated water sizk flicksmed slob Treated water sizk flicksmed slob Treated water sizk flicksmed slob Treated sizk from plasm Raw water sizk fing beam Raw water sizk fing beam Raw water sizk fing beam Centrol From Piece Tipe Black Concrete Footings Centrol Size of the Size	VAR 3000	Use in den in 0.2 Zen die took Glein aus in 7 12. The die took Ben die took Ben die took Glein zeich zen die pope mack Glein rack through the plant ij Glein rack through the plant ij	9.6 M3 0.2 M3 5.8 M3 2 M3 2.3 M3 2.9 M3 2.9 M3 2.1 TN 14 TN 16 TN	\$13,000 \$10,000 \$6,000 \$3,402 \$3,402 \$3,402 \$1,852 \$1,752	\$64,585		254 23 24 25 26 26 26 26 26 26 26 26 26 26 26 26 26	505 505 505 505 505 505 50 50 50 50 50 5	\$2,000 ON \$2,000	\$1,800 \$180 \$204 \$204 \$2,772 \$4,272 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	0% 0% 0% 0% 0% 0%	100 S S S S S S S S S S S S S S S S S S	20,557 20,557 34,650 34,650 55,136 55,136 55,136 56,668 31,779 5406 52,568 53,561 541 541 541 541 541 541 541 541 541 54
265 266 267 268 268 269 269 279 279 279 279 274 274 275 275 276 276 277 277 278 278 278 278 278 278 278 278	Rymerch Rements has Total Mechanical Conjuncts Mechanical Mechanical Conjuncts Constitute Constitute Constitute Constitute Constitute Constitute Constitute Mechanical Mechanica	0.118 Janperts 0.118 Janperts 0.119	OLC - Node & Charent M.A. Proven Egipment M.A. Pro	Lime Lime Lime Lime Lime Lime Regards Regards Regards Sendors	0370 0370 0370 0370 0370 0370 0370 0380 038	AT A	300 700 700 700 700 700 700 700 700 800 8	270-AT-706 270-FE-701 270-FF-701 270-FF-701 270-FF-701 270-FF-701 280 280 280 280 280 280 280	cyntosis dosing runny s Ar compressor risks Treated water sizk flicksmed slob Treated water sizk flicksmed slob Treated water sizk flicksmed slob Treated sizk from plasm Raw water sizk fing beam Raw water sizk fing beam Raw water sizk fing beam Centrol From Piece Tipe Black Concrete Footings Centrol Size of the Size	VM 2000 G-16P4.5 C-16P4.5	Use in den in 0.2 Zen die took Glein aus in 7 12. The die took Ben die took Ben die took Glein zeich zen die pope mack Glein rack through the plant ij Glein rack through the plant ij	9.6 M3 0.2 M3 5.8 M3 2 M3 2.3 M3 2.9 M3 2.9 M3 2.1 TN 14 TN 16 TN	\$13,000 \$10,000 \$6,000 \$3,402 \$3,402 \$3,402 \$1,852 \$1,752	\$64,585		254 31 32 32 32 33 34 35 36 36 36 36 36 36 37 37 37 37 37 37 37 37 37 37 37 37 37	505 505 505 505 505 505 50 50 50 50 50 5	\$2,000 ON \$2,000	\$1,800 \$180 \$204 \$204 \$2,772 \$4,272 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	0% 0% 0% 0% 0% 0%	100 S S S S S S S S S S S S S S S S S S	20,557 20,557 34,650 34,650 55,136 55,136 55,136 56,668 31,779 5406 52,568 53,561 541 541 541 541 541 541 541 541 541 54
265 267 268 269 269 269 269 270 270 270 270 271 272 274 275 275 276 276 277 277 278 278 278 278 278 278 278 278	Ryments Rements has Your Mechanical Conjuncts Mechanical Mechanical Conjuncts Constitute Constitute Constitute Constitute Constitute Constitute Constitute Mechanical	0.118 Janperts 0.118 Janperts 0.119	OLC - Node & Charent M.A. Proven Egipment M.A. Pro	Lime Lime Lime Lime Lime Lime Regards Regards Regards Sendors	0370 0370 0370 0370 0370 0370 0370 0380 038	2M AT EE FP PP PP PP AA CF CF CF CD AB PP PP	300 700 700 700 700 700 700 700 800 800 8	270-AT-706 270-FE-701 270-FF-701 270-FF-701 270-FF-701 270-FF-701 280 280 280 280 280 280 280	cyntosis dosing runny s Ar compressor risks Treated water sizk flicksmed slob Treated water sizk flicksmed slob Treated water sizk flicksmed slob Treated sizk from plasm Raw water sizk fing beam Raw water sizk fing beam Raw water sizk fing beam Centrol From Piece Tipe Black Concrete Footings Centrol Size of the Size	VR 1000 G-339945 G-339945 G-33996 C-3399	Use in den in 0.2 Zen die took Glein aus in 7 12. The die took Ben die took Ben die took Glein zeich zen die pope mack Glein rack through the plant ij Glein rack through the plant ij	9.6 M3 0.2 M3 5.8 M3 2 M3 2.3 M3 2.9 M3 2.9 M3 2.1 TN 14 TN 16 TN	\$13,000 \$10,000 \$6,000 \$3,402 \$3,402 \$3,402 \$1,852 \$1,752	\$64,585		214 21 21 21 21 21 21 21 21 21 21 21 21 21	505 505 505 505 505 505 505 505 505 505	\$2,000 6% 6% 6% 6% 6% 6% 6% 6% 6% 6% 6% 6% 6%	\$1,800 \$100 \$204 \$204 \$204 \$2,772 \$4,870 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	0% 0% 0% 0% 0% 0%	100 S S S S S S S S S S S S S S S S S S	20,557 20,557 34,650 34,650 55,136 55,136 55,136 56,668 31,779 5406 52,568 53,561 541 541 541 541 541 541 541 541 541 54
166 Sept. 20	Plymouth Planetals had food Monthaid Copinets Monthaid Control C	\$110 Angerts \$120	GLLC - Imade & Channest M.A Promo Egipment C.A On Control Egipment C.A On Control Egipment C.A On Control Egipment C.A Structure Facilities M.A Promo Egipment	Line Line Line Line Rageme Rageme Rageme Solician Solici	0370 0370 0370 0370 0370 0370 0380 0380	## AF	300 700 700 700 700 700 700 700 700 800 8	270 AT 275 1270 AT	For compression of the Compressi	WW 1000 WW 1000 G 100°4.5 G 100°4.5 G 100°4.5 G 100°6 G 100°6	Direct des 4.2.2 2. Soude faited 2. Soude faited 1. 2. This days that 1. 2. This day	1 EACH 8.6 MS 6.2 MS 6.2 MS 7 MS 7 MS 7 MS 7 MS 7 MS 7 MS 1 EACH	\$1,000 \$4,000 \$4,000 \$4,000 \$1,400 \$1	SALES		313 31 32 32 32 32 32 32 32 32 32 32 32 32 32	505 505 505 505 505 505 505 505 505 505	\$3,820 6% 75,230	\$1,800 \$180 \$204 \$204 \$2,772 \$4,272 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	0% 0% 0% 0% 0% 0%	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	202517 204,650 24,650 56,640 56,640 56,156 55,15
265 266 267 268 268 269 269 279 279 279 279 274 274 275 275 276 276 277 277 278 278 278 278 278 278 278 278	Ryments Rements has Your Mechanical Conjuncts Mechanical Mechanical Conjuncts Constitute Constitute Constitute Constitute Constitute Constitute Constitute Mechanical	6.170 - Respects 6.110 - Services 6.110	OLC - Node & Charent M.A. Proven Egipment M.A. Pro	Lime Lime Lime Lime Lime Lime Regents Regents Regents Sectors	0370 0370 0370 0370 0370 0370 0370 0380 038	AT FE PP	200 700 700 700 700 700 700 700 800 800 8	270-AT-706 270-FE-701 270-FF-701 270-FF-701 270-FF-701 270-FF-701 280 280 280 280 280 280 280	cyntosis dosing runny s Ar compressor risks Treated water sizk flicksmed slob Treated water sizk flicksmed slob Treated water sizk flicksmed slob Treated sizk from plasm Raw water sizk fing beam Raw water sizk fing beam Raw water sizk fing beam Centrol From Piece Tipe Black Concrete Footings Centrol Size of the Size	VIS 1555 G-130945 G-130945 G-130945 G-130945 G-130945 G-130945	Use in den in 0.2 Zen die took Glein aus in 7 12. The die took Ben die took Ben die took Glein zeich zen die pope mack Glein rack through the plant ij Glein rack through the plant ij	9.6 M3 0.2 M3 5.8 M3 2 M3 2.3 M3 2.9 M3 2.9 M3 2.1 TN 14 TN 16 TN	\$1,000 \$20,000 \$1,000 \$1,402 \$1,402 \$1,402 \$1,402 \$1,503 \$1,722 \$	\$64,585		314 32 32 32 32 32 32 32 32 32 32 32 32 32	985 995 995 995 995 995 995 995 995 995	\$2,000 6% 6% 6% 6% 6% 6% 6% 6% 6% 6% 6% 6% 6%	\$1,800 \$180 \$204 \$204 \$2,772 \$4,272 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	0% 0% 0% 0% 0% 0%	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20,557 20,557 14,650 14,650 55,136 55,136 55,136 56,668 117,779 5406 52,668 53,961 54,961 54,

Page 1 of an annual production of the Page 1 of an annual production (PPSK Commentation) behaviorated 656 45 65 00 (C DMPL (P) and an annual production (PPSK Commentation) behaviorated 656 456 00 (C DMPL (P) and an annual production (PPSK Commentation) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) and an annual production) behaviorated 656 00 (C DMPL (P) ann

ct	Mechanical Equipment Mechanical Equipment Sub Total	0.3.8.0 - Services	M.A Process Equipment	Services	0280	TK	809	280-TK-923	Treated Water Tark	9000 L 9000L MOPE tank	1	EACH	\$2,000	\$2,000 24 \$329.374	1	24 452	\$95	\$2,280 \$42,940	6%	\$120 \$19,702	ON		_
	Mechanical Equipment Sub Fotal													MALIA		492		542,940		519,702			
	Total Area 0390 - Services													\$532,520		776		\$72,720		\$26,470			-
	·																						_
	Sarthworks	5.0.0.0 - Earthworks		Earthworks	5000			5000	Earthworks	\$4,165,275 RN of equipment installed	- 1	EACH	\$333,302.01	\$333,302									
	Electrical	S.O.O.O - Electrical		Electrical	5000			5000	Sectrical	30,000,000	- 1		52,300,000,00	\$2,300,000									
	Piping	5.0.0.0 - Piping		Piping	5000			5000	Piping	24% of equipment installed	1	EACH	\$999,906.04	\$999,906									
	Total Other Process Plant Direct Costs													\$3,633,208									-
	Total Process Plant Direct Costs													S10.558.487		13021		\$1,237,602		\$458,480			-
is .	Travel & Accompdation			Flights	9000			9000	Fights	160 return fliebts	160	EACH	\$500	\$80,000		0		50	0%	50			
	Travel & Accompdation			Accommodation & Messing	9000			9000	Accommodation & Messing	36,590manhrs, 3400 nights @70/night in client camo	3400	EACH	\$70	\$238,000		0		50	ON6	\$0			
	Commissioning			Vendor Representation	9000			9000	Vendor Representation	MII (14 days total)	14	EACH	\$1,500	\$21,000		0		50	0%	50			
	Commissioning			Commissioning	9000			9000	Commissioning	Crew of 6 for 6 week duration	1	EACH	50	50		2340	\$160	\$274,400	6%	50	0%	50	
	Post Commissioning Indirects			Mod Squad Assistance	9000			9000	Mod Squad Assistance	Crew of 6 for 4 week duration	1	EACH	\$0	50		1560	\$110	\$171,600	6%	50	0%	50	
	Mobilisation & Demobilisation			Contractor Mobilisation & Demobilisation	9000			9000	Cull Contractor Mobilisation & Demobilisation		1	EACH	\$50,000	\$50,000		0		50	ON.	50			
	Mobilisation & Demobilisation			Contractor Mobilisation & Demobilisation	9000			9000	SMP Contractor Mobilisation & Demobilisation		1	EACH	\$50,000	\$50,000		0		50	0%	50			
	Mobilisation & Demobilisation			Contractor Mobilisation & Demobilisation	9000			9000	E&I Contractor Mobilisation & Demobilisation		1	EACH	\$50,000	\$50,000		0		50	ON.	\$0			
	Heavy Lift Construction Equipment			Heavy Lift Construction Equipment	9000			9000	100t crane	\$6000 mob & demob, \$350/h wet hire, 10 days	105	HRS	\$350	\$36,750		105		90	ons	\$12,000			
	Heavy Lift Construction Equipment			Heavy Lift Construction Equipment	9000			9000	SOt craine	\$6000 mob & demob, \$225,h wet hire, 16 weeks	1176	HRS	\$225	\$264,600		1176		90	ons	\$12,000			
	Heavy Lift Construction Equipment			Heavy Lift Construction Equipment	9000			9000	France	\$2000 mob & demob, \$2800/wk dry hire \$8400/wk wet hire. 16 weeks	36	WEEK	\$8,400	\$302,400		2520		50	ons	\$4,000			
	Heavy Lift Construction Equipment			Heavy Lift Construction Equipment	9000			9000	EWP & Telehandler	Telehandler \$135,day, 60ft Knuckleboom \$150,day	154	DAY	\$585	\$90,090				50	oni	\$4,000			
	Heavy Lift Construction Equipment			Heavy Lift Construction Equipment	9000			9000	Tool Container	\$1500/week rental	20	WEEK	\$1,500	\$30,000				50	ons	\$1,000			
	Heavy Lift Construction Equipment			Heavy Lift Construction Equipment	9000			9000	Offices	\$150/week rental (12m x 3m)	20	week	\$900	\$18,000				50	ON.	\$2,000			
	Heavy Lift Construction Equipment			Heavy Lift Construction Equipment	9000			9000	Vehicles	\$85/day ute; \$125/day 12 seat bus	190	DAY	\$630	\$113,400				50	ON.	\$2,000			
	Concrete Batch Plant			Contractor Mobilisation & Demobilisation	9000			9000	Concrete Batch Plant Mobilisation & Demobilisation		1	EACH	\$70,000	\$70,000		0		50	ON.	\$0			
	Concrete Batch Plant			Concrete Testing and Trial Mising	9000			9000	Concrete Batch Plant Testing and Trial Mix Allowance		1	EACH	\$15,800	\$15,800		0		90	ons	50			
	Concrete Batch Plant			Batch Plant and Agitator Truck Hire	9000			9000	Concrete Batch Plant and Agitator Truck Hire		10	WEEK	\$22,000	\$220,000		0		50	on.	\$0			
	Scaffold				9000			9000	Scaffold rental allowance			LOT	\$50,000	\$50,000				50	0%	sn.			
	Survey & Geotechnical			Geotechnical Testing	9000			9000	Geotechnical Testing		1	EACH	50	50		0		50	0%	50			
	EPCM			EPCM	9000			9000	EPCM .	Factored as 25% of total directs	1	EACH	\$3,063,642	\$3,063,642		0		50	0%	50			
	First Fills			First fills	9000			9000	First fills	Factored as 1.5% of total directs	1	EACH	\$183,819	\$183,819		0		50	0%	50			
	Commissioning Sparres Critical Sparres			Commissioning spares Critical Spares	9000			9000	Commissioning spares Critical Spares	Factored as 1% of total directs Factored as 5% of total directs	1	EACH	\$122,546 5612,728	\$122,546 \$612,720		0		50	0%	50			
	Total Indirect Costs			Crisca spelli	2000			1000	Crisical against	PALLOTRE BY SW OF TOTAL BINGS		sour!		\$5,692,775				\$546,000	V.4	\$27,000			=
	TOTAL PROCESS PLANT BARE COST													\$16,241,262				\$1,783,602		\$495,480		-	Ē
	Contingency	20%		Contingency	9900									********				24,-35,000		2437,460		-	Ξ
	Maroin	0%		Lunighty																		-	-
	TOTAL PROCESS PLANT COST																						

0 0000-8889 ab-86050 MBP White Natio Each Project 0000 1 PFS X Commercial Coll Schemator (2004 E-Coll) C COMPS, If size

PROJECT:	WHITE WELL GOLD PROJECT			
DOCUMENT NUMBER:	56501-E5-G-001			
DOCUMENT EXTRACT:	TABLE FORMAT FOR MSP			
REVISION:	c			
DATE:	26-10-19			
ar:	GN			
TABLE FORMAT FOR MSP		SUB TOTAL (AS)	CONTINGENCY	TOTAL
INDIRECTS			20%	
Mobilisation & Demobilisation Project Insurances	Mobilisation & Demobilisation	\$ 150,000.00	\$ 30,000.00	\$ 180,000.
Capital Spares Allowance - Commissioning	Commissioning Spares	5 122,545,69	5 24,509,14	\$ 147,054
Capital Spares Allowance - Critical	Critical Sparres	5 612.728.45	5 122,545,69	5 735,274.
Survey & Geotechnical	Survey & Geotechnical	5	5	5
Travel & Accomodation	Travel & Accomodation	\$ 318,000.00	\$ 63,600.00	\$ 381,600.
First Fills	First Fills	\$ 183,818,53	\$ 36,763,71	\$ 220,582.
Permits & Fees		\$	\$ -	\$
Other - Phones, Faxes, Documents		s .	s -	\$
Acceptance, Warranty and Defects Liability Costs		\$	s -	\$
Past Commissioning Indirects	Post Commissioning Indirects	\$ 171,600.00	\$ 34,320.00	\$ 205,920.
Concrete Batch Plant	Concrete Batch Plant	\$ 305,800.00	\$ 61,360.00	\$ 366,960.
Scattold	Scaffold	\$ 50,000.00	\$ 10,000.00	\$ 60,000
Heavy Lift Construction Equipment	Heavy Lift Construction Equipment	\$ 892,240.00	\$ 178,448.00	
Sub Total Indirects		\$ 2,806,732.67	\$ \$61,346.53	\$ 2,368,079.
DIRECTS		\$	s -	\$
Equipment Supply & Installation	Mechanical Equipment	\$ 4,199,630.39	\$ 839,926.08	\$ 5,039,556
Infrastructure		s -	s -	
Earthworks Concrete Works	Earthworks Concrete	S 333,302.01 S 1,125,322.60	\$ 66,660.40 \$ 225,064.52	\$ 199,962. \$ 1,350,397.
		5 1,175,227.60 5 1,802.013.38	5 225,004.52 5 360,402.68	\$ 1,60,607 \$ 2,162,416
Structural Steelwork Plate Work	Structural Steel Platework	5 1,002,012.88 5 1494.394.52	5 298,878,90	5 1,793,273.
Pipe Work	Piping	\$ 999,906.04	5 199,981.21	\$ 1,199,887.
Electricals	Electrical	5 2,300,000,00	5 460,000,00	\$ 2,760,000
Sub Total Directs		5 12.254.568.95	\$ 2,450,913,79	\$ 14,705,482
SUB TOTAL DIRECTS & INDIRECTS		5 15,061,301,63	\$ 2,000,000,00	5 10,022,561
EPCM				
	EPCM	5 2,063,642,24	5 612.728.45	5 3,676,370
Proejct Management & Procurement Engineering Design & Drafting	EPLM .	2,062,642.24	412,728.45	
Construction				
Commissioning	Commissionine	5 295,400,00	5 79,090,00	\$ 474,480.
Sub Total EPCM		\$ 2,459,042.24	\$ 691,808.45	\$ 4,150,850.
TOTAL PROJECT		\$ 18,520,343.85		
CONTINGENCY	20%		\$ 2,704,068.77	
TARGET COST ESTIMATE				5 22.224.412

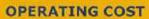
0.0000-0000 (2000 date) (2000 (200) (2000 (200) (2000 (200) (2000 (2000 (2000 (2000 (2000 (2000 (2000 (2000 (2000 (2000 (2000 (200) (2000 (2000 (200) (2000 (2000 (200) (2000 (200) (2000 (200) (2000 (200) (2000 (200) (2000 (2000 (200) (2000 (2000 (200) (2000 (200) (2000 (200) (2000 (2000 (200) (2000 (2000 (200) (2000 (200) (200) (2000 (200) (2000 (200) (2000 (200) (2000 (200)





APPENDIX C

29 October 2019 Revision B





Client:

MSP ENGINEERING

Project:

White Well Gold Project

Document Type:

Document Code:

565-ES-R-001_C













3. Maintenance contractor support FIFO & Camp charges.







General & Administration (Process) MSP White Well Gold Project 565-ES-R-001_B

Item	II-it		Assumptions / Commonts
item	Unit	_	Assumptions / Comments
General & Administration			
Consumables	Allowance		Allowance
Community Sponsorship	Allowance		Excluded
Performance Bonus			Excluded
Cleaning			Excluded
Postage & Couriers			Excluded
Printing & Stationery			Excluded
Telephones & Communications			Excluded
Roads / Bunds Maintenance			Excluded
PPE Clothing & Equipment			Excluded
Staff Amenities			Excluded Excluded
Security Insurance			Excluded
Tenement Fees & Rates			Excluded
FBT			Excluded
Labour & Services			
ROM rehandle			Excluded - mining
Contract Labour Contract Services - Crusher Relines			Excluded Included in Mtce Wear/Spare Consumables
Contract Services - Glusiner relines			Included in Mice Wear/Spare Consumables
Contract Services - General Plant Maintenance			Included in Mice Wear/Spare Consumables
Consultants - Technical	Allowance		TSF, Hydrology, Mtce NDT
Process Vehicles			
Light Vehicles hire and fuel			4WD Hire vehicle
Mobile Equipment hire and fuel			Forklift/Bobcat/EWP/25t Franna
Supply Consumables			Excluded
Equipment Hire			Excluded
Freight/Transport			Quote MacMahon Burnett
IT Services			
Consumables			Excluded
Equipment Hire Consultants			Excluded Excluded
Software			Excluded
Hardware			Excluded
Training			
Travel & Accommodation			Excluded
Training /Courses /Conferences			Excluded
Human Resources			Instituted in colony on conte
Recruitment Consultants			Included in salary on-costs Included in salary on-costs
Pre-Employment & Other Medicals			Included in salary on-costs
Mine Security Clearance			Included in salary on-costs
OH & S General			
Consumables			Excluded
Equipment Hire			Excluded Excluded
Sampling & Analysis First Aid & Safety Supply			Excluded
Safety Signage & Publications			Excluded
Fitness for Work (D&A Testing)			Included in salary on-costs
Safety Levy			Excluded
Mines Rescue			
Consultants			Excluded Excluded
Consultants First Aid & Safety Supply			Excluded
Training /Courses /Conferences			Excluded
Environment			
Consumables			Excluded
Survey / Reports			Excluded
Operations Compliance Monitoring			Excluded Excluded
Sampling & Analysis			Excluded
Cyanide box disposal			Excluded
Indigenous			
Travel Expenses			Excluded
Native Title Claimant Scholarships			Excluded
Cultural Awareness Training Consultants General			Excluded Excluded
Refining and Transportation			LAGUUGU
Refining	\$/oz of bullion		Costs allocated in general admin
Bullion transportation/insurance	Per weekly Collection		-
Water			L
Raw water supply pump hire			Excluded Excluded
Decant water pump hire Potable water supply			Excluded Excluded
FIFO			- Abiadou
			Included in Labour Cost
FIFO accomodation FIFO flights			Included in Labour Cost Included in Labour Cost
ogiito			
Processing & Mine Grade Control Laboratory Costs			
Assays provided by Tuckabianna			
Contingency	% Allowance		
Total			
I VIIII			

Assays MSP White Well Gold Project 565-ES-R-001_B

PROCESS PLANT - Site Laboratory Assays

ltem	Sample type	Sample Frequency	No of Samples	Weekly Samples	Au (Fire Assay & AAS)	Au/Ag - Carbon (AR & AAS)	Au - Soln (AAS)	Carbon Activity	Assumptions / Comments
Wash Plant Feed	Solids	Shift	1	14	2				
Trommel O/S	Solids	Shift	1	14	2				
Deslime O/F Tails	Solids	Shift	1	14	2				
Knelson Tails	Solids	Shift	i	14	2				
Ball Mill Cyclone O/F - CIL Feed	Solids	Shift	1	14	2				
CIL Tails	Solids	Shift	1	14	2				
Final Tails	Solids	Shift	i	14	2				
GIC - LeachTank 1	Solids	Weekly	i	1	2				
GIC - CIL Tank 1	Solids	Weekly	1	1	2				
GIC - CIL Tank 2	Solids	Weekly	1	1	2				
GIC - CIL Tank 2 GIC - CIL Tank 3	Solids	Weekly	1	1	2				
GIC - CIL Tank 3	Solids	Weekly	1	1	2				
	Solids		1	1	2				
GIC - CIL Tank 5	Solids	Weekly	1	1	2				
GIC - CIL Tank 6	Solids	Weekly	1	1	2				
Total Solid Samples			13	104	210				
CIL Residue	Solution	Shift	1	14			1		
Final Residue	Solution	Shift	1	14			1		
			1				1		
Pregnant solution	Solution	Daily		7					
Barren solution	Solution	Daily	1	7			1		
GIC - LeachTank 1	Solution	Weekly	1	1			1		
GIC - CIL Tank 1	Solution	Weekly	1	1			1		
GIC - CIL Tank 2	Solution	Weekly	1	1			1		
GIC - CIL Tank 3	Solution	Weekly	1	1			1		
GIC - CIL Tank 4	Solution	Weekly	1	1			1		
GIC - CIL Tank 5	Solution	Weekly	1	1			1		
GIC - CIL Tank 6	Solution	Weekly	1	1			1		
Total Solution Samples			11	49			49		
Carbons									
Loaded Carbon	Solids	Daily	1	7		1			
Barren Carbon	Solids	Daily	1	7		1			
GIC - CIL Tank 1	Solids	Weekly	1	1		1			
GIC - CIL Tank 2	Solids	Weekly		1					
GIC - CIL Tank 3	Solids	Weekly	1	1		1			
GIC - CIL Tank 4	Solids	Weekly	1	1		1			
GIC - CIL Tank 5	Solids	Weekly	1	1		1			
GIC - CIL Tank 6	Solids	Weekly	1	1		1			
Total Carbon Samples			8	20		20			
		147 11	1 .						
Loaded Carbon Activity	Activity	Weekly	1	1				1	
Barren Carbon Activity	Activity	Daily	1	7				1	
Regenerated Carbon Activity	Activity	Daily	1	7				1	
Total Solution Samples			3	15				15	
Total Weekly Assays Required			35	188	210	20	49	15	

 Mining/Grade Control
 FA

 Samples/day
 50
 50

 Samples/week
 350
 350

 Total Weekly Assays Required
 538
 560
 20
 49
 15
 644

Allow \$/sample 10
Annual Cost 334,880







APPENDIX D PROJECT SCHEDULE

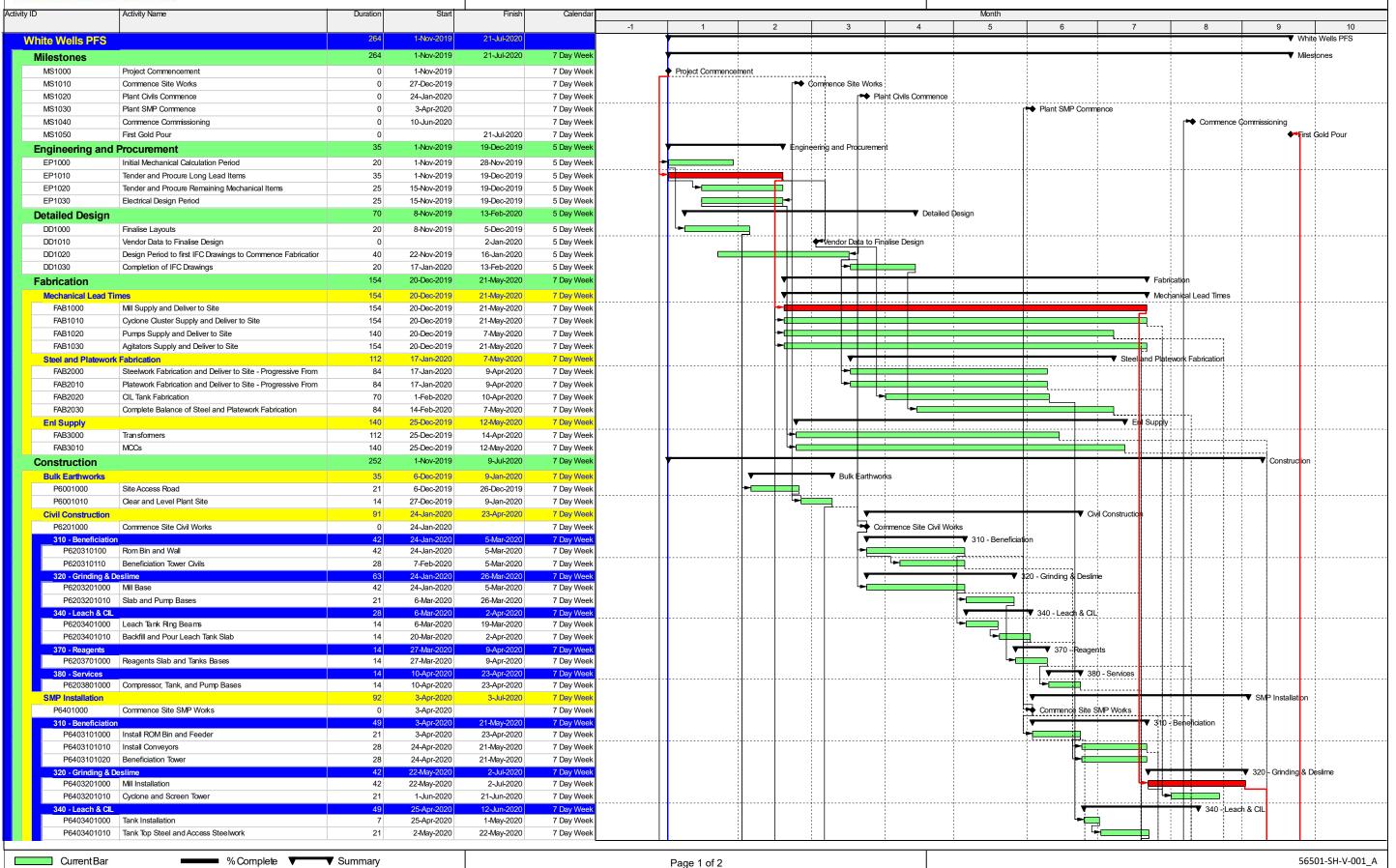
29 October 2019 Revision B



Critical Remaining Work

◆ Milestone

D56501 White Wells 30tph Gold Plant PFS Schedule



Printed: 1-Oct-2019

14:39



D56501 White Wells 30tph Gold Plant PFS Schedule

