

**RICHARDSON OPERATING COMPANY
AUTHORITY FOR EXPEDITURES**

Well Name: ROPCO #8-3 SECTION 8 PC SW/4, FC S/2
Location: T29N R14W
Proposed Depth: 850' Fruitland Coal
1000' Pictured Cliffs

Date: 01/11/2001
Objective Formation: Commingled Pictured Cliffs
and Fruitland Coal

I. Drilling Costs (Included Run Casing)

Survey and Permits
Title Opinion
* Drilling (incl. water and mud) 1000' @ 15.00/ft.
BOP Rental
Dirt Work
Pit Lining
Surface Casing 200' @ 7.18/ft.
Casing Head
Cement Surface
Power Tongs
Casing 1000' @ 5.50/ft.
Trucking
Logs
Engineering
Cement Longstring

Total Cost to Run Casing

5.9375% Farmington, NM Tax

10% Contingency

Grand Total to Run Casing

II. Completion Costs

Rig Anchors
Logs
Perf.
Wellhead & Fittings
Tubing 1000' @ 2.50/ft.
Stimulation
Tool Rental
Trucking
Battery Installation
Restore Location
Engineering
Treater, Separator
Flowline
Tank & Fittings
Gravel
Workover Rig
Completion Fluids
Pipeline Hookup
Division Order Opinion
Frac Tank Rental
Flowback
Fence Location

Total Completion Costs

5.9375% Farmington, NM Tax

10% Contingency

Drilling Costs

Grand Total Well Costs

Tangible	Intangible	Total	Fruitland Coal	Pictured Cliffs
	3,000		1,500	1,500
	3,000		1,500	1,500
	15,000		6,375	8,625
	750		375	375
	4,000		2,000	2,000
	2,800		1,400	1,400
1,436			718	718
1,500			750	750
	2,300		1,150	1,150
	1,000		500	500
5,500			2,338	3,163
	3,000		1,500	1,500
	3,750		1,875	1,875
	5,000		2,500	2,500
	4,000		1,700	2,300
8,436	47,600	56,036	26,181	29,856
		3,327	1,554	1,773
		5,936	2,773	3,163
		65,299	30,508	34,791
	750		375	375
	3,000		1,500	1,500
	3,500		1,750	1,750
4,000			2,000	2,000
2,500			1,063	1,438
	42,000		21,000	21,000
	2,300		1,150	1,150
	3,000		1,500	1,500
	6,000		3,000	3,000
	3,500		1,750	1,750
	5,800		2,900	2,900
5,300			2,650	2,650
4,000			2,000	2,000
4,500			2,250	2,250
	3,000		1,500	1,500
	10,000		5,000	5,000
	2,000		1,000	1,000
	13,000		6,500	6,500
	1,500		750	750
	2,500		1,250	1,250
	2,000		1,000	1,000
3,300			1,650	1,650
23,600	103,850	127,450	63,538	63,913
		7,567	3,773	3,795
		13,502	6,731	6,771
		65,299	30,508	34,791
		213,319	104,550	109,269

RICHARDSON OPERATING COMPANY
AUTHORITY FOR EXPEDITURES

Well Name: ROPCO 8-4 SECTION 8-SE/4
 Location: T29N R14W, San Juan County, NM
 Proposed Depth: 1200'

Date: 01/15/2001
 Objective Formation: Pictured Cliffs

I. Drilling Costs (Included Run Casing)

Survey and Permits
 Title Opinion
 Drilling (incl. water and mud) 1200' @ 15.00/ft.
 BOP Rental
 Dirt Work
 Pit Lining
 Surface Casing 200' @ 7.18/ft.
 Casing Head
 Cement Surface
 Power Tongs
 Casing 1200' @ 5.50/ft
 Trucking
 Logs
 Engineering
 Cement Longstring
 Total Cost to Run Casing
 5.9375% Farmington, NM Tax
 10% Contingency
 Grand Total to Run Casing

II. Completion Costs

Rig Anchors
 Logs
 Perf
 Wellhead & Fittings
 Tubing 1200' @ 2.50/ft
 Stimulation
 Tool Rental
 Trucking
 Battery Installation
 Restore Location
 Engineering
 Treator, Separator
 Flowline
 Tank & Fittings
 Gravel
 Workover Rig
 Completion Fluids
 Division Order Opinion
 Pipeline Hookup
 Frac Tank Rental
 Flowback
 Fence Location
 Total Completion Costs
 5.9375% Farmington, NM Tax
 10% Contingency
 Drilling Costs
 Grand Total Well Costs

Tangible	Intangible	Total	Actual
	3,000		
	1,500		
	18,000		
	750		
	4,000		
	2,800		
1,436			
1,500			
	2,300		
	1,000		
6,600			
	3,000		
	3,500		
	3,000		
	4,000		
9,536	46,850	56,386	
		3,348	
		5,973	
		65,707	
	750		
	2,500		
	2,000		
4,000			
3,000			
	22,000		
	2,300		
	3,000		
	6,000		
	3,500		
	3,250		
5,300			
4,000			
4,500			
3,000			
	5,000		
	1,000		
	1,000		
	13,000		
	1,250		
	1,000		
3,300			
27,100	67,550	94,650	
		5,620	
		10,027	
		65,707	
		176,004	