

**RBP OPTIMUM REPLACEMENT COST STUDY
EXISTING PIPELINE ROUTE
CAPITAL COST ESTIMATE**

ITEM				DN 500 with DN 400 Metro
	QTY	UNIT	RATE	CAPITAL COST (\$A)
SUPPLY COATED LINEPIPE (M/L & LATERALS)				
(DELIVERED INTO STOCKPILES ALONG R.O.W.)				
DN 500 X70 API5L 9.2WT (WALLUMBILLA TO CITY GATE)	361.4	km	245,000	88,543,000
DN 500 X70 API5L 11WT (WALLUMBILLA TO CITY GATE)	35.5	km	281,000	9,975,500
DN 450 X56 API5L 10WT (CITY GATE TO GIBSON IS)	43	km	262,000	11,266,000
DN 300 X70 API5L 8.4WT (SWANBANK LATERAL)	11	km	166,000	1,826,000
DN 250 X70 API5L 6WT (PEAT LATERAL)	106.2	km	110,000	11,682,000
DN 250 X70 API5L 7.2WT (PEAT LATERAL)	5	km	126,000	630,000
DN 250 X70 API5L 6WT (SCOTIA EXT LATERAL)	8.1	km	110,000	891,000
DN 250 X70 API5L 7.2WT (SCOTIA EXT LATERAL)	1	km	126,000	126,000
CLEARING & GRADING R.O.W.				0
LIGHT	499.2	km	1,935	965,952
MEDIUM	72	km	3,550	255,600
TRENCHING				0
TRENCHER	198.2	km	32,500	6,441,500
EXCAVATOR	213	km	54,200	11,544,600
RIPPABLE ROCK	112	km	67,800	7,593,600
ROCK SAW	48	km	71,760	3,444,480
PIPE HANDLE, WELD, LOWER IN & JOINT				0
STRINGING	571.2	km	6,990	3,992,688
BENDING	571.2	km	4,720	2,696,064
SKIDS & SAND BAGS	571.2	km	1,960	1,119,552
WELDING & TIE INS (DN 500)	396.9	km	69,950	27,763,155
WELDING & TIE INS (DN 450)	43	km	191,000	8,213,000
WELDING & TIE INS (DN 250)	120.3	km	41,900	5,040,570
WELDING & TIE INS (DN 300)	11	km	46,040	506,440
<i>Carried Forward</i>				204,516,701

ITEM				DN 500 with DN 400 Metro
	QTY	UNIT	RATE	CAPITAL COST (\$A)
<i>Brought Forward</i>				204,516,701
ROTOSCAN NDT 100%	439.9	km	14,750	6,488,525
DOUBLE WALL SCAN RAYS 100%	131.3	km	6,800	892,840
LOWER IN	571.2	km	31,520	18,004,224
FIELD JOINTS (DN 500)	396.9	km	13,035	5,173,592
FIELD JOINTS (DN 450)	43	km	28,700	1,234,100
FIELD JOINTS (DN 250)	120.3	km	8,050	968,415
FIELD JOINTS (DN 300)	11	km	8,840	97,240
BEDDING & PADDING (EXCAVATED MATERIAL)	220.2	km	9,960	2,193,192
BEDDING & PADDING (OZZIE Padder)	351	km	22,300	7,827,300
BACKFILLING	571.2	km	4,115	2,350,488
TRENCH BREAKERS (POLYURETHANE)	1030	No	955	983,650
<u>CROSSINGS</u>				0
GRAVEL ROADS	80	No	2,600	208,000
BITUMEN ROADS (BORED)	91	No	152,500	13,877,500
BITUMEN / CONCRETE DRIVEWAYS	164	No	3,715	609,260
HIGHWAYS / MOTORWAYS (BORED)	11	No	195,000	2,145,000
RAIL LINES (BORED)	8	No	85,000	680,000
HORIZONTAL DIRECTIONAL DRILLS (RIVERS)	8	No	1,300,000	10,400,000
UNDERGROUND SERVICES		ITEM		13,000,000
MINOR CREEKS (DRY)	61	No	3,500	213,500
MINOR CREEKS (WET)	20	No	105,000	2,100,000
REMOVE FENCES & GATES & RE-INSTATE	248	No	485	120,280
<u>TESTING, RESTORATION, ETC</u>				0
HYDRO TESTING, DEWATERING & DRYING	571.2	km	19,760	11,286,912
GROUND MARKERS	1627	No	515	837,905
AERIAL MARKERS	57	No	735	41,895
CATHODIC PROTECTION	571.2	km	1,320	753,984
RESTORATION OF R.O.W.	571.2	km	4,130	2,359,056
REVEGETATION SEEDING / GRASSING & WATERING	564.4	km	12,100	6,829,240
GRAVEL & BITUMEN RESURFACING ALONG ROADS	6.8	km	131,250	892,500
PRE COMMISSIONING	571.2	km	950	542,640
				0
Deletion for DN 450 Pipe Transmission Pipe				0
Deletion for DN 400 Metro Pipe				-4,500,000
				0
<i>Carried Forward</i>				313,127,939

ITEM				DN 500 with DN 400 Metro
	QTY	UNIT	RATE	CAPITAL COST (\$A)
<i>Brought Forward</i>				313,127,939
<u>SCADA & COMMUNICATIONS</u>				
UPGRADE FACILITY SITES (DISH, MODEM, ETC)	26	No	8,850	280,000
CONTROL HUTS, POWER SUPPLY, I/O PANEL, ETC	25	No	25,000	625,000
DITTO AT SWANBANK FACILITY + SCADA	1	No	3,000,000	3,000,000
<u>WALLUMBILLA COMPRESSOR STATION</u>				0
SUPPLY & CONSTRUCT (SEE WORKSHEET 3)		ITEM		0
<u>Intermediate COMPRESSOR STATION</u>				0
SUPPLY & CONSTRUCT (SEE WORKSHEET 3)		ITEM		38,146,000
<u>PEAT / SCOTIA COMPRESSOR STATION</u>				
PEAT = 320 kW, SCOTIA = 500 kW				5,740,000
<u>MLV's</u>				
DN 450	5	No	285,000	1,425,000
DN 500	3	No	320,000	960,000
DN 250	1	No	128,000	128,000
<u>SCRAPER STATIONS</u>				0
LAUNCHER/RECEIVER (DN 500)	1	No	661,000	661,000
LAUNCHER (DN 500)	1	No	360,000	360,000
RECEIVER (DN 500)	1	No	364,000	364,000
LAUNCHER (DN 300)	1	No	249,500	249,500
RECEIVER (DN 300)	1	No	256,000	256,000
LAUNCHER (DN 250)	1	No	224,000	224,000
RECEIVER (DN 250)	1	No	230,000	230,000
<u>ACTUATED ISOLATION VALVES AT STATIONS</u>	22	No	81,000	1,782,000
<u>STATION FACILITIES</u>				0
(SEE SEPARATE WORKSHEETS 1 & 2)				0
ARUBIAL		ITEM		801,250
OAKEY		ITEM		895,250
TOOWOOMBA		ITEM		2,555,000
<i>Carried Forward</i>				371,809,939

ITEM				DN 500 with DN 400 Metro
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<i>Brought Forward</i>				371,809,939
SANDY CK		ITEM		895,250
BRIGHTVIEW		ITEM		895,250
SWANBANK		ITEM		4,347,500
REDBANK		ITEM		772,250
<u>CAMPS</u>				0
MOBILISATION / DEMOBILISATION		ITEM		700,000
ESTABLISH & RELOCATE		ITEM		1,180,000
HIRE OF CAMP, MESSING & MAINTENANCE	160,000	M'DAYS	96	15,456,000
<u>CONSTRUCTION PLANT & FACILITIES</u>				0
MOBILISATION / DEMOBILISATION		ITEM		4,375,000
SUBTOTAL - Materials & Construction				400,431,000
<u>SUPPORT SERVICES:-</u>				
ENVIRONMENTAL IMPACT STUDIES		ITEM		1,784,000
SURVEY INCL AS-BUILTS		ITEM		2,125,000
EASEMENT ACQUISITION AND COMPENSATION		ITEM		6,750,000
CULTURAL HERITAGE and NATIVE TITLE		ITEM		2,190,000
LAND MANAGEMENT & LIAISON		ITEM		2,800,000
INDIGENOUS MONITORING		ITEM		1,000,000
GEOTECHNICAL INVESTIGATION		ITEM		900,000
OPERATIONS & MAINTENANCE BUILDING		ITEM		1,700,000
LINEPACK for 2005 LOAD + COMMISSIONING		227TJ		681,000
SUBTOTAL - Approvals & Support Services				19,930,000
ESTIMATED COST				420,361,000
<u>INDIRECTS</u>				
OWNERS COSTS	2.00%			8,407,000
PROJECT MGT, ENGINEER, PROCURE PIPELINE	4.25%	ITEM		16,000,000
PROJECT MGT, ENGINEER, PROCURE COMP STN	12.00%	ITEM		5,266,000
CONTINGENCY (COMP UNITS & LINEPIPE)	2.50%	ITEM		3,581,000
CONTINGENCY (CONSTRUCTION)	13.50%	ITEM		37,191,000
SUBTOTAL				70,445,000
Estimate Total				490,806,000
Interest During Construction	10.60%			30,914,000
TOTAL				521,720,000

Effective Contingency (% of Estimate Total before IDC)	8.3%
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