

CLIENT : THABAZIMBI LOCAL MUNICIPALITY
TENDER No : TECH/04/2022-23
FOR : UPGRADING OF BULK WATER PIPELINE BETWEEN THABAZIMBI PUMP STATION AND THABAZIMBI Y-PIECE
BILLS OF QUANTITIES SECTION 1: P's&G's

ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT R C
1	SANS 1200 A	SECTION 1: PRELIMINARY AND GENERAL				
1,1	PSA 8.3	SCHEDULED FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1.1		Fixed Preliminary and General Items				
1.1.1.1	PSA 8.3.1	Contractual requirements (excluding items scheduled below)	Sum	1		R 0,00
1.1.2	8.3.2	Establishment of Facilities on site				
1.1.2.1	PSA 8.3.2.1	Facilities for the Engineer:				
		a) Furnished Office (1 No)	Sum	1		R 0,00
		c) Project name board (2 No. off)	Sum	1		R 0,00
1.1.2.2	8.3.2.2	Facilities for the Contractor:				
		a) Offices and storage sheds	Sum	1		R 0,00
		b) Workshops	Sum	1		R 0,00
		c) Laboratories	Sum	1		R 0,00
		d) Living accommodation	Sum	1		R 0,00
		e) Ablution and latrine facilities	Sum	1		R 0,00
		f) Tools and equipment	Sum	1		R 0,00
		g) Water supplies ,electric power and communications (Services to site offices)	Sum	1		R 0,00
		h) Dealing with water	Sum	1		R 0,00
		i) Access	Sum	1		R 0,00
		j) Plant (7 KVA, 220 Volt (Gentech / Turner Morris / Honda / similar approved) Diesel Generator, for the duration of the project)	Sum	1		R 0,00
1.1.3	8.3.3	Other fixed-charge obligations	sum	1		R 0,00
1.1.4	8.3.4	Removal of site Establishment	Sum	1		R 0,00
1,2	8,4	SCHEDULED TIME-RELATED CHARGES				
1.2.1	PSA 8.4.1	Contractual requirements (excluding items scheduled below)	Sum	1		R 0,00
1.2.2	8.4.2	Operation and maintenance of facilities on site, for duration of construction, except where otherwise stated				
1.2.2.1	8.4.2.1	Facilities for the Engineer:				
		a) Furnished Office (2 No)	Sum	1		R 0,00
		b) Project name board	Sum	1		R 0,00
	PSA 8.4.2.1d	c) Survey Assistants, equipment and materials	Sum	1		R 0,00
1.2.2.2	8.4.2.2	Facilities for the Contractor:				
		a) offices and storage sheds	Sum	1		R 0,00
		b) workshops	Sum	1		R 0,00
		c) laboratories	Sum	1		R 0,00
Carried forward						R 0,00

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Brought forward						R 0,00
		d) Living accommodation	Sum	1		R 0,00
		e) Ablution and latrine facilities	Sum	1		R 0,00
		f) Tools and equipment	Sum	1		R 0,00
		g) Water supplies ,electric power and communications (Services to site offices)	Sum	1		R 0,00
		h) Dealing with water	Sum	1		R 0,00
		i) access	Sum	1		R 0,00
		j) Plant (7 KVA Gentech / Turner Morris / Honda / Similar approved Diesel Generator), for the duration of the project	Sum	1		R 0,00
1.2.3	8.4.3	Supervision for duration of construction	Sum	1		R 0,00
1.2.4	8.4.4	Company and Head Office over-head costs for Duration of Contract	Sum	1		R 0,00
1.2.5	8.4.5	Other time- related obligations	Sum	1		R 0,00
1.2.6	SANS 1200 A	Compliance with OHS Act (Act 85 of 1993) as stipulated under "Part C3.6 & 3.7: HEALTH AND SAFETY SPECIFICATIONS" of the contract				
		a) Implementation of Health and Safety Plan	Sum	1		R 0,00
		b) Health and Safety Training	Sum	1		R 0,00
		c) Personal Protective Clothing and Equipment	Sum	1		R 0,00
		d) Fences, Signs and Barricades	Sum	1		R 0,00
		e) Other Health and Safety Obligations (Covid-19 Requirements)	Sum	1		R 0,00
1,3	PSA 8.5	SUMS STATED PROVISIONALLY BY ENGINEER				
	PSA 8.5.1	a) For work to be executed by Contractor and valued in terms of the "valuation of variations" clause in the conditions of contract				
1.3.1	PSA 8.5.1.1	Provision for Registered Surveyor for the setting out of 3 additional benchmarks & other required survey works as required by the engineer & in line with SANS1200A items 8.5.1.1 and 8.8.5).	Prov Sum	1	R 130 000,00	R 130 000,00
1.3.2		Overheads, charges and profit on item 1.3.1 above	%	130 000,00		R 0,00
1.3.3		Provision for salary of CLO & PSC representative compensation	Prov Sum	1	R 140 000,00	R 140 000,00
1.3.4		Overheads, charges and profit on item 1.3.3 above	%	140 000,00		R 0,00
1.3.5		On-site inspectorate and additional tests required by the Engineer (includes Cathodic and AC Mitigation Inspections)	Prov Sum	1	R 1 300 000	R 1 300 000
1.3.6		Overheads, charges and profit on item 1.3.5 above	%	1 300 000		R 0,00
1.3.7		Reimbursement for Employer Geotechnical, Occupational Health and Safety and EMP inspectorate Specialists	Prov Sum	1	R 40 000,00	R 40 000,00
1.3.8		Charge required by Contractor on subitem 1.3.7 above	%	40 000,00		R 0,00
1.3.9		Reimbursement for Employer internship staff on site	Prov Sum	1	R 56 000,00	R 56 000,00
1.3.10		Charge required by Contractor on subitem 1.3.9 above	%	56 000,00		R 0,00
Carried forward						R 1 666 000,00

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ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT R C
Brought forward						R 1 666 000,00
1.3.11		Application and submission of all wayleaves	Prov Sum	1	R 87 000,00	R 87 000,00
1.3.12		Charge required by Contractor on subitem 1.3.11 above	%	87 000,00		R 0,00
1.3.13		Provision for all actions, equipment and material required to connect with Existing pipeline	Prov Sum	1	R 15 000,00	R 15 000,00
1.3.14		Overheads, charges and profit on item 1.3.13 above	%	15 000,00		R 0,00
1.3.15		Provision of accredited generic training by approved service provider	Prov Sum	1	R 120 000,00	R 120 000,00
1.3.16		Overheads, charges and profit on item 1.3.15 above	%	120 000,00		R 0,00
1.3.17		Provision of a airtime & data, stationery, office consumables and other office items for the Engineer	Prov Sum	1	R 68 000,00	R 68 000,00
1.3.18		Overhead, charges and profit on item 1.3.17 above	%	68 000,00		R 0,00
1.3.19		Relocation of existing services:				
		(a) Relocating existing services as well as point repairs	Prov Sum	1	R 20 000,00	R 20 000,00
		(b) Overheads, charges and profit on item (a) above	%	20 000,00		R 0,00
1,4	8,8	TEMPORARY WORKS				
1.4.1	8.8.2	Dealing with Traffic (accommodation of traffic)	Sum	1		R 0,00
1.4.2	8.8.3	Protection of existing structures until construction in the vicinity is Complete	Sum	1		R 0,00
1.4.3	8.8.4	Existing services:				
		a) Supply or hire of specialist equipment for the detection of:				
		(i) Electrical and other cables	Sum	1		R 0,00
		(ii) Water pipelines	Sum	1		R 0,00
		(iii) Sewer pipelines	Sum	1		R 0,00
		b) The use of the equipment referred to in item (a) above	Sum	1		R 0,00
		c) Hand excavation necessary for locating and exposing existing services soft materials:				
		(i) In roadways	m ³	100		R 0,00
		(ii) In all other areas	m ³	500		R 0,00
1,5		Provide "As Built" drawings(with x,y,z coordinates) for the exact positions of all pipework, water markers, valve manholes and chambers.	Sum	1		R 0,00
TOTAL CARRIED FORWARD TO SUMMARY						R 1 976 000,00

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BILLS OF QUANTITIES SECTION 2: EARTHWORKS & WATER PIPELINE

ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT R C
2	SANS 1200 C	SECTION 2: WATER PIPELINE				
2,1		<u>SITE CLEARANCE</u>				
2.1.1	8.2.1	Clear and grub	ha	2,9		R 0,00
2.1.2	8.2.2	Remove and grub large trees and tree stumps of girth a) Over 1m and up to and including 2m	No.	30		R 0,00
		b) Over 2m and up to and including 3m	No.	30		R 0,00
		c) Over 3m and up to and including 4m	No.	25		R 0,00
2.1.3	8.2.3	Remove and grub all trees and tree stumps regardless of girth (As instructed by the Engineer)	ha	0,5		R 0,00
2.1.4	8.2.4	Reclear Surfaces (Only on instructions from the Engineer)	ha	0,4		R 0,00
2.1.5	8.2.5	Take down existing fences regardless of height a) Wire Mesh fences complete	m	500		R 0,00
		b) Steel Palisade fence	m	20		Rate Only
		c) Brick work (up to 230mm thick) fences	m	20		Rate Only
		d) Pre-fabricated concrete fences complete	m	50		Rate Only
2.1.6	8.2.7	Dismantle and remove pipelines, electricity transmission line, cables etc.	m	250		R 0,00
2.1.7	8.2.8	Demolish and remove structures/ building and dismantle steelwork, etc.	Sum	1		R 0,00
	PSC 3.1					
2.1.8	8.2.9	Transport materials and debris shall be disposed to suitable places specified by the Contractor (Prov)	m ³ .km	1500		R 0,00
2.1.9	8.2.10	Remove topsoil to nominal depth of 150mm and stockpile	m ³	1264		R 0,00
2,2	SANS 1200DB	<u>EARTH WORKS (PIPE TRENCHES)</u>				
		EXCAVATION				
2.2.1	PSDB 8.3.2a	a) Excavate in all materials for trenches, backfill, compact and dispose of surplus material for: Pipes over 125 mm up to 700 mm dia for depths				
		Over and Up to 0.0 m 0.5 m	m ³	14		R 0,00
		0.5 m 1.5 m	m ³	1402		R 0,00
		1.5 m 2.5 m	m ³	8026		R 0,00
		2.5 m 3.5 m	m ³	2460		R 0,00
		3.5 m Over	m ³	602		R 0,00
2.2.2	8.3.2b	b) Extra-over item 8.3.2a above for:				
		i) intermediate excavation	m ³	1250		R 0,00
		ii) hard rock excavation	m ³	2501		R 0,00
		iii) Boulder rock excavation Class A	m ³	250		R 0,00
		iii) Boulder rock excavation Class B	m ³	250		R 0,00
Carried Forward						R 0,00
Brought forward						R 0,00

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ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT	
						R	C
2.2.3	8.3.2.c	Excavate and dispose of unsuitable material from trench bottom (provisional)	m ³	500			R 0,00
2,3	8.3.3	EXCAVATION ACILLIARIES					
2.3.1	8.3.3.1	Make up deficiency in backfill material (provisional)					
		a) from other necessary excavations on site	m ³	100			R 0,00
		c) by importation from commercial or off-site sources selected by the Contractor	m ³	200			R 0,00
2.3.2	8.3.3.3	Compaction in road reserves	m ³	70			R 0,00
2,4	8.3.3.4	OVERHAUL					
2.4.1		a) Limited Overhaul, 0.5km -1km (Provisional)	m ³	1751			R 0,00
2.4.2		b) Long Overhaul in excess of 1km (Provisional)	m ³ .km	8753			R 0,00
2,5	8.3.4	PARTICULAR ITEMS					
2.5.1		a) Shore trench opposite structure or service	m	800			R 0,00
2.5.2		b) Temporary works: Control ground water inflow from anywhere on site					
		1.) Provide equipment	Sum	1			R 0,00
		2.) Operate and maintain	Days	20			R 0,00
		3.) Remove equipment	Sum	1			R 0,00
2.5.3	8.3.5	Existing Services-that Intersect or Adjoin a Pipe Trench					
		a) Services that intersect a trench	No.	10			R 0,00
		b) Services that adjoin a trench	m	100			R 0,00
		c) Connection into services already in existence Y-Piece connection & Pump Station connection. Refer to DWG 138-CIV-WT-018	No.	2			R 0,00
2,6	8.3.6	FINISHING					
2.6.1	8.3.6.1	Reinstate road surfaces complete with all courses					
2.6.2		a) Gravel on shoulders 150mm thick compacted to 93% MOD AASHTO	m ²	20			R 0,00
2.6.3		b) G6 material and compact to 93% MOD AASHTO in layers of 150mm	m ²	20			R 0,00
2.6.4		c) G5 material and compact to 93% MOD AASHTO in layers of 150mm	m ²	20			R 0,00
2.6.5		d) C4 stabilised material and compacted to 98% MOD AASHTO in layers of 150mm	m ²	20			R 0,00
2.6.6		e) G1 material and compact to 86% apparent density in layers of 150mm	m ²	20			R 0,00
2.6.7		f) Continuously TPA graded medium asphalt of thickness 25 mm , including approved prime and tack coat preparation for roadway	m ²	20			R 0,00
Carried Forward							R 0,00

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BILLS OF QUANTITIES SECTION 2: EARTHWORKS & WATER PIPELINE

ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT	
						R	C
Brought forward						R 0,00	
2,7	SANS 1200D	EARTH WORKS					
2.7.1	8.3.3	Restricted Excavations					
2.7.1.1		a) Excavate for restricted foundations, footings and pipe trenches in all materials and use for backfill or embankment or dispose	m ³	200			R 0,00
2.7.2		b) Extra Over Items					
2.7.2.1		.01 Intermediate excavation	m ³	10			R 0,00
2.7.2.2		.02 Hard Rock Excavation	m ³	10			R 0,00
2.7.2.3		.03 Boulder Excavations, Class A	m ³	10			R 0,00
2.7.2.4		.03 Boulder Excavations, Class B	m ³	10			R 0,00
2,8	1200 LB	BEDDING FOR PIPES					
2.8.1		PROVISION OF BEDDING					
		Rigid Pipe on Class B bedding					
2.8.1.1	8.2.1	Provision of bedding from trench excavations:					
		a) Selected granular material	m ³	189			R 0,00
		b) Selected fill material	m ³	2569			R 0,00
2.8.2	8.2.2	Supply only of bedding by importation:					
2.8.2.1	8.2.2.1	Provision of "Class B" bedding from other necessary excavations (greater than1km) of: (Prov.)					
		a) Selected granular material	m ³	94			R 0,00
		b) Selected fill material	m ³	161			R 0,00
2.8.2.3	8.2.2.3	From Commercial sources (provisional)					
		a) Selected granular material	m ³	1660			R 0,00
		b) Selected fill material	m ³	415			R 0,00
2.8.3	8.2.3	Concrete bedding cradle(Provisional)					
		1) Class 20 Mpa/19mmm	m ³	30			R 0,00
2.8.4	8.2.4	Encasing of pipes in concrete: (Provisional)					
		1) Class 25 Mpa/19mmm	m ³	15			R 0,00
2.8.5	8.2.5	Overhaul of material for Bedding Cradle and Selected Fill Blanket	m ³ .km	50,00			Rate Only
Carried Forward						R 0,00	
Brought forward						R 0,00	

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ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT	
						R	C
2.9	SANS 1200L	MEDIUM-PRESSURE PIPELINES					
2.9.1	8.2.1	Supply, bed and lay pipes:					
		3LPE coated Steel pipe heavy duty Grade X42 length 12.192m, 4.5mm Wall, Bell End Prep. SABS 1123 Table 2500					
		All pipework shall be fabricated in accordance with SANS 719, with a CML lining internally and externally to a 3LPE coating (First layer - FBE minimum dry form thickness to be 300microns), and all flanges to be fabricated to SANS 1123 - Table 2500/3 flat faced. Rates shall include all jointing material, bolts, nuts, washers and gaskets, ERW weld to suit the pipe pressure rating.					
		01) DN 450mm	m	6900			R 0,00
		02) Welding- Installation & Fillet Welding of Spigot & Socket by a qualified specialist (Trade Test - Double Coated Welder; Quality Inspector should have a Diploma)	m	6900			R 0,00
		03) NDT "Non-Destructive Testing" by a SANAS accredited Specialist	Prov.Sum	1	R 150 000,00		R 150 000,00
		04) Overheads, charges and profit on item 03 above	%	150 000			R 0,00
2.9.2		SPECIALS AND FITTINGS FOR STEEL PIPES					
2.9.2.1	8.2.2	Epoxy coated Steel bends, flanged both ends.Flanges to SABS 1123 Table 2500/3					
		1) 11.25° bends: 450mm Diameter	No.	10			R 0,00
		2) 22.5° bends: 450mm Diameter	No.	8			R 0,00
		3) 45° bends: 450mm Diameter	No.	21			R 0,00
		4) 90° bends: 450mm Diameter	No.	1			Rate Only
		5) Tees: 450mm Diameter	No.	1			R 0,00
		6) Reducing Flanged tees (Prefabricated): 450mm x 400mm	No.	1			R 0,00
		7) Reducers: 450mm x 250mm	No.	1			R 0,00
		.02 450mm x 350mm	No.	1			R 0,00
		.03 450mm x 400mm	No.	2			R 0,00
		8) Flanged adaptors:					
		.01 250mm Diameter	No.	1			Rate Only
		.02 300mm Diameter	No.	1			Rate Only
		.03 350mm Diameter	No.	1			Rate Only
		.04 400mm Diameter	No.	1			R 0,00
		.05 450mm Diameter	No.	1			R 0,00
Carried Forward							R 150 000,00

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ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT	
						R	C
Brought forward						R 150 000,00	
2.9.2.2	8.2.3	Valves- Supply and Install					
		1) Isolation Valves					
		Resilient Sealed gate valve to SABS 664, PN25 with non-rising spindle, Fusion Bonded Epoxy powder coated Cast Iron Body, Stainless steel, Hand wheel operated, Clockwise closing, flanges drilled to SABS 1123 Table 2500 or Similar Approved.					
		DN 250mm	No.	7		R 0,00	
		DN 450mm	No.	1		Rate Only	
		2) Air Valves					
		Vent-O-Mat Series RBX2501 Series Air Release valve, Compact Construction With Integral "Anti - Shock" Mechanism And H.D.P.E. Floats, Housed In A 304 Stainless Steel Tubular Barrel Body, Enclosed With Blue RAL5012 Fusion Bonded Epoxy Powder Coated Ductile Iron Ends, Secured By Stainless Steel 304 Tie Rods And Nuts, E.P.D.M Rubber Seats And Seals And ABS Plastic Orifice Cover. End Connection Flanged-Studded SANS 1123 T2500/3 or Similar Approved					
		DN 100mm	No.	7		R 0,00	
		DN 250mm	No.	1		Rate Only	
		3) Scour Valves					
		Resilient Sealed gate valve to SABS 664, PN25 with non-rising spindle, Fusion Bonded Epoxy powder coated Cast Iron Body, Stainless steel, Hand wheel operated, Clockwise closing, flanges drilled to SABS 1123 Table 2500 or Similar Approved.					
		DN 200mm	No.	1		Rate Only	
		DN 250mm	No.	5		R 0,00	
		5) Dismantling Joints					
		Viking Johnson or similar approved dismantling joint flanged adaptor. 4x M16 Stainless Steel tie rods 300mm in length.					
		01) DN 400mm	No.	1		R 0,00	
		02) DN 450mm	No.	1		R 0,00	
2.9.3	8.2.3	Extra over items 8.2.1 for supplying, fixing and bedding of gate valves					
		.01 250mm Diameter	No.	4		R 0,00	
2.9.4	8.2.4	Extra over Item 8.2.1 for the Cutting of the Pipe and the Supplying and Fixing of the Extra Coupling					
		.01 450mm Diameter	No.	2		R 0,00	
2.9.5	8.2.5	Supply and Place Pipes, Valves and Specials (Short pipe runs)	No.	6		Rate Only	
2.9.6	8.2.6	Extra-over 8.2.1, 8.2.2, 8.2.3 for supplying and installing joints with machined collars and special fittings	No.	4		Rate Only	
2.9.7	8.2.7	Extra over 8.2.1 for Encasing Joints	No.	3		Rate Only	
2.9.8	8.2.8	Recover Old Pipeline				Rate Only	
		Over and Up to					
		0.0 m 0.5 m	m	100		Rate Only	
		0.5 m 1.5 m	m	100		Rate Only	
		1.5 m 2.5 m	m	100		Rate Only	
Carried Forward						R 150 000,00	
Brought forward						R 150 000,00	
2.9.9	8.2.10	Temporary Valves, e.t.c					

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						R	C
		DN 450mm	No	1		R	0,00
2.9.10	PSL	Anchor/thrust blocks and pedestals:					
	8.2.11 (b)	.01 Class 25 MPa/19 mm	m³	98			R 0,00
		.02 Formwork	m²	606			R 0,00
		0.3 Reinforcement	t	12			R 0,00
2.9.11	8.2.12	Concrete casing:					
		.01 Class 25 MPa/19 mm	m³	20			R 0,00
2.10	8.2.13	VALVE AND SCOUR CHAMBERS					
2.10.1	8.2.13	Isolation Valve chamber , as per DWG No. 138-CIV-WT-SD-001 for maximum 1.5m depth.	No.	1			Rate Only
2.10.2	8.2.13	Scour Valve Chamber , as per DWG No. 138-CIV-WT-SD-002, for maximum 1.5m depth.	No.	1			Rate Only
2.10.3	8.2.13	Air Valve Chamber , as per DWG No. 138-CIV-WT-SD-003, for maximum 1.5m depth.	No.	1			Rate Only
2.11	8.2.14	MANHOLES					
2.11.1	8.2.14a	Air Valve Manhole as per DWG No. 138-CIV-WT-SD-001, for maximum depth of 1.5m	No.	7			R 0,00
2.11.2	8.2.14b	Extra Over for item 2.11.1 manhole of depth exceeding 1.5m in given increment of 0.25m depth per manhole.	0.25m	2			R 0,00
2.11.3	8.2.14a	Scour Valve Manhole as per DWG No. 138-CIV-WT-SD-002, for maximum depth of 1.5m	No.	5			R 0,00
2.11.4	8.2.14b	Extra Over for item 2.11.3 manhole of depth exceeding 1.5m in given increment of 0.25m depth per manhole.	0.25m	1			R 0,00
2.11.5	8.2.14a	Isolation Valve Manhole as per DWG No. 138-CIV-WT-SD-003, for maximum depth of 1.5m	No.	7			R 0,00
2.11.6	8.2.14b	Extra Over for item 2.11.5 manhole of depth exceeding 1.5m in given increment of 0.25m depth per manhole.	0.25m	2			R 0,00
2.12	SANS 1200 LF	ERF CONNECTIONS					
2.12.1	8.2.3	Markings or Marker Posts as per DWG No. 138-CIV-WT-SD-004	No.	14			R 0,00
2.13	PSL3.9.6	Specialist contractor to supply and install Cathodic Protection and AC Mitigation	m	6 900			R 0,00
2.14	PSL 7.3	Standard Hydraulic Pipe Testing					
	PSL 7.3.1	Test Pressure and Time of Test	m	6900			R 0,00
TOTAL CARRIED FORWARD TO SUMMARY							R 150 000,00

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FOR : UPGRADING OF BULK WATER PIPELINE BETWEEN THABAZIMBI PUMP STATION AND THABAZIMBI Y-PIECE

SECTION 3: HORIZONTAL DIRECTION DRILLING

ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3		SECTION 3: HORIZONTAL DIRECTIONAL DRILLING				
3,1		Establishment				
3.1.1		Fixed charges	Sum	1		R 0,00
3.1.2		Time Related Charges	Sum	1		R 0,00
3.1.3		HDD Setup at Crossing Position	No.	2		R 0,00
3,2		Scanning of site	Sum	1		R 0,00
3,3		Supply and welding of HDPE Pipes Transnet Railway Line				
		630mm HDPE PN10 (Sleeve)	m	37		R 0,00
3,4		HDD Drill and Pull Back HDPE Pipe - Through firm, dry, soils				
		630mm HDPE PN10 (Sleeve)	m	37		R 0,00
3,5		Supply and install				
		450mm STEEL PN25 (Service pipe to be installed in Sleeve and pulled through together)	m	37		R 0,00
3,6		Extra Over Item 3.4 for drilling through Intermediate Materials				
3.6.1		Intermediate ground	m	4		R 0,00
3.6.2		Hard / Rock ground	m	3		R 0,00
3,7		Standing Time for HDD plant and crew	hr	20		R 0,00
TOTAL CARRIED FORWARD TO SUMMARY						R 0,00

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SECTION 4: ACCESS GRAVEL ROAD

ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	SANS 1200 DM	SECTION 4: ACCESS ROAD				
4,1	8.3.4	Cut to fill, borrow to fill a). Compact to 90% of modified AASHTO maximum density	m ³	4500		R 0,00
		b). Rockfill, process and compact	m ³	2250		R 0,00
4,2	8.3.5	Selected layer compacted to 93% of modified AASHTO maximum density	m ³	2250		R 0,00
4,3	8.3.6	Extra-over items 8.3.4 and 8.3.5 for excavating and breaking down material in				
		a) Intermediate excavation	m ³	675		R 0,00
		b) Hard excavation	m ³	450		R 0,00
		c) Boulder excavation Class A	m ³	113		R 0,00
		d) Boulder excavation Class B	m ³	113		R 0,00
TOTAL CARRIED FORWARD TO SUMMARY						R 0,00

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SECTION 5: DAYWORKS

ITEM NO	PAYMENT ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5	SANS 1200 A PSA 8,7	SECTION 5: DAY WORKS (Note: Rates submitted as "Rate Only" must be fair and balanced as it may be used to determine the contract value)				
5,1		LABOUR (a) Working Hours (As and when instructed by the Engineer including non-working hours, Public Holidays, Weekends etc.)				
		(i) Unskilled Labour	hour	10		R 0,00
		(ii) Semi-Skilled Labour	hour	10		R 0,00
		(iii) Skilled Labour	hour	10		R 0,00
		(iv) Construction Foreman	hour	10		R 0,00
		(v) Gang Supervisor	hour	10		R 0,00
		(vi) Surveyors Assistant	hour	10		R 0,00
		(vii) Registered Surveyor	hour	10		R 0,00
5,2	8,7	PLANT				
		(i) Excavator 25 - 30 Ton (110kw)	hour	10		R 0,00
		(ii) Excavator Less 25 Ton (Less 110kw)	hour	10		R 0,00
		(iii) Loader 10 Ton	hour	10		R 0,00
		(iv) TLB Backator (10 ton Max)	hour	10		R 0,00
		(v) Tipper or Dumper (4-10m3)	hour	10		R 0,00
		(vi) Grader (CAT 140G or Similar Approved)	hour	10		R 0,00
		(vii) Water Truck (Equipied with sprayer) 5000 litres Min	hour	10		R 0,00
		(viii) Compactor (Bomag BW190 11-13tons or Similar Approved) (100kw)	hour	10		R 0,00
		(ix) Pneumatic Roller (Bomag BW190 5-9tons or Similar Approved) (55kw)	hour	10		R 0,00
		(x) Sheep Foot Compactor (20-25 ton) 100kw	hour	10		R 0,00
TOTAL CARRIED FORWARD TO SUMMARY						R 0,00

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FOR : UPGRADING OF BULK WATER PIPELINE BETWEEN THABAZIMBI PUMP STATION AND THABAZIMBI Y-PIECE

BILLS OF QUANTITIES: SUMMARY		
Item	DESCRIPTION	TOTAL (Rands)
1	SECTION 1: PRELIMINARY AND GENERAL	R 1 976 000,00
2	SECTION 2: WATER PIPELINE	R 150 000,00
3	SECTION 3: HORIZONTAL DIRECTION DRILLING	R 0,00
4	SECTION 4: ACCESS GRAVEL ROAD	R 0,00
5	SECTION 5: DAYWORKS	R 0,00
	SUB-TOTAL 1 (VAT EXCLUDED)	R 2 126 000,00
	CONTINGENCIES AT 10% OF SUB-TOTAL 1 ABOVE	
	The amount reflected here will be utilised on the works should unforeseen conditions warrant it. If not used, it will be deducted in whole or in part.	R 212 600,00
	CONTRACT PRICE ADJUSTMENT (CPA) 8% OF SUB-TOTAL 1	R 170 080,00
	CONSTRUCTION COST SUB-TOTAL 2 (INCL CONTIGENCIES & CPA) (VAT EXCLUDED)	R 2 508 680,00
	ADD: VALUE ADDED TAX (15%)	R 376 302,00
	CONSTRUCTION COST TOTAL (VAT INCL.)	R 2 884 982,00