

CASE 2906: Application of WESTERN  
OIL FIELDS for approval of quad-  
ruple completion of GULF HILL #4.

CASE No.

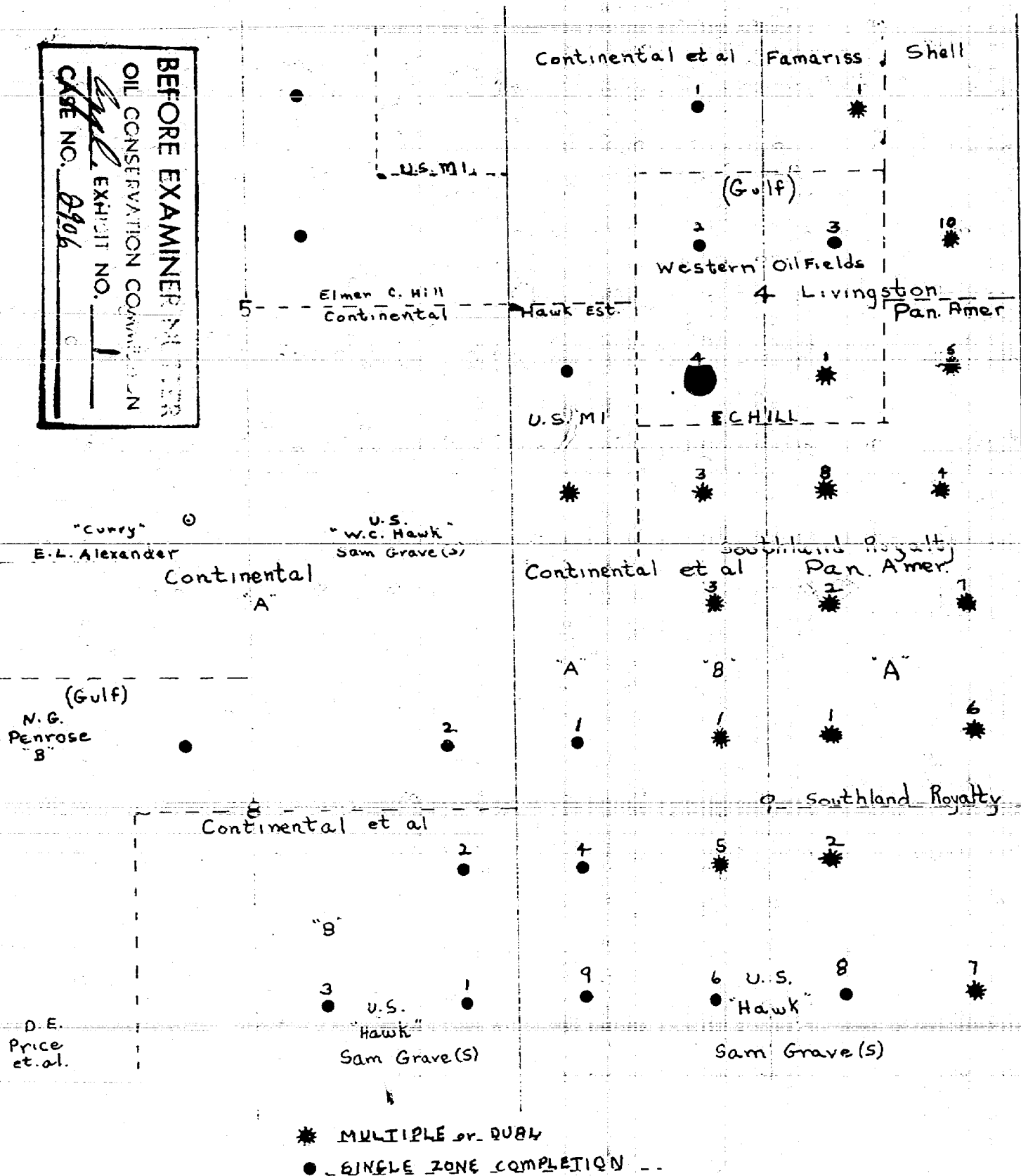
2906

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

# EXHIBIT I

COUNTY LEA STATE N. MEX.  
TOWNSHIP 21S RANGE 37E

BEFORE EXAMINER  
OIL CONSERVATION COMMISSION  
CASE NO. 8906  
EXHIBIT NO. 1



Western Oil Fields, Inc.

August 6, 1963

New Mexico Oil Conservation Commission  
P. O. Box 791  
Santa Fe, New Mexico

Attn: Mr. A. L. Porter, Jr., Secretary and Director

Dear Mr. Porter,

The Western Oil Fields, Inc. is contemplating a quadruple tubingless completion on the No. 4 Gulf Hill, located Unit S, Section 4, Township 21 South, Range 37 East.

The producing zones involved are as follows: (1) Grayburg Oil  
(2) Tubb Gas (3) Drinkard Oil (4) Wantz Abo Oil.

This exact combination does not exist in the pool limits under one order number which I can use for administrative approval, however, all of these zones are producing in combinations such as Drinkard & Tubb, Grayburg & Drinkard, Wantz Abo & Tubb etc. in the Pool Limits.

It is respectfully requested that I be advised how to pursue approval of the quadruple.

Sincerely yours,

Paul G. White  
Paul G. White

cc Mr. Ed Barnholt

Oh Ex 3-3722

*Call Mr. White  
Held, I understand  
where he wants  
the big which  
he will need  
on this  
John*

Case 7906

August 20, 1963

Mr. A. L. Porter, Jr.  
Secretary-Director  
New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Subject: Application for per-  
mission to Quadruple  
complete the Western  
Oil Fields, Inc. Gulf  
Hill No. 4 in the Gray-  
burg Oil, Tubb Oil,  
Drinkard Oil & Wantz  
Abo Oil Pool, Lea  
County, New Mexico

Dear Sir:

In accordance with provisions of Statewide Rule 112, Western Oil Fields, Inc., respectfully requests that you schedule a hearing to consider its application for permission to quadruple complete (tubingless) the subject well as specified below.

As per attached plat, this well is located in Unit "S" of Section 4, T-21-S, R-37-E, Lea County, New Mexico.

The completion will be made by utilizing (4) strings of 2 7/8ths inch tubing. Cement will be used to effect the separation of the four zones in the well bore. The Western Oil Fields, Inc., Gulf Hill No. 4 well is offset by Famariss Oil & Ref. Co., Shell Oil Co., Pan American Oil Co., and Continental Oil Co. Copies of this application are being furnished these operators.

Sincerely Yours,

*Paul G. White*  
Paul G. White  
Div. Engr.  
Western Oil Fields, Inc.

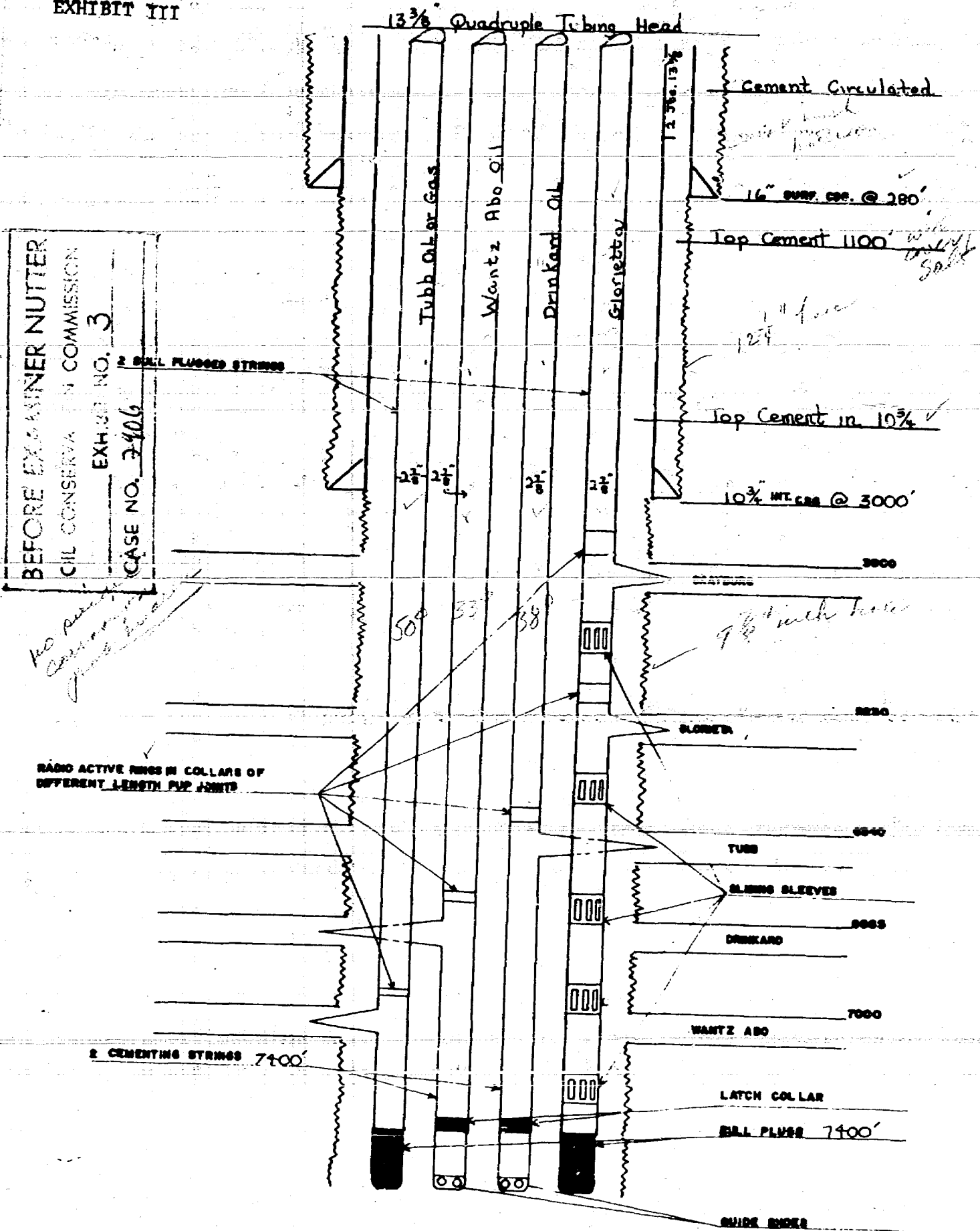
cc: Offset Operators  
Mr. E. C. Barnholt

DOCKET MAILED

Date: 9/13/63  
*QU*

# GENERAL PROGRAM FOR GULF HILL NO.4 COMPLETION

EXHIBIT III



CONFIDENTIAL

Company	Well	Accumulated 1-1-63		Zone	Present Tests		GOR	421-1001
		Dist. or Oil	Gas		Oil or Dist.	Gas		
Famariss	(S) E. C. Hill 1J	30,986	1,091,831	Blinebry Gas Tubb Zone	Plugged	4100 MCFD		
Continental	(S) E. C. Hill 1K	51,187	csghd.	Terry Blinebry	16		6688	16
Continental	(D) Hawk Fed A 4U	256	csghd.	Drinkard	28		1221	16
"	(D) " " " "		csghd.	Blinebry	8		1225	6
Continental	(S) Hawk Fed B-4 1F	51,660	csghd.	Terry Blinebry	17		2882	17
Continental	(S) Hawk Fed B-3 23A	42,950	csghd.	Terry Blinebry	6		5333	5
Pan American	(D) Southland Royalty 3V	25,781	csghd.	Drinkard	45		2873	45
"	(D) " " "	8,995	csghd.	Tubb	18		1389	18
Pan American	(T) Southland Royalty 4X	94,720	csghd.	Drinkard	86		1060	71
"	(T) " " "	24,465	1,357,129	Tubb Gas	14	390 MCF	27,400	
"	(T) " " "			Blinebry Oil	Made 76 BOPD on potential July 10, 1963 (Has 54			
Pan American	(D) Southland Royalty 5Q	59,594	csghd.	Drinkard	3		40,200	3
"	(D) " " "	83,000	1,715,907	Blinebry Gas	54	1060 MCF	21,200	
Pan American	(T) Southland Royalty 8W	No history	csghd.	Drinkard	33		2515	33
"	(T) " " "	" "	csghd.	Blinebry	20		1425	20
"	(T) " " "	" "	csghd.	Tubb	30		10,488	14
Shell	Livingston 10P	28,784	csghd.	Wantz Abo	P&A (9-7-61)			
"	(D) " "	19,680	csghd.	Drinkard	33		1567	33
"	(D) " "	14,547	csghd.	Blinebry	14		5514	14
Shell	Livingston 12I	9,908	csghd.	Blinebry	18		10,311	18
				Tubb	Recovering Load Oil			
				Drinkard	Recovering Load Oil			
Shell	(S) Taylor Glenn 7H	68,280	csghd.	Terry Blinebry	14		12,314	14
Continental	(S) L. G. Hill 1D			Grayburg - Made 139 BOPD on potential 10-5-55, went to 100% wat				
Continental	(S) Hawk Fed B-5 1P			Made 53,753 barrels oil before recompletion to Terry Blinebry (May 1957) from zone 6800-727				

Apple EXHIBIT NO. 17  
CASE NO. 2906

bbl	Accumulated 1-1-63		Zone	Present Tests		GOR	Allowable
	Dist. or Oil	Gas		Oil or Dist.	Gas		
G. Hill 1J	30,986	1,091,831	Blinebry Gas Tubb Zone	Plugged	4100 MCFD		
G. Hill 1K	51,187	csghd.	Terry Blinebry	16		6688	16
Fed A 4U	256	csghd.	Drinkard	28		1221	16
" " "		csghd.	Blinebry	8		1225	6
Fed B-4 1F	51,660	csghd.	Terry Blinebry	17		2882	17
Fed B-3 23A	42,950	csghd.	Terry Blinebry	6		5333	5
Royalty 3V	25,731	csghd.	Drinkard	45		2875	45
" "	8,995	csghd.	Tubb	18		1389	18
Southland Royalty 4X	94,720	csghd.	Drinkard	86		1060	71
" "	24,465	1,357,129	Tubb Gas	14	390 MCF	27,400	
" "			Blinebry Oil - Made 76 BOPD on potential July 10, 1963 (Has 54 bbl allowable)				
Southland Royalty 5Q	59,594	csghd.	Drinkard	3		40,200	3
" "	83,000	1,715,907	Blinebry Gas	54	1060 MCF	21,200	
Southland Royalty 8W	No history	csghd.	Drinkard	33		2515	33
" "	" "	csghd.	Blinebry	20		1425	20
" "	" "	csghd.	Tubb	30		10,488	14
Livingston 10P	28,784	csghd.	Wantz Abo	P&A (9-7-61)			
" "	19,680	csghd.	Drinkard	33		1567	33
" "	14,547	csghd.	Blinebry	14		5514	14
Livingston 12I	9,908	csghd.	Blinebry	18		10,311	18
			Tubb	Recovering Load Oil			
			Drinkard	Recovering Load Oil			
Kaylor Glenn 7H	68,280	csghd.	Terry Blinebry	14		12,314	14
G. Hill 1D			Grayburg - Made 139 BOFD on potential 10-5-65, went to 100% water P&A 12-8-55				
Fed B-3 1P			Made 53,753 barrels oil before recompletion to Terry Blinebry (May 1957) from zone 6890-7275' (Sec 3-21S-37E)				

## EXHIBIT II Part 2

PERTINENT COMPLETION DATA  
ON WELLS NEAR GULF HILL #4  
Sec. 4, T21S, R37E

Company	Well	Pipe Depth & Size	Cement Used	Cement Top	Gross Perf. Zones	Potential		GOR	Gross
						Oil or Dist.	Gas		
Famariss	E. C. Hill 1J	13-3/8" @ 250'	200 sks	Circul	6195-6394 Tubb	96 BOPD			46
		8-5/8" @ 2850'	200 sks	?	5630-3870 Blinebry	30 BDPD	4100 MCFD		?
		5-1/2" @ 6394'	1000 sks	?					
Continental	E. C. Hill 1K	13-3/8" @ 264'	300 sks	Circul	5869-5911 Blinebry	364 BOPD			39
		9-5/8" @ 2946'	1420 sks	950'					
		7" @ 6049'	940 sks	2850'					
Continental	Hawk Fed A 4U	8-5/8" @ 1261'	600 sks	Circul	6590-6680 Drinkard	125 BOPD		2240	38.2
		5-1/2" @ 6839'	700 sks	2350'	5828-6172 Blinebry	27 BOPD		222	38.3
Continental	Hawk Fed B-4 1F	10-3/4" @ 251'	250 sks	Circul	5734-5890 Blinebry	196 BOPD		344	40
		7-5/8" @ 3003'	870 sks	?					
		5-1/2" @ 5998'	436 sks	?					
Continental	Hawk Fed B-3 23A	10-3/4" @ 270'	250 sks	Circul	5758-5902 Blinebry	58 BOPD		2379	41
		7-5/8" @ 3149'	1150 sks	1425'					
		5-1/2" @ 5950'	400 sks	3100'					
Pan American	Southland Royalty 3V	16" @ 212'	300 sks	Circul	6664-6688 Drinkard	308 BOPD			38
		10-3/4" @ 1384'	300 sks	?	6338-6380 Tubb	74 BOPD		832	40
		5-1/2" @ 6725'	900 sks	3390'					
Pan American	Southland Royalty 4X	13-3/8" @ 305'	300 sks	Circul	6610- ? Drinkard	508 BOPD		682	39
		8-5/8" @ 2890'	475 sks	1750'	6176-6392 Tubb	99 BDPD	647 MCFD	31,960	52
		5-1/2" @ 6748'	180 sks	?	5777-5948 Blinebry	76 BOPD		492	
Pan American	Southland Royalty 5Q	13-3/8" @ 312'	300 sks	Circul	6640-6652 Drinkard	249 BOPD			38
		8-5/8" @ 2882'	300 sks	1365'	5702-5970 Blinebry	10 BDPD	2170 MCFD		54
		5-1/2" @ 6755'	360 sks	5425'					
Pan American	Southland Royalty 8W	9-5/8" @ 1347'	580 sks	Circul	6617-6649 Drinkard	42 BOPD			38
		7" @ 6702'	600 sks	?	6229-6327 Tubb	114 BOPD			37
					5837-5984 Blinebry	24 BOPD			42
Shell	Livingston 10P	13-3/8" @ 283'	250 sks	Circul	7024-7388 Wantz Abo	77 BOPD		255	33
		8-5/8" @ 3139'	2300 sks	Circul	6572-6654 Drinkard	131 BOPD		6924	39
		5-1/2" @ 7425'	550 sks	4255'	5772-5890 Blinebry	160 BOPD		2110	40
Shell	Livingston 12I	9-5/8" @ 308'	250 sks	Circul	6543-6603 Drinkard				
		2-7/8" @ 6745'	635 sks	2200'	6163-6326 Tubb				
		2-7/8" @ 6745'	635 sks	2200'	5763-5772 Blinebry				
		2-7/8" @ 6745'	635 sks						

## EXHIBIT II Part 2

PERTINENT COMPLETION DATA  
ON WELLS NEAR GULF HILL #4  
Sec. 4, T21S, R37E

	Pipe Depth & Size	Cement Used	Cement Type	Gross Perf. & Zone	Potential		GOR	Grav.	Remarks
					Oil or Dist.	Gas			
11 1J	13-3/8" @ 250'	200 sks	Circul	6195-6394 Tubb	96 BOPD			46	P&A 9/29/54
	8-5/8" @ 2850'	200 sks	?	5630-3870 Blinebry	30 BOPD	4100 MCFD		?	
	5-1/2" @ 6394'	1000 sks	?						
11 1K	13-3/8" @ 264'	300 sks	Circul	5869-5911 Blinebry	364 BOPD			39	
	9-5/8" @ 2946'	1420 sks	950'						
	7" @ 6049'	940 sks	2850'						
4 4D	8-5/8" @ 1261'	600 sks	Circul	6590-6680 Drinkard	125 BOPD		2240	38.2	
	5-1/2" @ 6839'	700 sks	2350'	5828-6172 Blinebry	27 BOPD		222	38.3	Pump
B-4 1F	10-3/4" @ 251'	250 sks	Circul	5734-5890 Blinebry	196 BOPD		344	40	
	7-5/8" @ 3003'	870 sks	?						
	5-1/2" @ 5998'	436 sks	?						
B-3 23A	10-3/4" @ 270'	250 sks	Circul	5758-5902 Blinebry	58 BOPD		2379	41	
	7-5/8" @ 3149'	1150 sks	1425'						
	5-1/2" @ 5950'	400 sks	3100'						
Royalty 3V	16" @ 212'	300 sks	Circul	6664-6688 Drinkard	308 BOPD			38	
	10-3/4" @ 1384'	300 sks	?	6338-6380 Tubb	74 BOPD		832	40	
	5-1/2" @ 6725'	900 sks	3390'						
Royalty 4X	13-3/8" @ 305'	300 sks	Circul	6610- ? Drinkard	508 BOPD		682	39	
	8-5/8" @ 2890'	475 sks	1750'	6176-6392 Tubb	99 BOPD	647 MCFD	31,960	52	
	5-1/2" @ 6748'	180 sks	?	5777-5948 Blinebry	76 BOPD		492		
Royalty 5Q	13-3/8" @ 312'	300 sks	Circul	6640-6652 Drinkard	249 BOPD			38	
	8-5/8" @ 2882'	300 sks	1365'	5702-5970 Blinebry	10 BOPD	2170 MCFD		54	
	5-1/2" @ 6755'	360 sks	5425'						
Royalty 8W	9-5/8" @ 1347'	580 sks	Circul	6617-6649 Drinkard	42 BOPD			38	
	7" @ 6702'	600 sks	?	6229-6327 Tubb	114 BOPD			37	
				5837-5984 Blinebry	24 BOPD			42	Pump
10P	13-3/8" @ 283'	250 sks	Circul	7024-7388 Wartz Abo	77 BOPD		255	33	Pump P&A 9/7/61
	8-5/8" @ 3139'	2300 sks	Circul	6572-6654 Drinkard	131 BOPD		6924	39	
	5-1/2" @ 7425'	550 sks	4255'	5772-5890 Blinebry	160 BOPD		2110	40	
12I	9-5/8" @ 308'	250 sks	Circul	6543-6603 Drinkard					
	2-7/8" @ 6745'	635 sks	2200'	6163-6326 Tubb					
	2-7/8" @ 6745'	635 sks	2200'	5763-5772 Blinebry					
	2-7/8" @ 6745'	635 sks							

## NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

5-1-61

## APPLICATION FOR MULTIPLE COMPLETION

2906

Operator Western Oilfields, Inc.		County Lea	Date August 20, 1963
Address P. O. Box 1137, Hobbs, N. Mex.		Lease Gulf Hill	Well No. 11
Location or Well	Unit S	Section 11	Township 21-S
		Range 37-E	

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES \_\_\_\_\_ NO X
2. If answer is yes, identify one such instance: Order No. \_\_\_\_\_; Operator, Lease, and Well No.: \_\_\_\_\_

3. The following facts are submitted:	(1) Upper Zone	(2)	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Grayburg	Tubb	Drinkard	Wantz-Abo
b. Top and Bottom of Pay Section (Perforations)	3900-4300	6340-6360	6665-6750	7000-7060
c. Type of production (Oil or Gas)	OIL	OIL	OIL	OIL
d. Method of Production (Flowing or Artificial Lift)	Flow	Flow	Flow	Flow

4. The following are attached. (Please mark YES or NO)

- No a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- No c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.\*
- No d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Famariss Oil & Refining Co., Broadmoor Building, Hobbs, New Mexico.

Shell Oil Co., Attn: Mr. R. L. Rankin, Box 845, Roswell, New Mexico.

Pan American Petroleum Corp, P. O. Box 268, Lubbock, Texas.

Continental Oil Co., Attn: Mr. W. A. Mead, 825 Petroleum Bldg. Roswell, New Mexico

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO \_\_\_\_\_. If answer is yes, give date of such notification August 20, 1963

CERTIFICATE: I, the undersigned, state that I am the Div. Engineer of the Western Oilfields Inc. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Paul White  
Signature

- \* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 9/25/63

CASE 2906

Hearing Date 9 am 9/25/63  
Don @ SF

My recommendations for an order in the above numbered cases are as follows:

Enter an order approving the  
quadruple completion (tubingless)  
of Western Oil Fields, Inc  
Gulf Hill Well #4 located 1980' FSL  
of 1980' FWL of Sec 4, T21S, R37E  
to produce oil from the Penrose-  
Stelly, Tewan, Drinkard, & Wantz-Abo  
Pool through parallel strings of 2 7/8  
inch casing cemented in a common  
well bore.

Also provide that applicant may obtain  
administrative approval to substitute  
the Glorita formation for the Penrose  
San Andres (Penrose-Stelly) in the  
event the latter does not prove  
productive.

Require segregation. Seismic  
tests upon sample &  
annually thereafter during the Wantz-Abo GOR test period

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 25, 1963

9:00 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, or Elvis A. Utz, as alternate examiner:

- CASE 2883: (Continued from the August 21st examiner hearing)  
Application of Pan American Petroleum Corporation for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a Tubb gas, Blinebry oil and Paddock gas triple completion, Fowler Field, at an unorthodox location for the Fowler Blinebry Oil Pool 990 feet from the South line and 1650 feet from the East line of Section 15, Township 24 South, Range 37 East, Lea County, New Mexico.
- CASE 2901: Application of Pan American Petroleum Corporation for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to drill its SMU Well No. 17 at an unorthodox location 1980 feet from the North line and 1980 feet from the East line of Section 15, Township 24 South, Range 37 East, Fowler Ellenburger Pool, Lea County, New Mexico.
- CASE 2902: Application of Pioneer Production Corporation for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Blanco Mesaverde and Basin-Dakota Gas Pools underlying the S/2 of Section 28, Township 30 North, Range 12 West, San Juan County, New Mexico.
- CASE 2903: Application of Coastal States Gas Producing Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its Gulf State Well No. 1, located in Unit F of Section 20, Township 17 South, Range 36 East, Lea County, New Mexico, to produce oil from the Double-A Abo Pool and an undesignated Lower Leonard pool through parallel strings of tubing.
- CASE 2904: Application of Coastal States Gas Producing Company for the creation of a new Abo Pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Abo production in Sections 15 and 16, Township 9 South, Range 33 East, Lea County, New Mexico, and for the establishment of temporary rules therefor, including provisions for 80-acre spacing and fixed well locations.
- CASE 2905: Application of Robert N. Enfield for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the West Indian Basin Unit Area comprising 4,278.29 acres of Federal, State and fee lands in Township 21 South, Range 23 East, Eddy County, New Mexico.
- CASE 2906: Application of Western Oil Fields, Inc. for a quadruple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the quadruple completion (tubingless) of its Gulf Hill No. 4 located in Unit S of Section 4, Township 21 South, Range 37 East, Lea County, New Mexico, to produce oil from the Penrose-Skeily, Tubb, Drinkard and Wantz Abo

Pools, through parallel strings of 2 7/8 inch casing cemented in a common well bore.

CASE 2907: Application of Penroc Oil Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Indian Hills-Upper Pennsylvanian Gas Pool underlying Section 19, Township 21 South, Range 24 East, Eddy County, New Mexico.

CASE 2908: Application of Penroc Oil Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Morrow section of the Pennsylvanian formation underlying Section 19, Township 21 South, Range 24 East, Indian Hills Field, Eddy County, New Mexico.

CASE 2909: Application of Sinclair Oil & Gas Company for the extension of a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Grayburg-Jackson Waterflood Project, Grayburg Jackson Pool, Eddy County, New Mexico, by the injection of water into 7 additional wells located in Sections 3, 4, 5, 8, 9, and 10, Township 17 South, Range 31 East. Applicant further seeks an administrative procedure for further expansion of the project by the conversion to water injection of 30 additional wells in three 6-month stages commencing in early 1964, said wells to be located in Sections 3, 5, 6, 7, 8, 9 and 10 of said township.

CASE 2910: Application of Big (O) Drilling Company for extension of an existing oil pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the extension of the Scharb Bone Spring Oil Pool to comprise the W/2 of Section 5, all of Section 6, and the N/2 of Section 7, Township 19 South, Range 35 East, Lea County, New Mexico, and for special rules therefor, including 80-acre spacing and proration units to comprise any two contiguous 40-acre tracts, and for fixed well locations.

(5) That the ~~Penrose - Skelly Pool~~ Secretary -  
Director of the Commission should be authorized  
to permit the applicant to complete the  
subject well in the Florida formation in  
line of the Penrose - Skelly Pool if the  
Penrose - Skelly pool is non-productive.

DRAFT

JMD/esr

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2906

Order No. R- 2577

APPLICATION OF WESTERN OIL FIELDS, INC.,  
FOR A QUADRUPLE COMPLETION, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 25, 1963, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this \_\_\_\_\_ day of September, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Western Oil Fields, Inc., seeks authority to complete its Gulf Hill Well No. 4, located in Unit S of Section 4, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as a quadruple completion (tubingless) to produce oil from the Penrose-Skelly, Tubb, Drinkard, and Wantz-Abo Pools through parallel strings of 2 7/8-inch casing cemented in a common well bore.
- (3) That the mechanics of the proposed quadruple completion are feasible and in accord with good conservation practices.
- (4) That approval of the subject application will prevent waste and protect correlative rights.

(2) That if the Penrose - Skelly pool is non-productive, the Secretary - Director of the Commission is hereby authorized to ~~grant~~ ~~the applicant~~ grant an exception to the requirements of Rule 112-A of the General Rules and Regulations to permit substitution ~~of the Glorieta formation in lieu of the substitution of the Glorieta formation~~ the applicant to complete ~~in the Glorieta formation~~ the subject well in the Glorieta formation in lieu of the Penrose - Skelly Pool. ~~Application for such multiple completion shall be filed in accordance with, Rule 112-A.~~

IT IS THEREFORE ORDERED:

(1) That the applicant, Western Oil Fields, Inc., is hereby authorized to complete its Gulf Hill Well No. 4, located in Unit S of Section 4, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as a quadruple completion (tubingless) to produce oil from the Penrose-Skelly, Tubb, Drinkard, and Wantz-Abo Pools through parallel strings of 2 7/8-inch casing cemented in a common well bore.

PROVIDED HOWEVER, That the applicant shall complete, operate and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order.

PROVIDED FURTHER, That the applicant shall take zone segregation tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Wantz-Abo Pool.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE NO. 2906  
Order No. R-2577

APPLICATION OF WESTERN OIL FIELDS, INC.,  
FOR A QUADRUPLE COMPLETION, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 25, 1963, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 3rd day of October, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Western Oil Fields, Inc., seeks authority to complete its Gulf Hill Well No. 4, located in Unit 8 of Section 4, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as a quadruple completion (tubingless) to produce oil from the Penrose-Skelly, Tubb, Drinkard, and Wantz-Abo Pools through parallel strings of 2 7/8-inch casing cemented in a common well bore.

(3) That the mechanics of the proposed quadruple completion are feasible and in accord with good conservation practices.

(4) That approval of the subject application will prevent waste and protect correlative rights.

(5) That the Secretary-Director of the Commission should be authorized to permit the applicant to complete the subject well in the Glorieta formation in lieu of the Penrose-Skelly Pool if the Penrose-Skelly Pool is non-productive.

IT IS THEREFORE ORDERED:

(1) That the applicant, Western Oil Fields, Inc., is hereby authorized to complete its Gulf Hill Well No. 4, located in Unit S of Section 4, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as a quadruple completion (tubingless) to produce oil from the Penrose-Skelly, Tubb, Drinkird, and Wants-Abo Pools through parallel strings of 2 7/8-inch casing cemented in a common well bore.

PROVIDED HOWEVER, That the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order.

PROVIDED FURTHER, That the applicant shall take some segregation tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Wants-Abo Pool.


(2) That if the Penrose-Skelly Pool is non-productive, the Secretary-Director of the Commission is hereby authorized to grant an exception to the requirements of Rule 112-A of the Rules and Regulations to permit the applicant to complete the subject well in the Glorieta formation in lieu of the Penrose-Skelly Pool; that application for such multiple completion shall be filed in accordance with Section IV, Rule 112-A.


(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

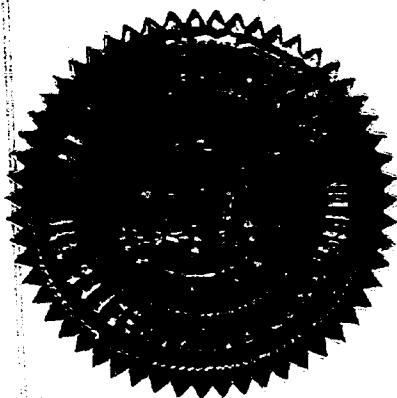
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
JACK M. CAMPBELL, Chairman

  
E. S. WALKER, Member

  
A. L. PORTER, Jr., Member & Secretary



GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

*State of New Mexico*  
**Oil Conservation Commission**



LAND COMMISSIONER  
E. S. JOHNNY WALKER  
MEMBER

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

P. O. BOX 971  
SANTA FE

October 3, 1963

Mr. Thomas McNenna  
Attorney at Law  
302 E. Palace Avenue  
Santa Fe, New Mexico

Re: Case No. 2906  
Order No. R-2577  
Applicant:  
Western Oil Fields, Inc.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

*A. L. Porter, Jr.*

A. L. PORTER, JR.  
Secretary-Director

ix/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC       

Antec OCC       

OTHER

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
SEPTEMBER 25, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Western Oil Fields, Inc.  
for a quadruple completion, Lea County,  
New Mexico, seeking approval of the  
quadruple completion of its Gulf Hill No.  
4, located in Unit S of Sec. 4, TS 21  
South, Range 37 East, Lea County, New  
Mexico, to produce oil from the Penrose-  
Skelly, Tubb, Drinkard and Wantz Abo

Case No. 2906

DEPOSE: DANIEL C. NUTT, EXAMINED

TRANSCRIPT OF HEARING

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

SANTA FE, N. M.  
PHONE 983-3971

ALBUQUERQUE, N. M.  
PHONE 243-6691

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
September 25, 1963

EXAMINER HEARING

DEARNLEY, MEIER, WILKINS and CROWNOVER

Phone 243-6691

General Court Reporting Service  
Albuquerque, New Mexico

IN THE MATTER OF:

Application of Western Oil Fields, Inc., for a  
quadruple completion, Lea County, New Mexico,  
seeking approval of the quadruple completion  
of its Gulf Hill No. 4 located in Unit's of  
Section 4, Township 21 South, Range 37 East,  
to produce oil from the Penrose-Skelly, Tubb,  
Drinkard and Wantz Abo.

CASE NO.

2906

BEFORE:

DANIEL C. NUTTER, EXAMINER

TRANSCRIPT OF HEARING

MR. NUTTER: Case 2906.

MR. DURRETT: Application of Western Oil Fields, Inc.,  
for a quadruple completion, Lea County, New Mexico.

MR. MCKENNA: Tom McKenna of Santa Fe representing Western  
Oil Fields. We have one witness.

(Witness sworn)

PAUL G. WHITE,  
called as a witness herein, having been first duly sworn on oath,  
was examined and testified as follows:



DIRECT EXAMINATION

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BY MR. McKENNA:

Q Would you state your full name, please?

A Paul G. White.

Q And what is your address?

A 1916 Gila Drive, Hobbs, New Mexico.

Q Your age, and for whom you work?

A I am 35 years. I am employed now for - - by Western Oil Fields, Inc, as Division Engineer.

Q Have you ever testified before this Commission?

A No, sir, I have not.

Q Will you tell the Commission something about your education and background, starting at the college level and thereafter, please?

A Yes, sir. I graduated from the University of New Mexico Bachelor of Science degree, 1950. My experience has been the last 13 years in the oil business. The last nine I have served as District Engineer for Aztec Oil and Gas Company, Division Engineer for J. D. Rather, Jr. . and now Division Engineer for Western Oil Fields, Inc.. And in that nine years, I have supervised directly the completion of probably 40 or 50 wells, both single completion and the dual completions. My experience has been almost wholly in the Hobbs area, in the Permian Basin area. Short time in north Texas and Oklahoma.

Q All right.



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MR. MCKENNA: Mr. Examiner, I ask that the qualifications be accepted.

MR. NUTTER: Mr. White is qualified.

Q (By Mr. McKenna) All right. Are you going to be in charge of the proposed multiple completion?

A Yes, sir, I am.

Q All right. Can you tell the Commission what the present status of the Gulf Hill Number 4 is?

A Sir, we contemplated a spudding date in July. We had some delay there and we are now in the process of drilling a 20 inch hole in order to set 16 inch surface pipe on the well.

Q Now, I hand you what has been marked as Applicant's Exhibit Number One. Can you tell the Commission what that is?

A Yes. This is a condensed plat marked in red as the well location. It is 1980 from the south line, and 1980 from the west line of Section Four, Township 21 South, Range 37 East.

Q Mr. White, what is your general proposal; why are you here this morning; what do you want to accomplish?

A Sir, we want to, with the Commission's approval, attempt to quadruple complete - quadruple completion on this well.

Q All right. Now, have you gathered together any pertinent data on nearby wells, that have produced from the formations that you are interested in, in this proposed multiple?

A Yes, sir. I have prepared Exhibit Two for it. And this preparation was made in order to point out the fact that the four



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zones in which we contemplate completion have already produced in Section Four. They have been geologically identified as separate producing oil and gas zones. I would like to, on Exhibit Two to point out briefly for instance, down on the list, Pan American, Southland Royalty, B & W, there is no accumulative history as yet, but the well is now from the Drinkard Oil, Blinbery Oil and Tubb Oil. I have put down present tests on the well, and allowables. Another example would be the Southland Royalty 3-V, up the list, producing from the Drinkard and Tubb. The Wantz Abo, which is also contemplated, has a producing section in this well - - is a producing section in this well, as shown by Livingston T & P, which Shell produced in excess of 28,000 barrels, but now, P. & A., Grayburg was completed and the Continental L. G. Hill 1-D, which is not shown on the plat, it is north of the extent of the plat, and it made 139 barrels of oil on potential, and then, to 100 percent water. I have with me a log analysis, a geochemical engineering analysis for the Glorieta and Grayburg Sections in this area, and they have - - they give the well every possibility of being successful in the Grayburg, and/or Glorieta. This Exhibit Two was just prepared to give - - It consists of two parts. The first part being pertinent production data. The second part, the pertinent completion data. I included that merely for the Examiner's benefit of seeing where the pipe has been set and cement used, and potential, and so on.

Q Now, did you prepare this exhibit yourself?



A Yes, sir. I did prepare it. Information came from the Oil Conservation Commission District Office in Hobbs, New Mexico.

Q Mr. White, I now give you what has been marked as Exhibit Number Three, which is the diagrammatic sketch for the multiple completion. I make reference to this sketch. Will you explain to the Commission how you plan to make this multiple quadruple completion if your application is granted, particularly as to your cementing program?

A Yes, sir, I will. We propose to drill this 20 inch hole, which is being drilled now, to a depth of approximately 280 feet and set 16 inch Armco casing and circulate cement. We then propose, after testing casing, to drill a 12 and a quarter inch hole to approximately the depth of 3,000 feet, and run 103/4 inch intermediate casing. We will bring the top of cement on this string. after running a microcaliper survey, calculate the actual cement volume, to at least 1100 feet from surface. This, we feel, would adequately cover the salt dome in the section. The salt dome approximating 1300 feet down to 2800 feet. We then contemplate - I might add that on top of the 103/4 inch, we plan to run two joints of 133/8 inch casing to better adapt to the quadruple tubing head. We then contemplate drilling a 97/8 inch hole to the depth of, I have the plat marked 7400, but I believe that personally 7300 will be adequate. And we then will run 4 strings of 2 7/8 inch regular API tubing. All strings being run to total depth, concurrently, simultaneously. The two inner strings will be equipped as cement-

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ing strings with latch type equipment. The two outer strings will be bull plugged. The strings will be equipped with centralizers and tubalizers throughout, each section, in which we contemplate production, and at least a minimum of 100 feet above each section. We, on the string marked Glorieta, have included the sliding sleeve type equipment. This has been written up adequately in Oil Journals by engineers as a protection against an inadequate primary cement job. We felt that this was very important in that this seems to be one of the difficulties encountered in multiple completions, tubingless completions. We propose, also, to run radio active rings so we can perforate by orientation method on the density - - perforate by orientation on the density method with polar charts. Then, we will equip this well with a 13 3/8 graduating tubing head so that proper segregation tests can be run, temperature, surface gas-oil ratio. We intend to also set separate metering vessels for each of the four zones producing.

Q Mr. White, did you prepare this sketch?

A Yes, sir, I did.

Q Is it your testimony you will be sitting on this well; is that correct?

A Yes, sir.

Q Now, will you plan or will you check the cement job before you engage in any perforation?

A Yes, sir. We intend to run a caliper survey and bring the top of cement on the four tubing strings into the 10 3/4 inch



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intermediate string. Then, with a pressure test, of course, at least 2,000 pounds, we intend to push the pressure up on each string, then with a locator run on small tubing, we intend to open the bottom sliding sleeve and attempt a pump in, if a pump rate with water is attained, we will squeeze at that point. The reason again for the sliding sleeve couplings, we are trying to stay away from drill out in this small tubing, and by having the Glorieta string on the outside there, we feel that we can put the block squeeze job in without drill out and come up and complete in our Glorieta or Grayburg.

Q Can you artificially lift a pump if necessary?

A Yes, sir. We anticipate, of course, the Drinkard oil and Tubb gas, or oil zone, flowing to an economic limit on the well. If we want the Abo and Glorieta, there is a possibility they will have to be lifted, with this two and 7/8 inch tubing, with ID of 2.4, we can pump continually with consequential sucker rod method.

Q Each of the proposed zones that you are interested in, is it your testimony that in your opinion they are separately-- separate sources of supply?

A Yes, sir. Yes, sir.

Q Now, is it your opinion that production from each zone can be kept separate?

A Yes, sir.

Q Measured separately?

A Yes.



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Q If you have not mentioned previously, how do you plan to do that?

A Well, sir, with cement, of course, and block squeeze job. We intend to then, upon completion, run segregation tests and eliminate any type of communication we may have incurred and then, by the setting of separate metering vessels we intend to keep the production separate. I won't say the gas-oil ratio will be definitive of segregation. I will say that the gravity of the oil in certain instances will be. In the event of a Tubb gas, the oil gravity runs 50 plus API degrees. The Drinkard gravity should run in the neighborhood of 38 degrees and Wantz Abo 33. I don't know, sir, about the Glorieta gravity.

Q Do you know or do you anticipate any problems as to corrosion and water, if you do--

A No, sir. Not any particular problems in the area. However, we anticipate this proposal, that we will run a corrosion inhibiting compound on the upper, plastic coating type, on the upper 1200 feet of our tubing string.

Q Mr. White, if your application is granted, is your plan to submit a sketch of the actual completion within a period of time after completion?

A Yes, sir.

Q What period of time?

A Within at least 15 days, I believe, according to Rule 112, we will submit a diagrammatic showing the mechanics and cementing



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of the well. Within seven days, after completion we plan to submit the necessary segregation tests, bottom hole pressures and temperature surveys to the Commission.

Q Do you plan any particular mechanical problems that you may not have covered in the testimony?

A No, sir. Of course, difficulty has arisen in this type of completion. I have made a complete research on other companies' experiences. I am going to attempt to benefit from their problems and mistakes. I have researched the records at the Commission and talked to Amarada and Texaco and Pan American, about some of their problems, and I naturally don't anticipate any real difficulty in the completion of the well.

Q Is it your testimony that this proposed multiple is in keeping with the principals of conservation and prevention of waste?

A Yes, sir. Yes, sir.

Q All right.

MR. McKenna: I believe, Mr. Examiner, that is all.

MR. NUTTER: Are there any questions of Mr. White?

# EXAMINATION

BY MR. DURRETT:

Q Yes, sir. I have a question or two. Mr. White, I am a little confused. Apparently, there is some discrepancy here. We advertised this case as multiple quadruple completion to produce from the Penrose-Skelly, Tubb, Drinkard and Wantz Abo Pool. Now,



am I correct that you now propose to complete in the Tubb, Wantz Abo, Drinkard and Glorieta?

A Yes, sir, or Grayburg, if the Glorieta does not produce. sir, on the letter I sent in, in my application, it is corrected.

The letter to the Commission where I made application for hearing is correct. I notice the case was written up in Penrose-Skelly.

Q But, you would like the record to show Glorieta and/or Grayburg for the 4th zone?

A Yes, sir.

Q Glorieta- -

A Or Grayburg.

Q - -or Grayburg?

A Yes, sir.

Q Did you want to amend your application, Mr. McKenna?

MR. MCKENNA: We certainly very definitely want to make that amendment. We very very definitely want to make the amendment to include the Grayburg or Glorieta.

MR. NUTTER: The application, Mr. White, even the letter here of August 20th requested the Grayburg, didn't say anything about the Glorieta.

A No, sir, did not. I made application simply to specify that it would be at least a four zone attempt. Now, the well is contingent on a Glorieta or a Grayburg possibility and we will core and test these zones in the process of drilling, and in the event that we have what we feel an economic production, we will

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complete in one of the two zones, sir. The completion - the application should have read Grayburg or Glorieta.

Q (By Mr. Durrett) One other thing, should have read Glorieta Oil or Gas?

A Oil.

Q Oil?

A Yes, sir.

Q Specifically.

MR. DURRETT: I probably ought to direct this to Mr. McKenna, if the Commission felt that it shouldn't amend the application, due to the possible defect in the add, you wouldn't have any objection, would you, with the understanding that if you did get a completion in the Glorieta, probably could be approved by administrative approval?

MR. MCKENNA: No, we have no objection to that at all.

MR. NUTTER: This hearing is probably limited to Penrose-Skelly.

MR. MCKENNA: Can the Penrose-Skelly be in any way correlated to the Grayburg-Glorieta?

A Yes, sir.

Q Can you explain how this is so?

A Well, sir, we feel this way about that: That in the horizon from 5200 feet. in that area, to surface, we have the possibility of completing in the Grayburg or Glorieta. Now, this Penrose-Skelly affair got out due to my research of - in the Hobbs



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Commission office in attempting to find a way of obtaining administrative approval. That is the only reason that that came about.

Q I believe it has been suggested the way to proceed in the case. We will so proceed, Mr. Examiner.

MR. NUTTER: Fine. Are there any other questions of the witness. Mr. Frank Irby, State Engineer's office.

MR. IRBY: Mr. White, I want to ask you about this surface casing. I believe you said this would be Armco casing?

A Yes, sir.

Q What quality is that?

A Sir, that is a quarter inch wall thickness casing. Its weight is approximately 42 pounds per foot. The setting depth on the casing recommended down to 1100 feet by the company. The bursting pressure, I do not have, sir, of the casing.

Q Pardon me. I think you misunderstood me. I am talking about 16 inch casing. I understood you said it was set at 280 instead of 1100 feet.

A 280 feet, yes, sir.

Q It is quarter inch wall, 40 pound casing?

A Yes, sir.

Q And where will that be landed?

A It will be landed at 280 feet, sir.

Q What formation?

A Well, sir, it would be just below the Red Red area. I wouldn't know the formation at all, sir.



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Q Below the red beds?

A Yes, sir.

Q The 280 is?

A Yes, sir. Then, it would protect any of the fresh water zones in that area, I believe, down to that depth, sir. Reason that was projected is because of other operators' policy in the area, in Section 40 there, surface casing. Other operators set the same type thing. Here is 13 3/8 at 264. On down here, 9 5/8 at 308. In other words, the surface program seems to be down that 300 foot level.

Q My problem is I didn't think that 280 feet would get you through the red beds?

A Well, sir, if it will not, we will go through the red beds.

Q I am not especially interested in the red beds as long as I have assurance that this will be set into and through the red beds.

A It will be, sir.

Q And the cement will be circulated as indicated on the diagram?

A Yes, sir. That is right. Well, upon the running of surface casing, we will notify the Commission in Hobbs so if they prefer, they can have a witness on the job.

MR. IRBY: That is all I have. Thank you.

MR. NUTTER: Any other questions of Mr. White?



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MR. DURRETT: I have just one additional question. Mr.

White, just as a matter of interest to me, can you tell me in lay language as much as possible what the sliding sleeves do?

A Sir, they are run inside the 2 7/8 inch, call it casing in this case, and they will provide us with an opening to squeeze cement through. I was trying to get away from perforating. In order to squeeze cement there, you have the difficulty of orientating and so on. We can run - - you run a locator on the small tubing string inside the 2 7/8 and open the sleeve. This opens your tubing to the rock, to the bore hole. And then, the squeeze job can be put into the bore hole and - - at whatever pressure you desire. And excess cement reversed out the small string of tubing. It will actually be a braden head squeeze reverse out the small string. This would test the primary cement job, which to me is the most important thing on the multiple.

MR. DURRETT: Thank you. I think that is very adequate.

MR. NUTTER: Any further questions. Witness may be excused. Do you have any further, Mr. McKenna?

MR. McKENNA: No. I would like to offer into evidence Applicant's Exhibits One, Two and Three.

MR. NUTTER: Applicant's Exhibits One, Two and Three will be admitted in evidence. Does anyone have anything they wish to offer in 2906? Take the case under advisement.

\* \* \* \* \*



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STATE OF NEW MEXICO X  
COUNTY OF BERNALILLO X

I, ROY D. WILKINS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill, and ability.

WITNESS my Hand and Seal of Office, this 18th day of November, 1963.

*Roy D. Wilkins*  
NOTARY PUBLIC

My Commission Expires:  
September 6, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2906 heard by me on 9/25/63

*[Signature]*, Examiner  
New Mexico Oil Conservation Commission

