BEFORE THE OIL CONSERVATION DIVISION Case No.11246/11247 Exhibit No.14 Submitted By: Richardson Operating Company Hearing Date: April 6, 2021995

RANDY V. MILLER Certified Petroleum Geologist P.O. Box 5152 Arvada, Colorado 80005 (303) 424-9245

Richardson Operating Company 1700 Lincoln #1700 Denver, Colorado 80302 Attn: Mr. David B. Richardson, President.

RE: W. Gallegos Area Sec. 12, T29N, R13W

Dear Mr. Richardson,

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I have completed the geological evaluation of the West Gallegos Area in San Juan County, New Mexico. The specific area of investigation was Section 12, T29N, R13W. The Cretaceous Basal Fruitland Coal Bed and the Upper Pictured Cliffs Sandstone are gas productive in the east-half of Section 12 and will also produce gas in the west-half of the Section. The risk for finding additional gas in this Section is extremely low, and the following is a summary of my findings:

1. Exhibit A. This is a stratigraphic cross-section through Section 12, T29N, R13W. As can be seen, the Basal Fruitland Coal Bed and the Upper Pictured Cliffs Sandstone are both continuous throughout the Section. The Coal averages over 20 feet in thickness, and the Sandstone ranges between 30 feet and 44 feet in thickness. In this area, well log characteristics of gas productivity from the Upper Pictured Cliffs Sandstone are noted by >14% porosity and >5 ohms deep induction resistivity. The Basal Coal is gas productive throughout this part of the San Juan Basin and usually exhibits >25% porosity and >50 ohms deep induction resistivity. These log characteristics are present throughout Section 12.

2. Exhibit B. This is an isopach map of the Basal Fruitland Coal Bed. As can be seen, the Coal ranges between 15 feet and 25 feet in thickness and averages over 20 feet in thickness in Section 12. Wells that are gas productive from the Coal are denoted with triangles.

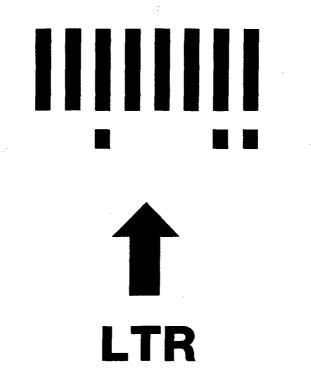
**3. Exhibit C.** This map is an isopach of porous Upper Pictured Cliffs Sandstone. The Sandstone ranges between 30 feet and 44 feet in thickness in Section 12. Wells that are gas productive from this interval are denoted with circles. p.2, R.V. Miller, W. Gallegos Area, 4/4/95.

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In summary, the risk for establishing gas production from the Basal Fruitland Coal Bed and the Upper Pictured Cliffs Sandstone in the west-half of Section 12, T29N, R13W, is extremely low. Wells drilled and completed in these zones should be similar to the two Richardson Operating Company wells producing gas in the east-half of the Section.

I hope that this investigation will prove useful in your evaluation of this area, and if additional input is needed, please don't hesitate to call me.

Yours Very Truly, 100-Randy V. Miller CPG #2943





## **Job separation sheet**

## AFE Comparison 4/6/95

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San Juan County,	-T29N-R13	W					•••••	
	, 19191							
ROPCO Fee 12-4	4 PC					1		
VS.	0.00 0.000 /							
Amoco Burnham	Gas Com /	APC						
		Exhibit 1		Exhibit	2	Exhibit	3	
		Richard	ison AFE	Richar	dson Actual	Amoc	o AFE	
Land				ROPCO	) Fed 12-1 PC			ROPCO Fed 12-1 PC located SE/4-Sec 12-T29N-R13W
survey and pe	ermits	A)	1500.00	A	2256.00	A	7000.00	
location		118		1.15		A2	5000.00	
damages	†	A3	1500.00	A2_	2500.00	1 10-		
title opinion /		A2	1500.00					
restore location		AS	1500.00			1		
gravel		A6	1000.00	1				· · · · · · · · · · · · · · · · · · ·
division order		A7	1000.00	i		1		
dirt work		AH	3000.00	A3	1233.00	)		
Sub Total		\$	11,000.00	\$	5,989.00	\$	12,000.00	
						ļ		
Drilling								
drilling rig		81	16000.00	Bi	16780.00	61	36000.00	
fluids						B2	7000.00	
daywork						<b>B3</b>	2160.00	
BOP rental		B2	750.00		1366.00			
pit lining		B3	1500.00			ļ		
<u> </u>				-				
Sub Total		\$	18,250.00	\$	18,146.00	\$	45,160.00	
<u> </u>						<u> </u>		
Casing						<b> </b>		
surface string		<u>CI</u>	1200.00		1786.00	1	8500.00	
casing head		<u>C2</u>	750.00			62	1500.00	
cement surfac		<u>c3</u>	1500.00	C2	1171.00	·		
casing crew		<u>د ب</u>	1000.00		<b>A 1 0 - - -</b>			
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logging		C7	4000.00	<u>cs</u>	3163.00			
engineering /		<u>C8</u>	1500.00 2000.00	<u>CG</u>	5328.00			
trucking	ļ	<u>C6</u>	2000.00	<u>C4</u>	984.00			
Sub Total		\$	22,350.00	\$	23,090.00	\$	10,000.00	
		<u>*</u>	22,550.00	<u> </u>	20,070.00	<b>–</b>	10,000.00	
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stimulation		DY.	24000.00	02	21192.00		43000.00	
logs		DI	2000.00	Sec				
tubing		03	2400.00			DZ	4600.00	
		DS	2000.00		593.00			
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BEFORE THE

OIL CONSERVATION DIVISION Case No.11247 Exhibit No. /5 Submitted By: Richardson Operating Company

Richardson Operating Company Hearing Date: April 20, 1995

Exhibit 1

### RICHARDSON OPERATING COMPANY AUTHORITY FOR EXPEDITURES

Well Name: ROPCO Fee 12-4 PC SECTION 12NW/4Location: T29N R13WDProposed Depth: 1600'O

Date: 3/6/95 Objective Formation: Pictured Cliffs

•	Drilling Cosis (Included Run Casing)	Tanglble	Inlangibl <b>e</b>		Total	Actual
	Survey and Permits		1,500	AI		
	Title Opinion & Land Costs		1,500	A2		
			1,500	A3		
	Drilling (Incl. water and mud) 1600' @ 10.00/(1		16,000	BI		
	BOP Rental		750	82		
	Dirt Work		3,000	1		
	Plt Uning		1,500			
	Surface Casing 200' @ 6.00/1t	1,200		Ci		
	Casing Head	750		c2		
	Cement Surface		1,500			
	Power Tongs		1,000	1		
	Casing 1600' @ 4.00/11	6,400		c5		
		0,400	2,000	1		
	Logs		4.000			
	Englneering		1,500	-		
	Cement Longstring		4,000			
	Total Cost to Run Casing	8,350	والمترية بالبخيرية الركب ومنجانا فتخفف		49 100	
		8,350	39,750		48,100	
	7% Conlingency			GI	3,367	
	Grand Total to Run Casing				51,467	
	Completion Costs	t	1	ı		
	Rlg Anchors		600			
	Logs		2,000			
	Perf		1,500	02		
	Wellhead & Fillings	4,000		EZ		
	Tubing 1600' @ 1.50/ft	2,400		D3		
	Slimulation		24,000	D4		
	Tool Rental		2,000	D5		
	Trucking		3.000	FI		
	Battery Installation		4,000	F2		
	Restore Location		1.500	85		
	Engineering	[	3,000		1	
	Treator	5,000		FU		
	Flowiine	5.000		F5		
	Tank & Fittings	4,000		FG		
	Gravel	.,	1,000	06		
	Workover Rig					
	Completion Fluids		2,000			
	El Paso Hookup	ł	13,000			
	Division Order		1,000			
	Frac Tank Rental			н/ Е4		
	Flowback		2,000	54 55		
	Fence Locallon	2.000		FB		
	Total Completion Costs	22,400	69,100	-0	91,500	
	10% Confingency	22,400		c -		
				62	9,150	
	Drilling Costs		-		51,467	
	Grand Total Well Costs		_		152,117	

ROPCO 12-4 PC, NW/4

100410	DIGULARRAN PRODUCTION COMPANY
10.041%	RICHARDSON PRODUCTION COMPANY
83.381%	AMOCO PRODUCTION COMPANY
2.077%	CHRISTMANN MINERAL COMPANY
1.039%	RODERICK ALLEN MARKHAM
1.039%	MANON MARKHAM MCMULLEN
1.039%	ROSALIND REDFERN
1.384%	KERR-MCGEE CORPORATION

APPROVED	DATE
APPROVED	DATE

..... A DE CTALED ON VOICUITO AL IIII AM -Rept 230-01 Based:03/31/95

Exhibit 2

Co: 90 GALLEGOS DRILLING PROJECT

Well:NM-007-010 ROPCB FED. PC #12-1

Accounting Basis: Accrual Closed+UnClosed DRILLING AFE

AFE STATUS REPORT

		ALE DIVIOS K			Well-WH-007-010 Korch Firs FC #12-1			
		TGTAL A Expenditure To date	FE AMOUNTS	AMOUNTS OVER/UNDER AFE				
	Drilling Costs:			-				
	Survey & Permits	2,256.68 AL	0.00	-2,256.68				
	Title Opinion & Land Costs	0.00	0.00	0.00				
	Site Damages	2,500.00 A2	0.00	-2,500.00				
	Drilling	16,780.19 BI	0.00	-16,780,19				
	SOP Rental	1,366.59 B2		-1,366.59				
	Dirt Work	1,233.43 A3	0.00	-1,233.43				
	Pit Lining	0.00	0.00	0.00				
	Surface Casing	1,786.15 CI	0.00	-1,786.15				
	Casing Head	0.00	0.00	0.00				
	Cement Surface	1,171.98 CZ		-1,171,98				
	Power Tongs	0.00	0.00	0.00				
	Casing	7,587.8503	0.00	-7,587.85				
	Trucking	984.75 C	H 0.00	-984.75				
	Logs	3,163.04 CS	5 0.00	-3,163.04				
	Engineering	5,213.11 C (	6.00	-5,213.11				
	Cement Longstring	3,071.90 C-	7 0.00	-3,071.90				
	Travel Expense	0.00	0.00	0.00				
	Geology	115.74 CG	ь <b>0.00</b>	-115.74				
	Roustabouting	0.00	0.00	0.00				
	TOTAL DRILLING COSTS	47,231.41	0.00	-47,231.41				
	Completion Costs:							
	Rig Anchors	475.31 E	0.00	-475.31				
	Logs & Perf	2,118.75 D	ı 0.00	-2,118.75				
	Wellhead & Fittings	6,731.80 E	z 0.00	-6,731.80				
	Tubing	0.00	0.00	0.00				
	Stimulation	21,192.82 03	2 0.00	-21,192.82				
	Tool Rental	593.25 D	з 0.00	-593.25				
	Trucking	5,680.10 F	-	-5,680.10				
	Battery Installation	90.00 F2		-90.00				
	Restore Location	0.00	0.00	0.00				
	Engineering	2,695.55 F3	-					
	Treator	4,440.93 F	4 0.00	-4,440.93				
	Flowline	5,000 <del>0.00</del> F	8 0.00		Actual prior to central offsite compression			
	. Compressor Fittings	0,00	0.00					
	Tank & Fittings	4,675.90 F	5 0.00	-4,675.90				
	Compressor Installation	0.00 <del>- 376.61</del>	0.00	-376.61	Compression omitted from comparison			
	Pumping Unit	0.00	0.00					
	Gravel	0.00	0.00	0.00				
	Workover Rig	4,251.17 E	3 0.00	-4,251,17				
ĺ	Completion Fluids	111.64 D						
	El Paso	13,000.00 F						
	Division Order	0.00	0.00					
	Frac Tank Rental	189.74 E						
	Flowback	0.00	0.00					
		1 566 67 -		1 000 05				

1,908.25 F7

0.00

-1,908.25

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Fence Location

## Pept 230:01 Based:03/31/95 Accounting Basis: Accrual Closed+UnClosed DRILLING AFE

AFE STATUS REPORT

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### Well:NH-007-010 ROPCO FED. PC \$12-1

Exhibit 2	

	TOTAL EXPENDITURE TO DATE	AFE	AMOUNTS	AMOUNTS OVER/UNDER AFE
Roustabouting	2,899.21	F2.	0.00	-2,899.21
TOTAL COMPLETION COSTS	71,431.03		0.00	-71,431.03
TOTAL DRILLING COSTS	118,662.44		0.00	-118,662.44
				+ 5,000 - <u>376</u> 123, 286

Flowline

Compressor Installation

Exhibit	3
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# Drilling Authorization

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Property - Burnham Gas Cor SAN JUAN County, NEW MEXICO Operating Field - Amoco Production Company		Vell# 1 Property FLAC - 189552			
Operator: AMOCO PRODUCTION COMPANY API#:	Operations Center: SAN JUAN OC AMOCO's Interest: 0.8338000	LPN#: 687773 Contract#: 00			
Targets - Total Depth: 1581 Eorizon Reg. Fiel PC	-	t Depth 1288			
Completion: Single FNL					
Surface Location: 1450' FSE x 1520' FW	2 sec. 12 - T29N - R13W				
Bottom Hole Location: Same					
Cost Summary (Development)		Gross Dry Hole	Gross Completion		
Drilling Intangibles			•		
	• • • • • • • • • • • • • • • • • • • •		\$36,000 Bl		
•	:				
	:		\$5,000 A2		
4	:		\$7,000 A\		
	• • • • • • • • • • • • • • • • • • • •		\$7,000 B2		
	:		\$43,000 DI		
Other	• • • • • • • • • • • • • • • • • • • •	\$13,000	\$20,400 GL		
Total Intangible Well Equipment - Tangibles	:	\$68,160	\$122,660		
Casing		\$8,500	\$8,500 CI		
Tubing		\$0	\$4,600 DZ		
Wellhead	:	\$1,500 <i>C</i> *	2 \$2,500 E1 = \$1000		
Other	:	\$0	\$0		
Total Tangible	:	\$10,000	\$15,600		
	• • • • • • • • • • • • • • • • • • • •				
			\$50,000 F1 = \$ 20,000		
	• • • • • • • • • • • • • • • • • • • •		\$0		
• • • • • • • • • • • • • •					
Total This Request		\$90,160	\$216,260		
			\$0		
Total to Date Estimate	:	\$90,160	\$216,260		
	<u>۸</u>	1	- 30,000 compressor		
Notice to Non-Operator: Cost shown on	this Non-Operator:	<u>\</u>	\$ 186,260		
form are estimates only. Non-Operator:	s should	```	· · · · · · · · · · · · · · · · · · ·		
not consider these estimates as establ.	ishing By:		Date:		
any limit on the monies which will be :	required				
to perform the proposed operation.					

Contacts:

Technical GREG E GROTEE P O BOX 800 DENVER, CO, 80201-0800 303-830-4079 303-830-4777 FAX Eusiness Julie & Jenkins P O BOX 800 DENVER, CO, 80201-0800 (303) 830-4844 (303) 830-4777 FAX