

EQUIPMENT LIST (Gasification Plant)

PROJECT BANKO PROJECT
TITLE COAL PULVERIZER AND DRYING EQUIPMENT

EQUIPMENT ITEM NUMBER	SERVICE	No REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
2-54	Pulverized Coal Surge Hopper	1	Steel Plate Cylindrical Type	φ 3,000 x 2,400 H Volume : 2 m ³ Discharge Feeder Motor : 0.2 KW	0.5			5	50	
2-55	Pulverized Coal Injec- tion Tank	1	Steel Plate Cylindrical Pressure Vessel	φ 1,300 x 2,400 H Volume : 2 m ³ Discharge Feeder Motor : 0.2 KW	0.5			5	50	
2-101	Coal Conveyor for Power Station	2	Belt Conveyor	Capacity : 70 t/hr				0	80	Out of Supply

PROJECT BANKO PROJECT
TITLE COAL INJECTING EQUIPMENT

EQUIPMENT LIST (Gasification Plant)

EQUIPMENT ITEM NUMBER	SERVICE	No REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
3-1	No.2 Pulverized Coal Surge Hopper	6	Steel Plate Cylindrical Type	5,000 ϕ x 10,500 H (Cylinder Height 6.2m) Cone Height 4.3m Volume : 140 m ³ With Bag Filter	10.9 Σ +			0	30	
3-2	Pulverized Coal Injection Tank	12	Steel Plate Cylindrical Pressure Vessel	4,600 ϕ x 6,700 H (Cylinder Height 3.0m) Cone Height 3.7m Volume : 70 m ³ With Load Cell	63.3 Σ			19	80	
3-3	Pulverized Coal Discharge Feeder	12	Rotary Feeder	Capacity : 70 t/hr Motor : 15 KW Speed Reducer Number of Rotation : 16 rpm	0.7 Σ			19	80	
3-4	Main Lance	24	Fourfold Tube Water Cooled Lance	250 ϕ x 9,500 L Capacity : 17.4 t/hr Internal Structure : Center Tube: CO ₂ + Pulverized Coal Second Tube: O ₂ Third Tube: Cooling Water In Fourth Tube: Cooling Water Out	3.7 Σ			19	1,600	

PROJECT BANKO PROJECT
TITLE SUB-MATERIAL EQUIPMENT

EQUIPMENT LIST (Gasification Plant)

EQUIPMENT ITEM NUMBER	SERVICE	No REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
4-1	Receiving Shoot	1	Steel Plate Square Type	3,000 x 7,200 H Prism Height : 3,500 H Pyramid Height : 3,700 H Volume : 38 m ³ With Lining	5.4			0	50	
4-2	Sub-Material Discharge Feeder	1	Vibrating Feeder	Capacity : 5 t/hr Motor : 2.2 KW	1.5			0	50	Value of Scrap
4-3	Sub-Material Conveyor (1)	1	Belt Conveyor	Capacity : 5 t/hr Motor : 1.5 KW	11			0	50	
4-4	Sub-Material Bucket Conveyor	1	Bucket Type	Capacity : 5 t/hr Motor : 1.5 KW	14			0	50	
4-5	Sub-Material Conveyor (2)	1	Belt Conveyor	Capacity : 5 t/hr Motor : 1.5 KW	17			0	50	
4-6	Distributor	1	Damper Adjust	1,000 x 1,000 x 1,000 Distributor with Square Damper	4.0			0	50	
4-7	Sub-Material Conveyor (3)	2	Belt Conveyor	Capacity : 5 t/hr Motor : 0.75 KW	6.6			0	50	
4-8	Sub-material Conveyor (4)	2	Belt Conveyor	Capacity : 5 t/hr Motor : 3.75 KW With Tripper With Shooter	43			0	50	

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					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
4-9	Quick Lime Hopper	6	Steel Plate Square Type	□ 2,200 x 4,630 H Prism Height : 2,200 Pyramid Height : 2,430 Volume : 10 m ³	23			0	50	
4-10	Scrap Hopper	6	Steel Plate Square Type	□ 1,200 x 3,220 H Prism Height : 1,750 Pyramid Height : 1,470. Volume : 2.5 m ³	1.0			0	50	
4-11	FeAl Hopper	6	Steel Plate Square Type	□ 1,000 x 2,730 H Prism Height : 1,750 Pyramid Height : 2,430 Volume : 1.4 m ³	0.7			0	50	
4-12	Quick Lime Discharger	6	Vibrating Feeder	Capacity : 8 ♯/hr Motor : 0.4 KW	0.2			0	50	
4-13	Scrap Discharger	6	Vibrating Feeder	Capacity : 6 ♯/hr Motor : 0.4 KW	0.2					
4-14	FeAl Discharger	6	Vibrating Feeder	Capacity : 36 ♯/hr Motor : 2.2 KW	0.2			0	50	
4-15	Quick Lime Scale Hopper	6	Steel Plate Pressure Vessel	∅ 800 x 2,200 H Volume : 0.6 m ³ With Load Cell	0.4			4	80	

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TITLE SUB-MATERIAL EQUIPMENT

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					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
4-16	Scrap, Feal Scale Hopper	6	Steel Plate Pressure Vessel	ϕ 500 x 1,600 H Volume : 0.15 m ³ With Load Cell	0.4			4	30	
4-50	Receiving Shoot	1	Steel Plate Square Type	□ 3,000 x 7,200 H Prism Height : 3,500 H Pyramid Height : 3,700 H Volume : 38 m ³ With Lining	5.4			0	50	
4-51	Lime Stone Discharge Feeder	1	Vibrating Feeder	Capacity : 9 ♯/hr Motor : 0.75 KW	0.3			0	50	
4-52	Lime Stone Conveyor (1)	1	Belt Conveyor	Capacity : 9 ♯/hr Motor : 1.5 KW	8.8			0	50	
4-53	Lime Stone Bucket Conveyor	1	Bucket Type	Capacity : 9 ♯/hr Motor : 1.5 KW	11			0	50	
4-54	Lime Stone Conveyor (2)	1	Belt Conveyor	Capacity : 9 ♯/hr Motor : 0.4 KW	3			0	50	

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					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
4-55	Lime Calciner	1	Direct Heating	Kiln Dimension 2,100 φ x 10,000 L Capacity : 4.3 Ƴ/hr Burner Fuel : Pulverized Coal Motor : 20 KW Accessory : Discharge Feeder Motor : 2.2 KW x 6 Unit	226 Ƴ			0.2	1,200	
4-56	Dust Collector	1	Suction Type Bag Filter	Capacity : 13,900 m ³ /hr Accessory : Discharge Feeder Motor : 0.4 KW x 2 unit	70 Ƴ			0.2	100	
4-57	Exhaust Blower	1	Turbo Blower	Capacity : 13,900 m ³ /hr Pressure Head : 1,000 mm Aq Motor : 80 KW	0.8 Ƴ			0.2	100	
4-58	Exhaust Stack	1	Steel Plate	1600 φ x 70,000	55 Ƴ			0.2	100	
4-59	Quick Lime Conveyor (1)	1	Screw Conveyor	Capacity : 5 Ƴ/hr Motor : 0.4 KW	2 Ƴ			0	50	
4-60	Quick Lime Bucket Conveyor	1	Bucket Type	Capacity : 5 Ƴ/hr Motor : 1.5 KW	14 Ƴ			0	50	
4-61	Quick Lime Storage Hopper	1	Steel Plate Cylindrical Type	2,500 φ x 4,630 H Volume : 10 m ³	2.3 Ƴ			0	50	

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 TITLE SUB-MATERIAL EQUIPMENT

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					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
4-62	Quick Lime Discharge Feeder	1	Rotary Feeder	Capacity : 5 3/hr Motor : 2.2 KW	1.5 3			0	50	
4-63	Quick Lime Conveyor (2)	1	Belt Conveyor	Capacity : 5 3/hr Motor : 0.75 KW	6.6 3			0	50	

PROJECT BANKO PROJECT
TITLE COAL GASIFICATION EQUIPMENT

EQUIPMENT LIST (Gasification Plant)

EQUIPMENT ITEM NUMBER	SERVICE	NO REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
5-1	Gasifier	6	Horizontal Type	7,100 φ x 17,190 L Steel Bath : 277 t	1546 ♀			4	1700	
5-2	Ladle	6	Steel Plate Refractory Material Lining	3,400 φ x 3,800 H Capacity : 153 t	63 ♀			0	1700	
5-3	Slag Pot	6	Cast Steel Slag Pot	Capacity : 15 t	18.3 ♀			0	1700	
5-4	Slag Hole of Drill Machine	6	Pneumatic Drive Rotary Drill	Drill Hole : 90 φ Stroke : 1,500	10 ♀			8	1700	
5-5	Mud Gun	6	Hydraulic Drive Mud Gun	Mud Volume : 60 L Accessory : Hydraulic Unit Water and Glycol Use Motor : 30 KW	12 ♀			210	1800	
5-6	Slag Dump	2	Automotive Slag Dump	Load : 33.3 ♀ Own Weight : 18.3 ♀ Slag : 15 ♀	6 ♀			0	100	
5-7	Ladle Crane	1	Overhead Traveling Crane	Main Hook : 250 t Auxiliary Hook : 35 t Motor: 250x2/110/15/75/45x2 KW	300 ♀			0	100	

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TITLE COAL GASIFICATION EQUIPMENT

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					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
5-8	Sub-Lance	6	Threefold Tube	100 ϕ x 13,500 Measuring Item: Steel Bath Temperature Steel Bath Carbon Content Slag Basicity Inside Structure Center Tube : Cable Second Tube : Cooling Water (Inlet) Third Tube : Cooling Water (Outlet) Accessory : Prove Exchanger	0.85			12	1800	
5-9	Main Lance Elevator	24	Winch Type	High Speed : 12 m/min Low Speed : 3 m/min Motor : 15 KW	25.8			0	80	
5-10	Furnace Heating-Up Burner	4	Off-Gas Combustion	Heating Capacity : 1.69 x 10 ⁷ Kcal/hr	3.7			0	1600	
5-11	Furnace Heating-Up Burner Blower	1	Single Suction Turbo-Blower	Capacity : 1,500 m ³ /min Pressure Head : 800 mm Aq Motor : 400 KW	12			0	Am- bient Temper- ature	
5-12	Scrap Melting Burner	4	Off-Gas Combustion	Thermal Capacity : 1.32 x 10 ⁷ Kcal/hr	3.7			0	1600	
5-13	Sub-Lance Elevator	6	Winch Type	High Speed : 20 m/min Low Speed : 5 m/min Motor : 7.5 KW	20			0	80	

PROJECT BANKO PROJECT
TITLE COAL GASIFICATION EQUIPMENT

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					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
5-14	Overhead Traveling Crane for Lance	2	Overhead Traveling Crane	Main Hook : 30 W Auxiliary Hook : 15 W Motor : 75/45/15/55 KW	60 W			0	80	
5-15	Ladle Turning Table	1	180° Rotary Table	4,500 φ x 1,400 H Motor Base : 1.8m x 4.4m x 0.3m Number of Rotation : 2 rpm Motor : 50 KW x 8P With Speed Reducer	52.4 W			0	80	
5-16	Drill Machine for Tapping Hole	2	Movable Type Drill	Diesel Engine Drive (Electric Power Supply from Building)	20 W			8	1700	

PROJECT BANKO PROJECT
TITLE GAS COOLING AND DEDUSTING EQUIPMENT

EQUIPMENT LIST (Gasification Plant)

EQUIPMENT ITEM NUMBER	SERVICE	No REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
6-1	Waste Heat Boiler	6	Water Cooling Membrane Wall	Gas Flow Rate: 118,560 Nm ³ /hr Heat Transfer Area : 600 m ² Gas Temperature: 1600 °C → 610 °C	150			4	1700	
6-2	Waste Heat Boiler Drum	6	Steel Plate Pressure Vessel	Volume : 12 m ³	35			80	300	
6-3	Boiler Circulating Pump	24	Single Suction Volute Pump	Capacity : 260 t/hr Head : 50 m Motor : 75 KW	3			5	300	
6-4	Wet Type Dust Collector	6	Saturator & Ring slit washer	Gas Flow Rate: 118,560 Nm ³ /hr Gas Temperature: 610 °C → 70 °C Gas Dust Content: 0.03 mg/Nm ³	50			4	700	
6-5	Waste Water Tank	6	Steel Plate Cylindrical Type	4,600 ø x 4,200 H Volume : 70 m ³	6.6			0	80	
6-6	Waste Water Pump	12	Single Suction Volute Pump	Capacity : 250 t/hr Head : 50 m Motor : 50 KW	2			7	80	

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 TITLE GAS COOLING AND DEDUSTING EQUIPMENT

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					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
6-7	Three Way Valve	6	Closed Butterfly Valve	Inlet Diameter : 1,000 ϕ Drive : Air Cylinder Accessory : Valve Seat Cleaner Temperature: 100 °C	7.6 W			4	200	
6-8	Flare Stack	6	Steel Plate Stack Supported by Building	Diameter : 1,000 ϕ Accessory : Flea Burner	33.1 W			4	1200	
6-9	Gas Stop Valve	12	Butterfly Valve	Inlet Diameter : 1,000 ϕ Accessory : Double Action Air Cylinder	2.6 W			4	100	

PROJECT BANKO PROJECT
TITLE WATER TREATMENT EQUIPMENT

EQUIPMENT LIST (Gasification Plant)

EQUIPMENT ITEM NUMBER	SERVICE	No REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
7-1	Thickener	4	Concrete Thickener	21.28m ϕ x 3.05m H Quantity : 1,050 m ³ Accessory: Thickener Rake Motor 7.5/1.5 KW Adjusting Water Tank: 23.68m ϕ x 1.2m W x 2.83m H Volume : 240 m ³				0	80	
7-2	Chemical Feed Tank	2	Steel Plate Cylindrical Type	4,250 ϕ x 5,300 H Volume : 75 m ³ Accessory : Agitator Motor 22 KW	7 S			0	50	
7-3	Chemical Feed Pump	2	Diaphragm Pump	Capacity : 1.25 t/hr Head : 20 m Motor : 0.4 KW	0.5 F			5	50	
7-4	Thickener Pump	8	Piston Pump	Capacity : 14 t/hr Head : 310 m Motor : 75 KW	9.0 S			35	50	
7-5	Dust Collector Water Pump	8	Volute Pump	Capacity : 480 t/hr Head : 40 m Motor : 111 KW	3.5 S			5	70	
7-6	Collective Water Tank	2	Concrete Tank	3 \square x 1.5H Volume : 13.5 m ³				0	80	

PROJECT BANKO PROJECT
TITLE GAS HOLDER EQUIPMENT

EQUIPMENT LIST (Gasification Plant)

EQUIPMENT ITEM NUMBER	SERVICE	No REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
8-1	Holder Inlet Valve	6	Closed Butterfly Type	Inlet Diameter : 450 φ Gas Pressure : 39 kg/cm ² G Gas Temperature : 32 °C	1.0			20	80	
8-2	Gas Holder	3	Steel Plate Spherical	Shape : 15,400 φ Globlular Shape Volume : 1,905 m ³ Gas Pressure : 39 kg/cm ² G	810			20	80	
8-3	Holder Outlet Valve 1	1	Pressure Reduce Valve	Inlet Diameter : 400 φ Gas Pressure : 2 39 kg/cm ² G → 10 kg/cm ² G Gas Temperature : 32 °C	2.0			20	80	
8-4	Holder Outlet Valve 2	2	Pressure Reduce Valve	Inlet Diameter : 400 φ Gas Pressure : 2 10 kg/cm ² G → 2.4 kg/cm ² G Gas Temperature : 32 °C	2.0			20	80	

PROJECT BANKO PROJECT
TITLE AUXILIARY EQUIPMENT

EQUIPMENT LIST (Gasification Plant)

EQUIPMENT ITEM NUMBER	SERVICE	No REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
9-1	Environmental Dust Collector	1	Pressure Type Bag Filter	Capacity : 35,000 m ³ /min Accessory : Discharge Feeder Motor : 2.2 KW x 56 Set	1160			0.2	80	
9-2	Duct Collector Blower	7	Double Suction Turbo Type	Capacity : 5,600 m ³ /min Pressure Head : 1,000 mm Aq Gas Temperature : 40 °C Motor : 1,833 KW	79			0.2	80	
9-3	Ladle Preheating Equipment	2	Off-Gas Combustion		4.9					
9-3-1	Preheating Equipment	2		Dimension: 7280 ^W x 3400 ^L x 8300 ^H Heating Capacity of Burner: 5,43 X 10 ⁵ Kcal/hr	3			0	1700	
9-3-2	Blower for Preheating Burner	2	Section Turbo-Blower	Capacity: 166 m ³ /min Pressure Head: 650mmAq Motor: 37KW	1,9			0	80	
9-4	Brick Conveying Equipment	2	Dolly Lifting Method	Dimension: ø 1900 X 15m Dolly for Lifting Stroke: approx. 14m Motor: 11 Motor for Dolly-Lifting: 11KW Motor for Hoisting: 15KW	25			0	Am- bient Temper- ature	
9-5	Fork Lift	3	Fork Lift	Lift Capacity : 2	5			0	Am- bient Temper- ature	Gasifier: 2 Ladle: 1

PROJECT BANKO PROJECT
TITLE WATER SOFTENING EQUIPMENT

EQUIPMENT LIST (Gasification Plant)

EQUIPMENT ITEM NUMBER	SERVICE	No REQD	TYPE	SPECIFICATION	WEIGHT (ton)			DESIGN		REMARKS
					EREC	TEST	OPN	PRESS Kg/cm ²	TEMP °C	
10-1	Industrial Water Filter	1	Vertical and Cylindrical Type	3,400 ϕ x 5,000 H Volume : 38 m ³ Pump: Capacity 67.5 t/hr Head 50 m Number 1 Set	15.3		55	5	50	
10-2	Water Softener	1	Vertical and Cylindrical Type	3,400 ϕ x 5,000 H Volume : 38 m ³	18		58	5	50	
10-3	Cooling Tower	3	Cooling Tower	7,600 ϕ x 6,700 H Cooling Capacity : 3.9 x 10 ⁶ Kcal/hr Standard Flow Rate : 13 m ³ /min Pipe Diameter : 300 A	6.5			0	50	
10-4	Cooling Water Circulating Pump 1	3	Single Suction Volute Pump	Capacity : 625 t/hr Head : 50m Motor : 110 KW	7			5	50	For Lance & Sub-Lance
10-5	Cooling Water Circulating Pump 2	3	Single Suction Volute Pump	Capacity : 210 t/hr Head : 50m Motor : 40 KW	1.3			5	50	For Heating up Melting Burner

ATTACHMENT 15-2

1. Computer Printout of Financial Analysis - Base Case

1. Computer Printout of Financial Analysis - Base Case

CASE BASE	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
* M / L *											
* METHANOL											
PRICE (\$/TON)	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00
1ST VOLUME (1000T)	0	0	0	0	350	450	500	500	500	500	500
2ND VOLUME (1000T)	0	0	0	0	0	0	0	350	450	500	500
3RD VOLUME (1000T)	0	0	0	0	0	0	0	0	0	350	450
REVENUE	0	0	0	0	61,250	78,750	87,500	148,750	166,250	236,250	253,750
VARIABLE COST	0	0	0	0	13,740	17,666	19,629	33,369	37,295	52,998	56,924
RAW MATERIALS	0	0	0	0	12,788	16,442	18,269	31,057	34,711	49,326	52,980
(COAL)	0	0	0	0	12,128	15,594	17,326	29,455	32,920	46,781	50,247
(CADO3)	0	0	0	0	217	279	310	527	589	836	898
(SCRAP)	0	0	0	0	443	570	633	1,076	1,202	1,709	1,835
CATALYST/CHEMICALS	0	0	0	0	952	1,224	1,360	2,312	2,584	3,672	3,944
FIXED COST	2,621	3,066	7,642	14,342	68,817	63,547	58,964	86,274	82,290	101,738	93,448
DEPR & AMORT	0	0	0	0	39,863	36,993	34,410	55,872	51,888	66,724	62,034
MAINTENANCE	0	0	0	0	5,999	5,899	5,899	9,277	9,277	11,917	11,917
INSURANCE	0	0	0	0	3,933	3,933	3,933	6,185	6,185	7,944	7,944
PLANT OVERHEAD COS	0	0	0	0	9,561	9,561	9,561	9,561	9,561	9,561	9,561
ADMINISTRATIVE COS	2,390	2,390	4,781	4,781	0	0	0	0	0	0	0
PERSONNEL	231	676	2,861	9,561	9,561	7,161	5,161	5,379	5,379	5,992	1,992
(LOCAL)	231	676	1,561	1,561	1,561	1,561	1,561	1,779	1,779	1,992	1,992
(JAPANESE)	0	0	1,300	8,000	8,000	5,600	3,600	3,600	3,600	3,600	0
TOTAL EXPENSE	2,621	3,066	7,642	14,342	82,557	81,213	78,593	119,643	119,585	154,736	150,372
OPF. PROFIT	-2,621	-3,066	-7,642	-14,342	-21,307	-2,463	8,907	29,107	46,665	81,514	103,378
INTEREST PAID	1,350	5,350	14,439	25,320	32,748	40,134	47,531	52,083	52,119	45,658	34,333
LONG INT.	1,368	4,747	13,008	22,161	25,956	29,263	34,031	37,263	37,893	35,393	30,746
SHORT INT.	182	603	1,431	3,158	6,792	10,872	13,499	14,821	14,226	10,264	3,587
I.D.C.	1,368	4,747	13,008	22,161	1,962	7,409	14,318	5,637	9,767	0	0
PROFIT BEF. TAX	-2,803	-3,669	-9,073	-17,500	-52,094	-35,189	-24,306	-17,340	4,314	35,856	69,044
TAX	0	0	0	0	0	0	0	0	0	0	0
NET PROFIT	-2,803	-3,669	-9,073	-17,500	-52,094	-35,189	-24,306	-17,340	4,314	35,856	69,044
RETAINED EARNING	-2,803	-6,473	-15,545	-33,045	-85,139	-120,328	-144,635	-161,975	-157,661	-121,805	-52,761

CASE BASE	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
* C / F *											
CASH-IN											
PROFIT BEF TAX	-2,803	-3,669	-9,073	-17,500	-52,094	-35,189	-24,306	-17,340	4,314	35,856	69,044
DEP. & AMORT.	0	0	0	0	39,863	36,993	34,410	55,872	51,888	66,724	62,034
EQUITY	12,791	18,804	58,430	27,147	17,708	31,463	31,144	24,142	13,799	0	0
L.I.D.	38,372	56,412	175,289	81,441	53,125	94,389	93,432	72,426	41,398	0	0
S.T.D.	2,803	6,473	15,545	33,045	71,445	95,809	111,874	116,135	102,726	55,189	0
TOTAL	51,163	78,020	240,191	124,133	130,047	223,466	246,554	251,235	214,125	157,769	131,079
CASH-OUT											
TOTAL INVESTMENT	51,163	75,216	233,718	108,587	70,834	125,853	124,577	96,568	55,197	0	0
(CAPEX)	(49,795)	(70,469)	(220,710)	(79,383)	(68,872)	(118,444)	(105,203)	(90,931)	(40,374)	(0)	(0)
(WORKING CAP.)	(0)	(0)	(0)	(3,371)	(0)	(0)	(3,371)	(0)	(3,371)	(0)	(0)
(START-UP)	(0)	(0)	(0)	(1,685)	(0)	(0)	(1,685)	(0)	(1,685)	(0)	(0)
(TRAINING)	(0)	(0)	(0)	(1,987)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(I.D.C.)	(1,368)	(4,747)	(13,008)	(22,161)	(1,962)	(7,409)	(14,318)	(5,637)	(9,767)	(0)	(0)
LONG REPAY	0	0	0	0	26,168	26,168	26,168	42,793	42,793	55,042	60,842
SHORT REPAY	0	2,803	6,473	15,545	33,045	71,445	95,809	111,874	116,135	102,726	55,189
EXCESS CASH	0	0	0	0	0	0	0	0	0	0	15,048
TAX PAID	0	0	0	0	0	0	0	0	0	0	0
DIVIDEND	0	0	0	0	0	0	0	0	0	0	0
TOTAL	51,163	78,020	240,191	124,133	130,047	223,466	246,554	251,235	214,125	157,769	131,079
* B / S *											
CASH	0	0	0	0	0	0	0	0	0	0	15,048
RECEIVABLE ASSET	0	0	0	0	0	0	0	0	0	0	0
CAPEX	49,795	120,264	340,974	420,357	453,862	539,809	615,098	657,039	652,408	594,426	541,133
WORKING CAPITAL	0	0	0	3,371	3,371	3,371	6,742	6,742	10,113	10,113	10,113
DEFERRED ASSET	1,368	6,116	19,124	44,957	42,423	45,336	56,843	55,997	60,166	51,425	42,683
TOTAL ASSET	51,163	126,380	360,098	468,685	499,656	568,516	678,682	719,378	722,687	655,963	608,976
PAYABLES	0	0	0	0	0	0	0	0	0	0	0
L.I.D.	38,372	94,785	270,073	351,514	378,471	446,692	513,956	543,589	542,194	487,151	426,309
S.T.D.	2,803	6,473	15,545	33,045	71,445	95,809	111,874	116,135	102,726	55,189	0
EQUITY	12,791	31,595	90,024	117,171	134,880	166,343	197,487	221,629	235,428	235,428	235,428
RETAINED EARNING	-2,803	-6,473	-15,545	-33,045	-85,139	-120,328	-144,635	-161,975	-157,661	-121,805	-52,761
TOTAL LIABIL & CAP	51,163	126,380	360,098	468,685	499,656	568,516	678,682	719,378	722,687	655,963	608,976

BREAK EVEN PRICE

CASE	BASE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
* P / L *												
* METHANOL												
PRICE (\$/TON)		175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00
1ST VOLUME (1000T)		500	500	500	500	500	500	500	500	500	500	500
2ND VOLUME (1000T)		500	500	500	500	500	500	500	500	500	500	500
3RD VOLUME (1000T)		500	500	500	500	500	500	500	500	500	500	500
REVENUE		262,500	262,500	262,500	262,500	262,500	262,500	262,500	262,500	262,500	262,500	262,500
VARIABLE COST												
RAW MATERIALS		58,887	58,887	58,887	58,887	58,887	58,887	58,887	58,887	58,887	58,887	58,887
(COAL)		54,807	54,807	54,807	54,807	54,807	54,807	54,807	54,807	54,807	54,807	54,807
(COACOS)		(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)
(SCRAP)		(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)
CATALYST/CHEMICALS		4,080	4,080	4,080	4,080	4,080	4,080	4,080	4,080	4,080	4,080	4,080
FIXED COST		89,228	85,430	82,011	74,439	71,670	69,178	64,548	62,529	58,853	57,218	55,746
DEPR & AMORT		57,814	54,016	50,597	43,025	40,256	37,764	33,134	31,115	27,439	25,804	24,332
MAINTENANCE		11,917	11,917	11,917	11,917	11,917	11,917	11,917	11,917	11,917	11,917	11,917
INSURANCE		7,944	7,944	7,944	7,944	7,944	7,944	7,944	7,944	7,944	7,944	7,944
PLANT OVERHEAD COS		9,561	9,561	9,561	9,561	9,561	9,561	9,561	9,561	9,561	9,561	9,561
ADMINISTRATIVE COS		0	0	0	0	0	0	0	0	0	0	0
PERSONNEL		1,992	1,992	1,992	1,992	1,992	1,992	1,992	1,992	1,992	1,992	1,992
(LOCAL)		(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)
(JAPANESE)		0	0	0	0	0	0	0	0	0	0	0
TOTAL EXPENSE		148,115	144,316	140,898	133,326	130,556	128,064	123,435	121,416	117,740	116,105	114,633
OPF. PROFIT		114,385	118,184	121,602	129,174	131,944	134,436	139,065	141,084	144,760	146,395	147,867
INTEREST PAID		25,954	21,161	17,439	14,725	11,948	9,795	8,266	7,238	6,710	6,183	5,656
LONG INT.		25,954	21,161	17,439	14,725	11,948	9,795	8,266	7,238	6,710	6,183	5,656
SHORT INT.		0	0	0	0	0	0	0	0	0	0	0
I.D.C.		0	0	0	0	0	0	0	0	0	0	0
PROFIT REF. TAX		88,432	97,022	104,163	114,450	119,995	124,640	130,799	133,846	138,050	140,212	142,211
TAX		28,224	33,958	36,457	40,057	41,998	43,624	45,780	46,846	48,317	49,074	49,774
NET PROFIT		60,208	63,065	67,706	74,392	77,997	81,016	85,020	87,000	89,732	91,138	92,437
RETAINED EARNING		7,447	70,511	138,217	212,610	290,607	371,623	456,643	543,643	633,375	724,513	816,950

CASE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
* C / F *											
CASH-IN											
PROFIT REF TAX	89,432	97,022	104,163	114,450	119,995	124,640	130,799	133,846	138,050	140,212	142,211
DEP. & AMORT.	57,814	54,016	50,597	43,025	40,256	37,764	33,134	31,115	27,439	25,804	24,332
EQUITY	0	0	0	0	0	0	0	0	0	0	0
L.T.D.	0	0	0	0	0	0	0	0	0	0	0
S.T.D.	0	0	0	0	0	0	0	0	0	0	0
TOTAL	146,246	151,038	154,760	157,475	160,251	162,404	163,933	164,962	165,489	166,016	166,543
CASH-OUT											
TOTAL INVESTMENT	0	0	0	0	0	0	0	0	0	0	0
(CAPEX)	0	0	0	0	0	0	0	0	0	0	0
(WORKING CAP.)	0	0	0	0	0	0	0	0	0	0	0
(START-UP)	0	0	0	0	0	0	0	0	0	0	0
(TRAINING)	0	0	0	0	0	0	0	0	0	0	0
(I.D.C.)	0	0	0	0	0	0	0	0	0	0	0
LONG REPAY	60,842	60,842	34,674	37,168	37,168	22,794	22,794	10,545	10,545	10,545	10,545
SHORT REPAY	0	0	0	0	0	0	0	0	0	0	0
EXCESS CASH	57,179	56,238	83,629	80,249	81,085	95,985	95,359	107,570	106,626	106,377	106,224
TAX PAID	28,224	33,958	36,457	40,057	41,998	43,624	45,780	46,846	48,317	49,074	49,774
DIVIDEND	0	0	0	0	0	0	0	0	0	0	0
TOTAL	146,246	151,038	154,760	157,475	160,251	162,404	163,933	164,962	165,489	166,016	166,543
* R / S *											
CASH											
RECEIVABLE ASSET	72,227	128,465	212,094	292,343	373,428	469,413	564,772	672,342	778,968	885,365	991,589
CAPEX	492,061	446,787	404,932	366,154	330,144	296,627	265,352	236,096	208,657	182,853	158,521
WORKING CAPITAL	10,113	10,113	10,113	10,113	10,113	10,113	10,113	10,113	10,113	10,113	10,113
DEFERRED ASSET	33,941	25,199	16,457	12,211	7,965	3,719	1,859	0	0	0	0
TOTAL ASSET	608,342	610,564	643,596	680,820	721,630	779,871	842,096	918,551	997,739	1,078,331	1,160,223
PAYABLES											
L.T.D.	0	0	0	0	0	0	0	0	0	0	0
S.T.D.	0	0	0	0	0	0	0	0	0	0	0
EQUITY	235,428	235,428	235,428	235,428	235,428	235,428	235,428	235,428	235,428	235,428	235,428
RETAINED EARNING	7,447	70,511	138,217	212,610	290,607	371,633	456,643	543,643	633,375	724,513	816,950
TOTAL LIABIL & CAP	608,342	610,564	643,596	680,820	721,630	779,871	842,096	918,551	997,739	1,078,331	1,160,223

BREAK EVEN PRICE

** INDONESIA BANKO COAL PROJECT (UNIT:1000\$)

CASE BASE

	2018	2019	2020	2021	2022	2023	2024	TOTAL
PRICE (\$/TON)	175.00	175.00	175.00	175.00	175.00	175.00	175.00	5075.00
1ST VOLUME (1000T)	500	500	500	500	500	500	500	500
2ND VOLUME (1000T)	500	500	500	500	500	500	500	500
3RD VOLUME (1000T)	500	500	500	500	500	500	500	500
REVENUE	262,500	262,500	262,500	262,500	262,500	262,500	262,500	5,757,500
VARIABLE COST	58,887	58,887	58,887	58,887	58,887	58,887	58,887	1,291,586
RAW MATERIALS	54,807	54,807	54,807	54,807	54,807	54,807	54,807	1,202,098
(COAL)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(51,979)	(140,077)
(CACOS)	(929)	(929)	(929)	(929)	(929)	(929)	(929)	(20,382)
(SCRAP)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(1,898)	(41,638)
CATALYST/CHEMICALS	4,080	4,080	4,080	4,080	4,080	4,080	4,080	89,488
FIXED COST	54,422	53,230	45,489	44,533	43,654	40,396	39,892	1,675,005
DEPR & AMORT	23,008	21,816	14,075	13,109	12,240	8,982	8,279	874,588
MAINTENANCE	11,917	11,917	11,917	11,917	11,917	11,917	11,917	274,584
INSURANCE	7,944	7,944	7,944	7,944	7,944	7,944	7,944	183,056
PLANT OVERHEAD COS	9,561	9,561	9,561	9,561	9,561	9,561	9,561	239,025
ADMINISTRATIVE COS	0	0	0	0	0	0	0	14,342
PERSONNEL	1,992	1,992	1,992	1,992	1,992	1,992	1,992	89,410
(LOCAL)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(1,992)	(52,110)
(JAPANESE)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(37,300)
TOTAL EXPENSE	113,309	112,117	104,375	103,410	102,541	99,283	98,579	2,966,590
OPF. PROFIT	149,191	150,383	158,125	159,090	159,959	163,217	163,921	2,790,910
INTEREST PAID	5,129	4,601	4,074	3,547	3,020	2,492	1,965	511,169
LONG INT.	5,129	4,601	4,074	3,547	3,020	2,492	1,965	431,733
SHORT INT.	0	0	0	0	0	0	0	79,436
I.D.C.	0	0	0	0	0	0	0	80,377
PROFIT BEF. TAX	144,062	145,782	154,050	155,543	156,939	160,724	161,956	2,360,118
TAX	50,422	51,024	53,918	54,440	54,979	56,254	56,684	841,781
NET PROFIT	93,641	94,758	100,133	101,103	102,011	104,471	105,271	1,518,337
RETAINED EARNING	910,591	1,005,349	1,105,481	1,206,585	1,308,595	1,413,066	1,518,337	

** INDONESIA BANKO COAL PROJECT (UNIT:1000*)

CASE BASE

	2018	2019	2020	2021	2022	2023	2024	TOTAL
CASH-IN								
PROFIT BEF TAX	144,042	145,782	154,050	155,543	156,939	160,724	161,956	2,360,118
DEF. & AMORT.	23,008	21,816	14,075	13,109	12,240	8,982	8,279	874,588
EQUITY	0	0	0	0	0	0	0	235,428
L.T.D.	0	0	0	0	0	0	0	706,285
S.T.D.	0	0	0	0	0	0	0	611,045
TOTAL	167,071	167,598	168,125	168,652	169,180	169,707	170,234	4,787,464

CASH-OUT

TOTAL INVESTMENT	0	0	0	0	0	0	0	941,713
(CAPEX)	0	0	0	0	0	0	0	0
(WORKING CAP.)	0	0	0	0	0	0	0	0
(START-UP)	0	0	0	0	0	0	0	0
(TRAINING)	0	0	0	0	0	0	0	0
(I.D.C.)	0	0	0	0	0	0	0	0
LONG REPAY	10,545	10,545	10,545	10,545	10,545	10,545	10,545	672,256
SHORT REPAY	0	0	0	0	0	0	0	611,045
EXCESS CASH	106,104	106,029	103,662	103,667	103,706	103,908	103,004	1,730,670
TAX PAID	50,422	51,024	53,918	54,440	54,929	56,254	56,684	841,781
DIVIDEND	0	0	0	0	0	0	0	0
TOTAL	167,071	167,598	168,125	168,652	169,180	169,707	170,234	4,787,464

* R / S *

CASH	1,097,693	1,203,722	1,307,384	1,411,051	1,514,757	1,617,665	1,720,670	
RECEIVABLE ASSET	0	0	0	0	0	0	0	
CAPEX	135,513	113,696	99,622	86,513	74,273	65,290	57,012	
WORKING CAPITAL	10,113	10,113	10,113	10,113	10,113	10,113	10,113	
DEFERRED ASSET	0	0	0	0	0	0	0	
TOTAL ASSET	1,243,319	1,327,531	1,417,119	1,507,677	1,599,143	1,693,068	1,787,794	
PAYABLES	0	0	0	0	0	0	0	
L.T.D.	97,300	86,755	76,209	65,664	55,119	44,574	34,029	
S.T.D.	0	0	0	0	0	0	0	
EQUITY	235,428	235,428	235,428	235,428	235,428	235,428	235,428	
RETAINED EARNING	910,591	1,005,349	1,105,481	1,206,585	1,308,595	1,413,066	1,518,337	
TOTAL LIABIL & CAP	1,243,319	1,327,531	1,417,119	1,507,677	1,599,143	1,693,068	1,787,794	

BREAK EVEN PRICE

** INDONESIA BANKO COAL PROJECT

CASE BASE

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
* (P/L) CONTENTS OF DEPR. & INTEREST											
(1) DEPR. & AMORT.	0	0	0	0	39,863	36,993	34,410	55,872	51,888	66,724	62,034
PHASE I	0	0	0	0	35,734	32,864	30,282	27,957	25,845	23,982	22,287
(FACILITIES)	()	()	()	()	()	()	()	()	()	()	()
(BUILD. & LANDS)	()	()	()	()	()	()	()	()	()	()	()
(WORKING CAP.)	()	()	()	()	()	()	()	()	()	()	()
(START-UP EXP)	()	()	()	()	()	()	()	()	()	()	()
(TRAINING)	()	()	()	()	()	()	()	()	()	()	()
PHASE II	0	0	0	0	0	0	0	21,568	19,674	17,973	16,440
(FACILITIES)	()	()	()	()	()	()	()	()	()	()	()
(BUILD. & LANDS)	()	()	()	()	()	()	()	()	()	()	()
(WORKING CAP.)	()	()	()	()	()	()	()	()	()	()	()
(START-UP EXP)	()	()	()	()	()	()	()	()	()	()	()
(TRAINING)	()	()	()	()	()	()	()	()	()	()	()
PHASE III	0	0	0	0	0	0	0	0	0	16,731	15,269
(FACILITIES)	()	()	()	()	()	()	()	()	()	()	()
(BUILD. & LANDS)	()	()	()	()	()	()	()	()	()	()	()
(WORKING CAP.)	()	()	()	()	()	()	()	()	()	()	()
(START-UP EXP)	()	()	()	()	()	()	()	()	()	()	()
(TRAINING)	()	()	()	()	()	()	()	()	()	()	()
I. D.C.	0	0	0	0	4,129	4,129	4,129	6,347	6,347	8,038	8,038
(PHASE I)	()	()	()	()	()	()	()	()	()	()	()
(PHASE II)	()	()	()	()	()	()	()	()	()	()	()
(PHASE III)	()	()	()	()	()	()	()	()	()	()	()
(2) INTEREST PAID	1,550	5,350	14,439	25,320	32,748	40,134	47,531	52,083	52,119	45,658	34,333
LONG INT.	1,550	5,350	14,439	25,320	32,748	40,134	47,531	52,083	52,119	45,658	34,333
PHASE I	1,368	4,747	13,008	22,161	23,995	21,854	19,714	17,573	15,433	13,292	11,006
(PLANT 60%)	()	()	()	()	()	()	()	()	()	()	()
(PLANT 40%)	()	()	()	()	()	()	()	()	()	()	()
(INFRA)	()	()	()	()	()	()	()	()	()	()	()
PHASE II	0	0	0	0	1,962	7,409	12,813	14,053	12,693	11,333	9,973
(PLANT 60%)	()	()	()	()	()	()	()	()	()	()	()
(PLANT 40%)	()	()	()	()	()	()	()	()	()	()	()
(INFRA)	()	()	()	()	()	()	()	()	()	()	()
PHASE III	0	0	0	0	0	0	1,504	5,637	9,767	10,768	9,766
(PLANT 60%)	()	()	()	()	()	()	()	()	()	()	()
(PLANT 40%)	()	()	()	()	()	()	()	()	()	()	()
(INFRA)	()	()	()	()	()	()	()	()	()	()	()
7) 25% CAPITAL	182	603	1,431	3,158	6,792	10,872	13,499	14,821	14,226	10,264	3,587

CASE BASE

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
* (C/F) DEBT, REPAY & INVESTMENT *											
L.T.D. TOTAL	41,176	62,885	190,834	114,486	124,570	190,199	205,306	188,560	144,124	55,189	0
PHASE I	38,372	56,412	175,289	81,441	0	0	0	0	0	0	0
(PLANT 60%)	(15,426)	(22,678)	(70,466)	(32,739)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(PLANT 40%)	(10,284)	(15,119)	(46,977)	(21,826)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(INFRA)	(12,663)	(18,616)	(57,845)	(26,875)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
PHASE II	0	0	0	0	53,125	94,389	51,983	0	0	0	0
(PLANT 60%)	(0)	(0)	(0)	(0)	(23,906)	(42,475)	(23,392)	(0)	(0)	(0)	(0)
(PLANT 40%)	(0)	(0)	(0)	(0)	(15,938)	(28,317)	(15,595)	(0)	(0)	(0)	(0)
(INFRA)	(0)	(0)	(0)	(0)	(13,281)	(23,597)	(12,996)	(0)	(0)	(0)	(0)
PHASE III	0	0	0	0	0	0	41,450	72,426	41,398	0	0
(PLANT 60%)	(0)	(0)	(0)	(0)	(0)	(0)	(17,658)	(30,853)	(17,635)	(0)	(0)
(PLANT 40%)	(0)	(0)	(0)	(0)	(0)	(0)	(11,772)	(20,569)	(11,757)	(0)	(0)
(INFRA)	(0)	(0)	(0)	(0)	(0)	(0)	(12,020)	(21,003)	(12,005)	(0)	(0)
772572 7714	2,903	6,473	15,545	33,045	71,445	95,809	111,874	116,135	102,726	55,189	0
TOTAL INVESTMENT	51,163	75,216	233,718	108,587	70,834	125,853	124,577	96,568	55,197	0	0
PHASE I	49,795	70,469	220,710	85,426	0	0	0	0	0	0	0
(FACILITIES)	(25,028)	(70,469)	(179,741)	(11,745)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(BUILD.& LANDS)	(24,767)	(0)	(40,969)	(67,638)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(WORKING CAPITAL)	(0)	(0)	(0)	(3,371)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(START-UP EXP.)	(0)	(0)	(0)	(1,685)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(TRAINING)	(0)	(0)	(0)	(1,987)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
PHASE II	0	0	0	0	68,872	118,444	56,497	0	0	0	0
(FACILITIES)	(0)	(0)	(0)	(0)	(62,731)	(118,444)	(6,067)	(0)	(0)	(0)	(0)
(BUILD.& LANDS)	(0)	(0)	(0)	(0)	(6,141)	(0)	(43,374)	(0)	(0)	(0)	(0)
(WORKING CAPITAL)	(0)	(0)	(0)	(0)	(0)	(0)	(3,371)	(0)	(0)	(0)	(0)
(START-UP EXP.)	(0)	(0)	(0)	(0)	(0)	(0)	(1,685)	(0)	(0)	(0)	(0)
(TRAINING)	(0)	(0)	(0)	(0)	(0)	(0)	(53,762)	(90,931)	(45,430)	(0)	(0)
PHASE III	0	0	0	0	0	0	53,762	90,931	45,430	0	0
(FACILITIES)	(0)	(0)	(0)	(0)	(0)	(0)	(48,963)	(90,931)	(6,295)	(0)	(0)
(BUILD.& LANDS)	(0)	(0)	(0)	(0)	(0)	(0)	(4,799)	(0)	(34,079)	(0)	(0)
(WORKING CAPITAL)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3,371)	(0)	(0)
(START-UP EXP.)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1,685)	(0)	(0)
(TRAINING)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
IDC	1,368	4,747	13,008	22,161	1,962	7,409	14,318	5,637	9,767	0	0
(PHASE I)	(1,368)	(4,747)	(13,008)	(22,161)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(PHASE II)	(0)	(0)	(0)	(0)	(1,962)	(7,409)	(12,813)	(0)	(0)	(0)	(0)
(PHASE III)	(0)	(0)	(0)	(0)	(0)	(0)	(1,504)	(5,637)	(9,767)	(0)	(0)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
LONG REPAY	0	2,803	6,473	15,545	59,213	97,613	121,978	154,667	158,928	157,769	116,031
PHASE I	0	0	0	0	26,168	26,168	26,168	26,168	26,168	26,168	31,968
(PLANT 60%)	0	0	0	0	15,701	15,701	15,701	15,701	15,701	15,701	15,701
(PLANT 40%)	0	0	0	0	10,467	10,467	10,467	10,467	10,467	10,467	10,467
(INFRA)	0	0	0	0	0	0	0	0	0	0	5,800
PHASE II	0	0	0	0	0	0	0	16,625	16,625	16,625	16,625
(PLANT 60%)	0	0	0	0	0	0	0	9,975	9,975	9,975	9,975
(PLANT 40%)	0	0	0	0	0	0	0	6,650	6,650	6,650	6,650
(INFRA)	0	0	0	0	0	0	0	0	0	0	0
PHASE III	0	0	0	0	0	0	0	0	0	12,249	12,249
(PLANT 60%)	0	0	0	0	0	0	0	0	0	7,350	7,350
(PLANT 40%)	0	0	0	0	0	0	0	0	0	4,900	4,900
(INFRA)	0	0	0	0	0	0	0	0	0	0	0
7777777777777777	0	2,803	6,473	15,545	33,045	71,445	95,809	111,874	116,135	102,726	55,189

* (R/S) DEBT *

DEBT (LONG)	41,176	101,257	285,619	394,599	449,916	542,501	625,830	659,724	644,920	542,340	426,309
(PHASE I)	38,372	94,785	270,073	351,514	325,346	299,177	273,009	246,841	220,673	194,504	162,536
(PHASE II)	0	0	0	0	53,123	147,513	199,498	182,873	166,248	149,623	132,998
(PHASE III)	0	0	0	0	0	0	41,450	113,875	135,273	143,024	130,775
(7777777777777777)	2,803	6,473	15,545	33,045	71,445	95,809	111,874	116,135	102,726	55,189	0

CASE BASE

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
* (P/L) CONTENTS OF DEPR. & INTEREST #											
(1)DEPR. & AMORT.	57,814	54,016	50,597	43,025	40,256	37,764	33,134	31,115	27,439	25,804	24,332
PHASE I	20,762	19,390	18,154	16,675	15,675	14,774	13,963	13,234	12,577	11,987	11,455
(FACILITIES)	(13,726)	(12,354)	(11,118)	(10,006)	(9,006)	(8,105)	(7,295)	(6,565)	(5,909)	(5,318)	(4,786)
(BUILD.& LANDS)	(6,669)	(6,669)	(6,669)	(6,669)	(6,669)	(6,669)	(6,669)	(6,669)	(6,669)	(6,669)	(6,669)
(WORKING CAP.)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(START-UP EXP)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)
(TRAINING)	(199)	(199)	(199)	(199)	(199)	(199)	(199)	(199)	(199)	(199)	(199)
PHASE II	15,060	13,819	12,701	11,696	10,790	9,976	9,074	8,414	7,821	7,286	6,805
(FACILITIES)	(12,416)	(11,175)	(10,057)	(9,051)	(8,146)	(7,332)	(6,598)	(5,939)	(5,345)	(4,810)	(4,329)
(BUILD.& LANDS)	(2,476)	(2,476)	(2,476)	(2,476)	(2,476)	(2,476)	(2,476)	(2,476)	(2,476)	(2,476)	(2,476)
(WORKING CAP.)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(START-UP EXP)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)
(TRAINING)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
PHASE III	13,954	12,770	11,704	10,745	9,881	9,105	8,405	7,776	7,041	6,531	6,073
(FACILITIES)	(11,841)	(10,657)	(9,591)	(8,632)	(7,769)	(6,992)	(6,293)	(5,664)	(5,097)	(4,588)	(4,129)
(BUILD.& LANDS)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)
(WORKING CAP.)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(START-UP EXP)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)	(168)
(TRAINING)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
I. D.C.	8,038	8,038	8,038	3,909	3,909	3,909	1,691	1,691	0	0	0
(PHASE I)	(4,129)	(4,129)	(4,129)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(PHASE II)	(2,218)	(2,218)	(2,218)	(2,218)	(2,218)	(2,218)	(0)	(0)	(0)	(0)	(0)
(PHASE III)	(1,691)	(1,691)	(1,691)	(1,691)	(1,691)	(1,691)	(1,691)	(1,691)	(0)	(0)	(0)
(2) INTEREST PAID	25,954	21,161	17,439	14,725	11,948	9,795	8,266	7,238	6,710	6,183	5,656
LONG INT.	25,954	21,161	17,439	14,725	11,948	9,795	8,266	7,238	6,710	6,183	5,656
PHASE I	(8,576)	(6,145)	(4,785)	(4,495)	(4,205)	(3,915)	(3,625)	(3,335)	(3,045)	(2,755)	(2,465)
(PLANT 60%)	(1,766)	(589)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(PLANT 40%)	(1,444)	(481)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(INFRA)	(5,365)	(5,075)	(4,785)	(4,495)	(4,205)	(3,915)	(3,625)	(3,335)	(3,045)	(2,755)	(2,465)
PHASE II	(8,613)	(7,253)	(5,893)	(4,471)	(2,987)	(2,182)	(2,057)	(1,933)	(1,808)	(1,683)	(1,559)
(PLANT 60%)	(3,367)	(2,618)	(1,870)	(1,122)	(374)	(0)	(0)	(0)	(0)	(0)	(0)
(PLANT 40%)	(2,753)	(2,141)	(1,529)	(918)	(306)	(0)	(0)	(0)	(0)	(0)	(0)
(INFRA)	(2,494)	(2,494)	(2,494)	(2,431)	(2,307)	(2,182)	(2,057)	(1,933)	(1,808)	(1,683)	(1,559)
PHASE III	(8,764)	(7,762)	(6,760)	(5,758)	(4,756)	(3,698)	(2,584)	(1,970)	(1,857)	(1,745)	(1,632)
(PLANT 60%)	(3,583)	(3,032)	(2,480)	(1,929)	(1,378)	(827)	(276)	(0)	(0)	(0)	(0)
(PLANT 40%)	(2,930)	(2,479)	(2,028)	(1,578)	(1,127)	(676)	(225)	(0)	(0)	(0)	(0)
(INFRA)	(2,251)	(2,251)	(2,251)	(2,251)	(2,251)	(2,195)	(2,083)	(1,970)	(1,857)	(1,745)	(1,632)
	0	0	0	0	0	0	0	0	0	0	0

CASE	BASE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
* (C/F) DEBT, REPAY & INVESTMENT *												
L.T.D. TOTAL												
PHASE I		0	0	0	0	0	0	0	0	0	0	0
(PLANT 60X)		0	0	0	0	0	0	0	0	0	0	0
(PLANT 40X)		0	0	0	0	0	0	0	0	0	0	0
(INFRA)		0	0	0	0	0	0	0	0	0	0	0
PHASE II		0	0	0	0	0	0	0	0	0	0	0
(PLANT 60X)		0	0	0	0	0	0	0	0	0	0	0
(PLANT 40X)		0	0	0	0	0	0	0	0	0	0	0
(INFRA)		0	0	0	0	0	0	0	0	0	0	0
PHASE III		0	0	0	0	0	0	0	0	0	0	0
(PLANT 60X)		0	0	0	0	0	0	0	0	0	0	0
(PLANT 40X)		0	0	0	0	0	0	0	0	0	0	0
(INFRA)		0	0	0	0	0	0	0	0	0	0	0
TOTAL INVESTMENT		0	0	0	0	0	0	0	0	0	0	0
PHASE I		0	0	0	0	0	0	0	0	0	0	0
(FACILITIES)		0	0	0	0	0	0	0	0	0	0	0
(BUILD.& LANDS)		0	0	0	0	0	0	0	0	0	0	0
(WORKING CAPITAL)		0	0	0	0	0	0	0	0	0	0	0
(START-UP EXP.)		0	0	0	0	0	0	0	0	0	0	0
(TRAINING)		0	0	0	0	0	0	0	0	0	0	0
PHASE II		0	0	0	0	0	0	0	0	0	0	0
(FACILITIES)		0	0	0	0	0	0	0	0	0	0	0
(BUILD.& LANDS)		0	0	0	0	0	0	0	0	0	0	0
(WORKING CAPITAL)		0	0	0	0	0	0	0	0	0	0	0
(START-UP EXP.)		0	0	0	0	0	0	0	0	0	0	0
(TRAINING)		0	0	0	0	0	0	0	0	0	0	0
PHASE III		0	0	0	0	0	0	0	0	0	0	0
(FACILITIES)		0	0	0	0	0	0	0	0	0	0	0
(BUILD.& LANDS)		0	0	0	0	0	0	0	0	0	0	0
(WORKING CAPITAL)		0	0	0	0	0	0	0	0	0	0	0
(START-UP EXP.)		0	0	0	0	0	0	0	0	0	0	0
(TRAINING)		0	0	0	0	0	0	0	0	0	0	0
IDC		0	0	0	0	0	0	0	0	0	0	0
(PHASE I)		0	0	0	0	0	0	0	0	0	0	0
(PHASE II)		0	0	0	0	0	0	0	0	0	0	0
(PHASE III)		0	0	0	0	0	0	0	0	0	0	0

CASE	BASE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
LONG REPAY		60,842	60,842	34,674	37,168	37,168	22,794	22,794	10,545	10,545	10,545	10,545
PHASE I		31,968	31,968	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800
(PLANT 60%)		(15,701)	(15,701)	0	0	0	0	0	0	0	0	0
(PLANT 40%)		(10,467)	(10,467)	0	0	0	0	0	0	0	0	0
(INFRA)		(5,800)	(5,800)	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800
PHASE II		16,625	16,625	16,625	19,119	19,119	2,494	2,494	2,494	2,494	2,494	2,494
(PLANT 60%)		(9,975)	(9,975)	9,975	9,975	9,975	0	0	0	0	0	0
(PLANT 40%)		(6,650)	(6,650)	6,650	6,650	6,650	0	0	0	0	0	0
(INFRA)		0	0	0	2,494	2,494	2,494	2,494	2,494	2,494	2,494	2,494
PHASE III		12,249	12,249	12,249	12,249	12,249	14,501	14,501	2,251	2,251	2,251	2,251
(PLANT 60%)		(7,350)	(7,350)	7,350	7,350	7,350	7,350	7,350	0	0	0	0
(PLANT 40%)		(4,900)	(4,900)	4,900	4,900	4,900	4,900	4,900	0	0	0	0
(INFRA)		0	0	0	0	0	2,251	2,251	2,251	2,251	2,251	2,251
772574 2774		0	0	0	0	0	0	0	0	0	0	0
* (B/S) DEBT *												
DEBT (LONG)		345,467	304,624	269,950	232,782	195,615	172,820	150,026	139,480	128,935	118,390	107,845
(PHASE I)		(130,568)	(98,600)	(92,800)	(87,000)	(81,200)	(75,400)	(69,600)	(63,800)	(58,000)	(52,200)	(46,400)
(PHASE II)		(116,374)	(99,749)	(83,124)	(64,005)	(44,887)	(42,393)	(39,900)	(37,406)	(34,912)	(32,418)	(29,925)
(PHASE III)		(118,525)	(106,276)	(94,027)	(81,777)	(69,528)	(55,027)	(40,526)	(38,275)	(36,023)	(33,772)	(31,520)
(772574 2774)		0	0	0	0	0	0	0	0	0	0	0

** INDONESIA BAKO COAL PROJECT (UNIT:1000\$)

CASE BASE

	2018	2019	2020	2021	2022	2023	2024	TOTAL
* (P/L) CONTENTS OF DEPR. & INTEREST *								
(1) DEPR. & AMORT.	23,008	21,816	14,075	13,109	12,240	8,982	8,279	874,588
PHASE I	10,976	10,545	3,489	3,140	2,826	2,544	2,289	403,427
(FACILITIES)	(4,307)	(3,877)	(3,489)	(3,140)	(2,826)	(2,544)	(2,289)	(266,381)
(BUILD. & LANDS)	(6,669)	(6,669)	(0)	(0)	(0)	(0)	(0)	(133,374)
(WORKING CAP.)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(START-UP EXP)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1,685)
(TRAINING)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1,987)
PHASE II	6,372	5,982	5,632	5,316	5,032	2,301	2,071	221,806
(FACILITIES)	(3,896)	(3,507)	(3,156)	(2,840)	(2,556)	(2,301)	(2,071)	(170,606)
(BUILD. & LANDS)	(2,476)	(2,476)	(2,476)	(2,476)	(2,476)	(0)	(0)	(49,515)
(WORKING CAP.)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(START-UP EXP)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1,685)
(TRAINING)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
PHASE III	5,660	5,288	4,954	4,633	4,382	4,138	3,919	168,979
(FACILITIES)	(3,716)	(3,344)	(3,010)	(2,709)	(2,438)	(2,194)	(1,975)	(128,416)
(BUILD. & LANDS)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(1,944)	(38,878)
(WORKING CAP.)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(START-UP EXP)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1,685)
(TRAINING)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
I.D.C.	0	0	0	0	0	0	0	80,377
(PHASE I)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(41,285)
(PHASE II)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(22,184)
(PHASE III)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(16,908)
(2) INTEREST PAID	5,129	4,601	4,074	3,547	3,020	2,492	1,965	511,169
LONG INT.	5,129	4,601	4,074	3,547	3,020	2,492	1,965	511,169
PHASE I	2,175	1,885	1,595	1,305	1,015	725	435	220,633
(PLANT 60X)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(65,148)
(PLANT 40X)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(53,277)
(INFRA)	(2,175)	(1,885)	(1,595)	(1,305)	(1,015)	(725)	(435)	(102,208)
PHASE II	1,434	1,309	1,185	1,060	935	810	686	118,095
(PLANT 60X)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(40,437)
(PLANT 40X)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(33,068)
(INFRA)	(1,434)	(1,309)	(1,185)	(1,060)	(935)	(810)	(686)	(44,590)
PHASE III	1,520	1,407	1,295	1,182	1,069	957	844	93,005
(PLANT 60X)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(29,768)
(PLANT 40X)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(24,343)
(INFRA)	(1,520)	(1,407)	(1,295)	(1,182)	(1,069)	(957)	(844)	(38,895)
7) 25% 2011-11/11	0	0	0	0	0	0	0	79,436

** INDONESIA BANKO COAL PROJECT (UNIT:1000\$)

CASE BASE

	2018	2019	2020	2021	2022	2023	2024	TOTAL
* (C/F) DEST. REPAY & INVESTMENT *	0	0	0	0	0	0	0	0
L.T.D. TOTAL	0	0	0	0	0	0	0	1,317,329
PHASE I	0	0	0	0	0	0	0	351,514
(PLANT 60%)	0	0	0	0	0	0	0	141,309
(PLANT 40%)	0	0	0	0	0	0	0	94,205
(INFRA)	0	0	0	0	0	0	0	116,000
PHASE II	0	0	0	0	0	0	0	199,498
(PLANT 60%)	0	0	0	0	0	0	0	89,774
(PLANT 40%)	0	0	0	0	0	0	0	59,849
(INFRA)	0	0	0	0	0	0	0	49,874
PHASE III	0	0	0	0	0	0	0	155,273
(PLANT 60%)	0	0	0	0	0	0	0	66,146
(PLANT 40%)	0	0	0	0	0	0	0	44,098
(INFRA)	0	0	0	0	0	0	0	45,029
722222 21111	0	0	0	0	0	0	0	611,045
TOTAL INVESTMENT	0	0	0	0	0	0	0	941,713
PHASE I	0	0	0	0	0	0	0	427,400
(FACILITIES)	0	0	0	0	0	0	0	286,993
(BUILD. & LANDS)	0	0	0	0	0	0	0	133,374
(WORKING CAPITAL)	0	0	0	0	0	0	0	3,371
(START-UP EXP.)	0	0	0	0	0	0	0	1,685
(TRAINING)	0	0	0	0	0	0	0	1,987
PHASE II	0	0	0	0	0	0	0	243,813
(FACILITIES)	0	0	0	0	0	0	0	189,242
(BUILD. & LANDS)	0	0	0	0	0	0	0	49,515
(WORKING CAPITAL)	0	0	0	0	0	0	0	3,371
(START-UP EXP.)	0	0	0	0	0	0	0	1,685
(TRAINING)	0	0	0	0	0	0	0	0
PHASE III	0	0	0	0	0	0	0	190,123
(FACILITIES)	0	0	0	0	0	0	0	146,189
(BUILD. & LANDS)	0	0	0	0	0	0	0	38,878
(WORKING CAPITAL)	0	0	0	0	0	0	0	3,371
(START-UP EXP.)	0	0	0	0	0	0	0	1,685
(TRAINING)	0	0	0	0	0	0	0	0
IDC	0	0	0	0	0	0	0	80,377
(PHASE I)	0	0	0	0	0	0	0	41,285
(PHASE II)	0	0	0	0	0	0	0	22,184
(PHASE III)	0	0	0	0	0	0	0	16,908

** INDONESIA BANKO COAL PROJECT (UNIT:1000\$)

CASE BASE

	2018	2019	2020	2021	2022	2023	2024	TOTAL
LONG REFAY	10,545	10,545	10,545	10,545	10,545	10,545	10,545	1,283,301
PHASE I	5,800	5,800	5,800	5,800	5,800	5,800	5,800	345,714
(PLANT 60%)	0	0	0	0	0	0	0	141,309
(PLANT 40%)	0	0	0	0	0	0	0	94,206
(INFRA)	5,800	5,800	5,800	5,800	5,800	5,800	5,800	110,200
PHASE II	2,494	2,494	2,494	2,494	2,494	2,494	2,494	187,029
(PLANT 60%)	0	0	0	0	0	0	0	89,774
(PLANT 40%)	0	0	0	0	0	0	0	59,849
(INFRA)	2,494	2,494	2,494	2,494	2,494	2,494	2,494	37,406
PHASE III	2,251	2,251	2,251	2,251	2,251	2,251	2,251	139,513
(PLANT 60%)	0	0	0	0	0	0	0	66,146
(PLANT 40%)	0	0	0	0	0	0	0	44,098
(INFRA)	2,251	2,251	2,251	2,251	2,251	2,251	2,251	29,269
772777 7777	0	0	0	0	0	0	0	611,045
* (B/S) DEBT *								
DEBT (LONG)	97,300	86,755	76,209	65,664	55,119	44,574	34,029	
(PHASE I)	40,600	34,800	29,000	23,200	17,400	11,600	5,800	
(PHASE II)	27,431	24,937	22,443	19,950	17,456	14,962	12,469	
(PHASE III)	29,269	27,018	24,766	22,515	20,263	18,012	15,760	
(772777 7777)	0	0	0	0	0	0	0	

98/12/22
CASE RAISE

I.R.R. (109) = 11.897 %

	CASH-FLOW	DIS	CASH-FLOW
0	0.000		0.000
1	-53784.338		-48065.921
2	-78382.695		-62521.392
3	-241359.783		-172269.825
4	-123928.952		-78411.529
5	-52378.346		-39800.875
6	-91323.119		-46523.175
7	-81259.977		-36995.316
8	-11588.744		-4715.067
9	43355.922		15764.541
10	148237.858		48169.649
11	165412.066		48035.573
12	172199.170		44689.786
13	172199.170		39938.312
14	172199.170		35692.021
15	172199.170		31897.204
16	172199.170		28505.851
17	172199.170		2475.074
18	172199.170		22766.532
19	172199.170		20345.966
20	172199.170		18182.758
21	172199.170		16249.544
22	172199.170		14521.873
23	172199.170		12977.889
24	172199.170		11595.064
25	172199.170		10364.943
26	172199.170		9262.930
27	172199.170		8278.083
28	172199.170		7397.947
29	239323.793		9188.561
TOTAL	2790909.574		0.002

ATTACHMENT 16-1

1. Computer Printout of Economic Analysis - Base Case

1. Computer Printout of Economic Analysis - Base Case

Annual Investment ** base case **

PHASE	total	1996	1997	1998	1999	2000	2001	2002	2003
Phase 1. Investment & Equipment	377202	44842	56241	200967	65152	64738	111007	42283	0
Working Capital	3272	0	0	0	3272	0	0	3272	0
Start-Up Reserve Expense	1685	0	1685	0	1685	0	0	1685	0
Training	300	0	300	0	300	0	0	300	0
Total	382459	44842	66241	200967	70409	64738	111007	42283	0
Phase 2. Investment & Equipment	216028	0	0	0	0	64738	111007	42283	0
Working Capital	3272	0	0	0	0	0	0	3272	0
Start-Up Reserve Expense	1685	0	0	0	0	0	0	1685	0
Training	300	0	0	0	0	0	0	300	0
Total	232285	0	0	0	0	64738	111007	42283	0
Phase 3. Investment & Equipment	169926	0	0	0	0	0	0	50536	85210
Working Capital	3272	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	1685	0	0	0	0	0	0	0	0
Training	300	0	0	0	0	0	0	0	0
Total	174183	0	0	0	0	0	0	50536	85210
Total	764156	44842	66241	200967	65152	64738	111007	92219	85210
Working Capital	9816	0	0	0	3272	0	0	3272	0
Start-Up Reserve Expense	5055	0	0	0	1685	0	0	1685	0
Training	900	0	0	0	300	0	0	300	0
Total	779927	44842	66241	200967	70409	64738	111007	98076	85210

Annual Investment ** base case **

PHASE	2004	2005	2005	2005	2007	2008	2009	2010	2011	2012
Phase 1. Investment & Equipment	0	0	0	0	0	0	0	0	0	0
Working Capital	0	0	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	0	0	0	0	0	0	0	0	0	0
Training	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Phase 2. Investment & Equipment	0	0	0	0	0	0	0	0	0	0
Working Capital	0	0	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	0	0	0	0	0	0	0	0	0	0
Training	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Phase 3. Investment & Equipment	33180	0	0	0	0	0	0	0	0	0
Working Capital	3272	0	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	1685	0	0	0	0	0	0	0	0	0
Training	300	0	0	0	0	0	0	0	0	0
Total	38437	0	0	0	0	0	0	0	0	0
Total	33180	0	0	0	0	0	0	0	0	0
Working Capital	3272	0	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	1685	0	0	0	0	0	0	0	0	0
Training	300	0	0	0	0	0	0	0	0	0
Total	38437	0	0	0	0	0	0	0	0	0

Annual Investment ** base case **

PHASE	2013	2014	2015	2016	2017	2018	2019	2020	2021
Phase 1 Investment & Equipment	0	0	0	0	0	0	0	0	0
Working Capital	0	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	0	0	0	0	0	0	0	0	0
Training	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Phase 2 Investment & Equipment	0	0	0	0	0	0	0	0	0
Working Capital	0	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	0	0	0	0	0	0	0	0	0
Training	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Phase 3 Investment & Equipment	0	0	0	0	0	0	0	0	0
Working Capital	0	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	0	0	0	0	0	0	0	0	0
Training	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
Investment & Equipment	0	0	0	0	0	0	0	0	0
Working Capital	0	0	0	0	0	0	0	0	0
Start-Up Reserve Expense	0	0	0	0	0	0	0	0	0
Training	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Annual Investment ** base case **

PHASE	2022	2023	2024
Phase 1 Investment & Equipment	0	0	0
Working Capital	0	0	0
Start-Up Reserve Expense	0	0	0
Training	0	0	0
Total	0	0	0
Phase 2 Investment & Equipment	0	0	0
Working Capital	0	0	0
Start-Up Reserve Expense	0	0	0
Training	0	0	0
Total	0	0	0
Phase 3 Investment & Equipment	0	0	0
Working Capital	0	0	0
Start-Up Reserve Expense	0	0	0
Training	0	0	0
Total	0	0	0
Total	0	0	0
Investment & Equipment	0	0	0
Working Capital	0	0	0
Start-Up Reserve Expense	0	0	0
Training	0	0	0
Total	0	0	0

Production Cost ** Base Case **

PHASE	Price	T/HR	Hours	Fullcost	2000	2001	2002	2003
Phase 1								
Capacity					500	500	500	500
Load					0.70	0.90	1.00	1.00
Production					350	450	500	500
Coal/Gas	14.00	105.40	8000	11805	8263	10624	11805	11805
Coal/Bal	14.00	49.30	8000	5522	3865	4969	5522	5522
CaCO3/Gas	8.80	2.90	8000	204	143	184	204	204
CaCO3/Bal	8.80	1.50	8000	106	74	95	106	106
Scrap/Gas	70.00	1.13	8000	633	443	570	633	633
Catalyst/Chemicals			8000	1360	952	1224	1360	1360
Total Variable Cost			8000	13740	17666	19629	19629	19629
Operating wages				8979	6579	4466	2422	
Operating expense				8979	8979	8979	4490	
Mainte & Insurance				5658	5658	5658	5658	
Total Production Cost				37356	38882	38732	32198	
Phase 2								
Capacity					0.00	0.00	0.00	0.70
Load					0.00	0.00	0.00	0.70
Production					0	0	0	350
Coal/Gas	14.00	105.40	8000	11805	0	0	0	8263
Coal/Bal	14.00	49.30	8000	5522	0	0	0	3865
CaCO3/Gas	8.80	2.90	8000	204	0	0	0	143
CaCO3/Bal	8.80	1.50	8000	106	0	0	0	74
Scrap/Gas	70.00	1.13	8000	633	0	0	0	443
Catalyst/Chemicals			8000	1360	0	0	0	952
Total Variable Cost			8000	13740	0	0	0	13740
Operating wages				0	0	0	0	2467
Operating expense				0	0	0	0	4490
Mainte & Insurance				0	0	0	0	3270
Total Production Cost				0	0	0	0	23967
Phase 3								
Capacity					0	0	0	0
Load					0	0	0	0
Production	0.00	0.00	0	0	0	0	0	0
Coal/Gas	14.00	105.40	8000	11805	0	0	0	0
Coal/Bal	14.00	49.30	8000	5522	0	0	0	0
CaCO3/Gas	8.80	2.90	8000	204	0	0	0	0
CaCO3/Bal	8.80	1.50	8000	106	0	0	0	0
Scrap/Gas	70.00	1.13	8000	633	0	0	0	0
Catalyst/Chemicals			8000	1360	0	0	0	0
Total Variable Cost			8000	13740	0	0	0	0
Operating wages				0	0	0	0	0
Operating expense				0	0	0	0	0
Mainte & Insurance				0	0	0	0	0
Total Production Cost				0	0	0	0	0
Total								
Capacity					500	500	500	1000
Production					350	450	500	850
Load					0.70	0.90	1.00	0.85
Coal/Gas	8263	10624	11805	20068	8263	10624	11805	20068
Coal/Bal	3865	4969	5522	9387	3865	4969	5522	9387
CaCO3/Gas	143	184	204	347	143	184	204	347
CaCO3/Bal	74	95	106	180	74	95	106	180
Scrap/Gas	443	570	633	1076	443	570	633	1076
Catalyst/Chemicals	952	1224	1360	2312	952	1224	1360	2312
Total Variable Cost	13740	17666	19629	33369	13740	17666	19629	33369
Operating wages	8979	6579	4466	4889	8979	6579	4466	4889
Operating expense	8979	8979	8979	8979	8979	8979	8979	8979
Mainte & Insurance	5658	5658	5658	5658	5658	5658	5658	5658
Total Production Cost	37356	38882	38732	56166	37356	38882	38732	56166

Production Cost ** Base Case **

PHASE	2004	2005	2006	2007	2008	2009	2010	2011	2012
Phase 1									
Capacity	500	500	500	500	500	500	500	500	500
Load	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Production	500	500	500	500	500	500	500	500	500
Coal/Gas	11805	11805	11805	11805	11805	11805	11805	11805	11805
Coal/Bal	5522	5522	5522	5522	5522	5522	5522	5522	5522
CaCO3/Gas	204	204	204	204	204	204	204	204	204
CaCO3/Bal	106	106	106	106	106	106	106	106	106
Scrap/Gas	633	633	633	633	633	633	633	633	633
Catalyst/Chemicals	1360	1360	1360	1360	1360	1360	1360	1360	1360
Total Variable Cost	19629	19629	19629	19629	19629	19629	19629	19629	19629
Operating wages	2457	1742	542	542	542	542	542	542	542
Operating expense	4490	2993	2993	2993	2993	2993	2993	2993	2993
Mainte & Insurance	5658	5658	5658	5658	5658	5658	5658	5658	5658
Total Production Cost	32243	30022	28822	28822	28822	28822	28822	28822	28822
Phase 2									
Capacity	500	500	500	500	500	500	500	500	500
Load	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Production	450	500	500	500	500	500	500	500	500
Coal/Gas	10624	11805	11805	11805	11805	11805	11805	11805	11805
Coal/Bal	4969	5522	5522	5522	5522	5522	5522	5522	5522
CaCO3/Gas	184	204	204	204	204	204	204	204	204
CaCO3/Bal	95	106	106	106	106	106	106	106	106
Scrap/Gas	570	633	633	633	633	633	633	633	633
Catalyst/Chemicals	1224	1360	1360	1360	1360	1360	1360	1360	1360
Total Variable Cost	17666	19629	19629	19629	19629	19629	19629	19629	19629
Operating wages	1742	542	542	542	542	542	542	542	542
Operating expense	4490	2993	2993	2993	2993	2993	2993	2993	2993
Mainte & Insurance	3270	3270	3270	3270	3270	3270	3270	3270	3270
Total Production Cost	27168	26434	26434	26434	26434	26434	26434	26434	26434
Phase 3									
Capacity	500	500	500	500	500	500	500	500	500
Load	0.70	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Production	0	350	450	500	500	500	500	500	500
Coal/Gas	0	8293	10624	11805	11805	11805	11805	11805	11805
Coal/Bal	0	3855	4969	5522	5522	5522	5522	5522	5522
CaCO3/Gas	0	143	184	204	204	204	204	204	204
CaCO3/Bal	0	74	95	106	106	106	106	106	106
Scrap/Gas	0	443	570	633	633	633	633	633	633
Catalyst/Chemicals	0	932	1224	1360	1360	1360	1360	1360	1360
Total Variable Cost	0	13740	17666	19629	19629	19629	19629	19629	19629
Operating wages	0	1742	542	542	542	542	542	542	542
Operating expense	0	2993	2993	2993	2993	2993	2993	2993	2993
Mainte & Insurance	0	2534	2534	2534	2534	2534	2534	2534	2534
Total Production Cost	0	21009	23735	25698	25698	25698	25698	25698	25698
Total									
Capacity	1000	1500	1500	1500	1500	1500	1500	1500	1500
Load	0.95	0.90	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Production	950	1350	1450	1500	1500	1500	1500	1500	1500
Coal/Gas	22429	31873	34234	35414	35414	35414	35414	35414	35414
Coal/Bal	10491	14908	16013	16565	16565	16565	16565	16565	16565
CaCO3/Gas	388	551	592	612	612	612	612	612	612
CaCO3/Bal	201	235	305	317	317	317	317	317	317
Scrap/Gas	1202	1709	1835	1898	1898	1898	1898	1898	1898
Catalyst/Chemicals	2584	3672	3944	4080	4080	4080	4080	4080	4080
Total Variable Cost	37395	52938	56924	58887	58887	58887	58887	58887	58887
Operating wages	4209	4036	1626	1626	1626	1626	1626	1626	1626
Operating expense	8979	8979	8979	8979	8979	8979	8979	8979	8979
Mainte & Insurance	8928	11462	11462	11462	11462	11462	11462	11462	11462
Total Production Cost	59411	77456	78991	80954	80954	80954	80954	80954	80954

Production Cost ** Base Case **

PHASE	2013	2014	2015	2016	2017	2018	2019	2020	2021
Phase 1									
Capacity	500	500	500	500	500	500	500	500	500
Load	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Production	500	500	500	500	500	500	500	500	500
Coal/Gas	11805	11805	11805	11805	11805	11805	11805	11805	11805
Coal/Bal	5522	5522	5522	5522	5522	5522	5522	5522	5522
CaCO3/Gas	204	204	204	204	204	204	204	204	204
CaCO3/Bal	106	106	106	106	106	106	106	106	106
Scrap/Gas	633	633	633	633	633	633	633	633	633
Catalyst/Chemicals	1360	1360	1360	1360	1360	1360	1360	1360	1360
Total Variable Cost	19629	19629	19629	19629	19629	19629	19629	19629	19629
Operating wages	542	542	542	542	542	542	542	542	542
Operating expense	2993	2993	2993	2993	2993	2993	2993	2993	2993
Mainte & Insurance	5658	5658	5658	5658	5658	5658	5658	5658	5658
Total Production Cost	28822	28822	28822	28822	28822	28822	28822	28822	28822
Phase 2									
Capacity	500	500	500	500	500	500	500	500	500
Load	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Production	500	500	500	500	500	500	500	500	500
Coal/Gas	11805	11805	11805	11805	11805	11805	11805	11805	11805
Coal/Bal	5522	5522	5522	5522	5522	5522	5522	5522	5522
CaCO3/Gas	204	204	204	204	204	204	204	204	204
CaCO3/Bal	106	106	106	106	106	106	106	106	106
Scrap/Gas	633	633	633	633	633	633	633	633	633
Catalyst/Chemicals	1360	1360	1360	1360	1360	1360	1360	1360	1360
Total Variable Cost	19629	19629	19629	19629	19629	19629	19629	19629	19629
Operating wages	542	542	542	542	542	542	542	542	542
Operating expense	2993	2993	2993	2993	2993	2993	2993	2993	2993
Mainte & Insurance	3270	3270	3270	3270	3270	3270	3270	3270	3270
Total Production Cost	26434	26434	26434	26434	26434	26434	26434	26434	26434
Phase 3									
Capacity	500	500	500	500	500	500	500	500	500
Load	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Production	500	500	500	500	500	500	500	500	500
Coal/Gas	11805	11805	11805	11805	11805	11805	11805	11805	11805
Coal/Bal	5522	5522	5522	5522	5522	5522	5522	5522	5522
CaCO3/Gas	204	204	204	204	204	204	204	204	204
CaCO3/Bal	106	106	106	106	106	106	106	106	106
Scrap/Gas	633	633	633	633	633	633	633	633	633
Catalyst/Chemicals	1360	1360	1360	1360	1360	1360	1360	1360	1360
Total Variable Cost	19629	19629	19629	19629	19629	19629	19629	19629	19629
Operating wages	542	542	542	542	542	542	542	542	542
Operating expense	2993	2993	2993	2993	2993	2993	2993	2993	2993
Mainte & Insurance	2534	2534	2534	2534	2534	2534	2534	2534	2534
Total Production Cost	25698	25698	25698	25698	25698	25698	25698	25698	25698
Total									
Capacity	1500	1500	1500	1500	1500	1500	1500	1500	1500
Production	1500	1500	1500	1500	1500	1500	1500	1500	1500
Load	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Coal/Gas	35414	35414	35414	35414	35414	35414	35414	35414	35414
Coal/Bal	16565	16565	16565	16565	16565	16565	16565	16565	16565
CaCO3/Gas	612	612	612	612	612	612	612	612	612
CaCO3/Bal	317	317	317	317	317	317	317	317	317
Scrap/Gas	1898	1898	1898	1898	1898	1898	1898	1898	1898
Catalyst/Chemicals	4080	4080	4080	4080	4080	4080	4080	4080	4080
Total Variable Cost	58887	58887	58887	58887	58887	58887	58887	58887	58887
Operating wages	1626	1626	1626	1626	1626	1626	1626	1626	1626
Operating expense	8979	8979	8979	8979	8979	8979	8979	8979	8979
Mainte & Insurance	11462	11462	11462	11462	11462	11462	11462	11462	11462
Total Production Cost	80954	80954	80954	80954	80954	80954	80954	80954	80954

Production Cost ** Base Case **

PHASE	2022	2023	2024
Phase 1			
Capacity	500	500	500
Load	1.00	1.00	1.00
Production	500	500	500
Coal/Gas	11805	11805	11805
Coal/Bal	5522	5522	5522
CaCO3/Gas	204	204	204
CaCO3/Bal	106	106	106
Scrap/Gas	633	633	633
Catalyst/Chemicals	1360	1360	1360
Total Variable Cost	19629	19629	19629
Operating wages	542	542	542
Operating expense	2993	2993	2993
Mainte & insurance	5658	5658	5658
Total Production Cost	28822	28822	28822
Phase 2			
Capacity	500	500	500
Load	1.00	1.00	1.00
Production	500	500	500
Coal/Gas	11805	11805	11805
Coal/Bal	5522	5522	5522
CaCO3/Gas	204	204	204
CaCO3/Bal	106	106	106
Scrap/Gas	633	633	633
Catalyst/Chemicals	1360	1360	1360
Total Variable Cost	19629	19629	19629
Operating wages	542	542	542
Operating expense	2993	2993	2993
Mainte & insurance	3270	3270	3270
Total Production Cost	26434	26434	26434
Phase 3			
Capacity	500	500	500
Load	1.00	1.00	1.00
Production	500	500	500
Coal/Gas	11805	11805	11805
Coal/Bal	5522	5522	5522
CaCO3/Gas	204	204	204
CaCO3/Bal	106	106	106
Scrap/Gas	633	633	633
Catalyst/Chemicals	1360	1360	1360
Total Variable Cost	19629	19629	19629
Operating wages	542	542	542
Operating expense	2993	2993	2993
Mainte & insurance	2534	2534	2534
Total Production Cost	25698	25698	25698
Total			
Capacity	1500	1500	1500
Production	1500	1500	1500
Load	1.00	1.00	1.00
Coal/Gas	35414	35414	35414
Coal/Bal	16565	16565	16565
CaCO3/Gas	612	612	612
CaCO3/Bal	317	317	317
Scrap/Gas	1898	1898	1898
Catalyst/Chemicals	4080	4080	4080
Total Variable Cost	58887	58887	58887
Operating wages	1626	1626	1626
Operating expense	8979	8979	8979
Mainte & insurance	11462	11462	11462
Total Production Cost	80954	80954	80954

Sales & Cost ** Base Case **

	Price	1996	1997	1998	1999	2000	2001	2002	2003
Phase 1 Production									
Sales	175	0	0	0	0	350	450	500	500
Production Cost						61250	78750	87500	87500
Admin. & Selling Expense						37356	38882	38732	32198
Gross Income		231	676	2617	9317	23894	39868	48768	55302
Phase 2 Production									
Sales	175	0	0	0	0	0	0	0	350
Production Cost						0	0	0	61250
Admin. & Selling Expense						338	338	225	23967
Gross Income		0	0	0	0	-338	-338	-225	37283
Phase 3 Production									
Sales	175	0	0	0	0	0	0	0	0
Production Cost						0	0	0	0
Admin. & Selling Expense						0	0	0	0
Gross Income		0	0	0	0	0	0	0	0
Total									
Production	0	0	0	0	0	350	450	500	850
Sales						61250	78750	87500	148750
Production Cost						37356	38882	38732	56196
Admin. & Selling Expense		231	676	2617	9317	338	338	450	229
Gross Income		-231	-576	-2617	-9317	23556	39530	48318	92355

Sales & Cost ** Base Case **

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Phase 1 Production									
Sales	500	500	500	500	500	500	500	500	500
Production Cost	87500	87500	87500	87500	87500	87500	87500	87500	87500
Admin. & Selling Expense	32243	30022	28822	28822	28822	28822	28822	28822	28822
Gross Income	55257	57478	58678	58678	58678	58678	58678	58678	58678
Phase 2 Production									
Sales	450	500	500	500	500	500	500	500	500
Production Cost	78750	87500	87500	87500	87500	87500	87500	87500	87500
Admin. & Selling Expense	27188	26434	26434	26434	26434	26434	26434	26434	26434
Gross Income	51582	61066	61066	61066	61066	61066	61066	61066	61066
Phase 3 Production									
Sales	0	350	450	500	500	500	500	500	500
Production Cost	0	61250	78750	87500	87500	87500	87500	87500	87500
Admin. & Selling Expense	0	21009	23735	25698	25698	25698	25698	25698	25698
Gross Income	-229	40241	55015	61802	61802	61802	61802	61802	61802
Total									
Production	980	1350	1450	1500	1500	1500	1500	1500	1500
Sales	166250	239250	253750	262500	262500	262500	262500	262500	262500
Production Cost	59411	77466	78991	80954	80954	80954	80954	80954	80954
Admin. & Selling Expense	229	0	0	0	0	0	0	0	0
Gross Income	106610	158784	174759	181546	181546	181546	181546	181546	181546

Sales & Cost ** Base Case **

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Phase 1 Production	500	500	500	500	500	500	500	500	500
Sales	87500	87500	87500	87500	87500	87500	87500	87500	87500
Production Cost	28822	28822	28822	28822	28822	28822	28822	28822	28822
Admin & Selling Expense									
Gross Income	58678	58678	58678	58678	58678	58678	58678	58678	58678
Phase 2 Production	500	500	500	500	500	500	500	500	500
Sales	87500	87500	87500	87500	87500	87500	87500	87500	87500
Production Cost	26434	26434	26434	26434	26434	26434	26434	26434	26434
Admin & Selling Expense									
Gross Income	61066	61066	61066	61066	61066	61066	61066	61066	61066
Phase 3 Production	500	500	500	500	500	500	500	500	500
Sales	87500	87500	87500	87500	87500	87500	87500	87500	87500
Production Cost	25698	25698	25698	25698	25698	25698	25698	25698	25698
Admin & Selling Expense									
Gross Income	61802	61802	61802	61802	61802	61802	61802	61802	61802
Total Production	1500	1500	1500	1500	1500	1500	1500	1500	1500
Sales	262500	262500	262500	262500	262500	262500	262500	262500	262500
Production Cost	80954	80954	80954	80954	80954	80954	80954	80954	80954
Admin & Selling Expense	0	0	0	0	0	0	0	0	0
Gross Income	181546	181546	181546	181546	181546	181546	181546	181546	181546

Sales & Cost ** Base Case **

	2022	2023	2024
Phase 1 Production	500	500	500
Sales	87500	87500	87500
Production Cost	28822	28822	28822
Admin & Selling Expense			
Gross Income	58678	58678	58678
Phase 2 Production	500	500	500
Sales	87500	87500	87500
Production Cost	26434	26434	26434
Admin & Selling Expense			
Gross Income	61066	61066	61066
Phase 3 Production	500	500	500
Sales	87500	87500	87500
Production Cost	25698	25698	25698
Admin & Selling Expense			
Gross Income	61802	61802	61802
Total Production	1500	1500	1500
Sales	262500	262500	262500
Production Cost	80954	80954	80954
Admin & Selling Expense	0	0	0
Gross Income	181546	181546	181546

Economic Internal rate of Return ** Base Case ** (\$14 - 175s/t - 780mils)

	1996	1997	1998	1999	2000	2001	2002	2003
Phase 1 Capital Cost Stream	44842	6241	200967	70409	0	0	0	0
Operating Cost Stream	231	676	2617	9317	37356	38882	38732	32198
Sales Stream	0	0	0	0	61250	78750	87500	87500
Benefit Stream	-231	-676	-2617	-9317	23894	39868	48768	55302
Net Benefit Stream	-45073	-66917	-203584	-79726	23894	39868	48768	55302
Phase 2 Capital Cost Stream	0	0	0	0	64738	111007	47540	0
Operating Cost Stream	0	0	0	0	338	338	225	23967
Sales Stream	0	0	0	0	0	0	0	61250
Benefit Stream	0	0	0	0	-338	-338	-225	37283
Net Benefit Stream	0	0	0	0	-65076	-111345	-47765	37283
Phase 3 Capital Cost Stream	0	0	0	0	0	0	50536	83210
Operating Cost Stream	0	0	0	0	0	0	225	229
Sales Stream	0	0	0	0	0	0	0	0
Benefit Stream	0	0	0	0	0	0	0	0
Net Benefit Stream	0	0	0	0	0	0	-225	-229
Total	44842	6241	200967	70409	64738	111007	98076	85439
Operating Cost Stream	231	676	2617	9317	37694	39220	39182	56395
Sales Stream	0	0	0	0	61250	78750	87500	148750
Benefit Stream	-231	-676	-2617	-9317	23556	39530	48318	92355
Net Benefit Stream	-45073	-66917	-203584	-79726	-41182	-71477	-49758	7145

Economic Internal rate of Return ** Base Case ** (\$14 - 175s/t - 780mils)

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Phase 1 Capital Cost Stream	0	0	0	0	0	0	0	0	0
Operating Cost Stream	3243	3022	2822	2822	2822	2822	2822	2822	2822
Sales Stream	87500	87500	87500	87500	87500	87500	87500	87500	87500
Benefit Stream	5257	57478	58678	58678	58678	58678	58678	58678	58678
Net Benefit Stream	5257	57478	58678	58678	58678	58678	58678	58678	58678
Phase 2 Capital Cost Stream	0	0	0	0	0	0	0	0	0
Operating Cost Stream	27168	26434	26434	26434	26434	26434	26434	26434	26434
Sales Stream	87500	87500	87500	87500	87500	87500	87500	87500	87500
Benefit Stream	5182	61066	61066	61066	61066	61066	61066	61066	61066
Net Benefit Stream	5182	61066	61066	61066	61066	61066	61066	61066	61066
Phase 3 Capital Cost Stream	38437	0	0	0	0	0	0	0	0
Operating Cost Stream	229	21009	23735	25698	25698	25698	25698	25698	25698
Sales Stream	0	61250	78750	87500	87500	87500	87500	87500	87500
Benefit Stream	-229	40241	55015	61802	61802	61802	61802	61802	61802
Net Benefit Stream	-38666	40241	55015	61802	61802	61802	61802	61802	61802
Total	38437	0	0	0	0	0	0	0	0
Operating Cost Stream	59640	77466	78991	80954	80954	80954	80954	80954	80954
Sales Stream	166250	236250	253750	262500	262500	262500	262500	262500	262500
Benefit Stream	106610	158784	174759	181546	181546	181546	181546	181546	181546
Net Benefit Stream	68173	158784	174759	181546	181546	181546	181546	181546	181546

Economic Internal rate of Return ** Base Case ** (\$14 - 175s/t - 780mils)

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Phase 1									
Capital Cost Stream	0	0	0	0	0	0	0	0	0
Operating Cost Stream	2882	2882	2882	2882	2882	2882	2882	2882	2882
Sales Stream	87500	87500	87500	87500	87500	87500	87500	87500	87500
Benefit Stream	58678	58678	58678	58678	58678	58678	58678	58678	58678
Net Benefit Stream	58678	58678	58678	58678	58678	58678	58678	58678	58678
Phase 2									
Capital Cost Stream	0	0	0	0	0	0	0	0	0
Operating Cost Stream	26434	26434	26434	26434	26434	26434	26434	26434	26434
Sales Stream	87500	87500	87500	87500	87500	87500	87500	87500	87500
Benefit Stream	61066	61066	61066	61066	61066	61066	61066	61066	61066
Net Benefit Stream	61066	61066	61066	61066	61066	61066	61066	61066	61066
Phase 3									
Capital Cost Stream	0	0	0	0	0	0	0	0	0
Operating Cost Stream	25698	25698	25698	25698	25698	25698	25698	25698	25698
Sales Stream	87500	87500	87500	87500	87500	87500	87500	87500	87500
Benefit Stream	61802	61802	61802	61802	61802	61802	61802	61802	61802
Net Benefit Stream	61802	61802	61802	61802	61802	61802	61802	61802	61802
Total									
Capital Cost Stream	0	0	0	0	0	0	0	0	0
Operating Cost Stream	80954	80954	80954	80954	80954	80954	80954	80954	80954
Sales Stream	262500	262500	262500	262500	262500	262500	262500	262500	262500
Benefit Stream	181546	181546	181546	181546	181546	181546	181546	181546	181546
Net Benefit Stream	181546	181546	181546	181546	181546	181546	181546	181546	181546

Economic Internal rate of Return ** Base Case ** (\$14 - 175s/t - 780mils)

	2022	2023	2024	Initial
Phase 1				
Capital Cost Stream	0	0	-3272	0.50
Operating Cost Stream	2882	2882	2882	
Sales Stream	87500	87500	87500	Phase 1
Benefit Stream	58678	58678	58678	E.I.R.R.
Net Benefit Stream	58678	58678	61950	10.66%
Phase 2				
Capital Cost Stream	0	0	0	
Operating Cost Stream	26434	26434	26434	
Sales Stream	87500	87500	87500	Phase 2
Benefit Stream	61066	61066	61066	E.I.R.R.
Net Benefit Stream	61066	61066	61066	19.90%
Phase 3				
Capital Cost Stream	0	0	0	
Operating Cost Stream	25698	25698	25698	
Sales Stream	87500	87500	87500	Phase 3
Benefit Stream	61802	61802	61802	E.I.R.R.
Net Benefit Stream	61802	61802	61802	24.82%
Total				
Capital Cost Stream	0	0	-3272	
Operating Cost Stream	80954	80954	80954	
Sales Stream	262500	262500	262500	Total
Benefit Stream	181546	181546	181546	E.I.R.R.
Net Benefit Stream	181546	181546	184816	14.95%

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