

APPLICATION OF MURPHY OPERATING
CORPORATION FOR UNIT APPROVAL AND
FOR AUTHORITY TO INSTITUTE A WATERFLOOD PROJECT,
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO.

RECEIVED
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AUG 23 1988

APPLICATION OIL CONSERVATION DIVISION

Murphy Operating Corporation hereby applies to the New Mexico Oil Conservation Division for an order approving the unitization of the area and formation known as the Haley Chaveroo San Andres Unit, Chaves and Roosevelt Counties, New Mexico, and authorizing applicant to institute a waterflood project for the Haley Chaveroo San Andres Unit, and in support thereof, states:

1. Statutory authority for the proposed Haley Chaveroo San Andres Unit is found in Section 19-10-45, et seq. N.M.S.A. 1978 Comp., and the proposed waterflood project meets the criteria set forth in Section I, Rule 701, et seq. of the Rules and Regulations of the Oil Conservation Division of the Energy and Minerals Department of the State of New Mexico.

2. The proposed area for which application is made for unitized operations pursuant to the Act is known as the Haley Chaveroo San Andres Unit, Chaves and Roosevelt Counties, New Mexico (the "Unit Area"), and consists of 1840.7 acres, more or less, in Chaves and Roosevelt Counties, New Mexico, as more particularly delineated on a map of the Unit Area attached hereto as Exhibit "A". Exhibit "B" attached hereto contains a legal description of the locations of each of the leases within the proposed Unit Area together with corresponding ownership and unit participation factors.

3. The formation for which application is made (the "Unitized Formation") is the subsurface portion of the Unit Area known as the San Andres formation, and the vertical limits thereof are found in the interval between 4158 and 4470 feet as measured on the compensated formation density log run in the Murphy Operating Corporation Hobbs "T" Well No. 15 on March 23, 1966, said well located 990 feet from the South line and 1980 feet from the East line of Section 34, Township 7 South, Range 33 East, Roosevelt County, New Mexico. The Unitized Formation shall further include all subsurface points throughout the Unit Area correlative to the aforementioned identified depths.

4. The wells located in the proposed Haley Chaveroo San Andres Unit have reached an advanced stage of depletion and are currently regarded as "stripper wells".

5. Murphy Operating Corporation proposes to institute a waterflood project for the secondary recovery of oil and gas from the Unitized Formation within the Unit Area.

6. The proposed plan of unitization is embodied in the Unit Agreement, a true copy of which is attached hereto as Exhibit "C", and the plan is fair, reasonable and equitable.

7. The proposed operating plan covering the manner in which the Unit will be supervised and managed and costs allocated and paid is embodied in the Unit Operating Agreement, a true copy of which is attached hereto as Exhibit "D".

8. The owners of 100% of the working interest within the proposed Haley Chaveroo San Andres Unit have consented to voluntary unitization of the unitized formation within the Unit Area, and have agreed to the Unit Agreement and Unit Operating Agreement attached on Exhibit "C" and "D" hereto.

9. The method of operation which is proposed in the Unit Operating Agreement is feasible and will tend to promote the conservation of oil or gas and the better utilization of reservoir energy. Under the operations proposed, the State and each beneficiary of the lands involved will receive its fair share of the recoverable oil or gas in place under its lands in the area effected, and the proposed Unit and waterflood project is in all other respects for the best interest of the State, and will prevent waste and protect correlative rights.

10. By the conversion of certain presently producing wells, Murphy Operating Corporation proposes to inject fluids into the above-described San Andres formation in the Haley Chaveroo San Andres Unit. Attached hereto as Exhibit "E" is a plat showing the location of all wells located within the Unit which are ultimately proposed to be used as producing or injection wells, with the proposed injection wells circled in red. In addition, Exhibit "E" shows all wells and leases that are located within a two-mile radius of the proposed injection wells.

11. The water to be used for injection for the waterflood project shall be acquired from the closest and most economical of several commercial sources in the immediate area of the proposed Unit. It is projected that an average of 4,200 barrels of water per day (equivalent to 600 barrels of water per well per day) will be initially injected. If successful, a maximum of 13,800 barrels of water per day will be injected.

12. It is proposed that water will be injected at an average surface pressure of 800 psig and at a maximum surface pressure of 0.2 psi per foot of depth to top of injection zone, provided that surface pressure in excess of 0.2 psi per foot of depth to injection zone may be approved by administrative application pursuant to Oil Conservation Division rules and regulations.

13. Approval of the waterflood project will substantially increase recoverable reserves to be produced within the useful life of production facilities, thereby preventing waste and protecting correlative rights.

WHEREFORE, Murphy Operating Corporation requests that this application be set for hearing before the Division at the earliest practicable date and that the Division enter its order approving the Unit Agreement and Unit Operating Agreement, providing for the unitized management, operation and further development of the Unitized Formation and the Unit Area in accordance with the Act, and approving the waterflood project.

Murphy Operating Corporation further requests the establishment of a project allowable in accordance with Rule 701 and also the establishment of an administrative procedure for any change in, or additional, injection wells which might prove to be necessary, and for a procedure for administrative approval for the expansion of the waterflood project and the conversion of additional wells to injection.

Respectfully submitted,

HINKLE, COX, EATON, COFFIELD & HENSLEY
Post Office Box 10
Roswell, New Mexico 88202-0010

Attorneys for Applicant,
Murphy Operating Corporation

By: 
T. Calder Ezzell, Jr.
(505) 622-6510

Dated: August 18, 1988

SUPPLEMENTAL INFORMATION TO FORM C-108

TABLE OF DRILLING AND COMPLETION INFORMATION FOR WELLS WITHIN AREA OF REVIEW
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well #	Current Well Status	Proposed Well Status	Casing Record	Drilling Date/ Comple. Date	Total Depth	Perforations/Open Hole	Completion
MOC (prev. Sun Oper.) State "AZ" Well #11-Y C-34-T7S-R33E 660' FNL & 1880' FWL Elevation 4410' DF	34-03	PRD	PRD	2013' 8 5/8" 24# in 12 1/4" hole 700 sacks cnt. circ. to surf. 4450' 4 1/2" 9.5# in 7 7/8" hole 275 sacks cnt. TOC 3310' temp. survey	10-27-65/ 11-10-65	TD 4450' PBTD 4428'	11-08-65 (1 SPF) 4195, 4207, 4214, 4240, 4258, 4272, 4279, 4290, 4307, 4330, 4340	11-08-65 (4195-4340) Acidize w/1,250 gals. 04-25-68 Frac w/30,000 gals. oil & 50,000# sand
MOC (prev. Sun Oper.) State "AZ" Well #8 E-34-T7S-R33E 1980' FNL & 660' FWL Elevation 4409' DF	34-05	PRD	PRD	350' 8 5/8" 24# in 12 1/4" hole 250 sacks cnt. circ. to surf. 4470' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cnt. TOC 3700' by calc.	08-21-65/ 09-02-65	TD 4530' PBTD 4492'	09-07-65 (1 SPI) 4203, 4230, 4263, 4275, 4288, 4293, 4300, 4308, 4321, 4327, 4334, 4351	09-07-65 (4203-4351) Acidize w/1,500 gals. 02-21-68 Frac w/40,000 gals. oil & 50,000# sand
MOC (prev. Texaco) Hobbs "T" Well #10 G-34-T7S-R33E 1980' FNL & 1980' FEL Elevation 4399' DF	34-07	PRD	PRD	370' 8 5/8" 24# in 11" hole 250 sacks cnt. circ. to surf. 4474' 4 1/2" 9.5# in 7 7/8" hole 350 sacks cnt. TOC 3371' by temp. survey	10-09-65/ 10-21-65	TD 4475' PBTD 4438'	10-25-65 (1 SPI) 4252, 4267, 4270, 4279, 4281, 4283, 4292, 4300, 4304, 4313, 4318, 4323, 4327	10-25-65 (4252-4327) Acidize w/2,000 gals.
MOC (prev. Texaco) Hobbs "T" Well #12 I-34-T7S-R33E 1980' FSL & 660' FEL Elevation 4384' DF	34-09	PRD	PRD	370' 8 5/8" 24# in 11" hole 250 sacks cnt. circ. to surf. 4475' 4 1/2" 9.5# in 7 7/8" hole 350 sacks cnt. TOC 3395' by temp. survey	11-20-65/ 12-10-65	TD 4475' PBTD 4441'	12-06-65 (2 SPI) 4320, 4325, 4329, 4339, 4345, 4350, 4353 12-08-65 (1 SPI) 4221, 4231, 4256, 4260, 4272.5, 4279, 4284, 4287, 4297, 4305.5, 4309, 4311	12-06-65 (4320-4353) Acidize w/1,000 gals. 12-08-65 (4221-4353) Acidize w/2,000 gals. Frac w/40,000 gals. oil & 40,000# sand.

SUPPLEMENTAL INFORMATION TO FORM C-108

TABLE OF DRILLING AND COMPLETION INFORMATION FOR WELLS WITHIN AREA OF REVIEW
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well #	Current Well Status	Proposed Well Status	Casing Record	Drilling Date/ Comple. Date	Total Depth	Perforations/Open Hole	Completion
MOC (prev. Sun Oper.) State "AZ" Well #2 K-33-T7S-R33E 1980' FSL & 1980 FWL Elevation 4426' DF	33-11	PRD	PRD	350' 8 5/8" 24# in 12 1/4" hole 250 sacks cmt. circ. to surf. 4500' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cmt. TOC 3630 by temp. survey	06-09-65/ 06-27-65	TD 4470' PBTD 4426'	06-28-65 (1 SPI) 4218, 4246, 4251, 4276, 4295, 4307, 4314, 4323, 4330, 4338, 4369	06-28-65 Acidize w/ 250 gals. (4369); 1,000 gals. (4276-4338); 500 gals. (4246-4251); 250 gals. (4218) Frac (4218-4419) w/30,000 gals. oil & 30,000# sand
MOC (prev. Sun Oper.) State "AZ" Well #4 M-33- T7S-R33E 660' FSL & 660' FWL Elevation 4436' DF	33-13	PRD	PRD	356' 8 5/8" 24# in 12 1/4" hole 250 sacks cmt. circ. to surf. 4499' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cmt. TOC 3700' by calc.	07-02-65/ 07-26-65	TD 4500' PBTD 4439'	07-19-65 (3 SPI) 4447, 4451, 4456, Squeezed w/100 sacks cmt. 07-25-65 (1 SPI) 4257, 4284, 4302, 4313, 4326, 4332, 4345, 4379, 4413, 4423, 4431	07-19-65 (4447-4456) Acidize w/750 gals. 07-25-65 (4257-4431) Acidize w/2,450 gals. Frac w/30,000 gals. oil & 32,500# sand
MOC (prev. Texaco) Hobbs "T" Well #4 O-33-T7S-R33E 660' FSL & 1980 FEL Elevation 4432' DF	33-15	PRD	PRD	368' 8 5/8" 24# in 11" hole 250 sacks cmt. circ. to surf. 4524' 4 1/2" 9.5# in 7 7/8" hole 350 sacks cmt. TOC 3375' by temp. survey	09-17-65/ 10-08-65	TD 4525' PBTD 4491'	10-07-65 (2 SPF) 4341, 4342, 4346, 4347, 4352, 4353	10-07-65 (4341-4353) Acidize w/500 gals. Frac w/20,000 gals. lease oil & 20,000# sand
MOC (prev. Sun Oper.) State "AZ" Well #13 A-34-T7S-R33E 1980' FNL & 660' FWL Elevation 4435' DF	34-01	PRD	PRD	350' 8 5/8" 24# in 12 1/4" hole 250 sacks cmt. circ. to surf. 4450' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cmt. TOC 3700' by calc.	05-02-65/ 05-24-65	TD 4500' PBTD 4454'	05-17-65 (1 SPI) 4199, 4233, 4303, 4315, 4323, 4329, 4355 05-24-65 (4199-4355) Frac w/20,000 gals. oil & 20,000# sand	05-17-65 (4199-4355) Acidize w/1,500 gals. 05-24-65 (4199-4355) Frac w/20,000 gals. oil & 20,000# sand

SUPPLEMENTAL INFORMATION TO FORM C-108

TABLE OF DRILLING AND COMPLETION INFORMATION FOR WELLS WITHIN AREA OF REVIEW
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well #	Current Well Status	Proposed Well Status	Casing Record	Drilling Date/ Comple. Date	Total Depth	Perforations/Open Hole	Completion
MOC (prev. Sun Oper.) State "AZ" Well #3 C-33-T7S-R33E 660' FNL & 1980' FWL Elevation 4432' DF	33-03	PRD	PRD	351' 8 5/8" 24# in 12 1/4" hole 200 sacks cmt. circ. to surface 4473' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cmt. TOC 3530' by temp. survey	07-12-65/ 07-29-65	TD 4481' PBTD 4470'	07-26-65 (1 SPI) 4228, 4233, 4277, 4290, 4305, 4325, 4351, 4388, 4398, 4405, 4429	07-26-65 (4228-4429) Acidize w/2,750 gals. Frac w/20,000 gals. oil & 20,000# sand.
MOC (prev. Sun Oper.) State "AZ" Well #1 E-33-T7S-R33E 1980' FNL & 660' FWL Elevation 4435' DF	33-05	PRD	PRD	362' 8 5/8" 24# in 12 1/4" hole 250 sacks cmt. circ. to surface 4500' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cmt. TOC 3710' by temp. survey	05-02-65/ 05-24-65	TD 4500' PBTD 4454'	05-17-65 (1 SPI) 4199, 4233, 4303, 4315, 4323, 4329, 4355	05-17-65 (4199-4355) Acidize w/1,500 gals. 05-24-65 (4199-4355) Frac w/20,000 gals. oil & 20,000# sand
MOC (prev. Texaco) Hobbs "U" Well #1 G-33-T7S-R33E 1980' FNL & 1980' FEL Elevation 4424' DF	33-07	PRD	PRD	373' 8 5/8" 24# in 11" hole 200 sacks cmt. circ. to surface 4475' 4 1/2" 9.5# in 7 7/8" hole 350 sacks cmt. TOC 3364' by temp. survey	07-25-65/ 08-06-65	TD 4475' PBTD 4450'	08-16-65 (1 SPI) 4284, 4291, 4298, 4303, 4318, 4325, 4332, 4338, 4365, 4405, 4413, 4418, 4424, 4430, 4445	08-16-65 (4284-4445) Acidize w/3,000 gals.
MOC (prev. Sun Oper.) State "AZ" Well #7 I-33-T7S-R33E 1980' FSL & 660' FEL Elevation 4414' DF	33-09	PRD	PRD	368' 8 5/8" 24# in 11" hole 250 sacks cmt. circ. to surf. 4530' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cmt. TOC 3740' by temp. survey	08-10-65/ 08-28-65	TD 4530' PBTD 4486'	08-23-65 (1 SPI) 4358, 4364, 4377, 4390 08-29-65 (1 SPI) 4240, 4252, 4261, 4317, 4329, 4344	08-23-65 (4358-4390) Acidize w/1,000 gals. 08-29-65 (4240-4344) Acidize w/2,000 gals. Frac w/20,000 gals. oil & 30,000# 20/40 sand

SUPPLEMENTAL INFORMATION TO FORM C-108

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PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well #	Current Well Status	Proposed Well Status	Casing Record	Drilling Date/ Comple. Date	Total Depth	Perforations/Open Hole	Completion
MOC (prev. Sun Oper.) State "AZ" Well #10 K-34-T7S-R33E 1980' FSL & 1980' FWL Elevation 4406' DF	34-11	PRD	PRD	363' 8 5/8" 24# in 12 1/4" hole 250 sacks cmt. circ. to surf. 4469' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cmt. TOC 3700' by calc.	10-09-65/ 10-27-65	TD 4470' PBTD 4457'	10-25-65 (1 SPI) 4223, 4228, 4276, 4282, 4295, 4303, 4317, 4324, 4339, 4348, 4353, 4367	10-25-65 (4223-4367) Acidize w/2,250 gals. Frac w/25,000 gals. oil & 32,000# sand
MOC (prev. Sun Oper.) State "AZ" Well #16 M-34-T7S-R33E 990' FSL & 990' FWL Elevation 4415' DF	34-13	PRD	PRD	350' 8 5/8" 24# in 12 1/4" hole 250 sacks cmt. circ. to surf. 4470' 4 1/2" 9.5# in 7 7/8" hole 200 sacks cmt. TOC 3100' by calc.	04-02-66/ 04-23-66	TD 4470' PBTD 4462'	04-18-66 (1 SPI) 4302, 4308, 4318, 4324	04-18-66 (4302-4324) Acidize w/500 gals. Frac w/20,000 gals. oil & 26,000# sand
MOC (prev. Texaco) Hobbs "T" Well #15 O-34-T7S-R33E 990' FSL & 1980' FEL Elevation 4397' DF	34-15	PRD	PRD	374' 8 5/8" 24# in 11" hole 250 sacks cmt. circ. to surf. 4500' 4 1/2" 9.5# in 7 7/8" hole 350 sacks cmt. TOC 3309' by temp. survey	03-13-66/ 03-30-66	TD 4500' PBTD 4450'	04-04-66 (1 SPI) 4217, 4235, 4267.5, 4271, 4279, 4283, 4297, 4303, 4306, 4310	04-04-66 (4217-4310) Acidize w/2,000 gals.

SUPPLEMENTAL INFORMATION TO FORM C-108

TABLE OF DRILLING AND COMPLETION INFORMATION FOR WELLS WITHIN AREA OF REVIEW
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well #	Current Well Status	Proposed Well Status	Casing Record	Drilling Date/ Comple. Date	Total Depth	Perforations/Open Hole	Completion
Lynx Oil (prev. Midwest Oil) Morgan Federal Well #1 N-27-T7S-R33E 660' FSL & 1980 FWL Elevation 4406' DF	N/A	PRD	N/A	375' 8 5/8" 24# in 12 1/4" hole 350 sacks cmt. circ. to surf. 4427' 4 1/2" 9.5# in 7 7/8" hole 350 sacks cmt. TOC 2540' from surf.	11-27-65/ 12-17-65	TD 4430' PBD 4394'	12-20-65 (1 SPI) 4178, 4195, 4203, 4228, 4244, 4258, 4276, 4291, 4296	12-20-65 (4178-4296) Acidize w/2,000 gals. Frac w/20,000 gals oil & 20,000# sand
Chaveroo Operating (prev. Pan American) Farrell Fed. Well #6 P-28-T7S-R33E 660' FSL & 660' FEL Elevation 4422' DF	N/A	PRD	N/A	392' 8 5/8" 24# in 12 1/4" hole 250 sacks cmt. circ. to surf. 4462' 4 1/2" 9.5# in 7 7/8" hole 800 sacks cmt. TOC 37' from surf.	11-26-65/ 12-24-65	TD 4462' PBD 4428'	12-20-65 (2 SPF) 4271, 4272, 4274, 4275, 4282, 4283, 4284, 4285, 4286, 4290, 4291, 4292, 4299, 4300, 4304, 4305, 4313, 4314, 4318, 4319, 4320, 4336, 4337, 4338, 4342, 4343, 4344, 4384, 4385, 4395, 4396, 4397, 4400, 4401, 4405, 4406	12-20-65 (4271-4406) Acidize w/2,000 gals. Frac w/30,000 gals. oil, 45,000# sand & 3000# glass beads
Marathon Oil Co. State Well #1 L-35-T7S-R33E 1980' FSL & 660' FWL Elevation 4377' DF	N/A	PRD	N/A	363' 8 5/8" 24# in 12 1/4" hole 200 sacks cmt. circ. to surf. 4442' 5 1/2" 14# in 7 7/8" hole 350 sacks cmt. TOC 1932' by calc.	12-14-65/ 01-12-66	TD 4450' PBD 4405'	1-03-66 (1 SPI) 4244, 4256, 4277, 4281, 4288, 4292, 4303, 4309, 4321, 4327, 4331, 4334	01-03-66 (4244-4334) Acidize w/1,500 gals. 500 gals. 2,000 gals. Frac w/40,000 gals. oil & 40,000# sand

APPLICATION OF MURPHY OPERATING CORPORATION
FOR UNIT APPROVAL AND FOR AUTHORITY TO INSTITUTE A WATERFLOOD PROJECT,
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT,
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO.

INDEX OF EXHIBITS

FILE 1.

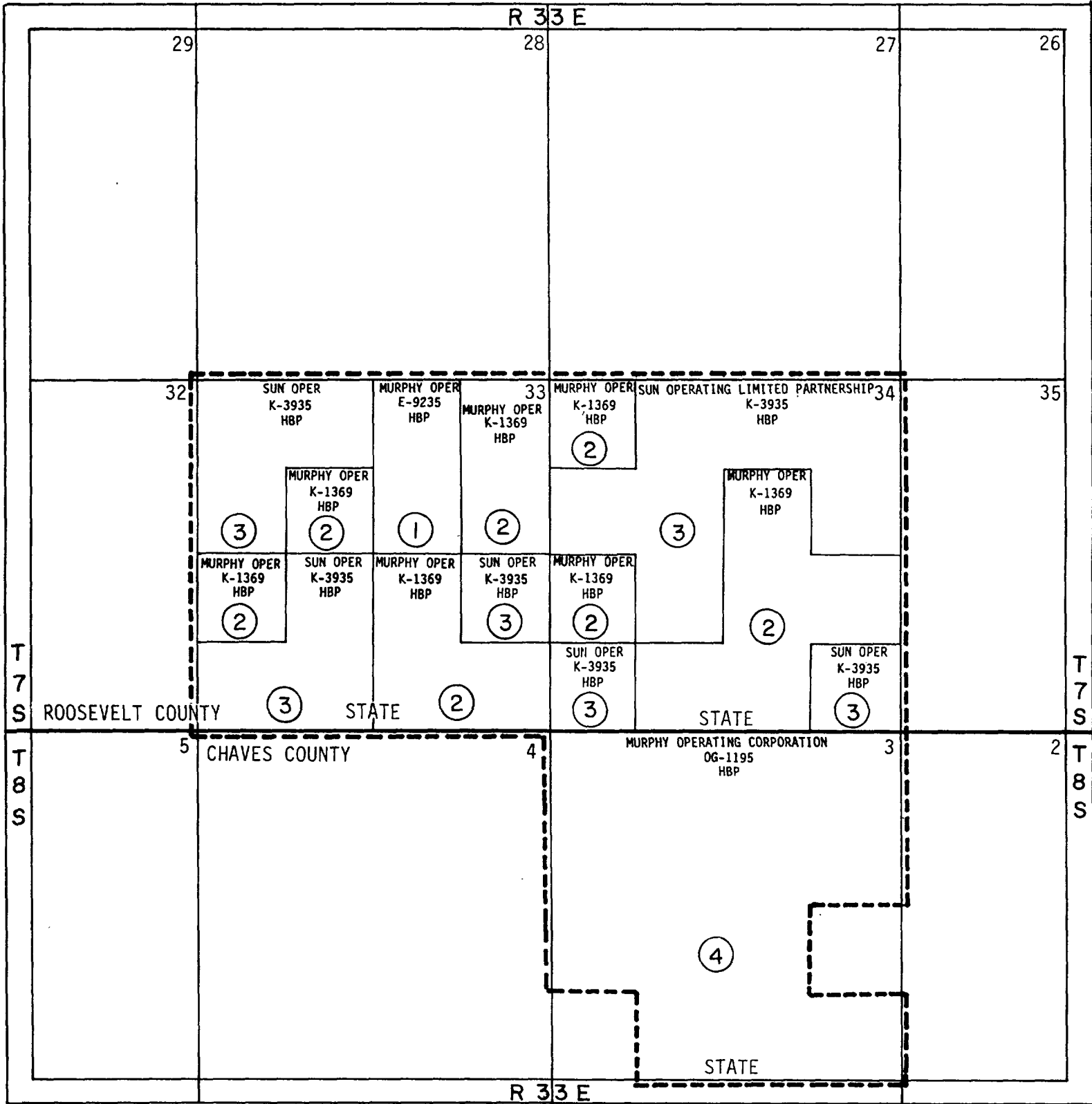
- Exhibit A. - Map of Unit Area.
- Exhibit B. - Schedule of Ownership and Leases.
- Exhibit C. - Unit Agreement.
- Exhibit D. - Unit Operating Agreement.
- Exhibit E. - Area of Review Map.

EXHIBIT "A"

ATTACHED TO AND MADE A PART OF THAT CERTAIN UNIT AGREEMENT, HALEY CHAVEROO
SAN ANDRES UNIT, COUNTIES OF CHAVES AND ROOSEVELT, STATE OF NEW MEXICO,
DATED AUGUST 15, 1988.

HALEY CHAVEROO SAN ANDRES UNIT

CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO



SCALE: 1" = 2000

TRACT NUMBER

---UNIT OUTLINE

☐ STATE LANDS

1,840.70 ACRES

100% UNIT AREA

EXHIBIT A.

EXHIBIT "B" TO UNIT AGREEMENT
HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

Tract No.	Lease Name, Description of Land, and No. Acres	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage		Overriding Royalty Owner or Production Payment Interest (PPI)		San Andres Production W.I. Ownership		W.I. Percent Ownership		Percent Unit Participation	
				State of N.M.	12.5%	None	None	Murphy Operating Corporation	American Energy Capital Corp.	12.50000	100.00000	0.661274	4.628914
1.	Hobbs U T-7-S, R-33-E Sec. 33: W½/NE¼ 80.00 acres Roosevelt County, N.M.	E-9235-6 8/16/55	Murphy Operating Corporation	State of N.M.	12.5%	None	None	Murphy Operating Corporation	American Energy Capital Corp.	12.50000	100.00000	0.661274	4.628914
2.	Hobbs T T-7-S, R-33-E Sec. 33: E½NE¼, SE½NW¼, NW¼SW¼, W½SE¼, SE½SE¼ Sec. 34: NW¼NW¼, SW¼NE¼, NW¼SW¼, SE½SW¼, N½SE¼, SW¼SE¼ 560.00 acres Roosevelt County, N.M.	K-1369-3 4/18/61	Murphy Operating Corporation	State of N.M.	12.5%	None	None	Murphy Operating Corporation	American Energy Capital Corp.	12.50000	100.00000	4.517902	31.625313
3.	State AZ T-7-S, R-33-E Sec. 33: N½NW¼, SW¼NW¼, NE¼SW¼, S½SW¼, NE¼SE¼ Sec. 34: SW¼NW¼, E½NW¼, N½NE¼, SE½NE¼, NE¼SW¼, SW¼SW¼, SE½SE¼ 640.00 acres Roosevelt County, N.M.	K-3935-1 2/18/64	Sun Operating Limited Partnership	State of N.M.	12.5%	None	None	Murphy Operating Corporation	American Energy Capital Corp.	12.50000	100.00000	4.282702	29.978916
4.	State BF T-8-S, R-33-E Sec. 3: Lots 1, 2, 3, 4, S½N½, N½SW¼, SE½SW¼, W½SE¼, SE½SE¼ 560.70 acres Chaves County, N.M.	OG-1195-2 8/20/57	Murphy Operating Corporation	State of N.M.	12.5%	None	None	Murphy Operating Corporation	American Energy Capital Corp.	12.50000	100.00000	3.038122	21.266857
TOTAL STATE ACREAGE										1,840.70 = 100% of Unit		100.000000	
TOTAL UNIT ACREAGE										1,840.70			
										GRAND TOTAL		100.000000	

ORIGINAL

UNIT AGREEMENT
HALEY CHAVEROO SAN ANDRES UNIT
COUNTIES OF CHAVES AND ROOSEVELT
STATE OF NEW MEXICO

ORIGINAL

EXHIBIT C.

UNIT AGREEMENT
HALEY CHAVEROO SAN ANDRES UNIT
COUNTIES OF CHAVES AND ROOSEVELT
STATE OF NEW MEXICO

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UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE

HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

THIS AGREEMENT, entered into as of the 15th day of August, 1988, by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as "parties hereto";

W I T N E S S E T H T H A T:

WHEREAS, the parties hereto are the owners of working, royalty or other oil and gas interests in the Unit Area subject to this Agreement; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by law (Section 3, Chapter 88, Laws of 1943) as amended by December 1 of Chapter 162, Laws of 1951, (Chapter 19, Article 10, Section 45, New Mexico Statutes 1978 Annotated), to consent to and approve the development or operation of State lands under agreements made by lessees of State land jointly or severally with other lessees where such agreements provide for the unit operation or development of part of or all of any oil or gas pool, field or area; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Section 1, Chapter 162, Laws of 1951; Chapter 19, Article 10, Section 47, New Mexico Statutes 1978 Annotated), to amend with the approval of lessee, evidenced by the lessee's execution of such agreement or otherwise, any oil and gas lease embracing State lands so that the length of the term of said lease may coincide with the term of such agreements for the unit operation and development of part or all of any oil or gas pool, field or area; and

WHEREAS, the Oil Conservation Division of the Energy & Minerals Department of the State of New Mexico is authorized by law (Chapter 72, Laws of 1935, as amended, being Section 70-2-1, et seq., New Mexico Statutes, 1978 Annotated) to approve this Agreement and the conservation provisions hereof; and

WHEREAS, the parties hereto hold sufficient interests in the Haley Chaveroo San Andres Unit Area, comprised of the land hereinafter designated, to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto to enable institution and consummation of secondary and/or enhanced oil recovery operations, conserve natural resources, prevent waste and secure the other benefits obtainable through development and operation of the area subject to this Agreement under the terms, conditions and limitations herein set forth.

NOW THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this Agreement their respective interests in the Unitized Formation underlying the Unit Area, and agree severally among themselves as follows:

SECTION 1. ENABLING ACT AND REGULATIONS. The oil and gas operating regulations in the effect as of the Effective Date hereof governing drilling and producing operations not inconsistent with the terms hereof or the laws of the State of New Mexico are hereby accepted and made a part of this Agreement.

SECTION 2. DEFINITIONS. For the purpose of this Agreement, the following terms and expressions are used herein shall mean:

- (a) "Unit Area" is defined as the land depicted on Exhibit "A" and described by Tracts in Exhibit "B" attached hereto, and said land is hereby designated and recognized as constituting the Unit Area.
- (b) "Commissioner" is defined as the Commissioner of Public Lands of the State of New Mexico.
- (c) "Division" is defined as the Oil Conservation Division of the State of New Mexico.

- (d) "Unitized Formation" is defined as that subsurface portion of the Unit Area known as the San Andres formation, the vertical limits thereof found in that stratigraphic interval between 4,158 and 4,470 feet as measured on the compensated formation density log run in the Murphy Operating Corporation Hobbs "T" Well No. 15 on March 23, 1966, said well located 990 feet from the South line and 1980 feet from the East line of Section 34, Township 7 South, Range 33 East, Roosevelt County, New Mexico. The Unitized Formation shall further include all subsurface points throughout the Unit Area correlative to the aforementioned identified depths.
- (e) "Unitized Substances" is defined as all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.
- (f) "Working Interest" is defined as an interest in Unitized Substances by virtue of a lease, operating agreement or otherwise, including a carried interest, which interest is chargeable with and obligated to pay or bear, either in cash or out of production or otherwise, all or a portion of the cost of drilling, developing, producing and operating the Unitized Formation. Any interest in Unitized Substances which is a Working Interest as of the date the owner thereof executes, ratifies or consents to this agreement shall thereafter be treated as a Working Interest for all purposes of this Agreement.
- (g) "Royalty Interest" is defined as a right to or interest in any portion of the Unitized substances or proceeds thereof other than a Working Interest.
- (h) "Working Interest Owner" is defined as a party hereto who owns a Working Interest.
- (i) "Royalty Owner" is defined as a party hereto who owns a Royalty Interest.
- (j) "Tract" is defined as each parcel of land described as such and given a Tract number in Exhibit "B".
- (k) "Tract Participation" is defined as the percentages of Unitized Substances allocated hereunder to a Tract. The Tract Participation of the Tracts within the Unit Area is shown on Exhibit "B" attached hereto.
- (l) "Unit Participation" is defined as the sum of the percentages obtained by multiplying the Working Interest of a Working Interest Owner in each Tract having Tract Participation by the Tract Participation of such Tract.
- (m) "Unit Operating Agreement" is defined as any agreement or agreements entered into, separately or collectively, by and between the Unit Operator and the Working Interest Owners as provided in Section 9, Accounting Provisions and Unit Operating Agreement, infra, and shall be styled "Unit Operating Agreement, Haley Chaveroo San Andres Unit, Roosevelt and Chaves Counties, New Mexico".
- (n) "Unit Manager" is defined as the person or corporation appointed by the Unit Working Interest Owners to perform the duties of the Unit Operator until the selection and qualification of a successor Unit Operator as provided for in Section 8, Successor Unit Operator, hereof.

SECTION 3. UNIT AREA. The area specified on the map attached hereto marked Exhibit "A" is hereby designated and recognized as constituting the Unit Area, containing 1,840.70 acres, more or less.

Exhibit "A", to the extent known to Unit Operator, shows the boundaries and identity of Tracts and leases in the Unit Area. Exhibit "B" attached hereto is a schedule showing, to the extent known to Unit Operator, the acreage comprising each Tract and the percentage of ownership of each Working Interest Owner in each Tract. However, nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest as are shown in said map or schedule as being owned by such party. Exhibit "B" attached hereto also contains a schedule showing the Tract Participation of each Tract in the Unit Area for which Tract Participation has been calculated upon the basis of all tracts within the Unit Area being committed to this Agreement as of the Effective Date hereof.

Exhibits "A" and "B" shall be revised by Unit Operator whenever changes render such revision necessary and not less than two copies of such revision shall be filed with the Commissioner and the Division.

SECTION 4. EXPANSION: The Unit Area may, when practicable, be expanded to include therein any additional Tract or Tracts regarded as reasonably necessary or advisable for the purposes of this Agreement. Such expansion shall be effected in the following manner:

(a) The Working Interest Owner or Owners of a Tract or Tracts desiring to bring such Tract or Tracts into the Unit Area shall file an application therefor with Unit Operator requesting such admissions.

(b) Unit Operator shall circulate a notice of the proposed expansion to each Working Interest Owner in the tract or tracts proposed to be included in the Unit and/or affected by the proposed expansion setting out the basis for admission, the Tract Participation proposed to be allocated to such Tract or Tracts, and other pertinent data. After negotiation (at Working Interest Owners' meeting or otherwise) if, in accordance with the voting procedure set forth in Article 4.3.2 of the Unit Operating Agreement, at least two (2) Working Interest Owners having a combined Unit Participation of sixty percent (60%) or more have agreed to such Tract or Tracts being brought into the Unit Area, then Unit Operator shall, after preliminary concurrence by the Commissioner and the Division:

(1) Prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reason therefor, the basis for admission of the additional Tract or Tracts, the Tract Participation to be allocated thereto, and the proposed Effective Date thereof; and

(2) Furnish copies of said notice to the Commissioner and the Division, to each Working Interest Owner, and to the lessee and lessor whose interests are proposed to be committed, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objections to such proposed expansion; and

(3) File, upon the expiration of said thirty-day period as set out in Subsection (2) immediately above, with the Commissioner and Division the following: (a) Evidence of mailing copies of said notice of expansion; (b) an application for such expansion; (c) an instrument containing the appropriate joinders in compliance with the qualification requirements of Section 13, Tracts Qualified for Unit Participation, *infra*; and (d) copies of any objections received.

The expansion shall, after due consideration of all pertinent information and upon approval by the Commissioner and Division, become effective as of the date prescribed in the notice thereof. The revised Tract Participation of the respective Tracts included within the Unit Area prior to such enlargement shall remain in the same ratio one to another.

There shall never be any retroactive allocation or adjustment of operating expenses or of interest in the Unitized Substances produced (or the proceeds of the sale thereof) by reason of an expansion of the Unit Area; provided, however, this limitation shall not prevent any adjustment of investment necessitated by such expansion.

SECTION 5. UNITIZED LAND AND UNITIZED SUBSTANCES. All land committed to this Agreement as provided in Section 13, Tracts Qualified for Unit Participation, as to the Unitized Formation defined in Section 2, Definitions, shall constitute land referred to herein as "Unitized Land" or "land subject to this Agreement". All oil and gas in the Unitized Formation in the Unitized Land are unitized under the terms of this Agreement and herein are called "Unitized Substances".

SECTION 6. UNIT OPERATOR. Murphy Operating Corporation is hereby designated as Unit Operator, and by signing this instrument as Unit Operator it agrees and consents to accept the duties and obligations of Unit Operator for the operation, development and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, and the term "Working Interest Owner" when used herein shall include or refer to Unit Operator as the owner of a Working Interest when such an interest is owned by it.

SECTION 7. RESIGNATION OR REMOVAL OF UNIT OPERATOR. Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of thirty (30) days after written notice of intention to resign has been given by Unit Operator to all Working Interest Owners and the Commissioner and Division unless a new Unit Operator shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

The Unit Operator shall, upon failure or refusal to perform its duties and obligations hereunder, be subject to removal by the vote of Working Interest Owners, other than Unit Operator, owning a combined Unit Participation of eighty percent (80%) or more. However, the Unit Operator shall not be removed until all debts owed to it by Working Interest Owners have been paid in full. Any such removal under this Section 7 shall be effective upon notice thereof to the Commissioner and Division.

In all such instances of resignation or removal, until a successor to Unit Operator is selected and approved as hereinafter provided, the Working Interest Owners shall be jointly responsible for the performance of the duties of the Unit Operator and shall not later than thirty (30) days before such resignation or removal becomes effective, appoint a Unit Manager to represent them in any action to be taken hereunder.

The resignation or removal of Unit Operator under this Agreement shall not terminate its right, title or interest as the owner of a Working Interest or other interest in Unitized Substances, but upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all equipment, books and records, materials, appurtenances and other assets used in conducting the Unit operations and owned by the Working Interest Owners (including copies of any and all data and information which it might have gained or assembled by reason of its operation of the Unit Area) to the new duly qualified successor Unit Operator or to the Unit Manager if no such new Unit Operator is elected, to be used for the purpose of conducting Unit Operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment or appurtenances needed for the preservation of any wells. Nothing herein contained shall be construed to relieve or discharge any Unit Operator who resigns or is removed hereunder from any liability or duties accruing to or performable by it prior to the effective date of such resignation or removal.

SECTION 8. SUCCESSOR UNIT OPERATOR. Whenever Unit Operator shall tender its resignation as Unit Operator or shall be removed as hereinabove provided, the Working Interest Owners, voting in the manner provided in the Unit Operating Agreement, shall select a successor Unit Operator; provided, however, that the voting interest of the outgoing Unit Operator shall not be considered for this purpose if such outgoing Unit Operator fails to vote or votes only to succeed itself. Such selection of a successor Unit Operator shall not become effective until: (a) a Unit Operator so selected shall accept in writing the duties and responsibilities of Unit Operator; and (b) the selection shall have been approved by the Commissioner and Division. If no successor Unit Operator is selected as herein provided, the Commissioner may declare this Agreement terminated.

SECTION 9. ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT. Costs and expenses incurred by Unit Operator in conducting Unit Operations hereunder shall be paid, apportioned among and borne by the Working Interest Owners in accordance with the Unit Operating Agreement. Such Unit Operating Agreement shall also provide the manner in which the Working Interest Owners shall be entitled to receive their respective proportionate and allocated share of the benefits accruing hereunder in conformity with their underlying operating agreements, leases or other independent contracts and such other rights and obligations as between Unit Operator and the Working Interest Owners as may be agreed upon by the Unit Operator and the Working Interest Owners; however, no such Unit Operating Agreement shall be deemed either to modify any of the terms and conditions of this Unit Agreement or to relieve the Unit Operator of any right or obligation established under this Agreement, and in case of any inconsistency or conflict between this Agreement and the Unit Operating Agreement, this Agreement shall prevail. One true copy of any Unit Operating Agreement executed pursuant to this Section shall be filed with the Commissioner.

SECTION 10. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR. Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating, and distributing the Unitized Substances are hereby delegated to and shall be exercised by the

Unit Operator as herein provided. Upon request therefor, acceptable evidence of title to said rights shall be deposited with said Unit Operator, and together with this Agreement shall constitute and define the rights, privileges and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this Agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

SECTION 11A. PLAN OF OPERATIONS. It is recognized and agreed by the parties hereto that all of the land subject to this Agreement has been reasonably proven to be productive of Unitized Substances in paying quantities or is necessary for Unit Operations and that the object and purpose of this Agreement is to formulate and to put into effect a secondary enhanced oil recovery project in order to effect a greater recovery of Unitized Substances, prevent waste and conserve natural resources. The parties hereto agree that the Unit Operator may, subject to the consent and approval of a plan of operation by the Working Interest Owners, the Division and the Commissioner, inject into the Unitized Formation, through any well or wells completed therein, brine, water, air, gas, oil, liquefied petroleum gas, steam and any other substance or a combination of any of said substances, whether produced from the Unitized Formation or not, and that the location of input wells and the rates of injection therein and the rate of production shall be governed by standards of good geologic and petroleum engineering practices and conservation methods. Reasonable diligence shall be exercised by Unit Operator in complying with the obligations of any approved plan of operation. The parties hereto, to the extent they have the right so to do, hereby grant Unit Operator the right to use brine or water (or both) produced from any formation underlying the Unit Area for injection in to the Unitized Formation; provided, however, that this grant of said right shall not preclude the use of brine or water (or both) produced from any formation other than the Unitized Formation for injection into formations other than the Unitized Formation. After commencement of secondary and/or enhanced oil recovery operations, Unit Operator shall furnish the Commissioner and the Division monthly injection and production reports for each well in the Unit. The Working Interest Owners, the Commissioner and the Division shall be furnished periodic reports on the progress of the plan of operation and any revisions or changes thereto necessary to meet changed conditions or to protect the interests of all parties to this Agreement; provided, however, that any major revisions of the plan of operation involving a basic deviation from the initial plan of operation shall be subject to the consent and approval of the Working Interest Owners, the Commissioner and Division.

The initial plan of operation shall be filed with the Division and the Commissioner concurrently with the filing of this Agreement for final approval. Reasonable diligence shall be exercised in complying with the obligations of said plan of operation.

Notwithstanding anything to the contrary herein contained, the Unit Operator shall commence, if not already having done so, secondary recovery operations and/or enhanced oil recovery operations on the Unit Area not later than eighteen (18) months after the Effective Date of this Agreement, or any extension thereof approved by the Commissioner and Division, or this Agreement shall terminate automatically in which latter event the Unit Operator shall notify all interested parties. After such operations are commenced, Unit Operator shall carry on such operations as would a reasonably prudent operator under the same or similar circumstances.

SECTION 11B. USE OF SURFACE AND USE OF WATER. The parties, to the extent of their rights and interests, hereby grant to Unit Operator the right to use as much of the surface of the Unitized Land as may reasonably be necessary for Unit Operations. Unit Operator shall have free use of water or brine or both from the Unitized Land for Unit Operations, except water from any well, lake, pond or irrigation ditch of a surface owner, unless approval for such use is granted by the surface owner. Unit Operator shall pay the owner for damages to growing crops, timber, fences, improvements and structures on the Unitized Land that result from Unit Operations, and such payments shall be considered as items of Unit Expense to be borne by all Working Interest Owners of lands subject hereto.

SECTION 12. TRACT PARTICIPATION. The percentages of Tract Participation set forth in Exhibit "B" for each Tract within the Unit Area have been calculated in accordance with the following formula:

Tract Participation = 20% A + 80% B
Where A = Percent of Total Useable Wells in Unit Area.
B = Percent of Total Primary Oil Recovery in Unit Area as of January 1, 1988.

Such percentages of Tract Participation have been calculated upon the basis of all of said Tracts within the Unit Area being committed to this Agreement as of the Effective Date hereof, and such Tract Participations shall govern the allocation of all Unitized Substances produced after the effective date hereof, subject, however, to any revision or revisions of the Unit Area and Exhibit "B" in accordance with the provisions hereof.

In the event less than all of the Tracts are committed hereto as of the Effective Date hereof Unit Operator shall promptly file with the Commissioner and Division at least two copies of revised Exhibit "B" setting forth the revised Tract Participations opposite each of the qualified tracts, which shall be calculated by using the tract factors and formula set forth hereinabove, but applying the same only to the qualified Tracts. The revised Exhibit "B" shall, effective as of the Effective Date of this Agreement, supersede the original Exhibit "B" attached hereto and shall thereafter govern the allocation of Unitized Substances unless disapproved by the Commissioner and Division within thirty (30) days after filing.

If, subsequent to the Effective Date of this Agreement, any additional tract comes committed hereto under the provisions of Section 3, Unit Area, or Section 28, Non-joinder and Subsequent Joinder, or any committed tract is excluded herefrom under the provisions of Section 27, Loss of Title, Unit Operator shall revise said Exhibit "B" or the latest revision thereof to show the new percentage participations of the then committed tracts, which revised exhibit shall, upon its approval by the Commissioner and the Division, supersede, as of its Effective Date, the last previously effective Exhibit "B". In any such revision of Exhibit "B" the revised percentage participations of the respective tracts listed in the last previously effective Exhibit "B" shall remain in the same ratio one to another.

SECTION 13. TRACTS QUALIFIED FOR UNIT PARTICIPATION. On and after the Effective Date hereof, the Tracts within the Unit Area that shall be entitled to participate in the production of Unitized Substances therefrom shall be the Tracts within the Unit Area that are qualified as follows:

(a) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest therein have become parties hereto and as to which Royalty Owners owning seventy-five percent (75%) or more of the Royalty Interest therein have become parties hereto.

(b) Each Tract as to which Working Interest Owners owning one hundred percent (100%) of the Working Interest therein have become parties hereto and as to which Royalty Owners owning less than seventy-five percent (75%) of the Royalty Interest therein have become parties hereto and, further, as to which:

(i) The Working Interest Owner who operates the Tract and at least seventy-five percent (75%) of all other Working Interest Owners in such Tract have joined in a request for the commitment of such Tract to this Agreement; and

(ii) Owners of seventy-five percent (75%) of the combined Unit Participation in all Tracts meeting the requirements of Section 13 (a) hereof have voted in favor of the commitment of such Tract.

(c) Each Tract as to which Working Interest Owners owning less than one hundred percent (100%) of the Working Interest therein have become parties hereto, regardless of the percentage of Royalty Interest therein which is committed hereto and, further, as to which:

(i) The Working Interest Owner operating any such Tract and a total of seventy-five percent (75%) or more of the other Working Interest Owners in such Tract who have become parties hereto have joined in a request for the commitment of such Tract to this Agreement and have executed and delivered an indemnity agreement indemnifying and agreeing to hold harmless the other Working Interest Owners in the Unit Area, their successors and assigns, against all claims and demands which may be made by the owners of working interests in such Tract who are not parties hereto and which arise out of the commitment of such Tract to this Agreement; and

(ii) Seventy-five percent (75%) of the combined Unit Participation in all Tracts meeting the requirements of Section 13 A. and 13 B. have voted in favor of the commitment of such Tract and acceptance of the indemnity agreement.

Upon the commitment of such a Tract to this Agreement, the Unit Participation that would have been attributed to the nonsubscribing owners of the Working Interest in such Tract, had they become parties to this Agreement and the Unit Operating Agreement, shall be attributed to the Working Interest Owners in such Tract who have become parties to such agreements in proportion to their respective Working Interests in the Tract.

SECTION 14A. ALLOCATION OF UNITIZED SUBSTANCES. All Unitized Substances produced and saved from the committed Tracts within the Unit Area (less, save and except any part of such Unitized Substances which is used in conformity with good operating practices on the Unit Area for drilling, operating, camp and other production, development and pressure maintenance purposes, or which is unavoidably lost) shall be apportioned among and allocated to the committed Tracts within the Unit Area in accordance with the Tract Participation effective hereunder, as such Tract Participation is shown in Exhibit "B" or any revision thereof. The amount of Unitized Substances so allocated to each Tract, and only that amount (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract), shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among or accounted for to the parties hereto entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions, as they would have participated and shared in the production from such Tract, or in the proceeds thereof, had this Agreement not been entered into, and with the same legal force and effect. No Tract committed to this Agreement and qualified for participation as heretofore provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances from such Tract.

If the Working Interest or the Royalty Interest in any Tract is, on or after the Effective Date hereof, divided with respect to separate parcels or portions of such Tract and owned severally by different persons, the Tract Participations assigned to such Tract shall, in the absence of a recordable instrument executed by all owners and furnished to Unit Operator fixing the divisions of ownership, be divided among such parcels or portions in proportion to the number of surface acres in each.

SECTION 14B. TAKING UNITIZED SUBSTANCES IN KIND. The Unitized Substances allocated to each Tract shall be delivered in kind to the respective Working Interest Owners and parties entitled thereto by virtue of the ownership of oil and gas rights therein or by purchase from such owners. Each Working Interest Owner and the parties entitled thereto shall have the continuing right to receive such production in kind at a common point within the Unit Area and to sell or dispose of the same as it sees fit. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose on the Unit Area, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto or with operations upon or with regard to formations other than the Unitized Formation conducted within the Unit Area. Subject to Section 16, Royalty Settlement, hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party (excepting the State of New Mexico) receiving the same in kind.

If any party fails to take in kind or separately dispose of its proportionate share of Unitized Substances, Unit Operator shall have the right, for the time being and subject to revocation at will by the party owning the share, to purchase for its own account or sell to others such share at not less than the prevailing market price in the area for like production; provided that, all contracts of sale by Unit Operator of any other party's share of Unitized Substances shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the circumstances, but in no event shall any such contract be for a period in excess of one year. The proceeds of the Unitized Substances so disposed of by Unit Operator shall be paid to the party entitled thereto.

Any party receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any Tract or receiving the proceeds therefrom shall be responsible for making payment of all royalty to the parties entitled

thereto, and shall indemnify all parties hereto, including Unit Operator, against any liability for all royalties, overriding royalties, production payments, and all other payments chargeable against or payable out of such Unitized Substances or the proceeds therefrom.

SECTION 15. OIL IN LEASE TANKAGE ON EFFECTIVE DATE. Unit Operator shall make a proper and timely gauge of all lease and other tanks within the Unit Area in order to ascertain the amount of merchantable oil above the pipeline connection in such tanks as of 7:00 A.M. on the Effective Date hereof. All such oil which has then been produced legally shall be and remain the property of the Working Interest Owner entitled thereto the same as if the Unit had not been formed; and such Working Interest Owner shall promptly remove said oil from the Unit Area. Any such oil not so removed shall be sold by Unit Operator for the account of such Working Interest Owner, subject to the payment of all royalty to Royalty Owners under the terms and provisions of the Unit Agreement and any applicable lease or leases and other contracts. All such oil as is in excess of the prior allowable of the well or wells from which the same was produced shall be regarded and treated the same as Unitized Substances produced after the Effective Date hereof.

If, as of the Effective Date, hereof, any Tract is over-produced with respect to the allowable of the well or wells on that Tract and the amount of such overproduction has been sold or otherwise disposed of, such overproduction shall be regarded and included as a part of the Unitized Substances produced after the Effective Date hereof and the amount thereof charged to such Tract as having been delivered to the persons entitled to Unitized Substances allocated to such Tract.

SECTION 16A. ROYALTY SETTLEMENT. The State of New Mexico and all Royalty Owners who, under existing contracts, are entitled to take in kind a share of the substances produced from any Tract unitized hereunder, shall hereafter be entitled to take in kind their share of the Unitized Substances allocated to such Tract, and Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty Interests not taken in kind shall be made by Working Interest Owners responsible therefor under existing contracts, laws and regulations, on or before the last day of each month for Unitized Substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any Royalty due under their leases, except that such Royalty shall be computed in accordance with the terms of this Agreement.

SECTION 16B. OUTSIDE SUBSTANCES. If gas obtained from lands not subject to this Agreement is introduced into the Unitized Formation for use in pressure maintenance, stimulation of production, or increasing ultimate recovery, which shall be in conformity with a plan first approved by the Commissioner and the Division a like amount of gas, less appropriate deductions for loss from any cause may be withdrawn from the formation into which the gas was introduced, royalty free as to dry gas, but not royalty free as to the products extracted therefrom; provided that such withdrawal shall be pursuant to such conditions and formula as may be prescribed or approved by the Commissioner and Division; provided further, that such right of withdrawal shall terminate on the termination of this Agreement. If liquefied petroleum gases obtained from lands or formations not subject to this Agreement is injected into the Unitized Formation for the purpose of increasing ultimate recovery, which shall be in conformance with a plan first approved by the Commissioner and Division; part or all of such liquefied petroleum gases may be withdrawn royalty free pursuant to such conditions and formula as may be prescribed or approved by the Commissioner and Division.

Royalty due on account of State lands shall be computed and paid on the basis of all Unitized Substances allocated to such lands.

SECTION 17. RENTAL SETTLEMENT. Rentals or minimum royalties due on leases committed hereto shall be paid by Working Interest Owners responsible therefor under existing contracts, laws and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for payment of any rental or minimum royalty in lieu thereof due under their leases. Rental for lands of the State of New Mexico subject to this Agreement shall be paid at the rate specified in the respective leases from the State of New Mexico, or may be reduced or suspended under order of the Commissioner pursuant to applicable laws and regulations.

SECTION 18. CONSERVATION. Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by State laws and regulations.

SECTION 19. DRAINAGE AND BORDER AGREEMENTS. The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from unitized land by wells on land not subject to this Agreement, or, with consent of the Commissioner and pursuant to applicable regulations, pay a fair and reasonable compensatory royalty as determined by the Commissioner.

The Unit Operator, upon approval by the Working Interest Owners, and the Commissioner and Division, is hereby empowered to enter into a borderline agreement or agreements with Working Interest Owners of adjoining lands not subject to this Agreement with respect to operation in the border area for the maximum economic recovery, conservation purposes and proper protection of the parties and interest affected.

SECTION 20. LEASES AND CONTRACTS CONFORMED AND EXTENDED. The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this Agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect, and the parties hereto hereby consent that the Commissioner, as to State leases, shall by his approval hereof or by the approval hereof by his duly authorized representative, does hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of State leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this Agreement. Without limiting the generality of the foregoing, all leases, subleases and contracts are particularly modified in accordance with the following:

(a) The development and operation of lands subject to this Agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part or separately owned Tract subject to this Agreement, regardless of whether there is any development of any particular part or Tract of the Unit Area, notwithstanding anything to the contrary in the lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling, producing secondary recovery or enhanced oil operations performed hereunder upon any Tract of unitized lands shall be accepted and deemed to be performed upon and for the benefit of each and every Tract of unitized land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on land therein embraced.

(c) Suspension of drilling or producing operations on all unitized land pursuant to direction or consent of the Division and Commissioner or their duly authorized representatives, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every Tract of unitized lands.

(d) Each lease, sublease, or contract relating to the exploration, drilling, development or operation for oil and gas which by its terms might expire prior to the termination of this Agreement, is hereby extended beyond any such term so provided therein, so that it shall be continued in full force and effect for and during the terms of this Agreement.

(e) Termination of this Agreement shall not affect any lease which, pursuant to the terms thereof or any applicable laws shall continue in force and effect thereafter.

(f) Any lease which is made subject to this Agreement shall continue in force beyond the term provided therein as to the lands committed hereto as long as such lands remain subject hereto.

(g) Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto, shall be segregated as to that portion committed and that not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the Effective Date hereof; provided, however that notwithstanding any of the provisions of this Agreement to the contrary, such lease (including both segregated portions) shall

continue in full force and effect beyond the term provided therein as to all lands embraced in such lease if oil or gas is, or has heretofore been discovered in paying quantities on some part of the lands embraced in such lease committed to this Agreement or, so long as a portion of the Unitized Substances produced from the Unit Area is, under the terms of this Agreement, allocated to the portion of the lands covered by such lease committed to this Agreement, or at any time during the term hereof, as to any lease that is then valid and subsisting and upon which the lessee or the Unit Operator is then engaged in bonafide drilling, reworking, or secondary recovery operations on any part of the lands embraced in such lease, then the same as to all lands embraced therein shall remain in full force and effect so long as such operations are diligently prosecuted, and if they result in the production of oil or gas, said lease shall continue in full force and effect as to all of the lands embraced therein, so long thereafter as oil or gas in paying quantities is being produced from any portion of said lands.

SECTION 21. COVENANTS RUN WITH LAND. The covenants herein shall be construed to be covenants running with the land with respect to the interests of the parties hereto and their successors in interest until this Agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee, or other successor in interest. No assignment or transfer of any Working Interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer; and no assignment or transfer or any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer.

SECTION 22. EFFECTIVE DATE AND TERM. This Agreement shall become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective on the first day of the calendar month next following the approval of this Agreement by the Commissioner and the Division.

If this Agreement does not become effective on or before October 1, 1989, it shall ipso facto expire on said date (hereinafter called "expiration date") and thereafter be of no further force or effect, unless prior thereto this Agreement has been executed or ratified by Working Interest Owners owning a combined Participation of at least sixty percent (60%); and at least fifty percent (50%) of such Working Interest Owners committed to this Agreement have decided to extend said expiration date for a period not to exceed one (1) year (hereinafter called "extended expiration date"). If said expiration date is so extended and this Agreement does not become effective on or before said extended expiration date, it shall ipso facto expire on said extended expiration date and thereafter be of no further force and effect.

Unit Operator shall file for record within thirty (30) days after the Effective Date of this Agreement, in the offices of the County Clerks where a memorandum of this Agreement is recorded, a certificate to the effect that this Agreement has become effective according to its terms and stating further the Effective Date.

The term of this Agreement shall be for and during the time that Unitized Substances are produced in paying quantities from the Unit Area and as long thereafter as diligent drilling, reworking or other operations (including secondary recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days, and as long thereafter as Unitized Substances are produced as aforesaid, unless sooner terminated by Working Interest Owners in the manner hereinafter provided.

This Agreement may be terminated at any time with the approval of the Commissioner by a unanimous vote of the Working Interest Owners, as determined from Exhibit "B". Notice of such termination shall be given by Unit Operator to all parties hereto.

Unit Operator shall, within thirty (30) days after the termination date of this Agreement, file for record in the offices where a memorandum of this Agreement is recorded, a certificate to the effect that this Agreement has terminated according to its terms and stating further the termination date.

If not otherwise covered by the leases unitized under this Agreement, Royalty Owners hereby grant Working Interest Owners a period of six (6) months after termination of this Agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit Operations.

SECTION 23. APPEARANCES. Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby before the Commissioner and the Division and to appeal from any order issued under the rules and regulations of the Commissioner or the Division or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Commissioner or the Division, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceedings.

SECTION 24. NOTICES. All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and verifiably hand-delivered to the party or parties or sent by postpaid certified mail ("return receipt requested") addressed to such party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 25. NO WAIVER OF CERTAIN RIGHTS. Nothing in this Agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said unitized lands are located, or rules or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive; provided, however, that each party hereto covenants that during the existence of this Agreement such party will not resort to any action at law or in equity to partition the Unit Area or the facilities used in the development or operation hereof and to that extent waives the benefits of all laws authorizing such partition.

SECTION 26. UNAVOIDABLE DELAY. All obligations under this Agreement requiring the Unit Operator to commence or continue secondary recovery operations or to operate on or produce Unitized Substances from any of the lands covered by this Agreement shall be suspended while, but only so long as, the Unit Operator despite the exercise of due care and diligence is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or Municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

SECTION 27. LOSS OF TITLE. In the event any Tract ceases to have sufficient Working Interest Owners or Royalty Owners committed to this Agreement to meet the conditions of Section 13, Tracts Qualified for Unit Participation, because of failure of title of any party hereto, such Tract shall be automatically regarded as not committed to this Agreement effective as of 7:00 A.M. on the first day of the calendar month in which the failure of title is finally determined; provided, however, that such Tract shall not be so regarded if said Tract can be requalified for admission under Section 13 within ninety (90) days after the date on which such title failure was finally determined.

If any such Tract cannot be so requalified, Unit Operator shall revise the schedule previously filed with the Commissioner setting forth the Tracts committed hereto, and Unit Operator shall revise Exhibit "B" to show the tracts in the Unit Area that remain committed hereto and the Tract Participation of each of said Tracts, which revised Tract Participation shall be calculated and determined on the basis that the Tract Participation of each of said Tracts shall remain in the same ratio one to the other. Copies of the revised schedule and exhibit shall be filed with the Commissioner and same shall be effective as of 7:00 A.M. on the first day of the calendar month in which such failure of title is finally determined.

If title to a Working Interest fails, the rights and obligations of Working Interest Owners by reason of such failure shall be governed by the Unit Operating Agreement. If title to a Royalty Interest fails, but the Tract to which it relates remains committed to this Agreement, the party whose title failed shall not be entitled to participate hereunder insofar as its participation is based on such lost Royalty Interest.

In the event of a dispute as to the title to any Working Interest or Royalty Interest subject hereto, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided, that as to State land or leases, no payments of funds due the State of New Mexico shall be withheld, but such funds shall be deposited as directed by the Commissioner to be held as unearned money pending final settlement of title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator, as such, is relieved from any responsibility for any defect or failure of any title hereunder.

SECTION 28. NONJOINDER AND SUBSEQUENT JOINDER. As the objective of this Agreement is to have lands in the Unit Area operated and entitled to participation under the terms hereof, it is agreed that, notwithstanding anything else herein, no joinder shall be considered a commitment to this Agreement unless the Tract involved is qualified under Section 13 hereof, Tracts Qualified for Unit Participation. Joinder in this Agreement by a Working Interest Owner, at any time must be accompanied by appropriate joinder to the Unit Operating Agreement in order for the interest to be regarded as effectively committed to this Agreement. Joinder by any owner of a Royalty Interest, at any time, must be accompanied by appropriate joinder by the owner of the corresponding Working Interest in order for the interest to be regarded as committed hereto.

Any oil or gas interest in the Unitized Formation in lands within the Unit Area not committed hereto prior to final approval of this Agreement by the Commissioner may thereafter be committed hereto upon compliance with the applicable provisions of Section 13, Tracts Qualified for Unit Participation, hereof, within a period of two (2) months thereafter, on the same basis of participation as provided for in Section 12, Tract Participation, and as set forth in Exhibit "B", by the owner or owners thereof subscribing or consenting in writing to this Agreement and, if the interest is a Working Interest, the owner of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed, however, that after two (2) months from the Effective Date hereof, the right of subsequent joinder as provided in this Section shall be subject to such requirements or approvals and on such basis as may be agreed upon by Working Interests Owners having a combined Unit Participation of not less than sixty percent (60%), provided that the Tract Participation of each previously committed Tract shall remain in the same ratio one to the other. Such joinder by a Working Interest Owner must be evidenced by its execution or ratification of this Agreement and the Unit Operating Agreement. Such joinder by a Royalty Owner must be evidenced by its execution or ratification of this Agreement and must be consented to in writing by the Working Interest Owner responsible for the payment of any benefits that may accrue hereunder on behalf of such Royalty Owner. Except as may be otherwise herein provided, subsequent joinders shall be effective at 7:00 A.M. on the first day of the month following the filing with the Commissioner, of duly executed documents necessary to establish effective commitment unless reasonable objection to such joinder by the Commissioner is duly made within sixty (60) days after such filing. Notwithstanding any of the provisions to the contrary, all commitments of State of New Mexico land must be approved by the Commissioner.

SECTION 29. COUNTERPARTS. This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification, or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above described Unit Area.

SECTION 30. JOINDER COMMITMENT. Execution as herein provided by any party either as a Working Interest Owner or as a Royalty Owner shall commit all interests that may be owned or controlled by such party.

SECTION 31. TAXES. Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the unitized land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto,

including Royalty Owners, who may be responsible for taxes on their respective allocated share of said Unitized Substances. No such taxes shall be charged to the State of New Mexico, or to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 32: PERSONAL PROPERTY EXCEPTED. Each Working Interest Owner has heretofore placed and used on its Tract or Tracts committed to this Agreement various well and lease equipment and other property, equipment or facilities. It is also recognized that additional equipment and facilities may hereafter be placed and used upon the Unitized Land as now or hereafter constituted. Therefore, for all purposes of this Agreement, any such equipment shall be considered to be personal property and not fixtures attached to realty. Accordingly, said well and lease equipment and personal property is hereby severed from the mineral estates affected by this Agreement, and the rights and interests therein as among Working Interest Owners are covered by Unit Operating Agreement.

SECTION 33. NO PARTNERSHIP. The duties, obligations and liabilities of the parties hereto are intended to be several and not joint or collective. This Agreement is not intended to create, and shall not be construed to create, an association or trust, or to impose a partnership duty, obligation or liability with regard to any one or more of the parties hereto. Each party hereto shall be individually responsible for its own obligations as herein provided.

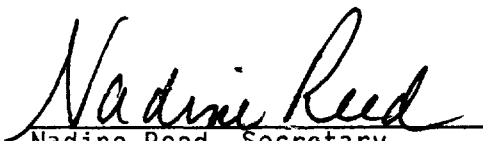
SECTION 34. CORRECTIONS OF ERRORS. It is hereby agreed by all parties to this Agreement that Unit Operator is empowered to correct any mathematical or clerical errors which may exist in the pertinent exhibits to this Agreement; provided, however, that correction of any error other than mathematical or clerical shall be made by Unit Operator only after first having obtained approval of Working Interest Owners having a combined Unit Participation of fifty percent (50%) or more and the Commissioner.


EXECUTED this 16th day of August, 1988, but effective for all purposes the 15th day of August, 1988.

"UNIT OPERATOR" AND "WORKING INTEREST OWNER"

MURPHY OPERATING CORPORATION
Post Office Box 2648
Roswell, New Mexico 88202-2648

ATTEST:

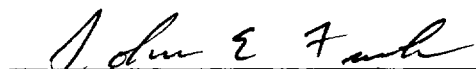

Nadine Reed, Secretary


By: 
Ann Murphy Ezzell, Chairman and
Chief Executive Officer

"NON-OPERATORS"

AMERICAN ENERGY CAPITAL CORPORATION
1111 Fannin, Suite 1470
Houston, Texas 77002

ATTEST:


John E. Funk, Secretary

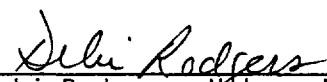

Murray C. McKinnon, President

STATE OF NEW MEXICO)
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 16th day of August, 1988 by Ann Murphy Ezzell, Chairman and Chief Executive Officer of MURPHY OPERATING CORPORATION, a New Mexico corporation, on behalf of said corporation.

My commission expires:

May 6, 1991


Debi Rodgers, Notary Public

STATE OF TEXAS)
)
COUNTY OF HARRIS)

The foregoing instrument was acknowledged before me this 18th day of August, 1988 by Murray C. McKinnon, President of AMERICAN ENERGY CAPITAL CORPORATION, a Delaware corporation, on behalf of said corporation.

My commission expires:

12-10-91

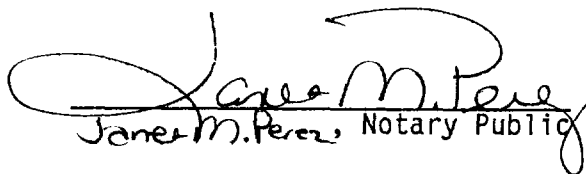
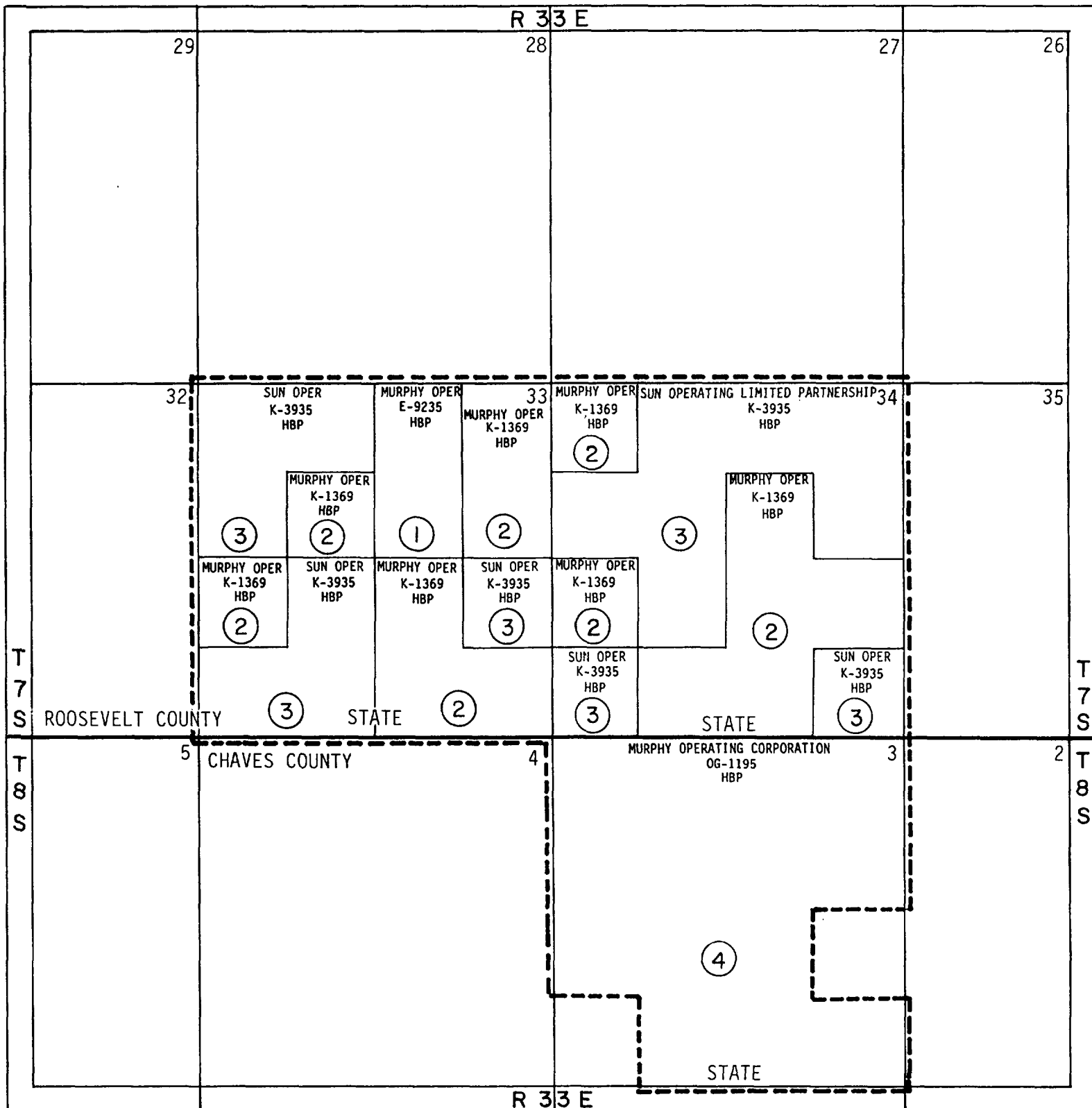

James M. Perez, Notary Public

EXHIBIT "A"

ATTACHED TO AND MADE A PART OF THAT CERTAIN UNIT AGREEMENT, HALEY CHAVEROO
SAN ANDRES UNIT, COUNTIES OF CHAVES AND ROOSEVELT, STATE OF NEW MEXICO,
DATED AUGUST 15, 1988.

HALEY CHAVEROO SAN ANDRES UNIT

CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO



SCALE: 1" = 2000

○ TRACT NUMBER

---UNIT OUTLINE

☐ STATE LANDS

1,840.70 ACRES

100% UNIT AREA

EXHIBIT "B" TO UNIT AGREEMENT
HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

Tract No.	Lease Name, Description of Land, and No. Acres	Serial No. & Lease Date	Lessee of Record	Overriding Royalty			W.I.		
				Basic Royalty & Percentage	Owner or Production Payment Interest (PPI)	Percent Ownership	San Andres Production W.I. Ownership	Percent Ownership	Percent Unit Participation
1.	Hobbs U T-7-S, R-33-E Sec. 33: W½/NE¼ 80.00 acres Roosevelt County, N.M.	E-9235-6 8/16/55	Murphy Operating Corporation	State of N.M. 12.5%	None	--	Murphy Operating Corporation American Energy Capital Corp.	12.50000 87.50000 100.00000	0.661274 4.628914 5.290188
2.	Hobbs T T-7-S, R-33-E Sec. 33: E½NE¼, SE¼NW¼, NW¼SW¼, W½SE¼, SE¼SE¼ Sec. 34: NW¼NW¼, SW¼NE¼, NW¼SW¼, SE¼SW¼, N½SE¼, SW¼SE¼ 560.00 acres Roosevelt County, N.M.	K-1369-3 4/18/61	Murphy Operating Corporation	State of N.M. 12.5%	None	--	Murphy Operating Corporation American Energy Capital Corp.	12.50000 87.50000 100.00000	4.517902 31.625313 36.143215
3.	State AZ T-7-S, R-33-E Sec. 33: N½NW¼, SW¼NW¼, NE¼SW¼, S½SW¼, NE¼SE¼ Sec. 34: SW¼NW¼, E½NW¼, N½NE¼, SE¼NE¼, NE¼SW¼, SW¼SW¼, SE¼SE¼ 640.00 acres Roosevelt County, N.M.	K-3935-1 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	None	--	Murphy Operating Corporation American Energy Capital Corp.	12.50000 87.50000 100.00000	4.282702 29.978916 34.261618
4.	State BF T-8-S, R-33-E Sec. 3: Lots 1, 2, 3, 4, S½N½, N½SW¼, SE¼SW¼, W½SE¼, SE¼SE¼ 560.70 acres Chaves County, N.M.	OG-1195-2 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	None	--	Murphy Operating Corporation American Energy Capital Corp.	12.50000 87.50000 100.00000	3.038122 21.266857 24.304979
TOTAL STATE ACREAGE				1,840.70 = 100% of Unit					
TOTAL UNIT ACREAGE				1,840.70					
					GRAND TOTAL				100.000000

ORIGINAL

UNIT OPERATING AGREEMENT
HALEY CHAVEROO SAN ANDRES UNIT
COUNTIES OF CHAVES AND ROOSEVELT
STATE OF NEW MEXICO

ORIGINAL

EXHIBIT D.

UNIT OPERATING AGREEMENT
HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

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UNIT OPERATING AGREEMENT
HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

THIS AGREEMENT, entered into as of the 15th day of August, 1988, by and between the parties who have signed the original of this instrument, a counterpart thereof, or other instrument agreeing to become a party hereto.

WITNESSETH

WHEREAS, the parties hereto as Working Interest Owners have executed, as of the date hereof, an Agreement entitled "Unit Agreement, Haley Chaveroo San Andres Unit, Chaves and Roosevelt Counties, New Mexico," herein referred to as "Unit Agreement," which, among other things, provides for a separate agreement to be entered into by Working Interest Owners to provide for Unit Operations as therein defined.

NOW, THEREFORE, in consideration of the mutual agreements herein set forth, it is agreed as follows:

ARTICLE 1
CONFIRMATION OF UNIT AGREEMENT

1.1 Confirmation of Unit Agreement. The Unit Agreement is hereby confirmed and by reference made a part of this Agreement. The definitions in the Unit Agreement are adopted for all purposes of this Agreement. If there is any conflict between the Unit Agreement and this Agreement, the Unit Agreement shall govern.

ARTICLE 2
EXHIBITS

2.1 Exhibits. The following exhibits are incorporated herein by reference:

2.1.1 Exhibits "A" and "B" of the Unit Agreement.

2.1.2 Exhibit "C", attached hereto, is a schedule showing the Unit Participation of each Working Interest Owner. Exhibit "C", or a revision thereof, shall not be conclusive as to the information therein, except it may be used as showing the Unit Participations of Working Interest Owners for purposes of this Agreement until shown to be in error or revised as herein authorized.

2.1.3 Exhibit "D", attached hereto, is the Accounting Procedure applicable to Unit Operations. If there is any conflict between this Agreement and Exhibit E, this Agreement shall govern.

2.1.4 Exhibit "E", attached hereto, contains insurance provisions applicable to Unit Operations.

2.1.5 Exhibit "F", attached hereto, contains a sample form memorandum for recordation of this Unit Operating Agreement.

2.2 Revision of Exhibits. Whenever Exhibit "A" or "B" are revised, Exhibit "C" shall be revised accordingly and be effective as of the same date. Unit Operator shall also revise Exhibit "C" from time to time as required to conform to changes in ownership of which Unit Operator has been notified as provided in the Unit Agreement.

2.3 Reference to Exhibits. When reference is made herein to an exhibit, it is to the exhibit as originally attached or, if revised, to the last revision.

ARTICLE 3
SUPERVISION OF OPERATIONS BY WORKING INTEREST OWNERS

3.1 Overall Supervision. Working Interest Owners shall exercise overall supervision and control of all matters pertaining to Unit Operations pursuant to this Agreement and the Unit Agreement. In the exercise of such authority, each Working Interest Owner shall act solely in its own behalf in the capacity of an individual owner and not on behalf of the owners as an entirety.

3.2 Specific Authorities and Duties. The matters with respect to which Working Interest Owners shall decide, vote and take action shall include, but not be limited to the following:

3.2.1 Method of Operation. The method of operation, including the type or types of pressure maintenance, secondary recovery, or other recovery program to be employed.

3.2.2 Drilling of Wells. The drilling of any well whether for production of Unitized Substances, for use as an injection well, or for other purposes.

3.2.3 Well Recompletion and Change of Status. The recompletion, abandonment, or permanent change of status of any well, or the use of any well for injection or other purposes.

3.2.4 Expenditures. The making of any single expenditure in excess of Fifty Thousand Dollars (\$50,000.00); however, approval by Working Interest Owners of the drilling, reworking, deepening or plugging back of any well shall include approval of all necessary expenditures required therefor, and for completing, testing, and equipping the well, including necessary flow lines, separators, and lease tankage.

3.2.5 Disposition of Unit Equipment. The selling or otherwise disposing of any major item of surplus Unit Equipment, if the current price of new equipment similar thereto is Fifty Thousand Dollars (\$50,000.00) or more.

3.2.6 Appearance Before a Court or Regulatory Agency. The designating of a representative to appear before any court or regulatory agency in matters pertaining to Unit Operations; however, such designation shall not prevent any Working Interest Owner from appearing in person or from designating another representative on its own behalf and at its own expense.

3.2.7 Audits. The auditing of the accounts of Unit Operator pertaining to Unit Operations hereunder; however, the audits shall:

(a) not be conducted more than once each year except upon the resignation or removal of the Unit Operator, and

(b) be made upon the approval of the owner or owners of an aggregate of sixty percent (60%) of Working Interest other than that of Unit Operator, at the expense of all Working Interest Owners other than Unit Operator, and

(c) be made upon not less than thirty (30) days written notice to Unit Operator.

3.2.8 Inventories. The taking of periodic inventories under the terms of Exhibit D.

3.2.9 Technical Services. The authorizing of charges to the Joint Account for services by consultants.

3.2.10 Assignments to Committees. The appointment of committees to study any problems in connection with Unit Operations.

3.2.11 The removal of Unit Operator and the selection of successor.

3.2.12 The enlargement of the Unit Area.

3.2.13 The adjustment and readjustment of investments.

3.2.14 The termination of the Unit Agreement.

3.2.15 Border Agreements.

3.2.16 Plans of Operation and Budgets.

ARTICLE 4 MANNER OF EXERCISING SUPERVISION

4.1 Designation of Representatives. Each Working Interest Owner shall inform Unit Operator in writing of the names and addresses of the representative and alternate who are authorized to represent and bind such Working Interest Owner with respect to Unit Operations. The representative or alternate may be changed from time to time by written notice to Unit Operator.

4.2 Meetings. All meetings of Working Interest Owners shall be called by Unit Operator upon its own motion or at the request and expense of Working Interest Owner(s) having a total Unit Participation then in effect of not less than fifty percent (50%). No meeting shall be called on less than fourteen (14) days advance written notice, with agenda for the meeting attached. In absence of protest by any qualified member at the meeting, Working Interest Owners who attend the meeting may amend items included in the agenda and may act upon an amended item or other items presented at the meeting. The representative of Unit Operator shall be chairman of each meeting.

4.3 Voting Procedure. Except as may be specified by other provisions of this Agreement or the Unit Agreement, Working Interest Owners shall decide all matters coming before them as follows:

4.3.1 Voting Interest. Each Working Interest Owner shall have a voting interest equal to its Unit Participation in effect at the time of the vote.

4.3.2 Vote Required. Unless otherwise provided herein or in the Unit Agreement, Working Interest Owners shall determine all matters by the affirmative vote of two or more Working Interest Owners having a combined voting interest of at least sixty percent (60%, hereinafter the "required majority vote).

4.3.3 Vote at Meeting by Nonattending Working Interest Owner. Any Working Interest Owner who is not represented at a meeting may vote on any agenda item by letter or telegram addressed to the representative of Unit Operator if its vote is received prior to the vote at the meeting, provided the agenda items are not amended.

4.3.4 Poll Votes. Working Interest Owners may vote on and decide, by letter or telegram, any matter submitted in writing to Working Interest Owners. If a meeting is not requested, as provided in Section 4.2, within seven (7) days after a written proposal is sent to Working Interest Owners, the vote taken by letter or telegram shall become final. Unit Operator will give prompt notice of the results of such voting to all Working Interest Owners.

4.3.5 Agreement to be Bound by "Required Majority Vote". The resolution of a matter in accordance with the voting procedure set forth in this Article 4 shall be final and binding upon all parties hereto as if each and all of them had voted in concurrence with that of the "required majority vote" as specified by § 4.3.2 above.

ARTICLE 5 INDIVIDUAL RIGHTS OF WORKING INTEREST OWNERS

5.1 Reservation of Rights. Working Interest Owners severally reserve to themselves all their rights, except as otherwise provided in this Agreement and the Unit Agreement.

5.2 Specific Rights. Each Working Interest Owner shall have, among others, the following specific rights:

5.2.1 Access to Unit Area. Access to the Unit Area at all reasonable times to inspect Unit Operations, all wells, and the records and data pertaining thereto.

5.2.2 Reports. The right to receive from Unit Operator, upon written request, copies of all reports to any governmental agency, reports of crude oil runs and stocks, inventory reports, and all other information pertaining to Unit Operations. The cost of gathering and furnishing information not ordinarily furnished by Unit Operator to all Working Interest Owners shall be charged to the Working Interest Owner that requests the information.

ARTICLE 6 UNIT OPERATOR

6.1 Unit Operator. MURPHY OPERATING CORPORATION is hereby designated as the Unit Operator.

6.2 Resignation or Removal and Selection of Successor. The resignation or removal of Unit Operator and the selection of a successor shall be governed by the provisions of the Unit Agreement.

ARTICLE 7 AUTHORITIES AND DUTIES OF UNIT OPERATOR

7.1 Exclusive Right to Operate Unit. Subject to the provisions of this Agreement and to instructions from Working Interest Owners, Unit Operator shall have the exclusive right and be obligated to conduct Unit Operations.

7.2 Workmanlike Conduct. Unit Operator shall conduct Unit Operations in a good and workmanlike manner as would a prudent operator under the same or similar circumstances. Unit Operator shall freely consult with Working Interest Owners and keep them informed of all matters which Unit Operator, in the exercise of its best judgment, considers important. Unit Operator shall not be liable to Working Interest Owners for damages, unless such damages result from its gross negligence or willful misconduct.

7.3 Liens and Encumbrances. Unit Operator shall endeavor to keep the lands and leases in the Unit Area and Unit Equipment free from all liens and encumbrances occasioned by Unit Operations, except the lien and security interest of Unit Operator and Working Interest Owners granted hereunder.

7.4 Employees. The number of employees used by Unit Operator in conducting Unit Operations, their selection, hours of labor, and compensation shall be determined by Unit Operator.

7.5 Records. Unit Operator shall keep correct books, accounts, and records of Unit Operations.

7.6 Reports to Working Interest Owners. Unit Operator shall furnish Working Interest Owners periodic reports of Unit Operations.

7.7 Reports to Governmental Authorities. Unit Operator shall make all reports to governmental authorities that it has the duty to make as Unit Operator.

7.8 Engineering and Geological Information. Unit Operator shall furnish to a Working Interest Owner, upon written request, a copy of all logs and other engineering and geological data pertaining to wells drilled for Unit Operations.

7.9 Expenditures. Unit Operator is authorized to make single expenditures not in excess of Fifty Thousand Dollars (\$50,000.00) without prior approval of Working Interest Owners. If an emergency occurs, Unit Operator may immediately make or incur such expenditures as in its opinion are required to deal with the emergency. Unit Operator shall report to Working Interest Owners, as promptly as possible, the nature of the emergency and the action taken.

7.10 Wells Drilled by Unit Operator. All wells drilled by Unit Operator shall be at the usual rates prevailing in the area. Unit Operator may employ its own tools and equipment, but the charge therefor shall not exceed the usual rates prevailing in the area, and the work shall be performed by Unit Operator under the same terms and conditions as are usual in the area in contracts of independent contractors doing work of a similar nature.

7.11 Border Agreements. Unit Operator may, after approval by Working Interest Owners, enter into border agreements with respect to lands adjacent to the Unit Area for the purpose of coordinating operations.

ARTICLE 8 TAXES

8.1 Ad Valorem Taxes. Beginning with the first calendar year after the Effective Date hereof, Unit Operator shall make and file all necessary ad valorem tax renditions and returns with the proper taxing authorities with respect to all property of each Working Interest Owner used or held by Unit Operator for Unit Operations. Unit Operator shall settle assessments arising therefrom. All such ad valorem taxes shall be paid by Unit Operator and charged to the joint account; however, if the interest of a Working Interest Owner is subject to a separately assessed overriding royalty interest, production payment, or other interest in excess of a one-eighth (1/8) royalty, such Working Interest Owner shall notify Unit Operator of such interest prior to the rendition date and shall be given credit for the reduction in taxes paid resulting therefrom. Any Working Interest Owner dissatisfied with any assessment of its interest in real or personal property shall have the right, at its own expense, and after due notice to the Operator, to protest and resist any such assessment.

8.2 Other Taxes. Each Working Interest Owner shall pay or cause to be paid all production, severance, gathering, and other taxes imposed upon or with respect to the production or handling of its share of Unitized Substances.

ARTICLE 9 INSURANCE

9.1 Insurance. Unit Operator, with respect to Unit Operations, shall: (a) comply with the Workmen's Compensation Laws of the State; (b) carry Employer's Liability and other insurance required by the laws of the State; and (c) provide other insurance as set forth in Exhibit "E".

ARTICLE 10 ADJUSTMENT OF INVESTMENTS

10.1 Personal Property Taken Over. Upon Effective Date, Working Interest Owners shall deliver to Unit Operator the following:

10.1.1 Wells. All wells completed in the Unitized Formation.

10.1.2 Well and Lease Equipment. The casing and tubing in each such well, the wellhead connections thereon, and all other lease and operating equipment that is used in the operation of such wells which Working Interest Owners determine is necessary or desirable for conducting Unit Operations.

10.1.3 Records. A copy of all production and well records for such wells.

10.2 Inventory and Evaluation of Personal Property. Working Interest Owners shall at Unit Expense inventory and evaluate, as determined by Working Interest Owners, the personal property taken over by Unit Operator under Section 10.1.2. Such inventory shall include and be limited to those items of equipment considered controllable under Exhibit "D" except, upon determination of Working Interest Owners, items considered uncontrollable may be included in the inventory in order to insure a more equitable adjustment of investment. Casing shall be included in the inventory for record purposes, but shall be excluded from evaluation and investment adjustment.

10.3 Investment Adjustment. Upon approval of Working Interest Owners of the inventory and evaluation, each Working Interest Owner shall be credited with the value, as determined in accordance with Section 10.2 above, of its interest in all personal property taken over by Unit Operator under Section 10.1.2 and charged with an amount equal to that obtained by multiplying the total value of all such personal property taken over by Unit Operator under Section 10.1.2 by such Working Interest Owner's Unit Participation, as shown in Exhibit "C." If the charge against any Working Interest Owner is greater than the amount credited to such Working Interest Owner, the resulting net charge shall be paid and in all other respects be treated as any other item of Unit Expense chargeable against such Working Interest Owner. If the credit to any Working Interest Owner is greater than the amount charged against such Working Interest Owner, the resulting net credit shall be paid to such Working Interest Owner by Unit Operator out of funds received by it in settlement of the net charges described above.

10.4 General Facilities. The acquisition of warehouses, warehouse stocks, lease houses, camps, facility systems, and office buildings necessary for Unit Operations shall be by negotiation by the owners thereof and Unit Operator, subject to the approval of Working Interest Owners.

10.5 Ownership of Personal Property and Facilities. Each Working Interest Owner, individually, shall by virtue hereof own an undivided interest, equal to its Unit Participation, in all personal property and facilities taken over or otherwise acquired by Unit Operator pursuant to this Agreement.

ARTICLE 11 UNIT EXPENSE

11.1 Basis of Charges to Working Interest Owners. Unit Operator initially shall provide for all Unit Expense in accordance with the provisions of this Article 11. Each Working Interest Owner shall reimburse Unit Operator for its share of Unit Expense in proportion to the respective Unit Participations of the parties hereto. All charges, credits, and accounting for Unit Expense shall be in accordance with Exhibit "D."

11.2 Budgets. Before or as soon as practical after the Effective Date, Unit Operator shall prepare a budget of estimated Unit Expense for the remainder of the calendar year, and, on or before the first day of each August thereafter, shall prepare a budget for the ensuing calendar year. A budget shall set forth the estimated Unit Expense by quarterly periods. Budgets shall be estimates only, and shall be adjusted or corrected by Working Interest Owners and Unit Operator whenever an adjustment or correction is proper. A copy of each budget and adjusted budget shall be furnished promptly to each Working Interest Owner.

11.3 Advance Billing. Unit Operator shall have the right, without prejudice to other rights or remedies, to require Working Interest Owners to advance their respective shares of estimated Unit Expense by submitting to Working Interest Owners, on or before the 15th day of any month, an itemized estimate thereof for the succeeding two (2) months, with a request for payment in advance. Said advances shall be due and payable as a proper and approved Unit Expense pursuant to the terms of this Agreement and attached accounting procedure. Within fifteen (15) days after receipt of the estimate, each Working Interest Owner shall pay to Unit Operator its share of such estimate. Adjustments between estimated and actual Unit Expense shall be made by Unit Operator at the close of each calendar month, and the accounts of Working Interest Owners shall be adjusted accordingly.

11.3.1 Billing Additional Interests. Notwithstanding any of the other provisions of this Agreement and of the accounting procedure attached as Exhibit "D", the parties hereto agree that in no event during the term of this Agreement shall the Unit Operator be required to make more than one billing for the entire interest credited to each party on Exhibit "C". If any party to this Agreement disposes of any part of its interest as shown on Exhibit "C", then until such time as such a Selling Party has designated and qualified one assignee to receive the billing for the entire interest, the Selling Party will be solely responsible for billing its assignee or assignees, and shall remain primarily liable to the other parties hereto for the interest or interests assigned and shall make prompt payment to the Unit Operator for the entire amount of statements and billings to the Selling Party for the interest conveyed. In order to qualify one assignee to receive the billing for the entire interest credited to the Selling Party on Exhibit "C", the Selling Party shall furnish to Unit Operator the following:

- a) Written notice of the conveyance together with certified copies of the recorded assignments by which the transfers were made;
- b) the name of the assignee to be billed and a written statement executed by the assignee to be billed in which it consents to receive statements and billings for the entire interest credited to Selling Party on Exhibit "C" hereof, and further consents to handle any necessary sub-billing in the event it does not own the entire interest credited Selling Party on Exhibit "C"; and
- c) ratification of the Unit Agreement and Unit Operating Agreement (including an executed and recordable instrument entitled "Memorandum of Unit Operating Agreement" as contained in Exhibit "F" hereto) executed by the Assignee to be billed wherein it adopts, ratifies and confirms all the provisions of the Unit Agreement and Unit Operating Agreement as if it had been a party thereto.

11.4 Commingling of Funds. Funds received by Unit Operator under this Agreement need not be segregated or maintained by it as a separate fund, but may be commingled with its own funds.

11.5 Lien and Security Interest of Unit Operator and Working Interest Owners. Each Working Interest Owner grants to Unit Operator a first and prior lien upon its Oil and Gas Rights in each Tract, and a security interest in its share of Unitized Substances when extracted and its interest in all Unit Equipment, to secure payment of its share of Unit Expense, together with interest thereon at the rate of Prime +2% per annum but not to be less than 21% per annum. To the extent that Unit Operator has a security interest under the Uniform Commercial Code of the State, Unit Operator shall be entitled to exercise the rights and remedies of a secured party under the Code. The bringing of a suit and the obtaining of judgment by Unit Operator for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the lien rights or security interest as security for the payment thereof. In addition, upon default by any Working Interest Owner in the payment of its share of Unit Expense, Unit Operator shall have the first and prior right, without prejudice to other rights or remedies, to collect from the purchaser the proceeds from the sale of such Working Interest Owner's share of Unitized Substances until the amount owed by such Working Interest Owner, plus interest has been paid. Each purchaser shall be entitled to rely upon Unit Operator's written statement concerning the amount of any default. Unit Operator grants a like lien and security interest to the Working Interest Owners.

11.5.1 Memorandum of Unit Operating Agreement. Each Working Interest Owner, to the extent it deems necessary to perfect the first and prior lien and security interest provided herein, may file this Unit Operating Agreement or Memorandum thereof as a lien in the applicable real estate records and as a financing statement. Further each Working Interest Owner, their successors and assigns, agree to execute a recordable instrument "Memorandum of Operating Agreement" in the format attached as Exhibit "F" to this Agreement to be filed both in the county records for real estate purposes and other such records as may be necessary for compliance with the Uniform Commercial Code.

11.5.2 Bankruptcy. If, following the granting of relief under the Bankruptcy Code to any party hereto, as debtor thereunder, this Agreement should be held to be an executory contract within the meaning of 11.U.S.C. §365, then the Unit Operator, or if the Unit Operator is the debtor-in-bankruptcy, the Working Interest Owners shall be entitled to a determination by debtor, or trustee for debtor, within thirty (30) days from the date an order for relief is entered under the Bankruptcy Code, as to the rejection or assumption of this Unit Operating Agreement. In the event of an assumption, Unit Operator, or said Working Interest Owners, shall be entitled to adequate assurances as to the future performance of debtor's obligation hereunder the the protection of the interest of all other parties.

11.6 Unpaid Unit Expense. If any Working Interest Owner fails or is unable to pay its share of Unit Expense within sixty (60) days after rendition of a statement therefor by Unit Operator, the non-defaulting Working Interest Owners shall, upon request by Unit Operator, pay the unpaid amount as if it were Unit Expense in the proportion that the Unit Participation of each Working Interest Owner bears to the Unit Participation of all such Working Interest Owners. Each Working Interest Owner so paying its share of the unpaid amount shall, to obtain reimbursement thereof, be subrogated to the security rights described in Article 11.5 of this Agreement.

11.6.1 Remedies In the Event of Default. Without prejudice to the other rights and remedies contained in this Agreement and those existing under law, it is agreed between the parties hereto that in the event any party fails to pay its proportionate share of advances or other Unit Expense incurred pursuant to the terms of this Agreement, then the non-defaulting party or parties shall have the option to consider such non-payment to constitute an election by the defaulting party to withdraw under Article 17 below. However, nothing contained in this Article 11.6.1 shall be construed as a limitation on a party's right to sell, transfer or assign to a third party its ownership in the Unit subject to the terms and conditions of Article 11.3.1 above and the other obligations of this Agreement and the Unit Agreement.

Further, for so long as a defaulting party has unpaid balances outstanding, it shall have no further access to the Unit Area or to information obtained in connection with operations hereunder and shall not be entitled to vote on any matter hereunder. As to any vote which it otherwise would have the right in which to participate, such defaulting party shall have its right to vote reinstated only after it pays all of the amounts to which it is in default, in full, including the interest amounts provided by Article 11 above, before the applicable proposed election or decision deadline. Notwithstanding anything to the contrary contained in this Agreement, the parties hereto agree that:

a) the Unit Operator shall not have the right to implement any of the remedies with respect to default described in this Article 11.6.1. while the Unit Operator and defaulting Working Interest Owner are engaged in ongoing negotiations or discussions conducted in good faith regarding disputed Unit Expense. It is understood, however, that this provision shall not relieve a Working Interest Owner of its responsibility to timely pay its portion of Unit Expense subject to possible subsequent adjustments upon resolution of any disputed amounts.

b) it is the intention of Article 11 to grant Working Interest Owners reciprocal rights against the Unit Operator in the event Unit Operator, rather than a Working Interest Owner, should fail or refuse to pay its proportionate share of Unit Expense. Where appropriate within the text of this Article 11, in order to effectuate this reciprocity, where the word "Unit Operator" is used, the word "Working Interest Owner" may be substituted therefor and where the word "Working Interest Owner" is used, the word "Unit Operator" may be substituted therefor.

11.7 Uncommitted Royalty. Should an owner of a Royalty Interest in any Tract fail to become a party to the Unit Agreement, and, as a result thereof, the actual Royalty Interest payments with respect to such Tract are more or less than the Royalty Interest payments computed on the basis of the Unitized Substances that are allocated to such Tract under the Unit Agreement, the difference shall be borne by or inure to the benefit of Working Interest Owners, in proportion to their respective Unit Participations at the time the Unitized Substances were produced; however, the difference to be borne by or inure to the benefit of the Working Interest Owners shall not exceed an amount computed on the basis of one-eighth (1/8) of the difference between the Unitized Substances allocated to the Tract and the Unitized Substances produced from the Tract. Such adjustments shall be made by charges and credits to the joint account.

11.8 Rentals. The Working Interest Owners in each Tract shall pay all rentals, minimum royalty, advance rentals or delay rentals due under the lease thereon and shall concurrently submit to the Unit Operator evidence of payment. If the Working Interest Owners in any tract determine not to pay any such rental, they shall notify Unit Operator at least sixty (60) days before the due date and they shall thereupon assign to all other Working Interest Owners in the Unit Area in proportion to their respective participating interests all of their right, title and interest under said lease free and clear of any liens or encumbrances; provided, however, all such assignments shall be subject to all obligations with respect to reassignments, if any, of the parties making such assignments theretofore created in favor of parties who are not parties to this Agreement. In the event of failure of any Working Interest Owner to make proper payment of any delay rental through mistake or oversight where such rental is required to continue the lease in force, there shall be no money liability on the part of the party failing to pay such rental, but such party shall make a bona fide effort on behalf of the Joint Account to secure a new lease covering the same interest to and commit such lease to the Unit Agreement and, in the event of failure to secure the new lease within a reasonable time, the interest of the parties hereto shall be revised, if required, so that the party failing to pay such rental shall not be credited with the ownership of any lease on which rental was required but not paid. The Unit Operator shall incur no liability for failure to pay any rental due under the terms of any lease committed to said Unit Agreement; however, in the event any rentals are paid by Unit Operator, the same shall be charged and billed to the party responsible for payment of same. In the event of loss of title to a lease for failure to pay rental, all losses occasioned thereby shall be that of the Working Interest Owners who should have paid the same.

11.9 Carved-out Interests. Any overriding royalty, production payment, net proceeds interest, carried interest or any other interest carved out of a Working Interest shall be subject to this Agreement. If a Working Interest Owner does not pay its share of Unit Expense and the proceeds from the sale of Unitized Substances under Article 11.5 are insufficient for that purpose, the security rights provided for therein may be applied against the carved-out interests with which such Working Interest is burdened. In such event, the owner of such carved-out interest shall be subrogated to the security rights granted by Article 11.5.

ARTICLE 12 NON-UNITIZED FORMATIONS

12.1 Right to Operate. Any Working Interest Owner that now has or hereafter acquires the right to drill for and produce oil, gas or other minerals, from a formation underlying the Unit Area other than the Unitized Formation, shall have the right to do so notwithstanding this Agreement or the Unit Agreement. In exercising the right, however, the Working Interest Owner shall exercise care to prevent unreasonable interference with Unit Operations. No Working Interest

Owner shall produce Unitized Substances through any well drilled or operated by it. If any Working Interest Owner drills any well into or through the Unitized Formation, the Unitized Formation shall be protected in a manner satisfactory to Working Interest Owners so that the production of Unitized Substances will not be affected adversely.

12.2 Multiple Completions. No well now or hereafter completed in the unitized formations shall ever be completed as a multiple completion with any other formation unless such multiple completion and the subsequent handling of the multiple completion is approved by Working Interest Owners in accordance with Article 4.3 of this Agreement.

ARTICLE 13 TITLES

13.1 Warranty and Indemnity. Each Working Interest Owner represents and warrants that it is the owner of the respective working interest set forth opposite its name in Exhibit "B" of the Unit Agreement, and agrees to indemnify and hold harmless the other Working Interest Owners from any loss due to failure, in whole or in part, of its title to any such interest, except failure of title arising out of Unit Operations; however, such indemnity and any liability for breach of warranty shall be limited to an amount equal to the net value that has been received from the sale or receipt of Unitized Substances attributed to the interest as to which title failed. Each failure of title will be deemed to be effective, insofar as this Agreement is concerned, as of 7:00 A.M. on the first day of the calendar month in which such failure is finally determined, and there shall be no retroactive adjustment of Unit Expense, or retroactive allocation of Unitized Substances or the proceeds therefrom, as a result of title failure.

ARTICLE 14 LIABILITY, CLAIMS, AND SUITS

14.1 Individual Liability. The duties and obligations, and liabilities of Working Interest Owners shall be several and not joint or collective; and nothing herein shall ever be construed as creating a partnership of any kind, joint venture, association, or trust among Working Interest Owners.

14.2 Settlements. Unit Operator may settle any single damage claim or suit involving Unit Operations if the expenditure does not exceed Fifty Thousand Dollars (\$50,000.00) and if the payment is in complete settlement of such claim or suit. If the amount required for settlement exceeds the above amount, Working Interest Owners shall assume and take over the further handling of the claim or suit, unless such authority is delegated to Unit Operator. All costs and expense of handling, settling, or otherwise discharging such claim or suit shall be an item of Unit Expense. If a claim is made against any Working Interest Owner or if any Working Interest Owner is sued on account of any matter arising from Unit Operations over which such Working Interest Owner individually has no control because of the rights given Working Interest Owners and Unit Operator by this Agreement and the Unit Agreement, the Working Interest Owner shall immediately notify the Unit Operator, and the claim or suit shall be treated as any other claim or suit involving Unit Operations.

ARTICLE 15 LAWS AND REGULATIONS

15.1 Internal Revenue Provision. Notwithstanding any provisions herein that the rights and liabilities of the parties hereunder are several and not joint or collective, or that this Agreement and operations hereunder shall not constitute a partnership, if for Federal income tax purposes this Agreement and the operations hereunder are regarded as a partnership, then each of the parties hereto elects to be excluded from the application of all of the provisions of Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, as permitted and authorized by Section 761 of the Code and the regulations promulgated thereunder. Unit Operator is hereby authorized and directed to execute on behalf of each of the parties hereto such evidence of this election as may be required by the Secretary of the Treasury of the United States or the Federal Internal Revenue Service, including specifically, but not by way of limitation, all of the returns, statements, and the data required by Federal Regulations 1.761-1(a). Should there be any requirement that each party hereto further evidence this election, each party hereto agrees to execute such documents and furnish such other evidence as may be required by the Federal Internal Revenue Service or as may be necessary to evidence this election. Each party hereto further agrees not to give any notices or take any other action inconsistent with the election made hereby. If any present or future income tax laws of the state or states in which the Unit Area is located, or any future income tax law of the United States, contain provisions similar to those in Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, under which an election similar to that

provided by Section 761 of the Code is permitted, each of the parties agrees to make election as may be permitted, or required by such laws. In making this election, each of the parties states that the income derived by such party from the operations under this Agreement can be adequately determined without the computation of partnership taxable income.

ARTICLE 16 NOTICES

16.1 Notices. All notices required hereunder shall be in writing and shall be deemed to have been properly served when sent by certified mail ("return receipt requested") or verifiably hand-delivered to the address of the representative of each Working Interest Owner as furnished to Unit Operator in accordance with Article 4.

ARTICLE 17 WITHDRAWAL OF WORKING INTEREST OWNER

17.1 Withdrawal. A Working Interest Owner may withdraw from this Agreement by transferring to the other Working Interest Owners all its Oil and Gas Rights free and clear of all liens and encumbrances, exclusive of any prior existing Royalty Interests, together with its interest in all Unit Equipment and in all wells used in Unit Operations. The instrument of transfer may be delivered to Unit Operator for the transferees. Such transfer shall not relieve the Working Interest Owner from any obligation or liability incurred prior to the date of the delivery of the instrument of transfer; however, the tender has to be accepted unless Working Interest Owners decide within ninety (90) days to terminate the Unit. The interest transferred shall be owned by the transferees in proportion to their respective Unit Participations in effect. The transferees, in proportion to the respective interest so acquired, shall pay transferor, for its interest in Unit Equipment, the net salvage value thereof as determined by the transferees. In the event such withdrawing party's interest in the aforesaid fair salvage value after deducting the estimated cost of salvaging same is less than the withdrawing party's share of estimated cost of plugging and abandoning the wells then being used or held for Unit Operations, then the withdrawing party, as condition precedent to withdrawal, shall pay in cash to the party or parties succeeding to its interest a sum equal to the deficiency. Within sixty (60) days after receiving delivery of the transfer, Unit Operator shall render a final statement to the withdrawing owner for its share of Unit Expense, including any deficiency in salvage value, as determined by Working Interest Owners, incurred as of the first day of the month following the date of receipt of the transfer. Provided all Unit Expense, including any deficiency hereunder, due from the withdrawing owner has been paid in full within thirty (30) days after the rendering of such final statement by the Unit Operator, the transfer shall be effective the first day of the month following its receipt by Unit Operator and, as of such effective date, withdrawing owner shall be relieved from all further obligations and liabilities hereunder and under the Unit Agreement, and the rights of the withdrawing Working Interest Owner hereunder and under the Unit Agreement shall cease insofar as they existed by virtue of the interest transferred.

17.2 Limitation on Withdrawal. Notwithstanding anything set forth in Section 17.1, Working Interest Owners may refuse to permit the withdrawal of a Working Interest Owner if its Working Interest is burdened by any royalties, overriding royalties, production payments, net proceeds interest, carried interest, or any other interest created out of the Working Interest in excess of one-eighth (1/8) lessor's royalty, unless the other Working Interest Owners willing to accept the assignment agree to accept the Working Interest subject to such burdens.

ARTICLE 18 ABANDONMENT OF WELLS

18.1 Rights of Former Owners. If Working Interest Owners decide to permanently abandon any well within the Unit Area prior to termination of the Unit Agreement, Unit Operator shall give written notice thereof to the Working Interest Owners of the tract on which the well is located, and they shall have the option for a period of thirty (30) days after the sending of such notice to notify the Unit Operator in writing of their election to take over and own the well. Within ten (10) days after the Working Interest Owners of the Tract have notified the Unit Operator of their election to take over the well, they shall pay Unit Operator, for credit to the joint account, the amount determined by Working Interest Owners to be the net salvage value of the casing and equipment in and on the well. The Working Interest Owners of the Tract, by taking over the well, agree to seal off the Unitized Formation, and upon abandonment to plug the well in compliance with applicable laws and regulations.

18.2 Plugging. If the Working Interest Owners of a Tract do not elect to take over a well located within the Unit Area that is proposed for Abandonment, Unit Operator shall plug and abandon the well in compliance with applicable laws and regulations.

ARTICLE 19 EFFECTIVE DATE AND TERM

19.1 Effective Date. This Agreement shall become effective when the Unit Agreement becomes effective.

19.2 Term. This Agreement shall continue in effect so long as the Unit Agreement remains in effect, and thereafter until (a) all unit wells have been plugged and abandoned or turned over to Working Interest Owners in accordance with Article 20; (b) all Unit Equipment and real property acquired for the joint account have been disposed of by Unit Operator in accordance with instructions of Working Interest Owners; and (c) there has been a final accounting.

ARTICLE 20 ABANDONMENT OF OPERATIONS

20.1 Termination. Upon termination of the Unit Agreement, the following will occur:

20.1.1 Oil and Gas Rights. Oil and Gas Rights in and to each separate Tract shall no longer be affected by this Agreement, and thereafter the parties shall be governed by the terms and provisions of the leases, contracts and other instruments affecting the separate Tracts.

20.1.2 Right to Operate. Working Interest Owners of any Tract that desire to take over and continue to operate wells located thereon may do so by paying Unit Operator, for credit to the joint account, the net salvage values, as determined by Working Interest Owners, of the casing and equipment in and on the wells taken over and by agreeing upon abandonment to plug each well in compliance with applicable laws and regulations.

20.1.3 Salvaging Wells. Unit Operator shall salvage as much of the casing and equipment in or on wells not taken over by Working Interest Owners of separate Tracts as can economically and reasonably be salvaged, and shall cause the wells to be plugged and abandoned in compliance with applicable laws and regulations.

20.1.4 Cost of Abandonment. The cost of abandonment of Unit Operations shall be Unit Expense.

20.1.5 Distribution of Assets. Working Interest Owners shall share in the distribution of Unit Equipment, or the proceeds thereof, in proportion to their Unit Participations.

ARTICLE 21 EXCISE TAX PROVISIONS

21.1 Crude Oil Excise Tax. For the period during which excise taxes are payable under the Crude Oil Windfall Profit Tax Act of 1980 on any party's Unitized Substances, the first crude oil allocated to any Tract after distribution of any incremental tertiary crude as hereinafter provided shall be the tax tier type of crude oil actually produced or considered to have been produced during the base period under I.R.C. regulations but not to exceed its Tract Participation share or the amount of such tax tier type of crude oil currently available. Any excess of a tax tier type of crude oil existing after the foregoing specific identification allocation shall be allocated to the remaining Tracts in the unit which have an underallocation of crude oil in proportion to the amount of their relative underallocations of crude oil. Anything hereinabove notwithstanding, any incremental tertiary oil as defined under I.R.C. Section 4993 shall be allocated to each Tract in accordance with its Tract Participation prior to any other allocation of tax tier type of crude oil under this Article 21.1. In no case shall the sum of the different tax tier types of crude oil allocated to any Tract exceed the total amount of crude oil allocable under its Tract Participation.

21.2 Amendment by Working Interest Owners. This Article 21 may be amended or deleted by vote of the Working Interest Owners using the voting procedure set out in Article 4.3 of this Operating Agreement if in the opinion of the Working Interest Owners (a) application of Article 21 as written becomes unworkable or inequitable as a result of changes in laws or regulations of any governmental agency, or (b) amendment or deletion of this Article 21 is necessary to comply with applicable laws, rules, regulations or orders of any governmental agency having jurisdiction.

ARTICLE 22
EXECUTION

22.1 Original, Counterpart, or Other Instruments. An owner of a Working Interest may become a party to this Agreement by signing the original of this instrument, a counterpart thereof, or other instrument agreeing to become a party hereto. The signing of such instrument shall have the same effect as if all parties had signed the same instrument.

ARTICLE 23
GOVERNMENTAL REGULATIONS

23.1 Governmental Regulations. Working Interest Owners agree to release Unit Operator from any and all losses, damages, injuries, claims and causes of action arising out of, incident to or resulting directly or indirectly from Unit Operator's interpretation or application of rules, regulations or orders of any governmental agency or predecessor agencies to the extent Unit Operator's interpretation or application of such rules, rulings, regulations or orders were made in good faith. Working Interest Owners further agree to reimburse Unit Operator for their proportionate share of any amounts Unit Operator may be required to refund, rebate or pay as a result of an incorrect interpretation or application of the above noted rules, rulings, regulations or orders, together with their proportionate part of interest and penalties owing by Unit Operator as a result of such incorrect interpretation or application of such rules, rulings, regulations or orders.

ARTICLE 24
SUCCESSORS AND ASSIGNS

24.1 Successors and Assigns. This Agreement shall extend to, be binding upon, and inure to the benefit of the parties hereto and their respective heirs, devisees, legal representatives, successors and assigns, and shall constitute a covenant running with the lands, leases and interests covered hereby.

EXECUTED this 16th day of August, 1988, but effective for all purposes the 15th day of August, 1988.

"UNIT OPERATOR" AND "WORKING INTEREST OWNER"

MURPHY OPERATING CORPORATION
Post Office Box 2648
Roswell, New Mexico 88202-2648

ATTEST:

Nadine Reed
Nadine Reed, Secretary

By: Ann Murphy Ezzell
Ann Murphy Ezzell, Chairman and
Chief Executive Officer

"NON-OPERATORS"

AMERICAN ENERGY CAPITAL CORPORATION
1111 Fannin, Suite 1470
Houston, Texas 77002

ATTEST:

John E. Funk
John E. Funk, Secretary

Murray C. McKinnon
Murray C. McKinnon, President

STATE OF NEW MEXICO)
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 16th day of August, 1988 by Ann Murphy Ezzell, Chairman and Chief Executive Officer of MURPHY OPERATING CORPORATION, a New Mexico corporation, on behalf of said corporation.

My commission expires:

May 6, 1991

Debi Rodgers
Debi Rodgers, Notary Public

STATE OF TEXAS)
)
COUNTY OF HARRIS)

The foregoing instrument was acknowledged before me this 17th day of August, 1988 by Murray C. McKinnon, President of AMERICAN ENERGY CAPITAL CORPORATION, a Delaware corporation, on behalf of said corporation.

My commission expires:

12-10-91

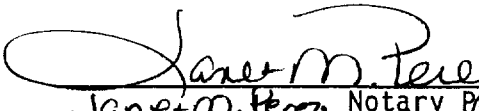

Janet M. Perez Notary Public

EXHIBIT "C"

Attached to that certain Unit Operating Agreement, Haley Chaveroo San Andres Unit, Counties of Chaves and Roosevelt, State of New Mexico, dated August 15, 1988.

HALEY CHAVEROO SAN ANDRES UNIT
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO

<u>UNIT INTEREST OWNER</u>	<u>PERCENTAGE UNIT PARTICIPATION</u>
American Energy Capital Corporation	87.50000
Murphy Operating Corporation	<u>12.50000</u>
Total	<u><u>100.00000</u></u>

EXHIBIT " D "

Attached to and made a part of that certain Unit Operating Agreement, Haley Chaveroo San Andres Unit, Counties of Chaves and Roosevelt, State of New Mexico, dated August 15, 1988.

ACCOUNTING PROCEDURE JOINT OPERATIONS

I. GENERAL PROVISIONS

1. Definitions

"Joint Property" shall mean the real and personal property subject to the agreement to which this Accounting Procedure is attached.

"Joint Operations" shall mean all operations necessary or proper for the development, operation, protection and maintenance of the Joint Property.

"Joint Account" shall mean the account showing the charges paid and credits received in the conduct of the Joint Operations and which are to be shared by the Parties.

"Operator" shall mean the party designated to conduct the Joint Operations.

"Non-Operators" shall mean the parties to this agreement other than the Operator.

"Parties" shall mean Operator and Non-Operators.

"First Level Supervisors" shall mean those employees whose primary function in Joint Operations is the direct supervision of other employees and/or contract labor directly employed on the Joint Property in a field operating capacity.

"Technical Employees" shall mean those employees having special and specific engineering, geological or other professional skills, and whose primary function in Joint Operations is the handling of specific operating conditions and problems for the benefit of the Joint Property.

"Personal Expenses" shall mean travel and other reasonable reimbursable expenses of Operator's employees.

"Material" shall mean personal property, equipment or supplies acquired or held for use on the Joint Property.

"Controllable Material" shall mean Material which at the time is so classified in the Material Classification Manual as most recently recommended by the Council of Petroleum Accountants Societies of North America.

2. Statement and Billings

Operator shall bill Non-Operators on or before the last day of each month for their proportionate share of the Joint Account for the preceding month. Such bills will be accompanied by statements which identify the authority for expenditure, lease or facility, and all charges and credits, summarized by appropriate classifications of investment and expense except that items of Controllable Material and unusual charges and credits shall be separately identified and fully described in detail.

3. Advances and Payments by Non-Operators - "Unit Expense"

Unless otherwise provided for in the agreement, the Operator may require the Non-Operators to advance their share of estimated cash outlay for the succeeding month's operation. Operator shall adjust each monthly billing to reflect advances received from the Non-Operators.

Each Non-Operator shall pay its proportion of all bills within fifteen (15) days after receipt. If payment is not made within such time, the unpaid balance shall bear interest monthly at the rate as defined in Article 11.5 of UOA or the maximum contract rate permitted by the applicable usury laws in the state in which the Joint Property is located, whichever is the lesser, plus attorney's fees, court costs, and other costs in connection with the collection of unpaid amounts.

4. Adjustments

Payment of any such bills shall not prejudice the right of any Non-Operator to protest or question the correctness thereof; provided, however, all bills and statements rendered to Non-Operators by Operator during any calendar year shall conclusively be presumed to be true and correct after twenty-four (24) months following the end of any such calendar year, unless within the said twenty-four (24) month period a Non-Operator takes written exception thereto and makes claim on Operator for adjustment. No adjustment favorable to Operator shall be made unless it is made within the same prescribed period. The provisions of this paragraph shall not prevent adjustments resulting from a physical inventory of Controllable Material as provided for in Section V.

5. Audits

A. Non-Operator, upon notice in writing to Operator and all other Non-Operators, shall have the right to audit Operator's accounts and records relating to the Joint Account for any calendar year within the twenty-four (24) month period following the end of such calendar year; provided, however, the making of an audit shall not extend the time for the taking of written exception to and the adjustments of accounts as provided for in Paragraph 4 of this Section I. Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct joint or simultaneous audits in a manner which will result in a minimum of inconvenience to the Operator. Operator shall bear no portion of the Non-Operators' audit cost incurred under this paragraph unless agreed to by the Operator.

6. Approval by Non-Operators

Where an approval or other agreement of the Parties or Non-Operators is expressly required under other sections of this Accounting Procedure and if the agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto, Operator shall notify all Non-Operators of the Operator's proposal, and the agreement or approval of a majority in interest of the Non-Operators shall be controlling on all Non-Operators.

II. DIRECT CHARGES

Operator shall charge the Joint Account with the following items:

1. Rentals and Royalties

Lease rentals and royalties paid by Operator for the Joint Operations.

2. Labor

- A. (1) Salaries and wages of Operator's field employees directly employed on the Joint Property in the conduct of Joint Operations.
- (2) Salaries of First Level Supervisors in the field.
- (3) Salaries and wages of Technical Employees directly employed on the Joint Property if such charges are excluded from the Overhead rates.
- B. Operator's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to employees whose salaries and wages are chargeable to the Joint Account under Paragraph 2A of this Section II. Such costs under this Paragraph 2B may be charged on a "when and as paid basis" or by "percentage assessment" on the amount of salaries and wages chargeable to the Joint Account under Paragraph 2A of this Section II. If percentage assessment is used, the rate shall be based on the Operator's cost experience.
- C. Expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's costs chargeable to the Joint Account under Paragraphs 2A and 2B of this Section II.
- D. Personal Expenses of those employees whose salaries and wages are chargeable to the Joint Account under Paragraph 2A of this Section II.

3. Employee Benefits

Operator's current costs of established plans for employees' group life insurance, hospitalization, pension, retirement, stock purchase, thrift, bonus, and other benefit plans of a like nature, applicable to Operator's labor cost chargeable to the Joint Account under Paragraphs 2A and 2B of this Section II shall be Operator's actual cost not to exceed twenty-three percent (23%) or the percent most recently recommended by the Council of Petroleum Accountants Societies of North America.

4. Material

Material purchased or furnished by Operator for use on the Joint Property as provided under Section IV. Only such Material shall be purchased for or transferred to the Joint Property as may be required for immediate use and is reasonably practical and consistent with efficient and economical operations. The accumulation of surplus stocks shall be avoided.

5. Transportation

Transportation of employees and Material necessary for the Joint Operations but subject to the following limitations:

- A. If Material is moved to the Joint Property from the Operator's warehouse or other properties, no charge shall be made to the Joint Account for a distance greater than the distance from the nearest reliable supply store, recognized barge terminal, or railway receiving point where like material is normally available, unless agreed to by the Parties.
- B. If surplus Material is moved to Operator's warehouse or other storage point, no charge shall be made to the Joint Account for a distance greater than the distance to the nearest reliable supply store, recognized barge terminal, or railway receiving point unless agreed to by the Parties. No charge shall be made to the Joint Account for moving Material to other properties belonging to Operator, unless agreed to by the Parties.
- C. In the application of Subparagraphs A and B above, there shall be no equalization of actual gross trucking cost of \$200 or less excluding accessorial charges.

6. Services

The cost of contract services, equipment and utilities provided by outside sources, except services excluded by Paragraph 9 of Section II and Paragraph 1. ii of Section III. The cost of professional consultant services and contract services of technical personnel directly engaged on the Joint Property if such charges are excluded from the Overhead rates. The cost of professional consultant services or contract services of technical personnel not directly engaged on the Joint Property shall not be charged to the Joint Account unless previously agreed to by the Parties.

7. Equipment and Facilities Furnished by Operator

- A. Operator shall charge the Joint Account for use of Operator owned equipment and facilities at rates commensurate with costs of ownership and operation. Such rates shall include costs of maintenance, repairs, other operating expense, insurance, taxes, depreciation, and interest on investment not to exceed eight per cent (8%) per annum. Such rates shall not exceed average commercial rates currently prevailing in the immediate area of the Joint Property.
- B. In lieu of charges in Paragraph 7A above, Operator may elect to use average commercial rates prevailing in the immediate area of the Joint Property less 20%. For automotive equipment, Operator may elect to use rates published by the Petroleum Motor Transport Association.

8. Damages and Losses to Joint Property

All costs or expenses necessary for the repair or replacement of Joint Property made necessary because of damages or losses incurred by fire, flood, storm, theft, accident, or other cause, except those resulting from Operator's gross negligence or willful misconduct. Operator shall furnish Non-Operator written notice of damages or losses incurred as soon as practicable after a report thereof has been received by Operator.

9. Legal Expense

Expense of handling, investigating and settling litigation or claims, discharging of liens, payment of judgments and amounts paid for settlement of claims incurred in or resulting from operations under the agreement or necessary to protect or recover the Joint Property, Operator shall charge the Joint Account for legal and land services rendered by Operator's staff in the performance of services on behalf of the Joint Property based upon reasonable rates standard in the industry.

10. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Joint Property, the operation thereof, or the production therefrom, and which taxes have been paid by the Operator for the benefit of the Parties.

11. Insurance

Net premiums paid for insurance required to be carried for the Joint Operations for the protection of the Parties. In the event Joint Operations are conducted in a state in which Operator may act as self-insurer for Workmen's Compensation and/or Employers Liability under the respective state's laws, Operator may, at its election, include the risk under its self-insurance program and in that event, Operator shall include a charge at Operator's cost not to exceed manual rates.

12. Other Expenditures

Any other expenditure not covered or dealt with in the foregoing provisions of this Section II, or in Section III, and which is incurred by the Operator in the necessary and proper conduct of the Joint Operations.

III. OVERHEAD**1. Overhead - Drilling and Producing Operations**

- i. As compensation for administrative, supervision, office services and warehousing costs, Operator shall charge drilling and producing operations on either:

- (☒) Fixed Rate Basis, Paragraph 1A, or
() Percentage Basis, Paragraph 1B.

Unless otherwise agreed to by the Parties, such charge shall be in lieu of costs and expenses of all offices and salaries or wages plus applicable burdens and expenses of all personnel, except those directly chargeable under Paragraph 2A, Section II. The cost and expense of services from outside sources in connection with matters of taxation, traffic, accounting or matters before or involving governmental agencies shall be considered as included in the Overhead rates provided for in the above selected Paragraph of this Section III unless such cost and expense are agreed to by the Parties as a direct charge to the Joint Account.

- ii. The salaries, wages and Personal Expenses of Technical Employees and/or the cost of professional consultant services and contract services of technical personnel directly employed on the Joint Property shall () shall not (☒) be covered by the Overhead rates.

A. Overhead - Fixed Rate Basis

- (1) Operator shall charge the Joint Account at the following rates per well per month:

Drilling Well Rate \$ 3,000.00
Producing Well Rate \$ 300.00

- (2) Application of Overhead - Fixed Rate Basis shall be as follows:

(a) Drilling Well Rate

- [1] Charges for onshore drilling wells shall begin on the date the well is spudded and terminate on the date the drilling or completion rig is released, whichever is later, except that no charge shall be made during suspension of drilling operations for fifteen (15) or more consecutive days.
- [2] Charges for offshore drilling wells shall begin on the date when drilling or completion equipment arrives on location and terminate on the date the drilling or completion equipment moves off location or rig is released, whichever occurs first, except that no charge shall be made during suspension of drilling operations for fifteen (15) or more consecutive days.
- [3] Charges for wells undergoing any type of workover or recompletion for a period of five (5) consecutive days or more shall be made at the drilling well rate. Such charges shall be applied for the period from date workover operations, with rig, commence through date of rig release, except that no charge shall be made during suspension of operations for fifteen (15) or more consecutive days.

(b) Producing Well Rates

- [1] An active well either produced or injected into for any portion of the month shall be considered as a one-well charge for the entire month.
- [2] Each active completion in a multi-completed well in which production is not commingled down hole shall be considered as a one-well charge providing each completion is considered a separate well by the governing regulatory authority.
- [3] An inactive gas well shut in because of overproduction or failure of purchaser to take the production shall be considered as a one-well charge providing the gas well is directly connected to a permanent sales outlet.
- [4] A one-well charge may be made for the month in which plugging and abandonment operations are completed on any well.
- [5] All other inactive wells (including but not limited to inactive wells covered by unit allowable, lease allowable, transferred allowable, etc.) shall not qualify for an overhead charge.

- (3) The well rates shall be adjusted as of the first day of April each year following the effective date of the agreement to which this Accounting Procedure is attached. The adjustment shall be computed by multiplying the rate currently in use by the percentage increase or decrease in the average weekly earnings of Crude Petroleum and Gas Production Workers for the last calendar year compared to the calendar year preceding as shown by the index of average weekly earnings of Crude Petroleum and Gas Fields Production Workers as published by the United States Department of Labor, Bureau of Labor Statistics, or the equivalent Canadian index as published by Statistics Canada, as applicable. The adjusted rates shall be the rates currently in use, plus or minus the computed adjustment.

B. Overhead - Percentage Basis

(1) Operator shall charge the Joint Account at the following rates:

(a) Development

_____ Percent (%) of the cost of Development of the Joint Property exclusive of costs provided under Paragraph 9 of Section II and all salvage credits.

(b) Operating

_____ Percent (%) of the cost of Operating the Joint Property exclusive of costs provided under Paragraphs 1 and 9 of Section II, all salvage credits, the value of injected substances purchased for secondary recovery and all taxes and assessments which are levied, assessed and paid upon the mineral interest in and to the Joint Property.

(2) Application of Overhead - Percentage Basis shall be as follows:

For the purpose of determining charges on a percentage basis under Paragraph 1B of this Section III, development shall include all costs in connection with drilling, redrilling, deepening or any remedial operations on any or all wells involving the use of drilling crew and equipment; also, preliminary expenditures necessary in preparation for drilling and expenditures incurred in abandoning when the well is not completed as a producer, and original cost of construction or installation of fixed assets, the expansion of fixed assets and any other project clearly discernible as a fixed asset, except Major Construction as defined in Paragraph 2 of this Section III. All other costs shall be considered as Operating.

2. Overhead - Major Construction - To be included in Authority for Expenditure.

~~To compensate Operator for overhead costs incurred in the construction and installation of fixed assets, the expansion of fixed assets, and any other project clearly discernible as a fixed asset required for the development and operation of the Joint Property, Operator shall either negotiate a rate prior to the beginning of construction, or shall charge the Joint Account for Overhead based on the following rates for any Major Construction project in excess of \$ _____:~~

A. _____ % of total costs if such costs are more than \$ _____ but less than \$ _____; plus

B. _____ % of total costs in excess of \$ _____ but less than \$1,000,000; plus

C. _____ % of total costs in excess of \$1,000,000.

~~Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single project shall not be treated separately and the cost of drilling and workover wells shall be excluded.~~

3. Amendment of Rates

The Overhead rates provided for in this Section III may be amended from time to time only by mutual agreement between the Parties hereto if, in practice, the rates are found to be insufficient or excessive.

IV. PRICING OF JOINT ACCOUNT MATERIAL PURCHASES, TRANSFERS AND DISPOSITIONS

Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for all material movements affecting the Joint Property. Operator shall provide all Material for use on the Joint Property; however, at Operator's option, such Material may be supplied by the Non-Operator. Operator shall make timely disposition of idle and/or surplus Material, such disposal being made either through sale to Operator or Non-Operator, division in kind, or sale to outsiders. Operator may purchase, but shall be under no obligation to purchase, interest of Non-Operators in surplus condition A or B Material. The disposal of surplus Controllable Material not purchased by the Operator shall be agreed to by the Parties.

1. Purchases

Material purchased shall be charged at the price paid by Operator after deduction of all discounts received. In case of Material found to be defective or returned to vendor for any other reason, credit shall be passed to the Joint Account when adjustment has been received by the Operator.

2. Transfers and Dispositions

Material furnished to the Joint Property and Material transferred from the Joint Property or disposed of by the Operator, unless otherwise agreed to by the Parties, shall be priced on the following bases exclusive of cash discounts:

A. New Material (Condition A)

(1) Tubular goods, except line pipe, shall be priced at the current new price in effect on date of movement on a maximum carload or barge load weight basis, regardless of quantity transferred, equalized to the lowest published price f.o.b. railway receiving point or recognized barge terminal nearest the Joint Property where such Material is normally available.

(2) Line Pipe

(a) Movement of less than 30,000 pounds shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store nearest the Joint Property where such Material is normally available.

(b) Movement of 30,000 pounds or more shall be priced under provisions of tubular goods pricing in Paragraph 2A (1) of this Section IV.

(3) Other Material shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store or f.o.b. railway receiving point nearest the Joint Property where such Material is normally available.

B. Good Used Material (Condition B)

Material in sound and serviceable condition and suitable for reuse without reconditioning:

(1) Material moved to the Joint Property

(a) At seventy-five percent (75%) of current new price, as determined by Paragraph 2A of this Section IV.

(2) Material moved from the Joint Property

(a) At seventy-five percent (75%) of current new price, as determined by Paragraph 2A of this Section IV, if Material was originally charged to the Joint Account as new Material, or

- (b) at sixty-five percent (65%) of current new price, as determined by Paragraph 2A of this Section IV, if Material was originally charged to the Joint Account as good used Material at seventy-five percent (75%) of current new price.

The cost of reconditioning, if any, shall be absorbed by the transferring property.

C. Other Used Material (Condition C and D)

(1) Condition C

Material which is not in sound and serviceable condition and not suitable for its original function until after reconditioning shall be priced at fifty percent (50%) of current new price as determined by Paragraph 2A of this Section IV. The cost of reconditioning shall be charged to the receiving property, provided Condition C value plus cost of reconditioning does not exceed Condition B value.

(2) Condition D

All other Material, including junk, shall be priced at a value commensurate with its use or at prevailing prices. Material no longer suitable for its original purpose but usable for some other purpose, shall be priced on a basis comparable with that of items normally used for such other purpose. Operator may dispose of Condition D Material under procedures normally utilized by the Operator without prior approval of Non-Operators.

D. Obsolete Material

Material which is serviceable and usable for its original function but condition and/or value of such Material is not equivalent to that which would justify a price as provided above may be specially priced as agreed to by the Parties. Such price should result in the Joint Account being charged with the value of the service rendered by such Material.

E. Pricing Conditions

- (1) Loading and unloading costs may be charged to the Joint Account at the rate of fifteen cents (15¢) per hundred weight on all tubular goods movements, in lieu of loading and unloading costs sustained, when actual hauling cost of such tubular goods are equalized under provisions of Paragraph 5 of Section II.
- (2) Material involving erection costs shall be charged at applicable percentage of the current knocked-down price of new Material.

3. Premium Prices

Whenever Material is not readily obtainable at published or listed prices because of national emergencies, strikes or other unusual causes over which the Operator has no control, the Operator may charge the Joint Account for the required Material at the Operator's actual cost incurred in providing such Material, in making it suitable for use, and in moving it to the Joint Property; provided notice in writing is furnished to Non-Operators of the proposed charge prior to billing Non-Operators for such Material. Each Non-Operator shall have the right, by so electing and notifying Operator within ten days after receiving notice from Operator, to furnish in kind all or part of his share of such Material suitable for use and acceptable to Operator.

4. Warranty of Material Furnished by Operator

Operator does not warrant the Material furnished. In case of defective Material, credit shall not be passed to the Joint Account until adjustment has been received by Operator from the manufacturers or their agents.

V. INVENTORIES

The Operator shall maintain detailed records of Controllable Material.

1. Periodic Inventories, Notice and Representation

At reasonable intervals, Inventories shall be taken by Operator of the Joint Account Controllable Material. Written notice of intention to take inventory shall be given by Operator at least thirty (30) days before any inventory is to begin so that Non-Operators may be represented when any inventory is taken. Failure of Non-Operators to be represented at an inventory shall bind Non-Operators to accept the inventory taken by Operator.

2. Reconciliation and Adjustment of Inventories

Reconciliation of a physical inventory with the Joint Account shall be made, and a list of overages and shortages shall be furnished to the Non-Operators within six months following the taking of the inventory. Inventory adjustments shall be made by Operator with the Joint Account for overages and shortages, but Operator shall be held accountable only for shortages due to lack of reasonable diligence.

3. Special Inventories

Special Inventories may be taken whenever there is any sale or change of interest in the Joint Property. It shall be the duty of the party selling to notify all other Parties as quickly as possible after the transfer of interest takes place. In such cases, both the seller and the purchaser shall be governed by such inventory.

4. Expense of Conducting Periodic Inventories

The expense of conducting periodic Inventories shall not be charged to the Joint Account unless agreed to by the Parties.

EXHIBIT "E"

Attached to that certain Unit Operating Agreement, Haley Chaveroo San Andres Unit, Counties of Chaves and Roosevelt, State of New Mexico, dated August 15, 1988.

INSURANCE

Unit Operator and Unit Operator's contractors and subcontractors shall, during the drilling and completing of any and all well or wells drilled on the Unit Area and during the performance of all operations, carry the following described minimum insurance coverage on the Unit Area.

- A. Employer's Liability with limit of \$300,000 and Workmen's Compensation Insurance covering Operator's employees and the employees of Operator's contractors and subcontractors engaged in operations under this Agreement, in compliance with the laws of the State where the work is to be performed.
- B. General Public Liability Insurance covering the parties hereto in connection with all operations conducted by Operator or Operator's contractors and subcontractors with Bodily Injury or Death limit of not less than Two Hundred Fifty Thousand Dollars (\$250,000.00) for injury to or death of any one person; not less than Five Hundred Thousand Dollars (\$500,000.00) for injury to or death of more than one person resulting from any one accident and for Property Damage with a limit of not less than Two Hundred Fifty Thousand Dollars (\$250,000.00) for damage to property for each accident; and
- C. Automobile Public Liability and Property Damage Insurance covering the parties hereto in connection with all operations conducted by Operator or Operator's contractors and subcontractors with Bodily Injury or Death limit of not less than Two Hundred Fifty Thousand Dollars (\$250,000.00) for injury to or death of any one person; not less than Five Hundred Thousand Dollars (\$500,000.00) for injury to or death of more than one person resulting from any one accident and for Property Damage with a limit of not less than Two Hundred Fifty Thousand Dollars (\$250,000.00) for damage to property for each accident.
- D. Such additional insurance as may hereafter be deemed necessary by the Unit Operator or as may be required by law.

Unit operator shall require its contractors and subcontractors working and performing services on land committed hereto to carry other insurance of the types specified above and such amounts as the Unit Operator shall deem necessary. All insurance coverage shall be carried at the joint expense and for the benefit of the parties hereto.

EXHIBIT "F"

Attached to that certain Unit Operating Agreement, Haley Chaveroo San Andres Unit, Counties of Chaves and Roosevelt, State of New Mexico, dated August 15, 1988.

(SAMPLE FORM)

MEMORANDUM OF OPERATING AGREEMENT

STATE OF NEW MEXICO)
)
COUNTIES OF CHAVES AND ROOSEVELT)

Reference is made to that certain Unit Operating Agreement dated the 15th day of August, 1988, wherein Murphy Operating Corporation, whose address is Post Office Box 2648, 400 North Pennsylvania Avenue, Suite 300, Roswell, New Mexico 88201, is named Unit Operator, and each of the undersigned is named as a Working Interest Owner, covering the Unit Area consisting of lands located in Chaves and Roosevelt Counties, New Mexico, more particularly described on Exhibit "F-A" attached hereto and made a part hereof.

The terms and provisions of the referenced Unit Operating Agreement are incorporated in and made a part hereof. Article 11 of the referenced Unit Operating Agreement grants to the Unit Operator and to the Working Interest Owners a first and prior lien upon each party's Oil and Gas Rights in each Unit Tract, and a security interest in its share of Unitized Substances when extracted and its interest in all Unit Equipment, to secure payment of its share of Unit Expense, together with interest thereon at the rate set forth in said Article, for the development and operation of the Unit Area. Oil and or gas or accounts will be financed at the wellhead located on the lands described in Exhibit "F-A". This instrument shall be deemed a Financing Statement.

This instrument is intended to give notice to third parties of the respective rights of each of the parties hereto under the referenced Unit Operating Agreement and the rights of each party to undivided interests in the oil and gas rights in the Unit Area, notwithstanding the fact that the real estate records of the counties where the lands described in Exhibit "F-A" are located show different rights than are reflected hereby.

A fully-executed copy of the above-described Unit Operating Agreement is available in the offices of Unit Operator at the address shown above.

Each of the undersigned Working Interest Owners agrees, at Unit Operator's request, to join the Unit Operator in executing one or more copies of this instrument at any time and from time to time whenever filing or recording this instrument is deemed by the Unit Operator to be necessary or desirable.

This instrument may be executed in multiple counterparts by each of the undersigned, and the Unit Operator is hereby authorized to assemble such counterparts into one document.

DATED and effective as of the date of the above-described Unit Operating Agreement.

AMERICAN ENERGY CAPITAL CORPORATION

By: _____
Murray C. McKinnon, President

STATE OF TEXAS)
)
COUNTY OF HARRIS)

The foregoing instrument was acknowledged before me this _____ day of August, 1988 by Murray C. McKinnon, President of AMERICAN ENERGY CAPITAL CORPORATION, a Delaware corporation, on behalf of said corporation.

My commission expires:

Notary Public

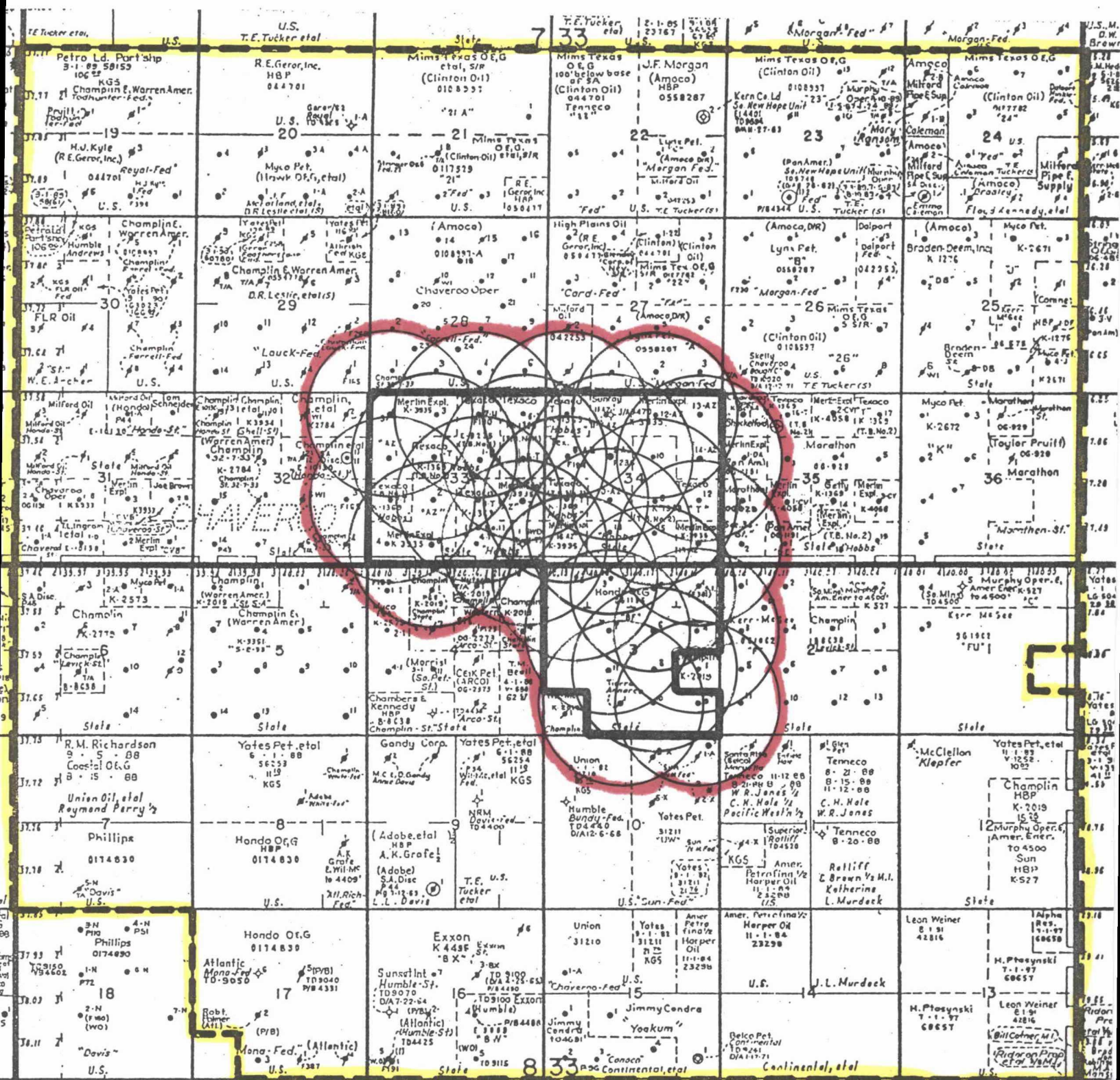
Attached to that certain Unit Operating Agreement, Haley Chaveroo San Andres Unit, Counties of Chaves and Roosevelt, State of New Mexico, dated August 15, 1988.

EXHIBIT "B" TO UNIT AGREEMENT
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Tract No.	Lease Name, Description of Land and No. Acres	Serial No. & Lease Date	Lessee of Record	Overriding Royalty		San Andres Production	W.I. Ownership		Percent Unit* Participation
				Basic Royalty & Percentage	Owner or Production Payment Interest (PPI)		Percent Ownership	W.I. Percent Ownership	
1.	Hobbs U T-7-S, R-33-E Sec. 33: W½/NE½ 80.0 acres	E-9235 8/16/55	Texaco Producing, Inc.	State of N.M. 12.5%	None	Murphy Operating Corporation American Energy Capital Corp.	--	12.5000000 87.5000000 100.0000000	*
2.	Hobbs T T-7-S, R-33-E Sec. 33: E½NE½, SE½NW½, NW½SW½, W½SE½, SE½SE½ Sec. 34: NW½NW½, SW½NE½, NW½SW½, SE½SW½, N½SE½, SW½SE½ 560.0 acres	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	None	Murphy Operating Corporation American Energy Capital Corp.	--	12.5000000 87.5000000 100.0000000	*
3.	State AZ T-7-S, R-33-E Sec. 33: N½NW½, SW½NW½, NE½SW½, S½SW½, NE½SE½/¼ Sec. 34: SW½NW½, E½NW½, N½NE½, SE½NE½, NE½SW½, SW½SW½, SE½SE½ 640.0 acres	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	None	Murphy Operating Corporation American Energy Capital Corp.	--	12.5000000 87.5000000 100.0000000	*
4.	State BF T-8-S, R-33-E Sec. 3: Lots 1, 2, 3, 4, S½N½, N½SW½, SE½SW½, W½SE½, SE½SE½/4 560.7 acres	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	None	Murphy Operating Corporation American Energy Capital Corp.	--	12.5000000 87.5000000 100.0000000	*

TOTAL STATE ACREAGE 1,840.70 = 100% of Unit
TOTAL UNIT ACREAGE 1,840.70

* SEE UNIT AGREEMENT.



UNIT AREA MAP

WATER FLOOD STUDY

MURPHY OPERATING CORPORATION

CHAVEROO SAN ANDRES FIELD

PROPOSED HALEY CHAVEROO SAN ANDRES UNIT

ROOSEVELT & CHAVES COUNTIES, NEW MEXICO.

LEGEND

● PRODUCING WELL

■ PLUGGED & ABANDONED WELL

⊙ SWD WELL

— PROPOSED UNIT BOUNDARY

2 MILE PERIMETER AROUND UNIT BOUNDARY

1/2 MILE RADIUS AROUND PROPOSED INJECTORS

EXHIBIT E.

APPLICATION OF MURPHY OPERATING
CORPORATION FOR UNIT APPROVAL AND
FOR AUTHORITY TO INSTITUTE A WATERFLOOD PROJECT,
CHAVES AND ROOSEVELT COUNTIES, NEW MEXICO.

No. 90-72

AUG 23 1988

SUPPLEMENTAL DATA REQUIRED
BY FORM C-108

OIL CONSERVATION DIVISION
I. The purpose of this Application is for secondary recovery.

II. The operator is Murphy Operating Corporation of Post Office Box 2648, Roswell, New Mexico, 88202-2648, contact parties: Mrs. Ann Murphy Ezzell, Mr. Mark B. Murphy, telephone (505) 623-7210.

III. The well data, in both tabular and schematic form, for each well proposed for injection is attached as Exhibit III.

IV. This is not an expansion of an existing project.

V. Attached hereto as Exhibit V. is a map identifying all wells and leases within two miles of each proposed injection well (two-mile boundary highlighted in yellow). A one-half mile radius circle (drawn in red) around each proposed injection well identifies the wells' areas of review. Also attached is a chart, "Redesignation of Well Names" listing original well names within the proposed Unit Area together with corresponding redesignated well names.

VI. Attached hereto as Exhibit VI.A. is a tabulation of well data for all wells within the proposed Unit Area. Exhibit VI.B. contains a tabulation of well data for wells outside the proposed Unit Area but within the "area of review". These area of review wells are encompassed within the boundary highlighted in yellow on the aforementioned Exhibit V. and their locations are listed below. Also attached as Exhibit VI.C. are schematics (illustrating all plugging detail) of any plugged well within the area of review.

<u>Original Well Name</u>	<u>Redesignated Well Name</u>	<u>Location</u>
		<u>Roosevelt County</u>
		<u>T-7-S, R-33-E, NMPM</u>
Hobbs "U" Well #2	Haley Unit Well #33-02	Section 33: NW/4NE/4
Hobbs "T" Well #1	Haley Unit Well #33-06	Section 33: SE/4NW/4
Hobbs "T" Well #2	Haley Unit Well #33-12	Section 33: NW/4SW/4
Hobbs "T" Well #3	Haley Unit Well #33-10	Section 33: NW/4SE/4
Hobbs "T" Well #5	Haley Unit Well #33-08	Section 33: SE/4NE/4
Hobbs "T" Well #7	Haley Unit Well #34-12	Section 34: NW/4SW/4
Hobbs "T" Well #8	Haley Unit Well #34-10	Section 34: NW/4SE/4
Hobbs "T" Well #9	Haley Unit Well #34-04	Section 34: NW/4NW/4
Hobbs "T" Well #11	Haley Unit Well #33-16	Section 33: SE/4SE/4
Hobbs "T" Well #13	Haley Unit Well #34-14	Section 34: SE/4SW/4
State "AZ" Well #5	Haley Unit Well #33-04	Section 33: NW/4NW/4
State "AZ" Well #6	Haley Unit Well #33-14	Section 33: SE/4SW/4
State "AZ" Well #9	Haley Unit Well #34-06	Section 34: SE/4NW/4
State "AZ" Well #12	Haley Unit Well #34-02	Section 34: NW/4NE/4
State "AZ" Well #14	Haley Unit Well #34-08	Section 34: SE/4NE/4
State "AZ" Well #15	Haley Unit Well #34-16	Section 34: SE/4SE/4
		<u>Chaves County</u>
		<u>T-8-S, R-33-E, NMPM</u>
State "BF" Well #2	Haley Unit Well #03-02	Section 3: Lot 2
State "BF" Well #4	Haley Unit Well #03-08	Section 3: SE/4NE/4
State "BF" Well #5	Haley Unit Well #03-04	Section 3: Lot 4
State "BF" Well #7	Haley Unit Well #03-06	Section 3: SE/4NW/4
State "BF" Well #8	Haley Unit Well #03-10	Section 3: NW/4SE/4
State "BF" Well #9	Haley Unit Well #03-16	Section 3: SE/4SE/4
Annarco Well #1	(P&A)	Section 3: SE/4SW/4

VII. Data on the proposed operation:

1. It is projected that an average of 4,200 barrels of water per day (equivalent to 600 barrels of water per well per day) will be initially injected. If successful, a maximum of 13,800 barrels of water per day will be injected.

2. The proposed waterflood system shall be a closed system.

3. It is proposed that water will be injected at an average surface pressure of 800 psig and at a maximum surface pressure of 0.2 psi per foot of depth to top of injection zone, provided that surface pressure in excess of 0.2 psi per foot of depth to injection zone may be approved by administrative application pursuant to Oil Conservation Division rules and regulations.

4. The water to be used for injection for the waterflood project shall be acquired from the closest and most economical of several commercial sources in the immediate area of the proposed Unit (see Exhibit 1., "Field Map Indicating Proposed Unit Facilities" attached to Plan of Operation, submitted for approval under separate cover);

Attached hereto as Exhibit VII.4. are chemical analyses and compatibility analyses of the proposed injection fluid (fresh water samples from possible sources as described hereinabove) with that of the receiving Chaveroo San Andres formation (sample from State "BF" Well #2 located within the Unit Area).

5. Not applicable.

VIII. Attached hereto as Exhibit VIII. is geological data related to the injection zone including appropriate lithological detail, geological name, thickness and depth. This exhibit contains:

- Exhibit VIII. - Engineering and Geological Report - Proposed Haley Chaveroo San Andres Unit, prepared by Bert H. Murphy, Registered Professional Petroleum Engineer dated August 1, 1988.
- Exhibit VIII.A. - General Location Map;
- Exhibit VIII.B. - Report dated November, 1966 prepared by Roswell Geological Society Symposium with attached structural and isopachus maps and type log;
- Exhibit VIII.C. - Core Data - "Completion Coregraph" for State "AZ" Well #2 located within Unit Area; "Completion Coregraph" and "Core-Gamma Correlation" for State "CVB" Well #1 located in near proximity of Unit in Section 31, T-7-S, R-33-E;
- Exhibit VIII.D. - Tabulated Summary of Geological Data;
- Exhibit VIII.E. - Structure Map with proposed Unit Area delineated;
- Exhibit VIII.F. - Isopachus Map with proposed Unit Area delineated;
- Exhibit VIII.G.1. - East-West Stratigraphic Cross-Section.
- Exhibit VIII.G.2. - North-South Stratigraphic Cross-Section.
- Exhibit VIII.H. - Chart of Derivation of Tract Participation Factors.
- Exhibit VIII.I. - Decline Curves for Wells within Area of Review.

IX. The proposed stimulation program, if any, is included with information contained in the aforementioned Exhibit VI.

X. Appropriate logging and test data for the proposed injection wells are attached as Exhibit X.

XI. Murphy Operating Corporation's review of the records at the State Engineer's office, Roswell District, indicated that there are no fresh water sources of record within one mile of any proposed injector. A letter dated August 15, 1988 from Mr. Frank Bradley, Supervisor - Portales Water Basin, Office of the State Engineer, confirming this record search is attached hereto as Exhibit XI.

XII. Not applicable.

XIII. Attached hereto as Exhibit XIII. is proof that copies of the application have been furnished by certified mail to: a) the owner of the surface of the land on which the proposed injection wells are to be located; and b) to the leasehold operators within one-half mile of the proposed injection wells.

XIV. Certification.

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Ann Murphy Ezzell

Title: Chairman & C.E.O. of
Murphy Operating Corporation

Signature:



Date: August 19, 1988

SUPPLEMENTAL DATA REQUIRED
BY FORM C-108

INDEX OF EXHIBITS

FILE 2.

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- Exhibit VI.A. - Tabulation of data for all wells of public record within the proposed Unit Area.
- Exhibit VI.B. - Tabulation of data for all wells of public record outside the proposed Unit Area but within the "area of review".
- Exhibit VI.C. - Schematics (illustrating all plugging detail) of any plugged and abandoned well within the area of review.
- SEE FILE 4. - Plan of Operation with attached Exhibit 1., "Field Map Indicating Proposed Unit Facilities" submitted for approval under separate cover.
- Exhibit VII.4. - Chemical analyses and compatibility analyses of the proposed injection fluid (fresh water samples from possible sources as described hereinabove) with that of the receiving Chaveroo San Andres formation (sample from State "BF" Well #2 located within the Unit Area).
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- Exhibit X. - Appropriate logging and test data for the proposed injection wells.
- Exhibit XI. - Letter dtd. 08/15/88 from Frank Bradley, Supervisor, Portales Water Basin, Office of the State Engineer, confirming record search of fresh water sources within one mile of any proposed injector.
- Exhibit XIII. - Proof that copies of the application have been furnished by certified mail to: a) the owner of the surface of the land on which the proposed injection wells are to be located; and b) to the leasehold operators within one-half mile of the proposed injection wells.

HALEY CHAVEROO SAN ANDRES UNIT
SUPPLEMENTAL DATA REQUIRED BY FORM C-108

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Exhibit III

TABLE OF DRILLING AND COMPLETION INFORMATION FOR PROPOSED INJECTION WELLS
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT, CHAVES & ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well#	Well Type*	Casing Record	Date Drig. & Comp.	Total Depth	Perforations/Open Hole	Completion	Proposed Injection Downhole Equipment		Proposed Inj. Rate (BPD)	
								Tubing	Packer	Average	Maximum
MOC originally Texaco Hobbs "U" Well #2 B-33-T7S-R33E 660' FNL & 1980 FEL Elevation 4430' DF	33-2	IP	374' 8 5/8" 24# in 11" hole 250 sx cmt. Circ to surf. 4514' 4 1/2" 9.5# in 7 7/8" hole 350 sx cmt TOC 3570' by temp. survey.	8-14-65 9-03-65	TD 4515' PBTD 4385'	9-02-65 (1 SPI) 4409', 4417', 4423' 4427', 4433', 4438' 4446', 4449', 4454' 4458', 4463', 4468' squeezed perfs w/100 sx. 9-02-65 (1 SPI) 4277', 4284', 4294' 4303', 4314', 4431'	9-02-65 (4409-4468) Acidize w/2000 gal Frac w/4200 gal 1se oil & 4200# snd 9-02-65 (4277-4431) Acidize w/1500 gal Frac w/30000 gal 1se oil & 30000# snd	2 3/8" 4.7# ceramic coated set @ 4174'	4 1/2" UNI-1 Tension Packer set @ 4177'	400/400#	600/800#
MOC originally Sunray NM "AZ" St. WELL-#5 D-33-T7S-R33E 660' FNL & 660 FWL Elevation 4430' DF	3-4	IP	368' 8 5/8" 24# in 12 1/4" hole 250 sx cmt. Circ to surf. 4470' 4 1/2" 9.5# in 7 7/8" hole 200 sx cmt TOC 3600' by Calc.	8-10-65 8-30-65	TD 4470' PBTD 4441'	8-23-65 (1 SPI) 4263', 4271', 4282' 4299', 4313', 4319' 4345', 4388', 4405' 4416'	8-23-65 (4263-4416) Acidize w/2500 gal Frac w/30000 gal oil & 32500# snd	2 3/8" 4.7# ceramic coated set @ 4159'	4 1/2" UNI-1 Tension Packer set @ 4163'	400/400#	600/800#
MOC originally Skelly Hobbs "T" Well #1 F-33-T7S-R33E 1980 FNL & 1980 FWL Elevation 4428' DF	33-6	IP	351' 8 5/8" 24# in 11" hole 250 sx cmt. Circ to surf. 4460' 4 1/2" 10.5# in 7 7/8" hole 250 sx cmt TOC 3345' by temp. survey.	7-06-65 7-25-65	TD 4460' PBTD 4425'	7-25-65 (1 SPI) 4395', 4399', 4405' 4413', 4416' (1 SPI) 4284', 4293', 4297' 4314', 4321', 4327' 4341', 4345', 4359'	7-25-65 Acidize (4395-4416) w/750 gal 250 gal (4359) 750 gal (4314-45) 500 gal (4284-97) Frac (4284-4416) 30000 gal 1se oil & 30000# snd	2 3/8" 4.7# ceramic coated set @ 4181'	4 1/2" UNI-1 Tension Packer set @ 4184'	400/400#	600/800#

WELL TYPE: IP = PROPOSED INJECTOR

EXHIBIT III

TABLE OF DRILLING AND COMPLETION INFORMATION FOR PROPOSED INJECTION WELLS
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT, CHAVES & ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well#	Well Type*	Casing Record	Date Drlg. & Comp.	Total Depth	Perforations/Open Hole	Completion	Proposed Injection		Proposed Inj. Rate (BPD)	
								Downhole Equipment	Packer	Proposed Inj. Press (PSI)	Maximum
MOC originally Skelly Hobbs "T" Well #5 H-33-T7S-R33E 1980 FNL & 660 FEL Elevation 4418' DF	33-8	IP	366' 8 5/8" 24# in 11" hole 250 sx cmt. Circ to surf. 4475' 4 1/2" 10.5# in 7 7/8" hole 350 sx cmt. TOC 3345' by temp. survey.	9-04-65 9-21-65	TD 4475' PBTD 4433'	9-21-65 (1 JSPP) 4230', 4241', 4243 1/2' 4248', 4285', 4292' 4294', 4301', 4310' 4362'	9-21-65 (4230-4362) Acidize w/2000 gal Frac w/ 30000 gal 1se oil & 30000# snd	2 3/8" 4.7# ceramic coated set @ 4127'	4 1/2" UNI-1 Tension Packer set @ 4130'	400/400#	600/800#
MOC originally Skelly Hobbs "T" Well #3 J-33-T7S-R33E 1980 FSL & 1980 FEL Elevation 4425' DF	33-10	IP	366' 8 5/8" 24# in 11" hole 250 sx cmt. Circ to surf. 4473' 4 1/2" 10.5# in 7 7/8" hole 350 sx cmt TOC 3457' by temp. survey.	8-25-65 9-15-65	TD 4480' PBTD 4400'	9-15-65 (4 SPI) 4432' squeezed w/ cmt. (1 SPI) 4224', 4241', 4244' 4254', 4276', 4335' 4344'	9-15-65 (4224-4344) Acidize w/2000 gal Frac w/30000 gal 1se oil & 30000# snd	2 3/8" 4.7# ceramic coated set @ 4121'	4 1/2" UNI-1 Tension Packer set @ 4124'	400/400#	600/800#
MOC originally Skelly Hobbs "T" Well #2 L-33-T7S-R33E 1980 FSL & 660 FWL Elevation 4435' DF	33-12	IP	376' 8 5/8" 24# in 11 hole 250 sx cmt. Circ to surf. 4486' 4 1/2" 10.5# in 7 7/8" hole 350 sx cmt TOC 3386' by temp. survey.	7-28-65 8-15-65	TD 4486' PBTD 4350'	8-15-65 (1 SPI) 4274', 4291', 4304' 4317', 4326', 4335' 4368', 4405', 4414' 4426' cmt. retainer @ 4350' squeezed 4368-4426 w/50 sx cmt.	8-15-65 (4274-4335) Acidize w/2000 gal Frac w/20000 gal 1se oil & 20000# snd	2 3/8" 4.7# ceramic coated set @ 4171'	4 1/2" UNI-1 Tension Packer set @ 4174'	400/400#	600/800#

WELL TYPE: IP = PROPOSED INJECTOR

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PROPOSED HALEY CHAVEROO SAN ANDRES UNIT, CHAVES & ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well#	Well Type*	Casing Record	Date Drilg. & Comp.	Total Depth	Perforations/Open Hole	Completion	Proposed Injection Downhole Equipment			Proposed Inj. Rate (BPD)	
								Tubing	Packer	Average	Maximum	Press (PSI)
MOC originally Sunray NM "AZ" St. Well #6 N-33-T7S-R-33E 660' FSL & 1980 FWL Elevation 4433' DF	33-14	IP	365' 8 5/8" 24# in 12 1/4" hole 250 sx cmt circ to surf. 4505' 4 1/2" 9.5# in 7 7/8" hole 200 sx cmt. TOC 3650' by temp. survey.	8-19-65 9-21-65	TD 4510' PBTD 4460'	9-21-65 (1 SPI) 4269', 4295', 4307' 4317', 4325', 4337' 4344', 4358', 4375' 4391'	9-21-65 (4269-4391) Acidize w/1500 gal Frac w/30000 gal lse oil & 32500# snd	2 3/8" 4.7# ceramic coated set @ 4166'	4 1/2" UNI-1 Tension Packer set @ 4169'	400/400#	600/800#	
MOC originally Skelly Hobbs "T" Well #11 P-33-T7S-R-33E 660 FSL & 660 FEL Elevation 4424' DF	33-16	IP	364' 10 3/4" 32.75# in 14 3/4" hole 350 sx cmt. Circ to surf. 4900 705/8" 26.4# in 9 7/8" hole 850 sx cmt. TOC 2800 by temp. survey.	11-09-65 12-29-65	TD 4900' PBTD 4867'	12-06-65 (4 SPI) 4699'-4766' 4723'-4731' 4735'-4766'	12-06-65 Acidize w/2000 gal (4699-4766) 500 gal (4676-4849) Frac w/30000 gal wtr & 30000# snd (4676-4849) Acidize w/2000 gal (4207-4418)	2 3/8" 4.7# ceramic coated set @ 4596'	4 1/2" UNI-1 Tension Packer set @ 4599'	400/400#	600/800#	
MOC originally Sunray NM "AZ" St. Well #12 B-34-T7S-R-33E 660 FNL & 1980 FEL Elevation 4403 DF	34-2	IP	366' 8 5/8" 24# in 12 1/4" hole 250 sx cmt. Circ to surf. 4444' 4 1/2" 9.5# in 7 7/8" hole 200 sx cmt TOC 3590' by temp. survey.	11-20-65 12-06-65	TD 4450' PBTD 4405'	12-06-65 (1 SPI) 4246', 4262', 4274' 4280', 4285', 4290' 4297', 4305', 4312' 4319', 4333', 4344'	10-12-65 (4254-4332) Acidize w/1500 gal 4-25-68 (4254-4332) Frac w/30000 gal lse oil & 40000# snd	2 3/8" 4.7# ceramic coated set @ 4143'	4 1/2" UNI-1 Tension Packer set @ 4146'	400/400#	600/800#	

WELL TYPE: IP = PROPOSED INJECTOR

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Well Name & Location	Unit Well#	Well Type*	Casing Record	Date Drig. & Comp.	Total Depth	Perforations/Open Hole	Completion	Proposed Injection Downhole Equipment		Proposed Inj. Rate (BPD) Proposed Inj. Press (PSI)	
								Tubing	Packer	Average	Maximum
MOC originally Skelly Hobbs "J" Well #9 D-34-T7S-R-33E 660 FNL & 660 FWL Elevation 4413' DF	34-4	IP	370' 8 5/8" 24# in 11" hole 250 sx cmt. Circ to surf. 4475' 4 1/2" 9.5# in 7 7/8" hole 350 sx cmt TOC 3282' by temp. survey.	9-30-65 11-08-65	TD 4475' PBTD 4440'	11-08-65 (1 SPI) 4254', 4284.5', 4294' 4304', 4309', 4318' 4323', 4332' 2-25-69 (1 SPI) 4256'	11-08-65 (4254-4332) Acidize w/2000 gals	2 3/8" 4.7# ceramic coated set @ 4151'	4 1/2" UNI-1 Tension Packer set @ 4154'	400/400#	600/800#
MOC originally Sunray NM "AZ" St. Well #9 F-34-T7S-R-33E 1980 FNL & 1980 FWL Elevation 4411 DF	34-6	IP	358' 8 5/8" 24# in 12 1/4" hole 200 sx cmt circ to surf. 4453' 4 1/2" 9.5# in 7 7/8" hole 200 sx cmt TOC 3750' by temp. survey.	9-16-65 10-04-65	TD 4457' PBTD 4406'	10-04-65 (1 SPI) 4209', 4221', 4230' 4256', 4269', 4282' 4293', 4300', 4307' 4321', 4327', 4334' 4345' 2-25-69 (1 SPI) 4256'	10-04-65 (4209-4345) Acidize w/1625 gal 2-25-69 (4256-4345) Frac w/30000 gal 1se oil & 40000# snd	2 3/8" 4.7# ceramic coated set @ 4106'	4 1/2" UNI-1 Tension Packer set @ 4109'	400/400#	600/800#
MOC originally Sunray NM "AZ" St. Well #14 H-34-T7S-R-33E 1980 FNL & 660 FEL Elevation 4388' DF	34-8	IP	361' 8 5/8" 24# in 12 1/4" hole 250 sx cmt. Circ to surf. 4476' 4 1/2" 9.5# in 7 7/8" hole 200 sx cmt TOC 3640' by temp. survey.	12-10-65 1-03-66	TD 4480' PBTD 4470'	1-03-66 (1 SPI) 4161', 4187', 4215' 4226', 4251', 4267' 4278', 4284', 4290' 4297', 4312', 4322' 4336', 4342', 4352'	1-03-66 (4161-4352) Acidize w/1500 gal Frac w/30000 gal 1se oil & 32500# snd	2 3/8" 4.7# ceramic coated set @ 4048'	4 1/2" UNI-1 Tension Packer set @ 4051'	400/400#	600/800#

WELL TYPE: IP = PROPOSED INJECTOR

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Well Name & Location	Unit Well #	Well Type*	Casing Record	Date Drlg. & Comp.	Total Depth	Perforations/Open Hole	Completion	Proposed Injection		Proposed Inj. Rate (BPD)	
								Downhole Equipment	Packer	Proposed Inj. Press (PSI)	Maximum
MOC originally Skelly Hobbs "T" Well #8 J-34-T7S-R-33E 1980 FSL & 1980 FEL Elevation 4397' DF	34-10	IP	370' 8 5/8" 24# in 11" hole 250 sx cmt. Circ to surf. 4474' 4 1/2" 9.5# in 7 7/8" hole 350 sx cmt. TOC 3421' by temp. survey.	10-26-65 11-11-65	TD 4475' P8TD 4446'	11-11-65 (1 SPI) 4229', 4261', 4272' 4279', 4290', 4293 1/2' 4298 1/2', 4301', 4307' 4314', 4324.5', 4334.5'	11-11-65 (4229-4334.5') Acidize w/2000 gal Frac w/20000 gal 1se oil & 20000# snd 1-23-69 (4229-4334.5) Frac w/40000 gelled brine & 60000# snd	2 3/8" 4.7# ceramic coated set @ 4126'	4 1/2" UNI-1 Tension Packer set @ 4129'	400/400#	600/800#
			366' 8 5/8" 24# in 11" hole 250 sx cmt. Circ to surf. 4525' 4 1/2" 9.5# in 7 7/8" hole 350 sx cmt TOC 3445' by temp. survey.	9-29-65 10-16-65	TD 4525' P8TD 4357'	10-14-65 (4 SPI) 4472.5'-4475.5' squeezed 4472.5'-4475.5' w/100 sx cmt 10-23-65 (4 SPI) 4376.5' & 4377.5' squeezed 4376.5' & 4377.5' w/150 sx cmt. 10-23-65 (4 SPI) 4332'-4440' 4342'-4345' 10-23-65 (1 SPI) 4295.5', 4303', 4311.5', 4316', 4322.5' 2-12-69 (1 SPI) 4224', 4235', 4263' 4271', 4288', 4291' 4299'	10-14-65 (4472.5-4475.5) Acidize w/750 gal 10-23-65 (4376.5-4377.5) Acidize w/500 gal 10-23-65 (4332-4345) Acidize w/500 gal 10-23-65 (4295.5-4322.5) Acidize w/1000 gal 2-12-69 (4224-4345) Acidize w/1000 gal Frac w/30000 gal wtr & 45000# snd	2 /38" 4.7# ceramic coated set @ 24121'	4 1/2" UNI-1 Tension Packer set @ 4124'	400/400#	600/800#

WELL TYPE: IP = PROPOSED INJECTOR

EXHIBIT III

TABLE OF DRILLING AND COMPLETION INFORMATION FOR PROPOSED INJECTION WELLS
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT, CHAVES & ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well#	Well Type*	Casing Record	Date Drlg. & Comp.	Total Depth	Perforations/Open Hole	Completion	Proposed Injection Downhole Equipment		Proposed Inj. Rate (BPD)	
								Tubing	Packer	Proposed Inj. Press (PSI)	
										Average	Maximum
MOC originally Skelly Hobbs "T" Well #13 N-34-T7S-R-33E 990 FSL & 1980 FWL Elevation 4407' DF	34-14	IP	366' 8 5/8" 24# in 12 1/4" hole 250 sx cmt. Circ to surf. 4500' 4 1/2" 9.5# in 7 7/8" hole 350 sx cmt, TOC 3089' by temp. survey.	2-17-66 3-03-66	TD 4500' PBTD 4464'	3-08-66 (1 SPI) 4249', 4259', 4294 1/2' 4299', 4304', 4311' 4316 1/2', 4328', 4344' 4348', 4353'	3-08-66 (4249-4353) Acidize w/1500 gal Frac w/25000 gals oil & 25000# snd	2 3/8" 4.7# ceramic coated set @ 4146'	4 1/2" UNI-1 Tension Packer set @ 4149'	400/400#	600/800#
MOC originally Sunray NM "AZ" St. Well #15 P-34-T7S-R-33E 660 FSL & 660 FEL Elevation 4385' DF	34-1	IP	371' 8 5/8" 24# in 12 1/4" hole 200 sx cmt. Circ to surf. 4480' 4 1/2" 9.5# in 7 7/8" hole 200 sx cmt TOC 3810' by temp. survey.	12-10-65 12-31-65	TD 4480' PBTD 4446'	1-03-66 (1 SPI) 4201', 4254', 4285' 4300', 4307', 4315' 4323', 4335', 4347'	1-03-66 (4201-4347) Acidize w/1000 gal Frac w/20000 gal oil & 24000# snd	2 3/8" 4.7# ceramic coated set@ 408	4 1/2" UNI-1 Tension Packer set @ 4101'	400/400#	600/800#
MOC originally Atlantic Richfield Co. State "BF" Well #2 B-3-T8S-R-33E 660 FNL & 1980 FE1 Elevation 4392' DF	3-2	IP	368' 8 5/8" 24# in 12 1/4" hole 255 sx cmt. Circ to surf. 4491' 4 1/2" 9.5# in 7 7/8" hole 250 sx cmt TOC 3540' by temp. survey.	5-02-66 5-24-66	TD 4491' PBTD 4453'	5-16-66 (1 SPI) 4200', 4302', 4306' 4310', 4339', 4344', 4350', 4355', 4361' 8-11-69 (1JSPF) 4217', 4229', 4231' 4235', 4240', 4246' 4253', 4261', 4268'	5-16-66 (4200-4261) Acidize w/2000 gal Frac w/25000 gal 1se oil & 20000# snd + 500 gal acid. 8-11-67 (4217-4268) Acidize w/250 gal 15% HCl and 10000 gal 28% HCl	2 3/8" 4.7# ceramic coated set @ 4097'	4 1/2" UNI-1 Tension Packer set @ 4100'	400/400#	600/800#

WELL TYPE: IP = PROPOSED INJECTOR

EXHIBIT III

TABLE OF DRILLING AND COMPLETION INFORMATION FOR PROPOSED INJECTION WELLS
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT, CHAVES & ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well #	Well Type*	Casing Record	Date Drig. & Comp.		Total Depth	Perforations/Open Hole	Completion	Proposed Injection Downhole Equipment		Proposed Inj. Rate (BPD)	
									Tubing	Packer	Average	Maximum
MOC originally Atlantic Richfield Co. State "BF" Well #7 F-3-T8S-R-33E 1980 FNL & 1980 FWL Elevation 4407' DF	3-6	IP	371' 8 5/8" 24# in 12 1/4" hole 250 sx cmt. Circ to surf. 4480' 4 1/2" 9.5# and 10.5# in 7 7/8" hole 300 sx cmt. TOC 3411' by temp. survey.	7-29-66 8-17-66		TD 4480' PBTD 4438'	8-15-66 (1 SPI) 4264', 4324', 4330' 4338', 4344', 4352' 4364', 4370'	8-15-66 (4264-4370) Acidize w/2000 gal Frac w/1000 gal acid, 35000 gal 1se oil & 40000# snd	2 3/8" 4.7# ceramic coated set @ 4161'	4 1/2" UNI-1 Tension Packer set @ 4164'	400/400#	600/800#
MOC originally Atlantic Richfield Co. State "BF" Well #4 H-3-T8S-R-33E 1980 FNL & 660 FEL Elevation 4387' DF	3-8	IP	375' 8 5/8" 24# in 12 1/4" hole 256 sx cmt. Circ to surf. 4489' 4 1/2" 10.5# in 7 7/8" hole 300 sx cmt. TOC 3200' by temp. survey.	6-25-66 7-10-66		TD 4490' PBTD 4452'	7-11-66 (1 SPI) 4198', 4286', 4306' 4310', 4318', 4329' 4344'	7-11-86 (4198-4344) Acidize w/2000 gal Frac w/25000 gal 1se oil & 30000# snd	2 3/8" 4.7# ceramic coated set @ 4095'	4 1/2" UNI-1 Tension Packer set @ 4098'	400/400#	600/800#
MOC originally Atlantic Richfield Co. State "BF" Well #8 J-3-T8S-R-33E 1980 FSL & 1980 FEL Elevation 4401' DF	3-10	IP	372' 8 5/8" 24# in 12 1/4" hole 250 sx cmt. Circ to surf. 4775' 4 1/2" 10.5# in 7 7/8" hole 300 sx cmt TOC 3200' by temp. survey.	11-08-66 11-22-66		TD 4776' PBTD 4438'	11-28-66 (1 SPI) 4240', 4251', 4262' 4273', 4329', 4342' 4356', (2 SPI) 4366'	11-28-66 (4240-4366) Acidize w/2000 gal Frac w/ 35000 gal 1se oil & 40000 # snd	2 3/8" 4.7# ceramic coated set @ 4137'	4 1/2" UNI-1 Tension Packer set @ 4140'	400/400#	600/800#

WELL TYPE: IP = PROPOSED INJECTOR

EXHIBIT III

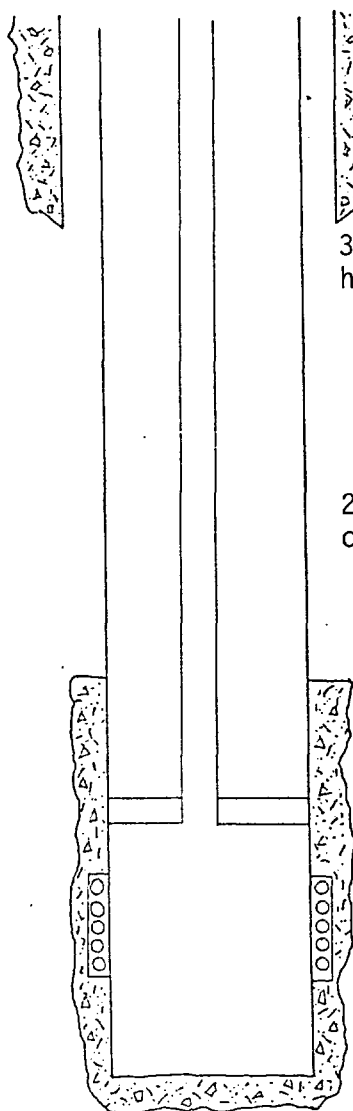
TABLE OF DRILLING AND COMPLETION INFORMATION FOR PROPOSED INJECTION WELLS
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT, CHAVES & ROOSEVELT COUNTIES, NEW MEXICO

Well Name & Location	Unit Well#	Well Type*	Casing Record	Date Drig. & Comp.		Total Depth	Perforations/Open Hole	Completion	Proposed Injection Downhole Equipment		Proposed Inj. Rate (BPD)	
									Tubing	Packer	Proposed Inj. Press (PSI)	
											Average	Maximum
MOC originally Atlantic Richfield State "BF" Well #9 P-3-T8s-R-33E 990 FSL & 660 FEL Elevation 4392'	3-16	IP	377' 8 5/8" 24# in 12 1/4" hole 250 sx cmt circ to surf. 4482' 4 1/2" 9.5# in 7 7/8" hole 300 sx cmt TOC 3200' by-Calc.	11-19-66 11-30-66		TD 4482' PBD 4447'	12-05-66 (1 SPI) 4253', 4270', 4323' 4331', 4343', 4351'	12-05-66 (4253'-4351') Acidize w/2000 gal Frac w/1000 gal acid, 35000 gal 1se oil & 40000# snd	2 3/8" 4.7# ceramic coated set @ 4150'	4 1/2" UNI-1 Tension Packer set @ 4153'	400/400#	600/800#

WELL TYPE: IP = PROPOSED INJECTOR

MURPHY OPERATING CORPORATION Proposed Haley Chaveroo San Andres Unit
 OPERATOR
 Well numbers & location(s) Section 33, 34 T7S R33E Roosevelt Co., NM
 listed on attached sheet Section 3 T8S R33E Chaves Co., NM
 WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Schematic



NOT DRAWN TO SCALE

Annulus
 filled w/
 inert
 ("packer")
 fluid.
 Pressure
 tested to
 300 psig and
 held for 30 min.

2-3/8" ceramic
 coated tubing

4-1/2" or 5-1/2"
 Baker Uni-1
 Injection
 Packer set
 w/in 100' of
 uppermost
 perforation.

Tabular Data

Surface Casing

Size 8-5/8 to 10-3/4" Cemented with 200 - 250 sx.

TOC Surface feet determined by circulation

Hole size 11" to 12-1/4"

Intermediate Casing

Size " Cemented with sx.

TOC feet determined by

Hole size

Long string

Size 4-1/2 to 7-5/8" Cemented with 200 - 850 sx.

TOC 2800 - 3800 feet determined by Temp. Survey

Hole size 7-7/8" to 9-7/8"

Total depth 4400' to 4500'

Injection interval

4217 feet to 4310 feet being the

(perforated or open-hole, indicate which) Unitized Formation which is further described as follows:

"Unitized Formation" is defined as that subsurface portion of the Unit Area known as the San Andres formation, the vertical limits thereof found in that stratigraphic interval between 4,158 and 4,470 feet as measured on the compensated formation density log run in the Murphy Operating Corporation Hobbs "T" Well No. 15* on March 23, 1966, said well located 990 feet from the South line and 1980 feet from the East line of Section 34, Township 7 South, Range 33 East, Roosevelt County, New Mexico. The Unitized Formation shall further include all subsurface points throughout the Unit Area correlative to the aforementioned identified depths.

*Unit Well #33-15

Tubing size 2-3/8" lined with ceramic epoxy coating set in a

(material)

Baker Uni-1

(brand and model)

packer at 4100 - 4150 feet

(within 100' of uppermost perforation)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres

2. Name of Field or Pool (if applicable) Chaveroo San Andres

3. Is this a new well drilled for injection? ☐ Yes ☒ No

If no, for what purpose was the well originally drilled? All wells drilled as oil & gas producers except Well #33-16 which was drilled as a SWD.

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) See Exhibit III entitled

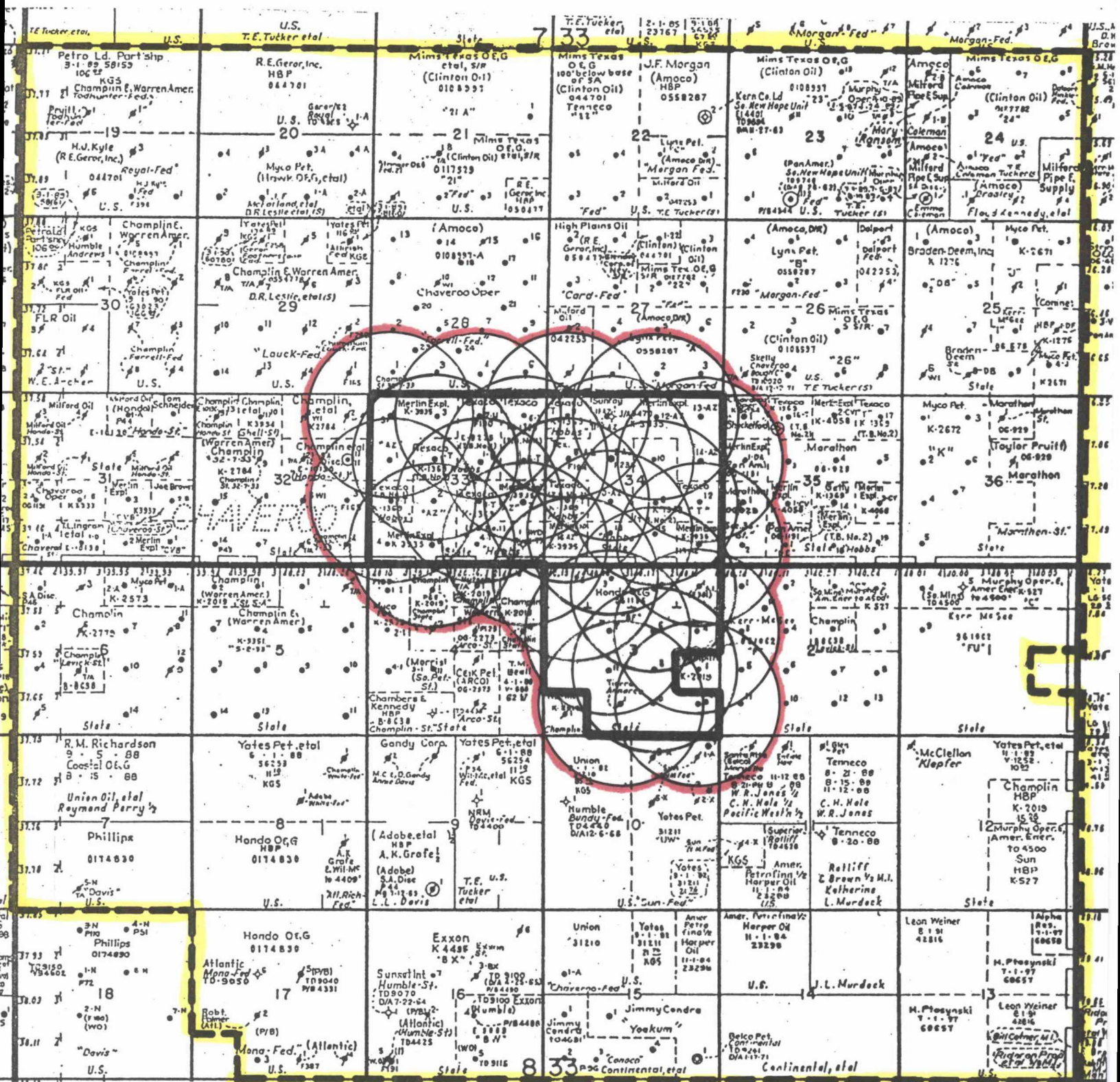
Table of Drilling and Completion Information on Proposed Injection Wells.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. There are no known overlying oil and gas zones. The Pennsylvanian Bough

"C" is productive at an approximate depth of 9050' in the Tobac Field which is

located approximately 3 to 4 miles south of the proposed Haley Chaveroo San Andres Unit.

<u>Proposed Unit Well No.</u>	<u>Unit Letter</u>	<u>Location</u>	<u>PBTD</u>	<u>TD</u>	<u>Remarks</u>
33-2	B	S33-T7S-R33E	4385	4514	
33-4	D	S33-T7S-R33E	4441	4470	
33-6	F	S33-T7S-R33E	4425	4460	
33-8	H	S33-T7S-R33E	4433	4475	
33-10	J	S33-T7S-R33E	4400	4480	
33-12	L	S33-T7S-R33E	4350	4486	
33-14	N	S33-T7S-R33E	4460	4505	
33-16	P	S33-T7S-R33E	4867	4900	
34-2	B	S34-T7S-R33E	4405	4444	
34-4	D	S34-T7S-R33E	4400	4475	
34-6	F	S34-T7S-R33E	4406	4453	
34-8	H	S34-T7S-R33E	4470	4478	
34-10	J	S34-T7S-R33E	4446	4474	
34-12	L	S34-T7S-R33E	4357	4525	
34-14	N	S34-T7S-R33E	4464	4500	
34-16	P	S34-T7S-R33E	4446	4480	
3-2	B	S3-T8S-R33E	4453	4491	
3-4	D	S3-T8S-R33E	4412	4499	Well to be re-entered or re- drilled for injection purposes
3-6	F	S3-T8S-R33E	4438	4480	
3-8	H	S3-T8S-R33E	4452	4489	
3-10	J	S3-T8S-R33E	4438	4775	
3-14	N	S3-T8S-R33E	NA	4396	Well to be re-entered or re- drilled for injection purposes
3-16	P	S3-T8S-R33E	4447	4482	



UNIT AREA MAP **WATER FLOOD STUDY** **MURPHY OPERATING CORPORATION** **CHAVEROO SAN ANDRES FIELD** **PROPOSED HALEY CHAVEROO SAN ANDRES UNIT** **ROOSEVELT & CHAVES COUNTIES, NEW MEXICO**

SCALE: 1"=4000'

LEGEND

- PRODUCING WELL
- PLUGGED & ABANDONED WELL
- ⊙ SWD WELL
- PROPOSED UNIT BOUNDARY
- - - 2 MILE PERIMETER AROUND UNIT BOUNDARY
- 1/2 MILE RADIUS AROUND PROPOSED INJECTORS

(P) - Producing
(F) - Flowing
(T) - Temporarily Abandoned
(S) - Shut-in
(I) - Injection
(A) - Plugged & Abandoned

REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Original Well Name, Tract Description of Land, No. of Acres & Status		Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	W.I.	
						San Andres Production W.I. Ownership	Percent Ownership Percent Unit Participation
1.	Hobbs "U" Well #1 (P) T-7-S, R-33-E Sec. 33: SW 1 NE 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-07	E-9235 8/16/55	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
1.	Hobbs "U" Well #2 (S) T-7-S, R-33-E Sec. 33: NW 1 NE 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-02	E-9235 8/16/55	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
							TOTAL UNIT PARTICIPATION TRACT #1
							0.661274
							4.628914
							5.290188
2.	Hobbs "T" Well #1 (P) T-7-S, R-33-E Sec. 33: SE 1 NW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-06	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
2.	Hobbs "T" Well #2 (P) T-7-S, R-33-E Sec. 33: NW 1 SW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-12	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000

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REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Tract No.	Original Well Name, Description of Land, No. of Acres & Status	Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	W.I.		
						San Andres Production W.I. Ownership	Percent Ownership	Percent Unit Participation
2.	Hobbs "T" Well #3 (P)	Haley Unit Well #33-10	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000	
	T-7-S, R-33-E						87.500000	
	Sec. 33: NW 1 SE 4 40.00 acres Roosevelt County, N.M.						<u>100.000000</u>	
2.	Hobbs "T" Well #4 (P)	Haley Unit Well #33-15	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000	
	T-7-S, R-33-E						87.500000	
	Sec. 33: SW 1 SE 4 80.00 acres Roosevelt County, N.M.						<u>100.000000</u>	
2.	Hobbs "T" Well #5 (P)	Haley Unit Well #33-08	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000	
	T-7-S, R-33-E						87.500000	
	Sec. 33: SE 1 NE 4 40.00 acres Roosevelt County, N.M.						<u>100.000000</u>	
2.	Hobbs "T" Well #6 (P)	Haley Unit Well #33-01	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000	
	T-7-S, R-33-E						87.500000	
	Sec. 33: NE 1 NE 4 40.00 acres Roosevelt County, N.M.						<u>100.000000</u>	
2.	Hobbs "T" Well #7 (S)	Haley Unit Well #34-12	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000	
	T-7-S, R-33-E						87.500000	
	Sec. 34: NW 1 SW 4 40.00 acres Roosevelt County, N.M.						<u>100.000000</u>	

(P) - Producing
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REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Original Well Name, Tract Description of Land, No. No. of Acres & Status		Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	San Andres Production W.I. Ownership	W.I. Percent Ownership		Percent Unit Participation
2.	Hobbs "T" Well #8 (P) T-7-S, R-33-E Sec. 34: NW X SE X 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-10	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000		
2.	Hobbs "T" Well #9 (P) T-7-S, R-33-E Sec. 34: NW X NW X 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-04	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000		
2.	Hobbs "T" Well #10 (P) T-7-S, R-33-E Sec. 34: SW X NE X 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-07	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000		
2.	Hobbs "T" Well #11 (I) T-7-S, R-33-E Sec. 33: SE X SE X 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-16	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000		
2.	Hobbs "T" Well #12 (S) T-7-S, R-33-E Sec. 34: NE X SE X 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-09	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000		

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REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Tract No.	Original Well Name, Description of Land, No. of Acres & Status	Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	W.I.	
						San Andres Production W.I. Ownership	Percent Unit Participation
2.	Hobbs "T" Well #13 (P) T-7-S, R-33-E Sec. 34: SE 1 SW 1 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-14	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp. 12.500000 87.500000 100.000000	
2.	Hobbs "T" Well #15 (P) T-7-S, R-33-E Sec. 34: SW 1 SE 1 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-15	K-1369 4/18/61	Texaco Producing, Inc.	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp. 12.500000 87.500000 100.000000	
							TOTAL UNIT PARTICIPATION
							TRACT #2
							4.517902
							31.625313
							36.143215
3.	State "AZ" Well #1 (P) T-7-S, R-33-E Sec. 33: SW 1 NW 1 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-05	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp. 12.500000 87.500000 100.000000	
3.	State "AZ" Well #2 (T) T-7-S, R-33-E Sec. 33: NE 1 SW 1 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-11	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp. 12.500000 87.500000 100.000000	
3.	State "AZ" Well #3 (T) T-7-S, R-33-E Sec. 33: NE 1 NW 1 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-03	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp. 12.500000 87.500000 100.000000	

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(S) - Shut-in
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REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Tract No.	Original Well Name, Description of Land, No. of Acres & Status	Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	W.I.		
						San Andres Production W.I. Ownership	Percent Ownership	Percent Unit Participation
3.	State "AZ" Well #4 (T) T-7-S, R-33-E Sec. 33: SW 1 SW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-13	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	
3.	State "AZ" Well #5 (A) T-7-S, R-33-E Sec. 33: NW 1 NW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-04	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	
3.	State "AZ" Well #6 (T) T-7-S, R-33-E Sec. 33: SE 1 SW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-14	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	
3.	State "AZ" Well #7 (T) T-7-S, R-33-E Sec. 33: NE 1 SE 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #33-09	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	
3.	State "AZ" Well #8 (S) T-7-S, R-33-E Sec. 34: SW 1 NW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-05	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	

(P) - Producing
(F) - Flowing
(T) - Temporarily Abandoned
(S) - Shut-in
(I) - Injection
(A) - Plugged & Abandoned

REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Original Well Name,		Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	W.I.	
Tract No.	Description of Land, No. of Acres & Status					San Andres Production W.I. Ownership	Percent Ownership Percent Unit Participation
3.	State "AZ" Well #9 (S) T-7-S, R-33-E Sec. 34: SE 1 NW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-06	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
3.	State "AZ" Well #10 (S) T-7-S, R-33-E Sec. 34: NE 1 SW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-11	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
3.	State "AZ" Well #11Y (S) T-7-S, R-33-E Sec. 34: NE 1 NW 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-03	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
3.	State "AZ" Well #12 (S) T-7-S, R-33-E Sec. 34: NW 1 NE 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-02	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
3.	State "AZ" Well #13 (T) T-7-S, R-33-E Sec. 34: NE 1 NE 4 40.00 acres Roosevelt County, N.M.	Haley Unit Well #34-01	K-3935 2/18/64	Sun Operating Limited Partnership	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000

(P) - Producing
(F) - Flowing
(T) - Temporarily Abandoned
(S) - Shut-in
(I) - Injection
(A) - Plugged & Abandoned

REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Original Well Name,		Serial No. & Lease Date	Redesignated Well Name	Basic Royalty & Percentage	San Andres Production W.I. Ownership	W.I.	
Tract No.	Description of Land, No. of Acres & Status					Percent Ownership	Percent Unit Participation
3.	State "AZ" Well #14 (S)	K-3935 2/18/64	Haley Unit Well #34-08	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000	
	T-7-S, R-33-E						
	Sec. 34: SE 1 NE 4 40.00 acres Roosevelt County, N.M.						
3.	State "AZ" Well #15 (T)	K-3935 2/18/64	Haley Unit Well #34-16	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000	
	T-7-S, R-33-E						
	Sec. 34: SE 1 SE 4 40.00 acres Roosevelt County, N.M.						
3.	State "AZ" Well #16 (T)	K-3935 2/18/64	Haley Unit Well #34-13	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000	TOTAL UNIT PARTICIPATION TRACT #3
	T-7-S, R-33-E						
	Sec. 34: SW 1 SW 4 40.00 acres Roosevelt County, N.M.						
4.	State "BF" Well #1 (S)	OG-1195 8/20/57	Haley Unit Well #03-01	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 87.500000 100.000000	4.282702 29.978916 34.261618
	T-8-S, R-33-E						
	Sec. 3: Lot 1 40.16 acres Chaves County, N.M.						

(P) - Producing
(F) - Flowing
(T) - Temporarily Abandoned
(S) - Shut-in
(I) - Injection
(A) - Plugged & Abandoned

REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Original Well Name,		Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	San Andres Production W.I. Ownership	W.I.	
Tract No.	Description of Land, No. of Acres & Status						Percent Ownership	Percent Unit Participation
4.	State "BF" Well #2 (P) <u>T-8-S, R-33-E</u> Sec. 3: Lot 2 40.17 acres Chaves County, N.M.	Haley Unit Well #03-02	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	
4.	State "BF" Well #3 (P) <u>T-8-S, R-33-E</u> Sec. 3: Lot 3 40.18 acres Chaves County, N.M.	Haley Unit Well #03-03	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	
4.	State "BF" Well #4 (F) <u>T-8-S, R-33-E</u> Sec. 3: SE <u>NEX</u> 40.00 acres Chaves County, N.M.	Haley Unit Well #03-08	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	
4.	State "BF" Well #5 (A) <u>T-8-S, R-33-E</u> Sec. 3: Lot 4 40.19 acres Chaves County, N.M.	Haley Unit Well #03-04	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	
4.	State "BF" Well #6 (F) <u>T-8-S, R-33-E</u> Sec. 3: SW <u>NEX</u> 40.00 acres Chaves County, N.M.	Haley Unit Well #03-07	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000	

(P) - Producing
(F) - Flowing
(T) - Temporarily Abandoned
(S) - Shut-in
(I) - Injection
(A) - Plugged & Abandoned

REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Tract No.	Original Well Name, Description of Land, No. of Acres & Status	Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	W.I.	
						San Andres Production W.I. Ownership	Percent Unit Participation
4.	State "BF" Well #7 (P) T-8-S, R-33-E Sec. 3: SE¼NW¼ 40.00 acres Chaves County, N.M.	Haley Unit Well #03-06	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
4.	State "BF" Well #8 (P) T-8-S, R-33-E Sec. 3: NW¼SE¼ 40.00 acres Chaves County, N.M.	Haley Unit Well #03-10	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
4.	State "BF" Well #9 (P) T-8-S, R-33-E Sec. 3: SE¼SE¼ 40.00 acres Chaves County, N.M.	Haley Unit Well #03-16	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
4.	State "BF" Well #10 (P) T-8-S, R-33-E Sec. 3: SW¼SE¼ 40.00 acres Chaves County, N.M.	Haley Unit Well #03-15	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000
4.	State "BF" Well #11 (P) T-8-S, R-33-E Sec. 3: NE¼SW¼ 40.00 acres Chaves County, N.M.	Haley Unit Well #03-11	OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000 <u>87.500000</u> 100.000000

(P) - Producing
(F) - Flowing
(T) - Temporarily Abandoned
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(A) - Plugged & Abandoned

REDESIGNATION OF WELL NAMES
HALEY CHAVEROO SAN ANDRES UNIT
ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

Tract No.	Original Well Name, Description of Land, No. of Acres & Status	Redesignated Well Name	Serial No. & Lease Date	Lessee of Record	Basic Royalty & Percentage	San Andres Production W.I. Ownership	W.I.	
							Percent Ownership	Percent Unit Participation
4.	Annarco #1 (A) T-8-S, R-33-E Sec. 3: SE 1 SW 4 40.00 acres Chaves County, N.M.		OG-1195 8/20/57	Murphy Operating Corporation	State of N.M. 12.5%	Murphy Operating Corporation American Energy Capital Corp.	12.500000	
							87.500000	
							100.000000	
							TOTAL UNIT PARTICIPATION	
						Murphy Operating Corporation American Energy Capital Corp.	12.500000	
							87.500000	
							100.000000	
							TRACT #4	
							3.038122	
							21.266857	
							24.304979	
							TOTAL UNIT PARTICIPATION	
							TRACTS #1 THROUGH #4	
							MURPHY OPERATING CORPORATION	
							AMERICAN ENERGY CAPITAL CORP.	
							12.500000	
							87.500000	
							100.000000	

Exhibit VI.A.
Tabulation of Well Data for Wells within Proposed Unit Area.
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
Chaves and Roosevelt Counties, New Mexico

Tract #	Operator Lease	Well #/Unit	New Unit	Status	Compl. Date	Datum Elev. Feet	TD or PBTD Feet	Casing Size Inches	Record Depth Feet	Completion Interval Feet	Initial Treatment		Initial Potential		Remarks	Cum. Oil Prod. to Jan.1 '88	Useable Wells		
											Acid/ G	Frac/ # Sand	BOPD	MCFGPD				BWPD	
Sec.33,T7S,R33E																			
1	Hobbs U	1G	33-07 I	P	08-06-65	4424	4450	4 1/2	W350 4475	4284-4445	3000	-	F 422	221	N/A	100275	1		
		2B	33-02	S	09-03-65	4430	4385	4 1/2	W350 4514	4277-4331	1500	30000#	F 190	101	N/A	Last Prod. Date 12/84	66487	1	
2	Hobbs T	1F	33-06	P	07-25-65	4428	4425	4 1/2	W250 4460	4284-4416	1500	30000#	F 298	148	3	82021	1		
		2L	33-12	P	08-15-65	4435	4350	4 1/2	W350 4486	4274-4335	2000	20000#	F 227	N/A	N/A	76911	1		
		3J	33-10	P	09-15-65	4425	4400	4 1/2	W350 4480	4224-4344	2000	30000#	P 40	N/A	130	73511	1		
		4O	33-15	P	10-08-65	4432	4491	4 1/2	W350 4524	4341-4353	500	20000#	P 44	N/A	81	72522	1		
		5H	33-08	P	09-21-65	4418	4433	4 1/2	W350 4475	4230-4362	2000	30000#	F 397	280	N/A	84659	1		
		6A	33-01	P	09-30-65	4421	4437	4 1/2	W350 4474	4267-4345	2000	-	F 222	170	N/A	98925	1		
		7L	34-12	S	10-16-65	4411	4357	4 1/2	W350 4525	4295.5-4325	1000	-	P 56	-	144	84303	1		
					02-15-69				4525	4224-4345	1000	45000#	P 65	N/A	2				
		8J	34-10	P	11-11-65	4397	4446	4 1/2	W350 4474	4229-4334.5	2000	20000#	F 609	N/A	N/A	79943	1		
		9D	34-04	P	10-12-65	4413	4440	4 1/2	W350 4475	4254-4332	2000	-	F 340	N/A	N/A	139994	1		
Sec.33,T7S,R33E		10G	34-07	P	10-21-65	4399	4438	4 1/2	W350 4474	4252-4327	2000	-	F 275	N/A	3	84118	1		
		11P	33-16	I	12-29-65	N/A	4867	7-5/8	4900	4207-4418	500	30000#	Salt Water Disposal			Inj. Well 4207-4418	0	1	
								W850		4676-4849						Perfs Packed Off			
Sec.34,T7S,R33E		12I	34-09	S	12-10-65	4384	4441	4 1/2	W350 4475	4221-4353	2000	40000#	F 432	N/A	8	Last Prod. Date 10/84	69872	1	
		13N	34-14	P	03-03-66	4407	4464	4 1/2	W350 4500	4249-4353	1500	25000#	P 105	60	70	79392	1		
		15O	34-15	P	03-30-66	4397	-	4 1/2	W350 4500	4217-4310	2000	-	F 404	N/A	4	107021	1		
Sec.33,T7S,R33E																			
3	State A Z	1E	33-05	P	05-24-65	4435	4454	4 1/2	W200 4500	4199-4355	1500	20000#	F 261	391	N/A	86381	1		
		2K	33-11	T	06-27-65	4426	4426	4 1/2	W200 4468	4218-4419	2000	30000#	F 288	334	N/A	Last Prod. Date 03/84	67376	1	
		3C	33-03	T	07-29-65	4432	4470	4 1/2	W200 4473	4228-4438	2750	20000#	F 252	214	N/A	Last Prod. Date 11/84	59822	1	
		4M	33-13	T	07-26-65	4436	-	4 1/2	W200 4499	4257-4431	2450	32500#	P 185	150	N/A	Last Prod. Date Prior 06/73	47936	1	
		5D	33-04		08-30-65	4430	-	4 1/2	W200 4470	4263-4416	2500	30000#	P 144	101	28	Converted SWD ('72-'73)	40372	1	
		6N	33-14	T	09-21-65	4433	4460	4 1/2	W200 4505	4269-4391	1500	30000#	P 113	86	86	Last Prod. Date 02/81	56354	1	
		7I	33-09	T	08-28-65	4414	4486	4 1/2	W200 4527	4240-4390	3000	-	P 50	38	52	Last Prod. Date 06/73	20110	1	
		8E	34-05	S	09-02-65	4409	4492	4 1/2	W200 4523	4203-4351	1500	-	F 194	126	6	Last Prod. Date 10/82	94747	1	
		9F	34-06	S	09-28-65	4411	4406	4 1/2	W200 4453	4209-4345	1625	-	F 236	269	12	Last Prod. Date 02/83	103085	1	
		10K	34-11	S	10-27-65	4406	4457	4 1/2	W200 4470	4223-4367	2250	32000#	F 265	304	N/A	Last Prod. Date 04/78	48196	1	
		Y	11C	34-03	S	11-10-65	4410	-	4 1/2	W275 4450	4195-4340	1250	-	F 280	336	N/A	Last Prod. Date 11/84	87215	1
			12B	34-02	S	12-03-65	4403	4405	4 1/2	W200 4444	4246-4344	1500	-	F 288	346	N/A	Last Prod. Date 11/84	63375	1

Exhibit VI.A.
Tabulation of Well Data for Wells within Proposed Unit Area.
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
Chaves and Roosevelt Counties, New Mexico

Tract #	Operator Lease	Well #/Unit	New Unit	Status	Compl. Date	Datum Elev. Feet	TD or PBTD Feet	Casing Size Inches	Record Depth Feet	Completion Interval Feet	Initial Treatment		Initial Potential			Remarks	Cum. Oil Prod. to Jan.1 '88 Wells		
											Acid/ G	Frac/ # Sand	BOPD	MCFGPD	BWPD				
3	Sec.34,T7S,R33E																		
	State A Z																		
	(Sun)	13A	34-01	T	12-12-65	4404	4450	4 1/2	W200	4456	4218-4351	1500	-	F 456	260	N/A	Last Prod. Date 12/79	65803	1
		14H	34-08	S	12-28-65	4388	4470	4 1/2	W200	4478	4161-4352	1500	32500#	F 251	233	N/A	Last Prod. Date 11/84	60623	1
		15P	34-16	T	12-31-65	4385	-	4 1/2	W200	4480	4201-4347	1000	24000#	S 182	138	N/A	Last Prod. Date 03/78	50591	1
16M		34-13	T	04-23-65	4415	4462	4 1/2	W200	4462	4302-4324	500	26000#	S 169	101	23	Last Prod. Date 11/84	72257	1	
4	Sec.3,T8S,R33E																		
	State B F	1A	03-01	S	04-13-66	4386	4447	4 1/2	W250	4480	4187-4344	1000	22200#	F 381	N/A	12	Last Prod. Date 01/86	104982	1
		2B	03-02	P	05-25-66	4392	4453	4 1/2	W250	4491	4200-4361	500	20000#	S 85	N/A	46		54716	1
					05-08-69						4217-4268	10250	-	P 27	N/A	05			
		3C	03-03	P	06-10-66	4403	-	4 1/2	W250	4480	4239-4354	2500	30000#	S 259	163	05		39794	1
	4H	03-08	F	07-13-66	4387	4452	4 1/2	W300	4489	4198-4344	2000	30000#	F 171	80	N/A		92213	1	
	(Atlantic Richfield)	5D	03-04	A	09-26-66	N/A	4412	4 1/2	W300	4499	4225-4390	2000	30000#	P 5	N/A	35	Plugging Approved 1975	111	0
										1000	68000#								
	6G	03-07	F	08-04-66	4397	-	4 1/2	W300	4455	4208-4356	2000	30000#	F 151	N/A	12		88977	1	
	7F	03-06	P	08-18-66	4407	-	4 1/2	W300	4480	4264-4370	2000	40000#	P 131	N/A	2		51880	1	
	8J	03-10	P	11-22-66	4401	4438	4 1/2	W300	4775	4240-4366	2000	40000#	S&F 306	N/A	66		98505	1	
	9P	03-16	P	12-16-66	N/A	4447	4 1/2	W300	4482	4253-4351	1000	40000#	P 52	N/A	10		93017	1	
	100	03-15	P	04-05-67	4402	4451	4 1/2	W530	4486	4260-4372	-	40000#	P 101	30	162	TD 9190	123713	1	
	11K	03-11	P	08-13-81	4398	4408	4435	5 1/2	W1600	4495	4240-4372	2000	23000#	P 2	2	12		3403	1
				08-09-82						4240-4372	2000	50200#	P 5	-	16				
(Tierra EX/Annarco)	N		09-10-84	4395	4405	-	4 1/2	W280	4396	4254-4392	3000	-	P 6	2	54				
	E																		
	L																		
The Wil Mc Oil Corp.																			
Chaplin State 1M					02-18-72	N/A	-	4 1/2	W150	4372	4208-4282	2000	40000#	P 27	-	130	Plugging Approved 1974	1424	
Chaplin Petroleum Co.																			
State "3"	I		P	04-21-67	4392	-	-	4 1/2	W350	4410	4235-4352	1500	52500#	P 142	60	N/A		170333	

Exhibit VI.B.
Tabulation of Well Data for Wells Outside Proposed Unit Area but within Area of Review.*
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
Chaves and Roosevelt Counties, New Mexico

Operator Lease	Well #/Unit	Status	Compl. Date	Datum Elev. Feet	TD or PBTD Feet	Casing Record		Completion Interval Feet	Initial Treatment		Initial Potential		Remarks *One half (½) mile of Unit Boundary.	
						Size Inches	Depth Feet		Acid/ G	Frac/ # Sand	BOPD	MCFGPD		BWPD
Sec. 26, T7SR33E														
Glenday Corp. of Nevada														
Federal 26	3K	P	06-05-66	4370	4338	4½	W330	4398	4153-4283	2000	45000#	F 441	251	-
	2L	P	05-23-66	4384	4356	4½	W330	4402	4142-4292	2000	28200#	F 469	275	-
	1M	S	06-22-66	4380	4365	4½	W350	4400	4108-4284	2000	45000#	F 516	123	Last prod. date 2/86
	4N	P	06-15-66	4371	4329	4½	W330	4380	4125-4294	2000	45000#	F 282	-	21
Sec. 27, T7SR33E														
Lynx Petroleum Cons.														
Morgan A Federal	6I	P	02-20-66	4387	4387	5½	W225	4426	4211-4287	1500	20000#	F 75	23	-
	5J	P	02-13-66	4399	4369	4½	W260	4438	4218-4287	2000	20000#	F 165	144	-
	4K	P	02-20-66	4408	N/A	4½	W300	4419	4191-4306	2000	20000#	F 280	130	-
	1N	P	12-17-65	4406	4394	4½	W350	4427	4178-4296	2000	20000#	F 144	262	-
	2O	P	12-21-65	4405	4420	4½	W350	4453	4196-4296	2300	-	F 72	128	-
	3P	P	01-28-66	4404	4387	7	W550	4450	4232-4302	1500	20000#	F 180	209	3
Dalport Oil Corp.														
Federal	1M	S	11-23-65	4416	4470	4½	W300	4499	4192-4366	2000	20000#	F 80	144	Last prod. date 11/86
	2L	S	02-23-66	4419	4480	4½	W300	4447	4200-4318.5	2000	20000#	F 165	96	Last prod. date 11/86
Sec. 28, T7SR33E														
Chaveroo Operating Co.														
Farrell Federal	9I	P	01-18-66	4423	4428	4½	W800	4460	4252-4418	2000	-	F 159	114	-
	7J	S	01-07-66	4426	4427	4½	W800	4460	4247-4393	2000	45000#	F 141	-	Last prod. date 10/86
	5K	S	12-08-65	4431	4418	4½	W800	4454	4248-4402	2000	45000#	P 129	-	Last prod. date 9/73
	2L	S	10-29-65	4437	4432	4½	W300	4470	4263-4414	2000	-	Swab	86	Last prod. date 9/86
	1M	P	10-09-65	4430	4404	4½	W300	4411	4262-4392	2500	15500#	P 78	-	-
	3N	S	11-19-65	4426	4430	4½	W350	4474	4243-4403	2000	30000#	P 68	-	Last prod. date 9/73
	4O	S	11-28-65	4425	4420	4½	W350	4455	4257-4402	2000	30000#	P 54	-	Last prod. date 9/86
	6P	P	12-24-65	4422	4428	4½	W800	4462	4271-4406	2000	45000#	F 224	-	-
	23M	S	05-02-84	4415	4463	4½	W300	4503	4180-4263	2000	43500#	P 46	45	Last prod. date 9/86
	24N	P	03-01-84	4412	4461	4½	W300	4501	4202-4295	24000	-	P 22	120	-

Exhibit VI.B.
Tabulation of Well Data for Wells Outside Proposed Unit Area but within Area of Review.*
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
Chaves and Roosevelt Counties, New Mexico

Operator Lease	Well #/Unit Status	Compl. Date	Datum Elev. Feet	TD or PBTD Feet	Casing Record		Completion Interval Feet	Initial Treatment		Initial		Potential	BWPD	Remarks
					Size Inches	Depth Feet		G	Acid/ Frac/ # Sand	BOPD	MCFGPD			
Sec. 29, T7SR33E														
Champlin Petroleum Co.														
Lauck Federal	2I	P&A	09-03-65	4438	4438	4 ½ W325	4440	4230-4392	2500	25000#	Swab 260	-	16	Plugging approved 1984
	12J	P&A	05-06-66	4445	4438	4 ½ W325	4440	4202-4404	500	40000#	P 96	-	24	Plugging approved 1987
	1P	P&A	07-20-65	4441	4455	4 ½ W300	4459	4282-4348	2500	-	F 165	64	18	Plugging approved 1984
Union Pacific Res.														
Lauck Federal	40	P	11-16-65	4447	4448	4 ½ W325	4453	4288-4406	2500	40000#	Swab 165	99	15	
Sec. 32, T7SR33E														
Champlin, et al.														
State 32-7-33														
Hondo State	3I	P	06-14-65	4438	4381	4 ½ W350	4384	4298-4363	2500	25000#	F 165	234	2	
	5J	I	08-02-65	4441	N/A	4 ½ W325	4480	4303-4425	3000	30000#	Swab 144	-	19	Injection well
	6O	S	09-19-65	4444	4472	4 ½ W300	4480	4227-4449	3500	25000#	Swab 204	-	54	Last prod. date 3/83
	4P	P&A	08-16-65	4436	N/A	4 ½ W325	4484	4289-4372	2500	25000#	Swab 266	-	8	Plugging approved 1984
	2A	P&A	06-06-65	4436	4351	4 ½ W350	4439	4298-4342	4500	-	F 162	62	2	Plugging approved 1984
	1B	P&A	04-19-65	4438	N/A	4 ½ W350	4379	4280-4346	3000	-	Swab 73	-	63	Plugging approved 1979
	2G	TA	06-27-65	4442	4370	4 ½ W325	4384	4272-4352	2500	25000#	F 177	321	-	Last prod. date 9/85
	2H	P	03-20-65	4439	8730	5 ½ W750	9100	4299-4347	8500	-	Swab 148	-	2	
Sec. 35, T7SR33E														
Texaco Producing Co.														
Hobbs T	16C	P&A	12-14-71	4382	N/A	8-5/8 W800	4510			-				Plugged and abandoned
Chaveroo Operating Co.														
Shackleford	1D	P	05-25-66	4390	4472	4 ½ W350	4497	4167-4318	3500	-	F 264	-	-	
Marathon Oil Co.														
State DA	1E	S	02-20-66	4377	4437	4 ½ W800	4466	4205-4332	4000	30000#	P 47	10	3	Last prod. date 8/87
State Sec. 35	3F	P	03-18-66	4378	4432	4 ½ W350	4440	4186-4326	3000	40000#	F 99	100	12	
	1L	P	01-12-66	4377	4405	5 ½ W350	4442	4244-4334	4000	40000#	F 294	123	29	
	2M	P	03-17-66	4373	4360	4 ½ W350	4372	4182-4333	2500	40000#	P 82	60	9	
State DE	1N	S	04-17-66	4368	4442	4 ½ W800	4476	4207-4336	2000	-	F 136	121	-	Last prod. date 4/86
State CV	1K	P	02-08-66	4367	4405	4 ½ W400	4437	4178-4316	3900	-	F 73	39	-	

Exhibit VI.B.
Tabulation of Well Data for Wells Outside Proposed Unit Area but within Area of Review.*
PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
Chaves and Roosevelt Counties, New Mexico

Operator Lease	Well #/Unit Status	Compl. Date	Datum Elev. Feet	ID or PBD Feet	Casing Record		Completion Interval Feet	Initial Treatment		Initial BOPD		Potential MCFGPD		Remarks	
					Size Inches	Depth Feet		Acid/ G	Frac/ # Sand	BOPD	BWPD				
Sec. 2, T8SR33E															
Kerr-McGee Corp. State F	2C	P	06-13-66	4364	4360	5½ W350	4406	4199-4347	2500	45000#	F 261	150	-	*One half (½) mile of Unit Boundary.	
	1D	P	06-03-66	4381	4352	5½ W300	4378	4211-4341	2000	44000#	F 376	104	-		
	3E	P	07-06-66	4377	4386	5½ W350	4420	4203-4339	4500	-	P 129	100	16		
	4F	P	07-12-66	4372	4398	5½ W350	4430	4200-4328	2500	42000#	F 200	175	-		
	5L	P	09-01-66	4387	4343	5½ W375	4346	4208-4331	2500	30000#	F 266	-	-		
	11M	P	10-21-66	4386	4334	5½ W350	4344	4210-4332	2500	45000#	F 395	217	-		
	10N	P	10-11-66	4375	4334	5½ W350	4336	4238-4331	2500	45000#	F 473	284	-		
	14C	P	10-16-80	4366	4455	4½ W730	4499	4181-4353	5500	111000#	P 14	9	81		
	1M	P&A	02-18-72	4408	4372	4½ W150	4372	4208-4282	2000	40000#	P 27	-	130		Plugging approved 1974
	1G	P&A	02-29-68	4423	4415	4½ W150	4415	4237-4379	5500	80000#	P 123	123	12		Plugging approved 1977
C & K Petroleum Arco State	1J	P&A	12-06-68	4428	4420	4½ W375	4420	4230-4402	2000	60000#	P 107	99	95	Plugging approved 1987	
	20	P&A	04-22-69	4429	4425	4½ W375	4436	4246-4358	1250	60000#	P 97	44	63	Plugging approved 1982	
	I	Undrilled												Undrilled	
	P	Undrilled												Undrilled	
Champlin State 4	A	Undrilled												Undrilled	
	1C	P&A	01-08-66	4437	4290	4½ W375	4415	4245-4273	4000	40000#	Swab 68	-	160	Plugging approved 1984	
	2F	P&A	06-09-66	4436	4429	4½ W325	4431	4189-4405	500	40000#	P 37	27	83	Plugging approved 1984	
	4H	P&A	12-04-76	4419	4456	4½ W300	4504	4245-4346	3000	70000#	P 10	6	105	Plugging approved 1987	
Kaneb Production Co. Champlin State	1B	TA	06-17-68	4433	4414	4½ W150	4414	4285-4377	2000	80000#	P 50	63	105	Last prod. 5/78	

Exhibit VI.B.
 Tabulation of Well Data for Wells Outside Proposed Unit Area but within Area of Review.*
 PROPOSED HALEY CHAVEROO SAN ANDRES UNIT
 Chaves and Roosevelt Counties, New Mexico

Operator Lease	Well #/Unit Status	Compl. Date	Datum Elev. Feet	TD or PBTD Feet	Casing Record		Completion Interval Feet	Initial Treatment		Initial Potential			Remarks
					Size Inches	Depth Feet		Acid/ G	Frac/ # Sand	BOPD	MCFGPD	BWPD	
Sec. 5, T8SR33E													
Union Pacific													
State 5	2A TA	02-21-66	4444	N/A	4 1/2 W325	4416	4214-4391	2500	-	Swab 72	-	72	Last prod. date 3/87
	1B P	12-18-65		4418	4 1/2 W325	4420	4328-4374	2500	25000#	Swab 104	-	64	
	5G I	09-17-76	4435	4484	4 1/2 W250	4525	4223-4401	4000	70000#	P 70	81	173	Injection well
	6H P	08-17-76	4434	4395	4 1/2 W250	4485	4230-4373	5000	70000#	P 45	54	150	
Sec. 9, T8S,R33E													
Yates Petroleum, et al													
Federal 9	1B	02-17-72	4416	N/A	4 1/2 W150	4365	4252-4310	2000	35000#	P 34	-	124	Plugging Approved 1975
	A	Undrilled											Undrilled
Sec. 10, T8SR33E													
Yates Petroleum Corporation													
Sun U-Federal	3A P	03-28-67	4396	4430	4 1/2 W200	4459	4240-4366	3250	20000#	P 16	29	250	
	2H SWD	04-26-67	4382	4375	4 1/2 W200	4454	4340-4357	2500	-	Swab 98	131	33	SWD
Sun Oil Company													
New Mexico X Federal	1A P&A	03-12-84	4374	4325	4 1/2 W250	4440	4193-4334	3000	-	P 44	120	60	Plugging Approved 1973
	3B P&A	06-09-67	4405	4414	5 1/2 W200	4449	4243-4356	1200	40000#	Swab 136	48	90	Plugging Approved 1973
	5G P&A	11-07-67	4399	4426	4 1/2 W200	4447	4271-4358	2000	33000#	P 13	-	6	Plugging Approved 1977
	2H P&A	10-15-82	4350	4397	4 1/2 W225	4397	4219-4308	2000	30000#	P 12	5	15	Plugging Approved 1973
Union	C	Undrilled											Undrilled
	D	Undrilled											Undrilled
	F	Undrilled											Undrilled
Sec. 11, T8SR33E													
Robert N. Enfield													
C.H. Hale	1C P&A	05-15-67	4378	4353	4 1/2 W350	4365	4242-4348	2500	37000#	P 33	-	86	Plugging Approved 1977
Collier Energy, Inc.													
Mary Ella II	1D TA	07-19-81	4372	4425	4 1/2 W1050	4460	4191-4276	3000	-	P 14	5	40	Last Prod. Date 7/83
	E	Undrilled											Undrilled
	F	Undrilled											Undrilled

PROPOSED HALEY CHAVEROO SAN ANDRES UNIT

EXHIBIT VI. C.

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM COMPANY

Lease Name: Lauck Federal

Well No.: 1

Location: 660 FSL & 660 FEL, Sec. 29, T7S, R33E

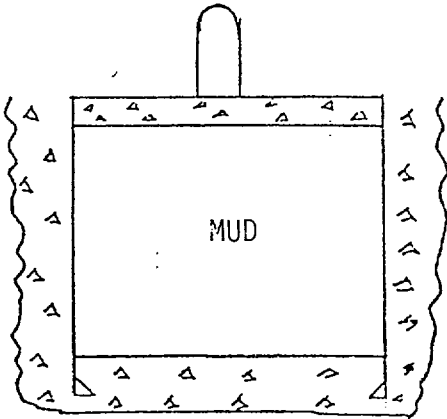
Drilling and Completion Data

409' 8-5/8", cmt w/250 sx.
Circulate to surface.

Plugging and Abandonment Data

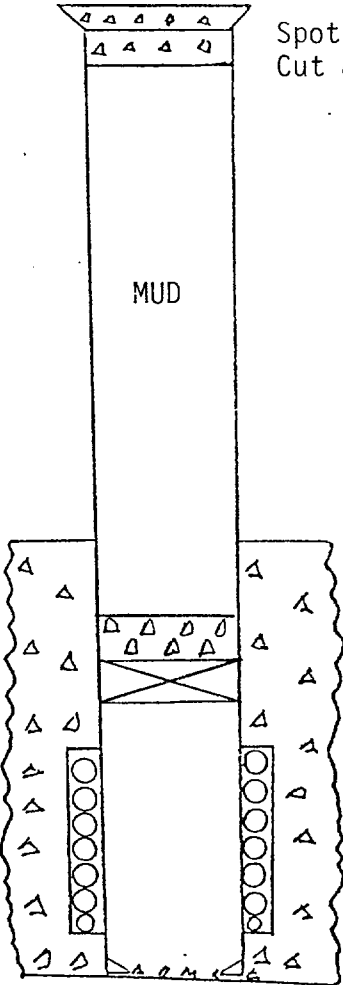
Surface: 10 sx. cmt. plug.

Spot 60 sx. cmt. 256' - 479'.
TOC 319'.



4459' 4-1/2", cmt. w/300 sx.

Spot 60 sx. cmt. plug 1018' - 1257'.
Cut & pull 1200' csg.



4 sx. cmt. plug TOC @ 4042'.
CIBP @ 4100'.

Perforations 4282' - 4348'

4455' P.B.T.D.
4460' T.D.

N. M. OIL CONS. COMMISSION
P. O. BOX 1980
HOBBS, NEW MEXICO 86240

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☒ gas well ☐ other ☐

2. NAME OF OPERATOR
Champlin Petroleum Company

3. ADDRESS OF OPERATOR
P. O. Box 7946 Midland, Tx 79708-0946

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 660' FS&EL, Sec. 29, T7S, R33E
AT TOP PROD. INTERVAL: Same
AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐
(other) ☐

SUBSEQUENT REPORT OF:

☐
☐
☐
☐
☐
☐
☐
☒

5. LEASE
Federal NM 0554778

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Lauck-Federal

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Chaveroo (San Andres)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 29, T7S, R33E

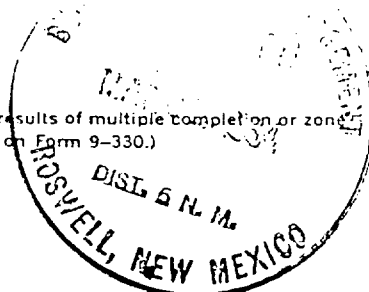
12. COUNTY OR PARISH
Roosevelt

13. STATE
New Mexico

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
4441 DF

(NOTE: Report results of multiple completion or zone change on Form 9-330.)



17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

2/13/84 - MI RU SU - NDWH - NU BOP's - GIH w/4-1/2" CIBP on WL - set @ 4100' to abandon San Andres perfs 4282-4348' - POH w/WL - GIH w/2-3/8" tbg - TU on plug @ 4100' - displace hole w/10#/gal SW mud - spot 4 sx Class 'C' cmt on CIBP - TOC @ 4042' - TOH w/tbg - ND BOP's - RU csg jacks - est csg free to 1266' - RIH w/jet cutter - make cut @ 1200' - POH w/1200' 4-1/2" csg - GIH w/2-3/8" tbg to 1257' - spot 60 sx Class 'C' cmt 1257-981' to cover 4-1/2" csg stub - TOH w/tbg - WOC - TIH w/tbg - tag TOC @ 1018' - PU tbg to 479' - spot 60 sx Class 'C' cmt 479-256' - TOH w/tbg - WOC - RIH w/WL - tag TOC @ 319' - set 10 sx surface plug - install dry hole marker - clear location of junk - RDMOSU - 2/15/84 - pits will be filled when dried up.
Well plugged 2/15/84
3259' 4-1/2" production csg left in hole - all (409') 8-5/8" surface csg left in hole.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Peter W. Chester TITLE Prod. Engineer DATE 2/27/84

(This space for Federal or State office use)

APPROVED BY PETER W. CHESTER
CONDITIONS OF APPROVAL, IF ANY.
(Sig. & Id.)

TITLE _____ DATE _____

NOV 7 1984

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM COMPANY

Lease Name: Lauck Federal

Well No.: 2

Location: 1980 FSL & 660 FEL, Sec. 29, T7S, R33E

Drilling and Completion Data

377' 8-5/8", cmt w/ 250 sx.
Circulate to surface.

4440' 4-1/2", cmt w/325 sx.

Perforations 4230' - 4392'

4438' P.B.T.D.
4440' T.D.

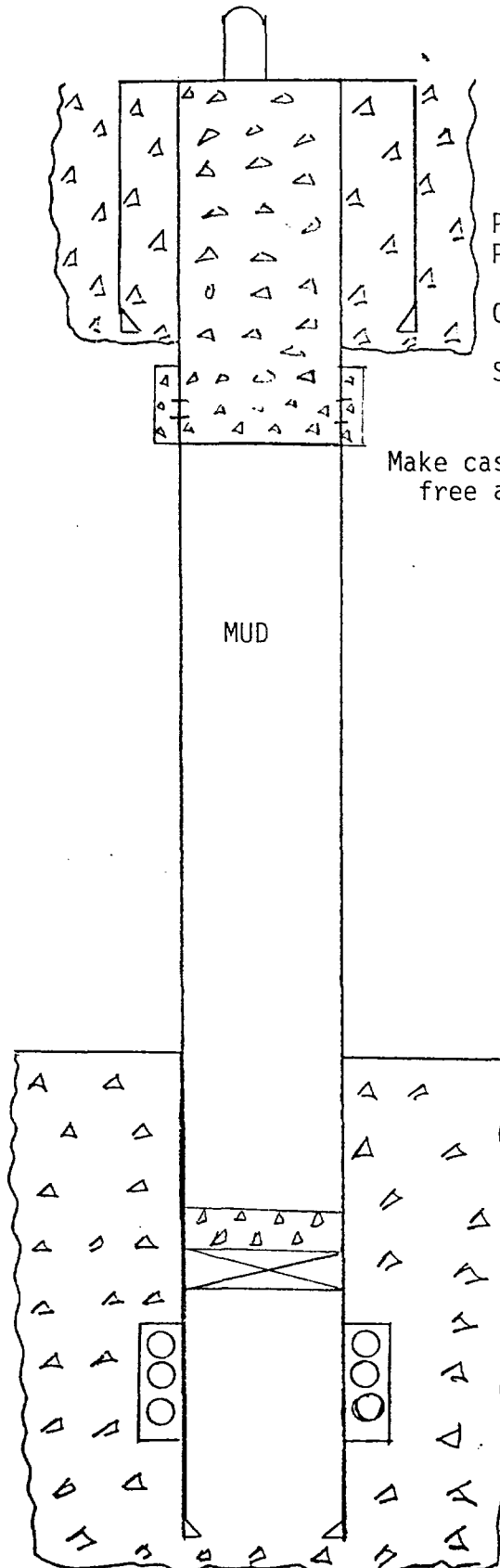
Plugging and Abandonment Data

Perforate casing @ 427' - 428'.
Pump 150 sx. cement down 4-1/2"
casing & up annulus.
Circulate to surface.

Spot 40 sx. cement plug from 758'
to 1074'. Sqz. 15 sx. cmt. into
formation.

Make casing cut @ 1000'. Tried to pull
free and could not.

Spot 4 sx. cement plug TOC @
4042'.
CIBP set @ 4100'.



N. M. OIL CONS. COMMISSION
P. O. BOX 1980
HOBBS, NEW MEXICO 88240

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☒ well gas ☐ well other

2. NAME OF OPERATOR
Champlin Petroleum Company

3. ADDRESS OF OPERATOR
P. O. Box 7946 Midland, TX 79708-0946

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1980' FSL & 660' FEL
AT TOP PROD. INTERVAL: Same
AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐
(other)

SUBSEQUENT REPORT OF:

☐
☐
☐
☐
☐
☐
☐
☒

5. LEASE

Federal NM 0554778

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Lauck-Federal

9. WELL NO.

2

10. FIELD OR WILDCAT NAME

Chaveroo (San Andres)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec. 20, T7S, R33E

12. COUNTY OR PARISH

Roosevelt

13. STATE

New Mexico

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)
4438 DF

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

2/15/84 - MI RU SU - NDWH - BU BOP's - RIH w/4-1/2" CIBP on WL - set @ 4100' - to abandon San Andres @ 4230-4392' - POH w/WL - GIH w/2-3/8" tbg - TU-on plug @ 4100' - displace hole w/10#/gal SW mud - spot 4 sx Class "C" cmt on CIBP - TOC @ 4042' - TOH w/tbg - ND BOP's - RU csg jacks - est csg free point @ 1000' - GIH w/jet cutter - make cut @ 1000' - csg would not come free - attempt to work csg free - csg would not come free - est circ btw prod & surface csg - work 4-1/2" csg - pipe would not come free - RIH w/jet cutter - make cut @ 1000' - pipe would not come free - NU BOP's RIH w/tbg to 1074 - spot 40 sx Class "C" cmt 1074-495' - PU 10 stds tbg - close BOP's - sqz 15 sx cmt into form - POH w/tbg - WOC - RIH w/WL & TU on cmt @ 758' - RIH w/perf gun - perf 4-1/2" prod csg @ 427-428' (8-5/8" surface csg shoe @ 377') - ND BOP's - est circ btw prod & surface csg - pmp 150 sx Class "C" cmt down (over)

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED [Signature] TITLE Prod. Engineer DATE 2/27/84

APPROVED (This space for Federal or State office use)

APPROVED BY (Sgt. Sgd.) PETER W. CHESTER TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

NOV 7 1984

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

4-1/2" prod csg & up 4-1/2" - 8-5/8" annulus - circ cmt
to surface - left 4-1/2" csg full of cmt to surface -
install dry hole marker - clean location of junk - RDMOSU
2/18/84 - will fill pits when dried up.
Well plugged 2/18/84
4440' 4-1/2" production csg & 377' of surface csg left
in hole.

RECEIVED

NOV -9 1984

D.C.D.
NORFOLK OFFICE

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM COMPANY
Lease Name: Lawck Federal
Well No.: 12
Location: 1980 FSI & 1980 FFI, Sec. 29, T7S, R33E

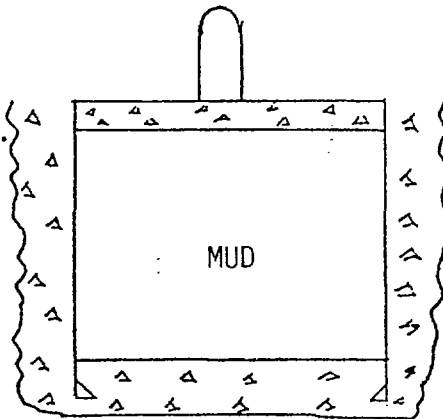
Drilling and Completion Data

370' 8-5/8" csg, cmt w/250 sx.
Circulate to surface.

Plugging and Abandonment Data

Surface: 50' cmt. plug.

Spot 50 sx. cmt. @ 430', TOC 300'.



4440' 4-1/2" csg., cmt. w/325 sx.

Cut & pulled 1038' of 4-1/2" csg.
Spot 40 sx. cmt. @ 1130. TOC 973'.

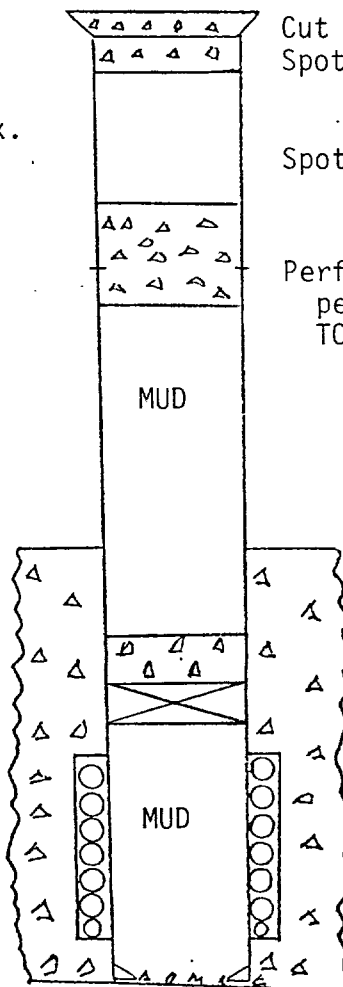
Spot 40 sx. @ 1850'. TOC 1325'.

Perforate @ 2700'. Could not pump into
perforations. Spot 40 sx. cmt. @ 2750'.
TOC 2232'.

50' cmt. plug.
CIBP @ 4100'.

Perforations 4202' - 4404'.

4438' P.B.T.D.
4440' T.D.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☐ gas ☐ other ☐ Injection
well well

2. NAME OF OPERATOR

Champlin Petroleum Company

3. ADDRESS OF OPERATOR

P.O. Box 7946 Highland, TX 79708

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 1980' TEL & 1980' TEL

AT TOP PROD. INTERVAL: same

AT TOTAL DEPTH: same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐
(other) ☐

SUBSEQUENT REPORT OF:

☐
☐
☐
☐
☐
☐
☐
☒

5. LEASE

Lauch-Federal

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Lauch-Federal

9. WELL NO.

12

10. FIELD OR WILDCAT NAME

Chaveroo - San Andres

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec 22, T25, R33

12. COUNTY OR PARISH

Roosevelt

13. STATE

TX

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)

4442 KDB

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

- 2-8-85 1. Set 4 1/2" CIBP 24100' - Cap with 50' on top
2-8-85 2. Perf 22700' - Could not pump into - Spot 40sxs. 22750' - tag 22232'
2-11-85 3. Spot 40 sxs 21350' - Tag 21325'
2-11-85 4. PCH with 1088' of 4 1/2" casing - Spot 50 sxs 21130' - Tag 20973'
2-12-85 5. Spot 50 sxs 2430' - Tag 2300'
2-12-85 6. Spot 50' at surface & dry hole marker
All plugs set thru tubing
Hole loaded with 10% cal mud

Donald W. Tally, Jr.
D. W. Tally, Jr.

Champlin Petroleum Co.
Senior Engineer

2-28-85

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

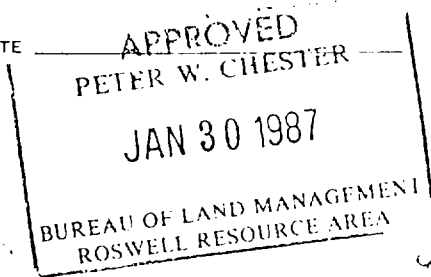
18. I hereby certify that the foregoing is true and correct

SIGNED Peter W. Chester TITLE Vice Pres. Mayo Harris DATE 2-23-85

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side



PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM COMPANY

Lease Name: State 32-7-33

Well No.: 1

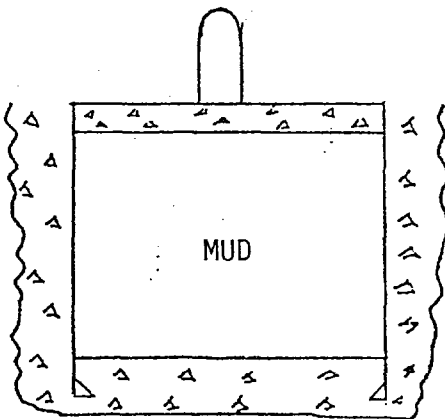
Location: 660 FNL & 1980 FEL, Sec. 32, T7S, R33E

Drilling and Completion Data

417' 8-5/8" csg., cmt w/300
sx. Circulate to surface.

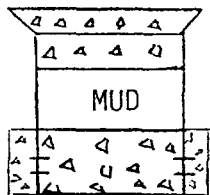
Plugging and Abandonment Data

Set 10 sx. cement plug @ surface.



4379' 4-1/2" csg., cmt w/350 sx.

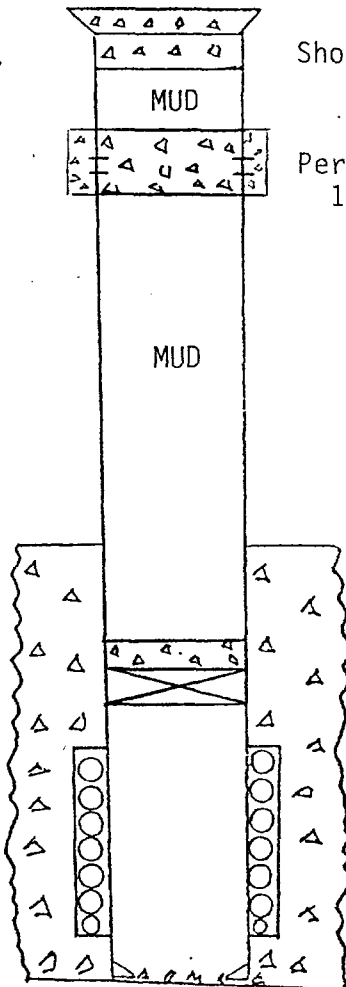
Shot & pulled 4-1/2" casing @ 473'.



Perforate @ 1750'. Squeeze w/40 sx. cement.
100' cement plug (1650' - 1750').

Perforations 4280' - 4346'

4380 T.D.



50' cement on top of CIBP.
Set CIBP @ 4270'.

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)		5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
		5. State Oil & Gas Lease No. K-2734
OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Water Injection Well		7. Unit Agreement Name State 32-7-33
Name of Operator Champlin Petroleum Company		8. Farm or Lease Name
Address of Operator 300 Wilco Building Midland, Texas 79701		9. Well No. 1
Location of Well UNIT LETTER B 660 FEET FROM THE North LINE AND 1980 FEET FROM THE East LINE, SECTION 32 TOWNSHIP 7-S RANGE 33-E NMPM.		10. Field and Pool, or Wildcat Chaveroo-San Andres
15. Elevation (Show whether DF, RT, GR, etc.) 4420' Gr.		12. County Roosevelt

6. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data			
NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <input type="checkbox"/>

7. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Well was Plugged and Abandoned as follows:

4-26-77 Set CIBP 4270'.
4-27-77 Dumped 50' cement on CIBP.
4-27-77 Perforated 4-1/2" casing @1750'. Squeezed 40 sxs. cement to 1650' thru packer. Left 100' plug inside 4-1/2" casing.
4-27-77 Shot casing @473' pulled 473' of 4-1/2" casing.
4-28-77 Set 10 sack plug in top of surface.
Installed Dry Hole Marker.
Hole loaded with 10# Mud w/gel.

8. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED <u>Walter M. Condit</u>	TITLE <u>District Clerk</u>	DATE <u>May 27, 1977</u>
APPROVED BY <u>Eddie L. [Signature]</u>	TITLE <u>OIL & GAS INSPECTOR</u>	DATE <u>APR 2 1979</u>
CONDITIONS OF APPROVAL, IF ANY:		

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM COMPANY

Lease Name: State 32-7-33

Well No.: 2

Location: 660 FNL & 660 FEL, Sec. 32, T7S, R33E

Drilling and Completion Data

407' 8-5/8" csg., cmt w/ 300 sx.
Circulate to surface.

4439' 4-1/2" csg., cmt w/350 sx.

Perforations 4298' - 4342'

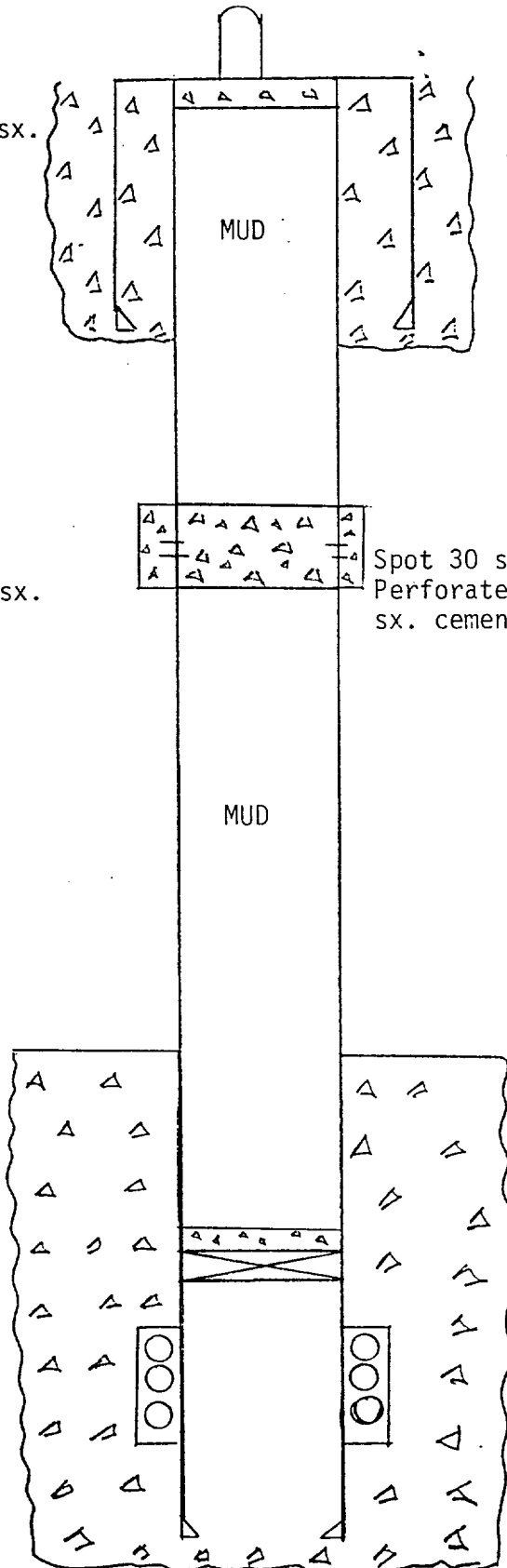
4351' P.B.T.D.
4440' T.D.

Plugging and Abandonment Data

Perforate 457' - 458'.
Circulated 150 sx. cement down
4-1/2" casing, up 4-1/2" -
8-5/8" annulus.

Spot 30 sx. cement plug TOC 1522'.
Perforate @ 1700' - 1701'. Squeeze w/15
sx. cement.

Spot 4 sx. cement on top of CIBP
(TOC 4042').
Set CIBP @ 4100'.



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ARTESIA, OFFICE

Form C-103
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C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease

State ☒Fee ☐

5. State Oil & Gas Lease No.

NM10130, NM3934, K2734

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name State 32-7-33 Unit
2. Name of Operator Champlin Petroleum Company	8. Farm or Lease Name
3. Address of Operator P. O. Box 7946 Midland, TX 79708-0946	9. Well No. 2
4. Location of Well UNIT LETTER A 660 FEET FROM THE North LINE AND 660 FEET FROM THE East LINE, SECTION 32 TOWNSHIP 7-S RANGE 33-E NMPM.	10. Field and Pool, or Wildcat Chaveroo (San Andres)
15. Elevation (Show whether DF, RT, GR, etc.) 4432 GR	12. County Roosevelt

16.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐PLUG AND ABANDON ☐TEMPORARILY ABANDON ☐CHANGE PLANS ☐PULL OR ALTER CASING ☐OTHER ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐COMMENCE DRILLING OPNS. ☐CASING TEST AND CEMENT JOB ☐OTHER ☐ALTERING CASING ☐PLUG AND ABANDONMENT ☒

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1/31/84 - MIRUSU - TIH w/4" scraper on 2-3/8" tbg to 4150' - TOH w/tbg & scraper - RIH w/4" CIBP on WL & set @ 4100' to abandon San Andres perfs 4252-4342' - TOH w/WL - RIH w/2-3/8" tbg OE - tagged CIBP @ 4100' - displace hole w/10#/gal SW mud - spot 4 sx Class "C" cmt on top of CIBP - TOC @ 4042' - TOH w/tbg - NDWH - RU csg jacks - GIH w/csg spear below csg slips - could not release csg slips - attempt to jar slips loose w/primer cord - could not release slips - cut off csg below slips w/cutting torch - spear into 4-1/2" csg - Free point @ \pm 650' - release spear and POH - RIH w/perf gun - perf 4-1/2" csg 1700-1701' (4 holes) - RIH w/tbg OE to 1772' - spot 30 sx cmt - TOC @ 1338' - TOH w/tbg - RIH w/4-1/2" FB pkr on tbg - set @ 130' - press csg to 300# - sqz 15 sx cmt into perfs 1700-1701' @ 1/2 BPM - press inc to 500# - shut well in & left 500# on sqz - WOC 2-1/2 hrs - rel pkr @ 130' - TOH w/pkr - RIH w/WL - tag cmt @ 1522' - GIH w/perf gun - perf 4-1/2" csg @ 457' - 458' (4 holes) - RIH w/FB pkr & set in top of 4-1/2" csg - est circ btw 4-1/2" & 8-5/8" csg - pump 150 sx Class "C" cmt down 4-1/2" csg & up 4-1/2"-8-5/8" annulus (8-5/8" csg shoe 407') left 4-1/2" csg & 4-1/2"-8-5/8" annulus completely filled w/cmt - rel pkr & POH - cut off braden head - instl dry hole marker - will cover pits when dried up - RD MO SU 2/3/84

No csg pulled - 4439- of 4-1/2" production csg left in hole & 407' of 8-5/8" csg left in hole.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED R. L. LinderTITLE Production EngineerDATE 2/15/84APPROVED BY Ronald M. CollierTITLE OIL & GAS INSPECTORDATE MAR 15 1984

CONDITIONS OF APPROVAL, IF ANY:

Page 12 of 52

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM CORPORATION

Lease Name: State

Well No.: 4

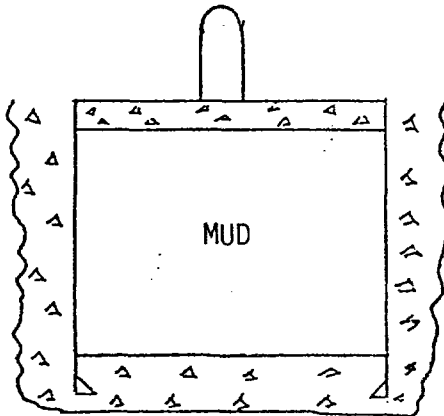
Location: 660 FSL & 660 FEL, Sec. 32, T7S, R33E

Drilling and Completion Data

367' 8-5/8" csg., cmt w/200
sx. Circulate to surface.

Plugging and Abandonment Data

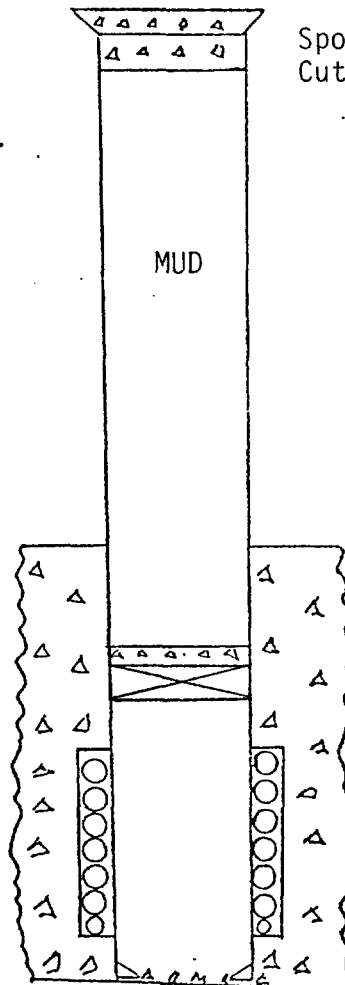
Spot 10 sx. cement plug @ surface.



Spot 65 sx. cement plug 272' - 419'.

4484' 4-1/2" csg., cmt w/325 sx.

Spot 60 sx. cement plug 977' - 1197'.
Cut & pulled 4-1/2" casing @ 1140'.



Spot 4 sx. cement plug on top of CIBP
(TOC 4042').
Set CIBP @ 4100'.

Perforations 4289' - 4372'

4484' T.D.

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ARTESIA, OFFICEForm C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease	State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.	NM10130, NM3934, K2734	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name State 32-7-33 Unit
2. Name of Operator Champlin Petroleum Company	8. Farm or Lease Name
3. Address of Operator P. O. Box 7946 Midland, TX 79708-0946	9. Well No. 4
4. Location of Well UNIT LETTER P 660 FEET FROM THE South LINE AND 660 FEET FROM THE East LINE, SECTION 32 TOWNSHIP 7-S RANGE 33-E NMPM.	10. Field and Pool, or Wildcat Chaveroo (San Andres)
15. Elevation (Show whether DF, RT, GR, etc.) 4417 GR	12. County Roosevelt

16.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐
OTHER ☐PLUG AND ABANDON ☐
CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐
COMMENCE DRILLING OPER. ☐
CASING TEST AND CEMENT JOBS ☐
OTHER ☐ALTERING CASING ☐
PLUG AND ABANDONMENT ☒

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

2/3/84 - MIRUSU - RIH w/4-1/2" CIBP on WL - set @ 4100' to abandon San Andres perfs
4289-4372' - RIH w/2-3/8" tbg - TU on CIBP @ 4100' - displace hole w/10#/gal SW mud
spot 4 sx cmt on CIBP @ 4100' - TOC @ 4042' - TOH w/tbg - NDWH - RU csg jacks - free
point @ ± 1222' - RIH w/jet cutter - made cut @ 1140' - POH w/27 jts 4-1/2" csg -
RIH w/tbg to 1197' - spot 60 sx cmt from 1197' - 922' to cover 4-1/2" csg stub - WOC -
TU on plug @ 977' - PU tbg to 419' - spot 65 sx cmt plug 419-272' to cover 8-5/8" csg
shoe @ 367' - POH w/tbg - WOC 4 hrs - RIH w/WL - TU on cmt @ 272' - spot 10 sx surface
plug - instl dry hole marker- will cover pits when dried up - RDMO SU 2/15/84
3344' 4-1/2" csg left in hole - all of surface csg left in hole (367')

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED R. C. Anderson TITLE Production Engineer DATE 2/15/84APPROVED BY Ronald M. Cullum OIL & GAS INSPECTOR

CONDITIONS OF APPROVAL, IF ANY:

MAR 15 1984

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: SUNRAY DX OIL COMPANY
Lease Name: NM "AZ" State
Well No.: 11
Location: 1980 FWL & 660 FNL, Sec. 34, T7S, R33E

Drilling and Completion Data

370' 8-5/8" csg., cmt. w/210
sx. Circulate to surface.

Drilled to 3470 and lost circulation.
Wash hole to 1409'. Stuck drill
string. Made back off & left one (1)
drill collar in hole.

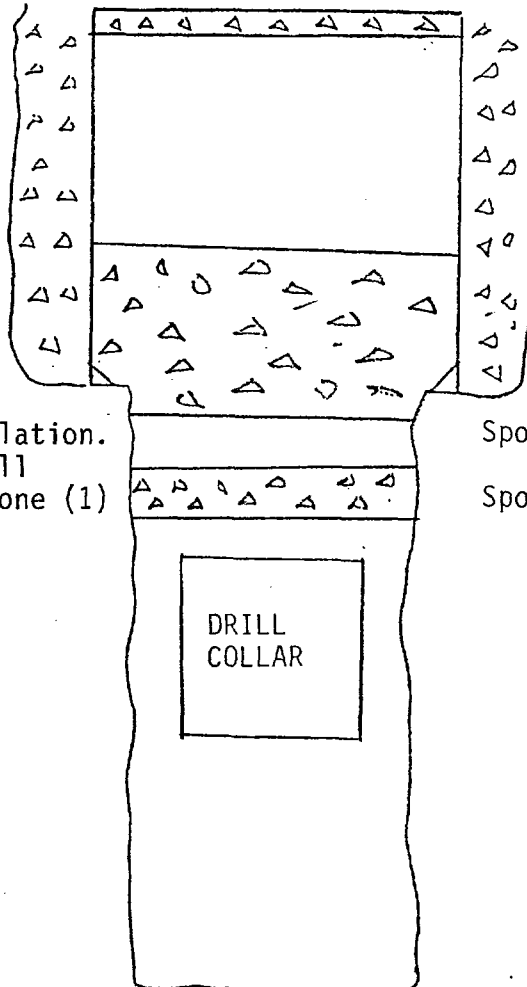
3470' T.D.

Plugging and Abandonment Data

Surface: 10 sx. cmt. plug.

Spot 50 sx. cmt. plug 208' - 403'.

Spot 40 sx. cmt. plug 1144' - 1300'.



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NEW MEXICO OIL CONSERVATION COMMISSION

OCT 28 11 16 AM '65

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease	State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.	K-3935	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator Sunray DX Oil Company	8. Farm or Lease Name N. M. State "AZ" State
3. Address of Operator P. O. Box 1416, Roswell, New Mexico	9. Well No. 11
4. Location of Well UNIT LETTER C 1980 FEET FROM THE West LINE AND 660 FEET FROM THE North LINE, SECTION 34 TOWNSHIP 7S RANGE 33E NMPM.	10. Field and Pool, or Wildcat Chaveroo San Andres
15. Elevation (Show whether DF, RT, GR, etc.) 4410 DF	12. County Roosevelt

16.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK	<input type="checkbox"/>
TEMPORARILY ABANDON	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>
OTHER	<input type="checkbox"/>

PLUG AND ABANDON	<input type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>
OTHER	<input type="checkbox"/>

SUBSEQUENT REPORT OF:

REMEDIAL WORK	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
COMMENCE DRILLING OPNS.	<input checked="" type="checkbox"/>	PLUG AND ABANDONMENT	<input checked="" type="checkbox"/>
CASING TEST AND CEMENT JOBS	<input checked="" type="checkbox"/>	OTHER	<input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

- Spud 11" hole at 10:00 A.M. 10-19-65.
- Drill to 376' TD. Ran 8 5/8", 24#, J-55 csg to csg pt 370'.
- Cmt w/210 sx reg cmt 2% CaCl₂. Plug down 4 P.M. 10-19-65. Cmt Circ.
- Drill 7 7/8" hole to 3470'. Lost circ. - could not get back in hole below 1395'. Wash hole to 1409'. Hole caved in and stuck 1 drill collar. Ran Dialog freepoint indicator. Back off, leaving 1 drill collar in hole. Fish for drill collar 2 days could not recover.
- P&A hole as follows: Placed 40 sx cmt plug 1300-1114'. Placed 50 sx plug 403-208. Plugged top of 8 5/8" csg w/10 sx cmt plug & install dry hole marker. P&A complete 5 P.M., 10-26-65. Will skid rig 100' West for new location.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED B.F. Brawley TITLE District Engineer DATE 10-27-65

APPROVED BY Leah W. Chambers TITLE _____ DATE _____

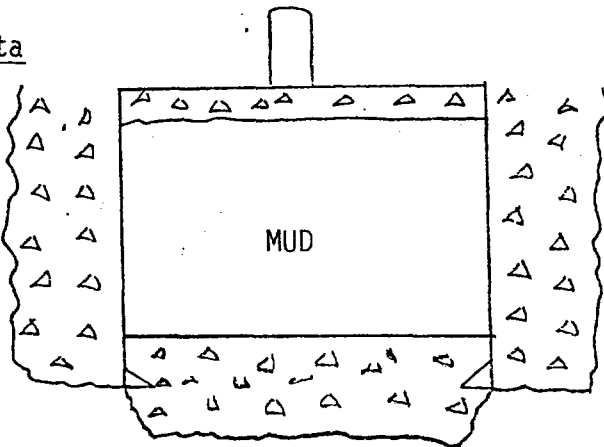
CONDITIONS OF APPROVAL, IF ANY:

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: SKELLY OIL COMPANY
Lease Name: Chaveroo Bough "C"
Well No.: 1
Location: 990' FNL & 1650' FWL, Sec. 35, T7S, R33E

Drilling and Completion Data

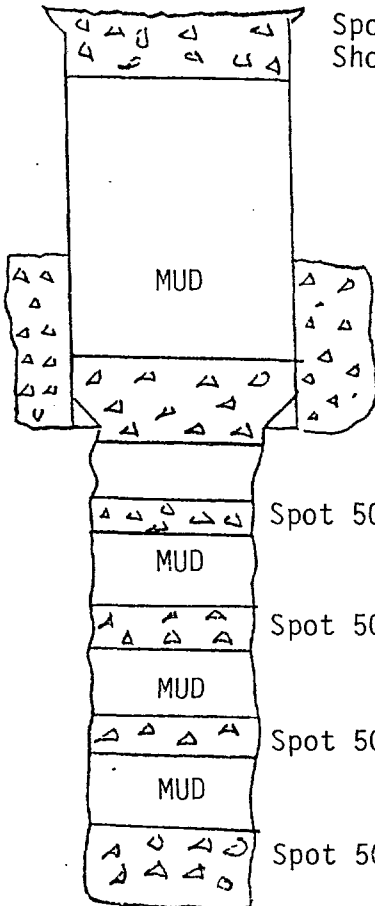
400' 13-3/8" csg., cmt.
w/400 sx. Circulate to
surface.



Plugging & Abandonment Data

Surface: 10 sx. plug.
Spot 50 sx. cmt. plug 387' - 445'

4500' 8-5/8" csg., cmt. w/800 sx.



Spot 150 sx. cmt. plug 1850' - 2025'.
Shot & pulled 8-5/8" csg. @ 1997'.

Spot 50 sx. cmt. plug 4375' - 4525'.

Spot 50 sx. cmt. plug 4772' - 4922'.

Spot 50 sx. cmt. plug 6865' - 7035'.

Spot 50 sx. cmt. plug 8280' - 8436'.

Spot 50 sx. cmt. plug 9870' - 10020'.

10,020 T.D.

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C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. K-1369
7. Unit Agreement Name
8. Farm or Lease Name Chaveroo Bugh "C"
9. Well No. 1
10. Field and Pool, or Wildcat Wildcat
12. County Roosevelt

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Dry Hole
2. Name of Operator Skelly Oil Company
3. Address of Operator P. O. Box 1351, Midland, Texas 79701
4. Location of Well UNIT LETTER C , 990 FEET FROM THE North LINE AND 1650 FEET FROM THE West LINE, SECTION 35 TOWNSHIP 7S RANGE 33E NMPM.
15. Elevation (Show whether DF, RT, GR, etc.) 4372' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>
OTHER <input type="checkbox"/>	OTHER <input checked="" type="checkbox"/> Re-enter, salvage 8-5/8" casing and re-plug well.
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

- 1) Moved in casing pulling unit 4-10-73.
- 2) Drilled out surface plug. Cleaned out to 2373'.
- 3) Circulated hole with 10# mud.
- 4) Shot of 8-5/8" OD casing at 1997' and pulled casing.
- 5) Spotted 150 sack plug 1850-2025' across 8-5/8" casing stub.
- 6) Spotted 50 sack plug 387-445' across bottom of surface casing.
- 7) Spotted 10 sack plug from surface to 11' in top of surface casing.
- 8) Set dry hole marker.

All intervals not cemented were filled with 10# mud.
Well plugged and abandoned 4-15-73.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED (Signed) D. R. Crow D. R. Crow TITLE Lead Clerk DATE 5-2-73

APPROVED BY *William E. O'Leary* TITLE DATE
CONDITIONS OF APPROVAL, IF ANY: Page 18 of 52

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.
K-1369

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <u>Dry Hole</u>	7. Unit Agreement Name
2. Name of Operator <u>Skelly Oil Company</u>	8. Farm or Lease Name <u>Chaveroo Bough "C"</u>
3. Address of Operator <u>P. O. Box 1351, Midland, Texas 79701</u>	9. Well No. <u>1</u>
4. Location of Well UNIT LETTER <u>C</u> <u>990</u> FEET FROM THE <u>North</u> LINE AND <u>1650</u> FEET FROM THE <u>West</u> LINE, SECTION <u>35</u> TOWNSHIP <u>7S</u> RANGE <u>33E</u> NMPM.	10. Field and Pool, or Wildcat <u>Wildcat</u>
15. Elevation (Show whether DF, RT, GR, etc.) <u>4372' GR</u>	12. County <u>Roosevelt</u>

16.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐
OTHER ☐

PLUG AND ABANDON ☐
CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐
COMMENCE DRILLING OPNS. ☐
CASING TEST AND CEMENT JOBS ☐
OTHER Drill to TD and plug and abandon ☒
ALTERING CASING ☐
PLUG AND ABANDONMENT ☐

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

- 1) Drilled out cement after setting 8-5/8" OD casing.
- 2) Drilled to 8695'. Ran Drill Stem Test No. 1.
- 3) Drilled to 8735'. Ran Drill Stem Test No. 2.
- 4) Drilled to 8810'. Ran Drill Stem Test No. 3.
- 5) Drilled to 8952'. Ran Drill Stem Test No. 4.
- 6) Drilled to 9680'. Ran Drill Stem Test No. 5.
- 7) Drilled to 9800'. Ran Drill Stem Test No. 6.
- 8) Drilled to TD 10,020'.
- 9) Ran Gamma Ray Sonic log 9550' - 4500' and Gamma Ray log 4500' - surface.
- 10) Drilled out bridge at 9550', then ran Gamma Ray Sonic log 9987' - 9550' and Laterolog 9983' - 8000'.
- 11) As no commercial quantities of oil or gas were encountered, well was ordered plugged and abandoned.
- 12) Ran drill pipe open-ended and spotted cement plugs as follows:

50 sacks 10,020' - 9870'
50 sacks 8436' - 8280'
50 sacks 7035' - 6865'

See attached

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED (Signed) D. T. Crow TITLE Lead Clerk DATE Dec. 16, 1971

APPROVED BY Nathan E. Clegg TITLE TCR DATE
CONDITIONS OF APPROVAL, IF ANY:

Form C-103

Page 2

Chaveroo Bough "C"

50 sacks 4922' - 4772'

50 sacks 4525' - 4375'

10-sack cement plug 30' to surface

All intervals not cemented were filled with 10# mud.

13) Set dry hole marker.

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: THE WIL-MC OIL CORPORATION

Lease Name: Champlin State

Well No.: 1

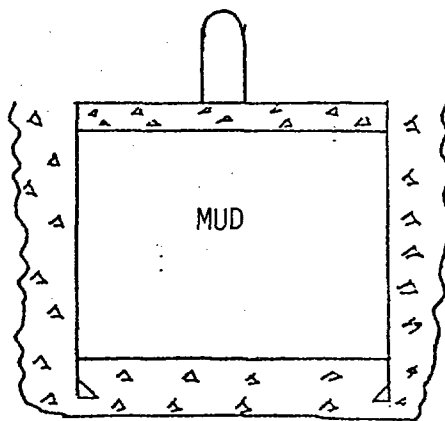
Location: 660 FWL & 660 FSL, Sec. 3, T8S, R33E

Drilling and Completion Data

360' 8-5/8" csg., cmt w/200
sx. Circulate to surface.

Plugging and Abandonment Data

Spot 10 sx. cement plug @ surface.

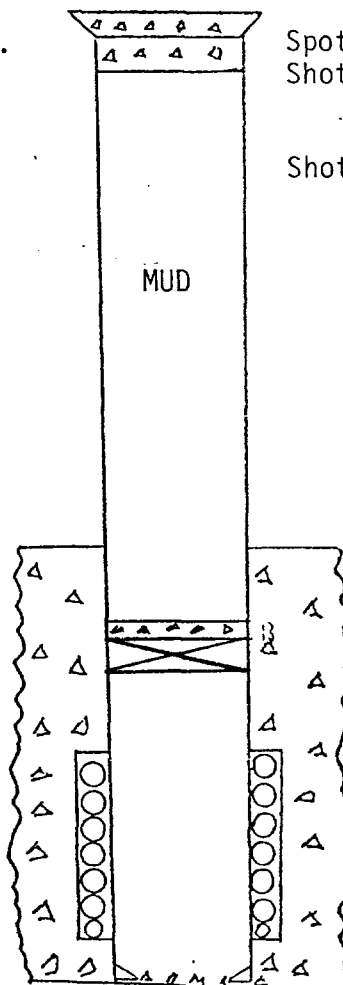


Spot 50 sx. cement plug @ 400' (8-5/8"
casing shoe).

4372' 4-1/2" csg., cmt w/150 sx.

Spot 50 sx. cement plug @ 1200'.
Shot & pulled 4-1/2" casing @ 1200'.

Shot 4-1/2" casing @ 1723'; could not pull.



Spot 4 sx. cement on top of CIBP.
Set @ 4100'.

Perforations 4208' - 4282'

4372' T.D.

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator The Wil-Mc Oil Corporation	8. Farm or Lease Name Champlin State
3. Address of Operator Drawer 1889, Midland, Texas 79701	9. Well No. 1
4. Location of Well UNIT LETTER <u>M</u> <u>660</u> FEET FROM THE <u>West</u> LINE AND <u>660</u> FEET FROM THE <u>South</u> LINE, SECTION <u>3</u> TOWNSHIP <u>8S</u> RANGE <u>33E</u> NMPM.	10. Field and Pool, or Wildcat Chayeroo
15. Elevation (Show whether DF, RT, GR, etc.) 4408' Gr.	12. County Chaves

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>
OTHER <input type="checkbox"/>	OTHER <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. Set CIBP at 4100' and dumped 4 sacks cement on top of bridge plug.
2. Shot off 4 1/2" casing at 1723', could not pull with 80,000 lbs. Shot off 4 1/2" at 1200' and pulled casing.
3. Run tubing and displaced hole with 25 lbs./bbl. mud to 4 1/2" pipe stub at 1200'.
4. Spotted 50 sacks cement over pipe stub at 1200'.
5. Pulled tubing to 400' and displaced hole with mud.
6. Spotted 50 sacks cement over surface pipe shoe at 400'.
7. Finished displacing hole with mud and capped with 10 sacks cement.
8. Installed marker, cleaned and leveled location.

Work completed 9-26-73

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED <u>John W. Remyan</u>	TITLE <u>Engineer</u>	DATE <u>10-8-73</u>
APPROVED BY <u>John W. Remyan</u>	TITLE <u>Geologist</u>	DATE <u></u>
CONDITION OF APPROVAL, IF ANY:		

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: TIERRA EXPLORATION, INC.

Lease Name: Annarco

Well No.: 1

Location: 2310 FWL & 990 FSL, Sec. 3, T8S, R33E

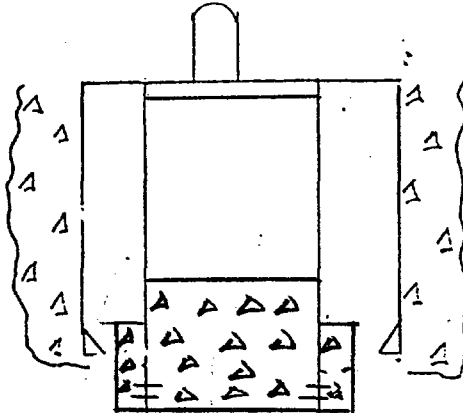
Drilling and Completion Data

1892' 8-5/8", cmt. w/900 sx.
Circulate to surface.

4396' 4-1/2", cmt. w/280 sx.

Perforations 4254' - 4392'

4396' T.D.



Plugging and Abandonment Data

Surface: 10 sx. plug

Perf @ 1925'. Sqz. 100 sx. cement.
1850' - 2000', 150' plug.

20 sx. cement plug.
CIBP @ 4200'.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

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OPERATOR		

5a. Indicate Type of Lease
State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.
061135

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT --" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator Tierra Exploration, Inc.	8. Farm or Lease Name Annarco
3. Address of Operator P. O. Box 5057 Hobbs, NM 88241	9. Well No. 1
4. Location of Well UNIT LETTER N 2310 FEET FROM THE West LINE AND 990 FEET FROM South 3 8S 33E THE LINE, SECTION TOWNSHIP RANGE NMPM.	10. Field and Pool, or Wildcat Chaveroo-San Andres
15. Elevation (Show whether DF, RT, GR, etc.) 4407' DF	12. County Chaves

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. Set CIBP at 4200'.
2. Set 20 sx plug in 4-1/2" casing on top of plug at 4200'.
3. Perfed 4-1/2" casing at 1925'. Squeezed cement with 100 sx. Left 150' plug in 4-1/2" casing 2000-1850'.
4. Set 10 sx plug at surface.
5. Welded cap on 4-1/2" casing. Set dry hole marker.
6. Cleaned location for OCD inspection.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Jan E. Clark TITLE Office Manager DATE September 25, 1980

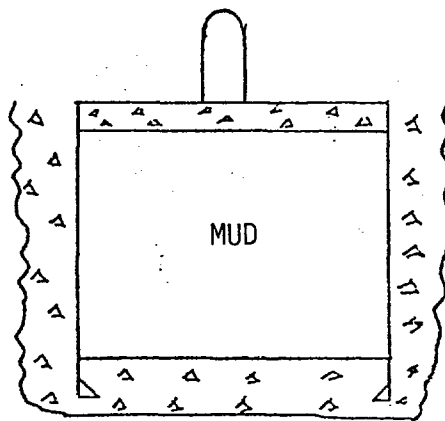
APPROVED BY Jack Griffin TITLE OIL & GAS INSPECTOR DATE JUL 18 1980

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: ATLANTIC RICHFIELD COMPANY
Lease Name: State "BF"
Well No.: 5
Location: 330 FNL & 990 FWL, Sec. 3, T8S, R33E

Drilling and Completion Data

355' 8-5/8", cmt. w/253 sx.
Circulate to surface.

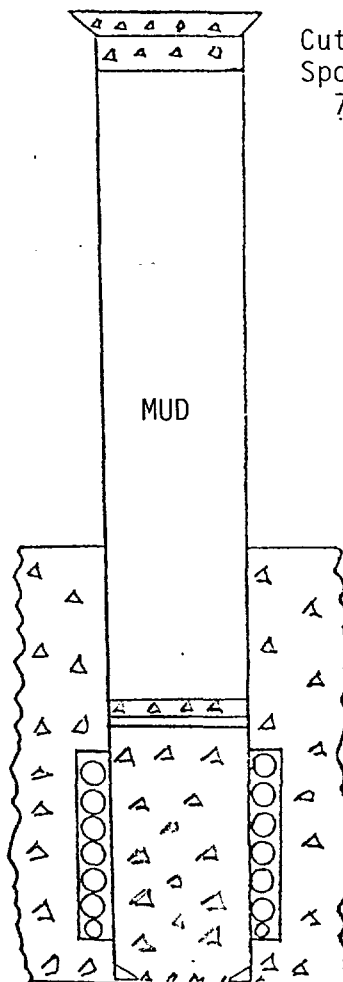


Plugging and Abandonment Data

Spot 10 sx. cement plug @ surface.

Spot 50 sx. cement plug across 8-5/8" casing shoe 300' - 460'.

4499' 4-1/2", cmt. w/300 sx.



Cut & pulled 1014' 4-1/2" csg.
Spot 40 sx. cement plug across 4-1/2" csg. stub
750' - 1064'.

Cement retainer @ 4175'. Squeeze perfs
w/34 sx. below cement retainer & 6 sx.
above.

Perforations 4225' - 4390'

4412' P.B.T.D.

4500' T.D.

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

5a. indicate Type of Lease	
State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.	
OG 1195	
7. Unit Agreement Name	
8. Farm or Lease Name	
State BF	
9. Well No.	
5	
10. Field and Pool, or Wellcat	
Chaveroo San Andres	
12. County	
Chaves	

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SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. ☒ OIL WELL ☐ GAS WELL ☐ OTHER-

2. Name of Operator
Atlantic Richfield Company

3. Address of Operator
P. O. Box 1710, Hobbs, New Mexico 88240

4. Location of Well
UNIT LETTER D 330 FEET FROM THE North LINE AND 990 FEET FROM
THE West LINE, SECTION 3 TOWNSHIP 8S RANGE 33E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
4415' DF

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

On 5/23/75 rigged up, killed well w/brine wtr & installed BOP. Ran 3½" bit & 4½" scraper to 4175'. OK. POH w/bit & scraper. RIH w/2-3/8" tbg & 4½" retr. Set retr @ 4175'. Cmtd perfs 4225-4390' w/34 sx Cl C w/4% gel below retr & 6 sx above. POH w/tbg. Filled hole w/heavy mud laden material. Cut 4½" csg @ 1014' & pulled 1014'. Spotted 40 sx Cl C cmt plug across 4½" csg stub 1064-750'. Spotted 50 sx Cl C cmt plug across 8-5/8" OD csg shoe 460-300'. Spotted 10 sk cmt plug @ surface, installed regulation dry hole marker. Plugged & abandoned eff 5/30/75. Your office to be notified when location is cleaned & levelled for final inspection.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED <u>[Signature]</u>	TITLE <u>Dist. Drlg. Supv.</u>	DATE <u>6/5/75</u>
APPROVED BY <u>[Signature]</u>	TITLE <u>Geologist</u>	DATE <u>FEB 22 1977</u>
CONDITIONS OF APPROVAL, IF ANY:		

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: HYTECH ENERGY CORPORATION

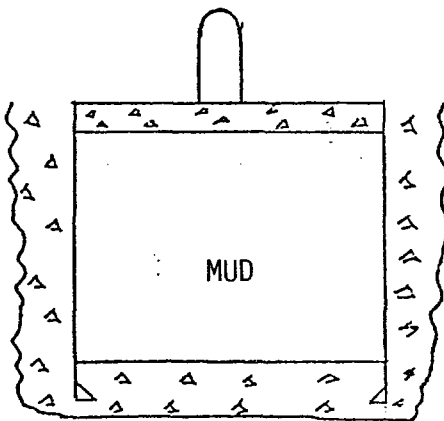
Lease Name: Champlin State

Well No.: 1

Location: 660 FNL & 1980 FEL, Sec. 4, T8S, R33E

Drilling and Completion Data

330' 8-5/8" csg., cmt w/250
sx. Circulate to surface.

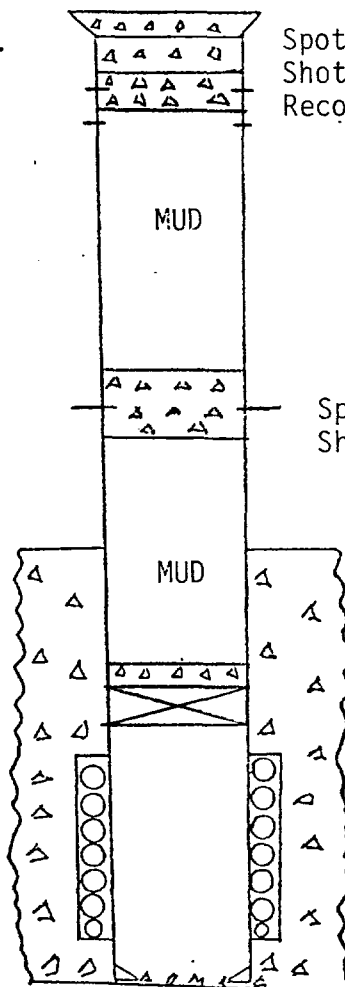


Plugging and Abandonment Data

Surface: 10 sx. cmt. plug.

Spot 50 sx. cement plug 230' - 380'.

4414' 4-1/2" csg., cmt w/150 sx.



Spot 45 sx. cmt. plug 1250' - 1350'.
Shot 4-1/2" csg. @ 1295', 1398', 1515'.
Recovered csg. from 1295'.

Spot cmt. plug 1750' - 2150'.
Shot 4-1/2" csg. @ 2100'. Unable to pull.

Spot 35 sx. cmt. on top CIBP.
Set CIBP @ 4200'.

4414' P.B.T.D.
4415' T.D.

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

SUNDY NOTICES AND REPORTS ON WELLS
DO NOT USE THIS FORM FOR NOTICES TO ABANDON OR TO RE-ENTER OR PLUG BACK TO A DIFFERENT RESERVOIR.
(SEE APPLICATION FOR PERMIT OR PRODUCTION FOR SUCH PURPOSES.)

OIL WELL ☒ GAS WELL ☐ OTHER ☐

Name of Operator
Hytech Energy Corporation

Address of Operator
400 Wilco Bldg. Midland, Texas 79701

Location of Well
UNIT LETTER **B** **660** FEET FROM THE **North** LINE AND **1,980** FEET FROM
THE **East** LINE, SECTION **4** TOWNSHIP **8-S** RANGE **33-E** NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
4426 GR

5a. Indicate Type of Lease
State ☒ Fee ☐

5. State Oil & Gas Lease No.
K-2019

7. Unit Agreement Name

8. Form of Lease Name
Champlin State

9. Well No.
1

10. Field and Pool, or Wildcat
Chaveroo

12. County
Chaves

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☒ REMEDIAL WORK ☐ ALTERING CASING ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐ COMMENCE DRILLING OPS. ☐ PLUG AND ABANDONMENT ☒
 ULL OR ALTER CASING ☐ OTHER ☐ CASING TEST AND CEMENT JOBS ☐
 OTHER ☐

SUBSEQUENT REPORT OF:

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

10/26/78

Well Plugged & abandoned as follows:

1. Ran & set cast iron bridge plug at 4,200 feet with 35 ft. cement on plug
2. Ran tubing, circulated casing with salt gel mud
3. Shot 4½" at 2,100 ft; unable to pull, spotted cement plug from 2,150 ft. to 1,750 ft across salt section
4. Shot 4½" casing at 1,515 ft, 1,398 ft & 1,295 ft; recovered casing 1,295ft
5. Ran tubing, spotted 45 sack plug from 1,350 ft. to 1,250 ft.
6. Tagged cement plug at 1,225 ft - Ran tubing, spotted 50 sack plug from 380 ft. to 230 ft.
7. Tagged cement plug at 230 ft.
8. Set 10 sack plug at surface, installed dry-hole marker.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

BY Gene Milford TITLE Agent DATE Nov. 17, 1978

APPROVED BY Eddie TITLE OIL & GAS INSPECTOR DATE APR 2 1979

ADDITIONS OF APPROVAL, IF ANY:

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM COMPANY

Lease Name: State 4

Well No.: 1

Location: 660 FNL & 1980 FWL, Sec. 4, T8S, R33E

Drilling and Completion Data

351' 8-5/8", cmt. w/200 sx.
Circulate to surface

4415' 4-1/2", cmt. w/375 sx.

Perforations 4228' - 4273'

4290' P.B.T.D.
4415' T.D.

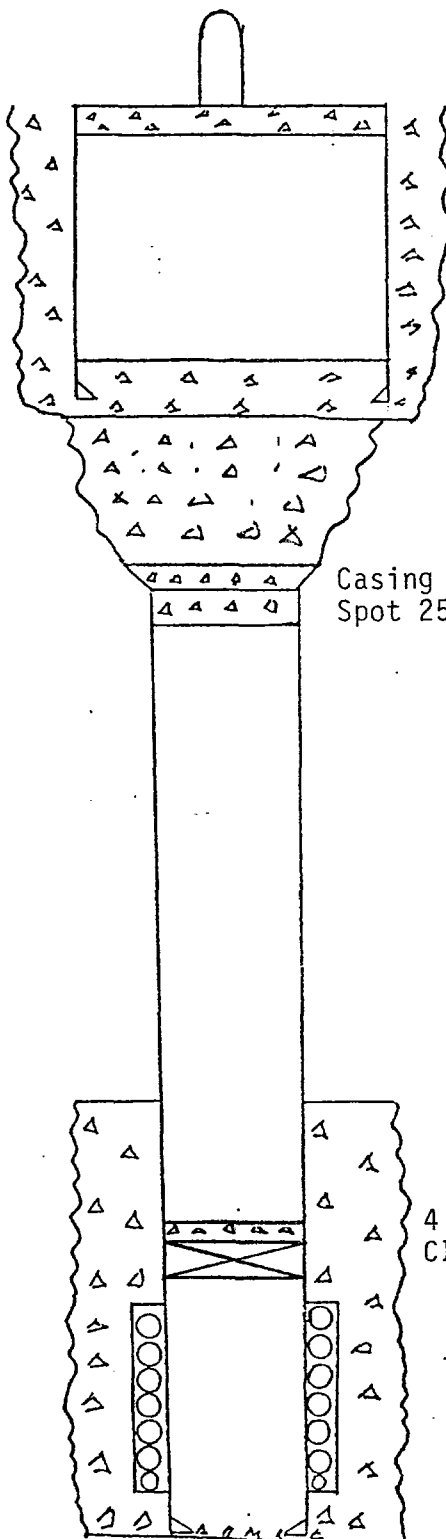
Plugging and Abandonment Data

Surface: 10 sx. plug.

Spot 50 sx. cmt. plug 185' - 416'.

Casing pulled from 326'.
Spot 25 sx. cmt. plug 967' - 1264'.

4 sx. cmt. plug TOC @ 4042'.
CIBP @ 4100'.



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NEW MEXICO OIL CONSERVATION COMMISSION

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C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. NM 5144
7. Unit Agreement Name
8. Farm or Lease Name State '4'
9. Well No. 1
10. Field and Pool, or Wildcat Chaveroo (San Andres)
12. County Chaves

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- 2. Name of Operator Champlin Petroleum Company 3. Address of Operator P. O. Box 7946, Midland, TX 79708-0946 4. Location of Well UNIT LETTER C 660 FEET FROM THE North LINE AND 1980 FEET FROM THE West LINE, SECTION 4 TOWNSHIP 8-S RANGE 33-E NMPM. 15. Elevation (Show whether DF, RT, GR, etc.) 4427 GR

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>
OTHER <input type="checkbox"/>	OTHER <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

RUSU 1/23/84 - RIH w/4-1/2" CIBP & set @ 4100' to abandon San Andres perfs 4228-4273' - RIH w/ 2-3/8" tbq OE to CIBP - disp hole w/10#/gal SW mud - spot 4 sx cmt on CIBP - TOC @ 4042' - POH w/tbq - ND csg hngr - RU csg jacks to pull 4-1/2" prod csg - csg parted @ 326' - screw back onto csg - GIH w/jet cutter on WL & cut csg @ 1200' - could not work csq free - csg parted @ 326' - POH w/WL & 326' 4-1/2" csg - GIH w/spear on 4-1/2" csg & stung into csq @ 326' - from stretch csg calc to be free @ 537' - release spear & POH w/csg - RIH w/2-3/8" tbq OE to 1264' - spot 25 sx plug in 4-1/2" csg 1264-901' - WOC - taq cmt @ 967 - PU tbq to 416' - spot 50 sx cmt plug in 4-1/2" csg from 416-185' to cover 4-1/2" csg stub @ 326' & 9-5/8" csg shoe @ 351' - spotted 10 sx cmt plug @ surface - cut off WH - install dry hole marker - will cover up pits when dried up - RDSU 1/26/84

TD 4418' - 4-1/2" prod csg set @ 4418' - 8-5/8" surface csg set @ 351' - 4092' of 4-1/2" prod. csg left in hole - all of 8-5/8" csg left in hole.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED <u>Paul Kautz</u>	TITLE <u>Production Engineer</u>	DATE <u>1/31/84</u>
Original signed by <u>Paul Kautz</u>	TITLE <u>OIL & GAS INSPECTOR</u>	DATE <u>FEB 29 1984</u>
APPROVED BY _____	TITLE _____	DATE _____
CONDITIONS OF APPROVAL, IF ANY:		

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM COMPANY

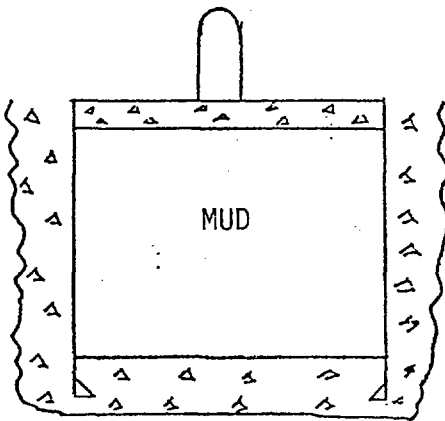
Lease Name: State 4

Well No.: 2

Location: 1980 FNL & 1980 FWL, Sec. 4, T8S, R33E

Drilling and Completion Data

368' 8-5/8", cmt. w/250 sx.
Circulate to surface.

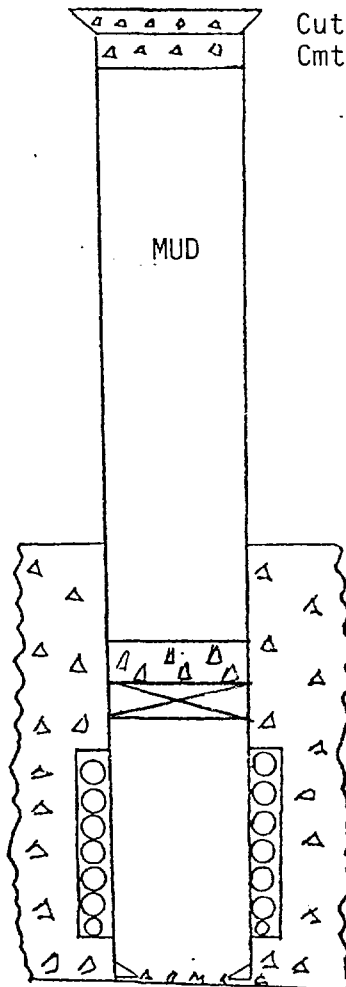


Plugging and Abandonment Data

Surface: 10 sx. cmt. plug.

Spot 70 sx. cmt. plug 300' - 424'.

4431' 4-1/2" cmt. w/325 sx.



Cut & pull csg. @ 1100'.
Cmt. plug 1051' - 1169'.

4 sx. cmt. plug TOC @ 4042'.
CIBP @ 4100'.

Perforations 4189' - 4405'.

4429' P.B.T.D.
4431' T.D.

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease	
State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. NM 5144	
7. Unit Agreement Name	
8. Farm or Lease Name State '4'	
9. Well No. 2	
10. Field and Pool, or Wildcat Chaveroo (San Andres)	
12. County Chaves	

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>
2. Name of Operator Champlin Petroleum Company
3. Address of Operator P. O. Box 7946 Midland, TX 79708-0946
4. Location of Well UNIT LETTER F, 1980 FEET FROM THE North LINE AND 1980 FEET FROM THE West LINE, SECTION 4 TOWNSHIP 8-S RANGE 33-E NMPM.
15. Elevation (Show whether DF, RT, GR, etc.) 4436 DF

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1/26/84 MI&RUSC - RIH w/CIBP on WL & set @ 4100' to abandon San Andres perms 4189'-4405' - TIH w/2 3/8" tbg OE - tag CIBP @ 4100' - disp hole w/10#/gal SW mud - spot 4 sx cmt plug on CIBP - TOC @ 4042' - TOH w/tbg - RU CSG jacks - free point est @ 1200' - RIH w/jet cutter - make cut @ 1100' - POH w/1100' 4 1/2" csg - RIH w/2 3/8" tbg to 1169' - spotted cmt plug 1169' - 992' to cover 4 1/2" csg stub - WOC - tag plug w/tbg @ 1051' - PU tbg to 424' - spot 70 sx plug 424-300' to cover 8 5/8" csg shoe @ 367' - WOC - tag cmt. @ 300' - POH w/tbg - set 10 sx surface plug in 8 5/8" csg - cut off WH - install dry hole marker - will cover pits when dried up - RD MOSU 1/31/84.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [Signature] TITLE Production Engineer DATE 2/6/84

APPROVED BY Original signed by Paul Kozitz TITLE OIL & GAS INSPECTOR DATE FEB 29 1984

CONDITIONS OF APPROVAL, IF ANY:

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: CHAMPLIN PETROLEUM COMPANY

Lease Name: State

Well No.: 4

Location: 1980 FNL & 660 FEL, Sec. 4, T8S, R33E

Drilling and Completion Data

1928' 8-5/8", cmt. w/850 sx.
Circulate to surface.

Plugging and Abandonment Data

Spot 10 sx. cement plug @ surface.

4504' 4-1/2", cmt. w/300 sx.

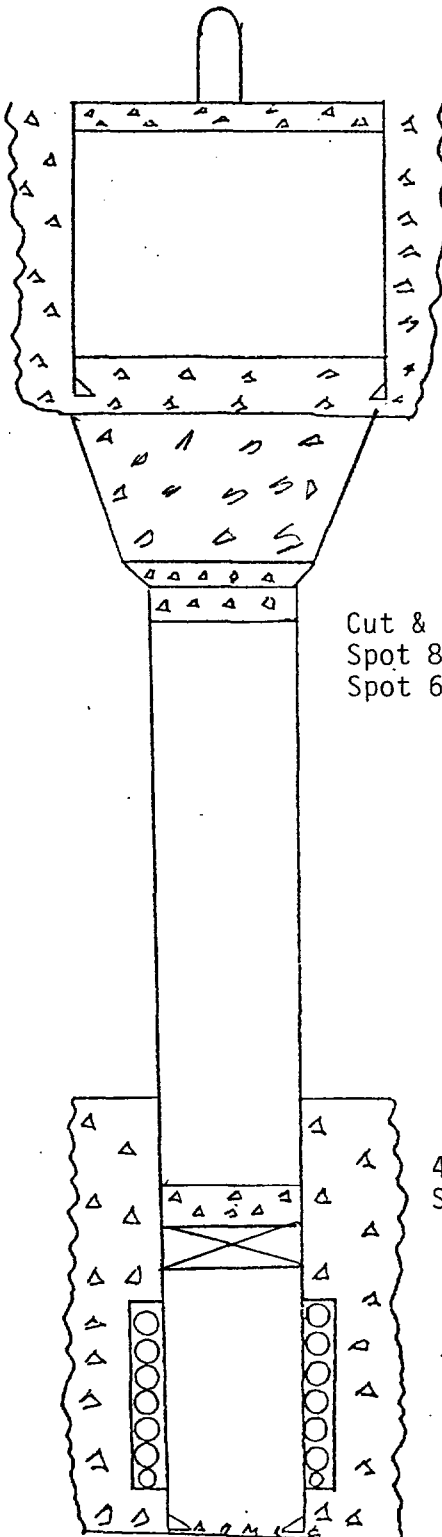
Cut & pulled 4-1/2" csg. @ 2000'.
Spot 80 sx. cement plug 1808' - 2010'.
Spot 60 sx. cement plug 2010' - 2060'.

Perforations 4245' - 4346'

4456' P.B.T.D.

4505' T.D.

4 sx. cement plug TOC @ 4039'.
Set CIBP @ 4100'.



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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.
NM 5144

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator Champlin Petroleum Company	8. Farm or Lease Name State '4'
3. Address of Operator P. O. Box 7946, Midland, TX 79708-0946	9. Well No. 4
4. Location of Well UNIT LETTER <u>H</u> , 1980 FEET FROM THE <u>North</u> LINE AND <u>660</u> FEET FROM THE <u>East</u> LINE, SECTION <u>4</u> TOWNSHIP <u>8-S</u> RANGE <u>33-E</u> NMPM.	10. Field and Pool, or Wildcat Chaveroo (San Andres)
15. Elevation (Show whether DF, RT, GR, etc.) 4408 GR	12. County Chaves

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐
OTHER ☐

PLUG AND ABANDON ☐
CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐
COMMENCE DRILLING OPNS. ☐
CASING TEST AND CEMENT JOB ☐
OTHER ☐
ALTERING CASING ☐
PLUG AND ABANDONMENT ☒

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1603.

RUSU 1/16/84 - RIH w/4-1/2" CIBP on WL & set @ 4100' to abandon San Andres perfs 4245-4346' - POH w/WL - GIH w/2-3/8" tbg to 4100' - displace hole w/10#/gal SW mud - spot 4 sx cmt plug on CIBP - TOC @ 4039' - POH w/tbg - ran free-point - made cut in 4-1/2" prod csg @ 2000' - POH w/2000' 4-1/2" prod csg - RIH w/2-3/8" tbg OE to 2060' - spot 60 sx cmt plug from 2060 - 1837' to cover 4-1/2" prod csg stub @ 2000' & 8-5/8" surface csg shoe @ 1928' - WOC - RIH w/WL to 2000' - could not tag cmt plug - POH w/WL - RIH w/2-3/8" tbg - tagged plug @ 2010' - spot 80 sx cmt plug 2010 - 1760' - WOC - tag cmt plug @ 1808' - POH w/tbg - spot 10 sx cmt plug @ surface - install dry hole marker - will cover up pits when dried up - RDSU 1/21/84
TD @ 4505' - 4-1/2" prod csg set @ 4504' - 2504' 4-1/2" prod csg left in hole - 8-5/8" surface csg set @ 1928' - all of surface csg left in hole.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [Signature]TITLE Production EngineerDATE 1/30/84APPROVED BY [Signature]TITLE OIL & GAS INSPECTORDATE OCT 30 1987

CONDITIONS OF APPROVAL, IF ANY:

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: WESTERN STATES PRODUCING COMPANY

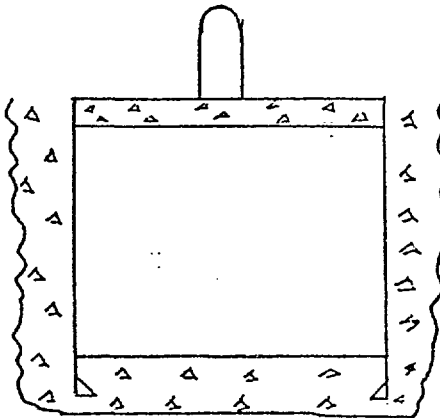
Lease Name: Arco State

Well No.: 1

Location: 1980 FNL & 1980 FEL, Sec. 4, T8S, R33E

Drilling and Completion Data

321' 8-5/8" csg., cmt. w/250
sx. Circulate to surface.

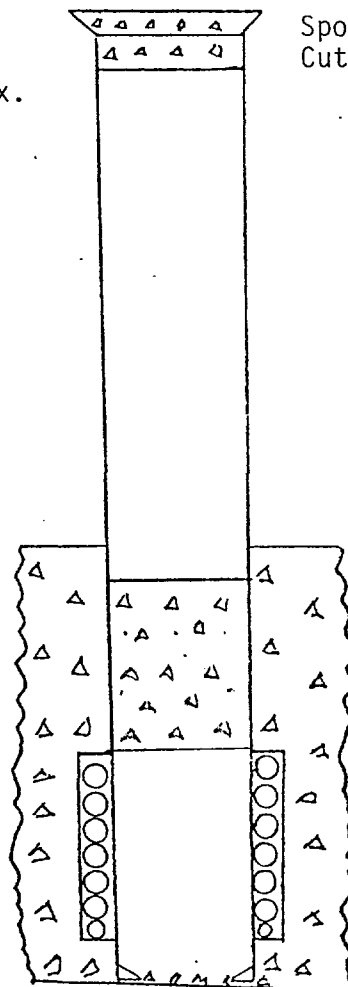


Plugging and Abandonment Data

Spot 10 sx. cmt. plug @ surface.

Spot 50 sx. cmt. plug 261' - 361'.

4415' 4-1/2" csg., cmt. w/150 sx.



Spot 25 sx. cmt. plug @ 2000'.
Cut & pulled 4-1/2" csg. @ 2500'.

Perforations 4237' - 4379'

4415' T.D.

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)	
1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <input type="checkbox"/>	7. Unit Agreement Name -----
2. Name of Operator Western States Producing Company	8. Farm or Lease Name Arco-State
3. Address of Operator 900 Building of the Southwest Midland, Texas 79701	9. Well No. 1
4. Location of Well UNIT LETTER <u>G</u> <u>1980</u> FEET FROM THE <u>north</u> LINE AND <u>1980</u> FEET FROM THE <u>east</u> LINE, SECTION <u>4</u> TOWNSHIP <u>8-S</u> RANGE <u>33-E</u> NMPM.	10. Field and Pool, or Wildcat Chaveroo
15. Elevation (Show whether DF, RT, GR, etc.) 4416' GL	12. County Chaves

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. Set 25 sack cement plug from 4238' back to 3970' in 4 1/2" casing.
2. Cut off 4 1/2" casing at 2500'.
3. Set 25 sack cement plug at 2000'.
4. Set 50 sack cement plug from 381' back to 261'.
5. Set 10 sack cement plug at surface.
6. Removed head and welded on plate.
7. Cleaned location and set marker.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Dr. C. Bennett TITLE Operations Manager DATE 4/29/72

APPROVED BY John W. Runyan TITLE Geologist DATE FEB 22 1972

CONDITIONS OF APPROVAL, IF ANY:

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: C & K PETROLEUM

Lease Name: Arco State

Well No.: 1

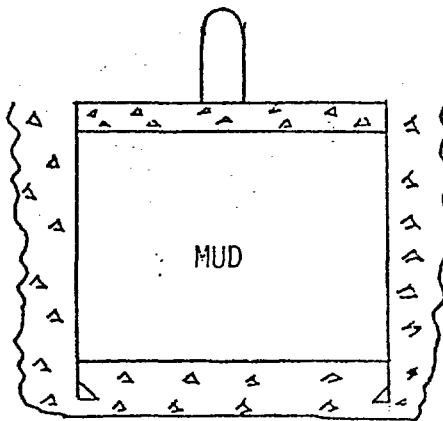
Location: 2310 FSL & 1980 FEL, Sec. 4, T8S, R33E

Drilling and Completion Data

374' 8-5/8", cement w/250 sx.
Circulate to surface.

Plugging and Abandonment Data

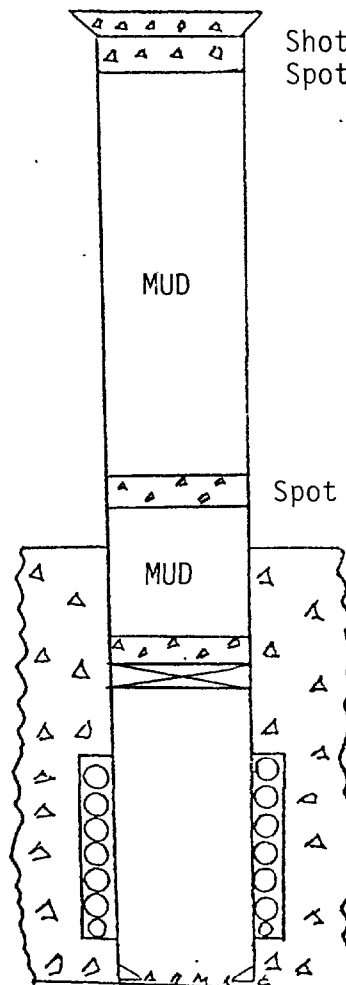
Spot 20 sx. cement plug from surface - 61



Spot 50 sx. cement plug 296' - 432'.

4420' 4-1/2", cement w/375 sx.

Shot & pulled 4-1/2" @ 973'.
Spot 40 sx. cement plug 869' - 1027'.



Spot 50 sx. cement plug 1825' - 2012'.

Set CIBP @ 3750'.
Top w/40' cement.

Perforations 4230' - 4402'

4420' T.D.

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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No.
OG - 2273

SUNDRY NOTICES AND REPORTS ON WELLS <small>(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)</small>	
1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator C & K Petroleum, Inc.	8. Farm or Lease Name Arco State
3. Address of Operator P.O. Drawer 3546, Midland, TX 79702	9. Well No. 1
4. Location of Well UNIT LETTER J 2310 FEET FROM THE South LINE AND 1980 FEET FROM THE East LINE, SECTION 4 TOWNSHIP 8S RANGE 33E NMPM.	10. Field and Pool, or Wildcat Chaveroo, SA
15. Elevation (Show whether DF, RT, GR, etc.) 4418 GR	12. County Chaves

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>
OTHER <input type="checkbox"/>	OTHER <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

7/17/81 - Rig up C.E. Knight casing pulling unit. Set cast iron bridge plug at 3750' and topped with 40' cement with wire line dump bailer. Filled hole with 10# mud-laden brine. Shot 4-1/2" casing at 973'.

Spotted 50 sack plug 2012 - 1825
Spotted 40 sack plug 1027 - 869
Spotted 50 sack plug 432 - 296
Spotted 20 sack plug 61 - Surface

Installed dry hole marker and cleaned location.

Casing left in hole: 374' of 8-5/8"
3447' of 4-1/2"

Job complete 7/20/81

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED <u>A. Linnelle Zeeck</u>	TITLE <u>Administrative Supervisor</u>	DATE <u>7/24/81</u>
APPROVED BY <u>Al. Stachman</u>	TITLE <u>OIL & GAS INSPECTOR</u>	DATE <u>MAR 18 1982</u>
CONDITIONS OF APPROVAL, IF ANY:		

PLUGGING DIAGRAM

Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: YATES PETROLEUM CORPORATION

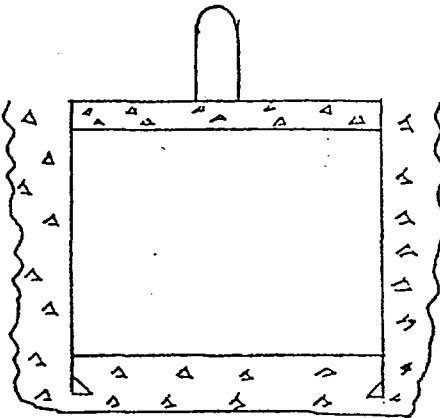
Lease Name: Sun "UW" Federal

Well No.: 1

Location: 660' FNL & 660' FEL, Sec. 10, T8S, R33E

Drilling and Completion Data

365' 8-5/8" csg., cmt. w/250
sx. Circulate to surface.

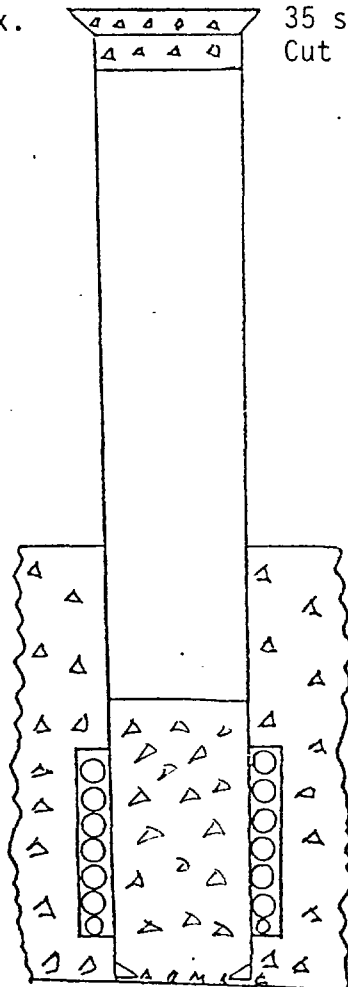


Plugging and Abandonment Data

Surface: 10 sx. cmt. plug

35 sx. cmt. plug @ 350'.

4459' 4-1/2" csg., cmt. w/200 sx.



35 sx. cmt. plug @ 1691'.
Cut & pull 1691' 4-1/2" csg.

Spot 25 sx. cmt. @ 4090' - 4397'.

Perforations 4240' - 4366'

4430' P.B.T.D.
4461' T.D.

NM OIL CONS. COMMISSION
Drawer DD
Artesia, NM 88210

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other ☐ P&A

2. NAME OF OPERATOR
Yates Petroleum Corporation

3. ADDRESS OF OPERATOR
207 South 4th St., Artesia, NM 88210

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 660 FNL & 660 FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO: SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF	<input type="checkbox"/>	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	<input type="checkbox"/>
CHANGE ZONES	<input type="checkbox"/>	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(other)		

5. LEASE NM 31211
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME Sun "UW" Federal
9. WELL NO. 1
10. FIELD OR WILDCAT NAME Chavaroo
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Unit A, Sec. 10-T8S-R33E
12. COUNTY OR PARISH Chaves 13. STATE NM
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD) 4385' DF

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this well.)

Well plugged and abandoned as follows:

Plug #1: 35 sacks Class "C" at 1691'.
Plug #2: 35 sacks Class "C" at 350'.
Plug #3: 10 sacks Class "C" at surface.

Verbal permission for plugging obtained from Mr. George Stewart, Minerals Management Service, Roswell on 8-23-82.

Regulation abandonment marker will be installed. Location will be restored in accordance with MMS-BLM requirements.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Peter W. Chester TITLE Engineering Secty DATE 8-25-82

(This space for Federal or State office use)

APPROVED BY PETER W. CHESTER
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____ DATE _____

MAR 3 1986

BUREAU OF LAND MANAGEMENT
ROSWELL RESOURCE AREA

*See Instructions on Reverse Side

RECEIVED

AUG 26 1982

OIL & GAS
MINERALS MGMT. SERVICE
ROSWELL, NEW MEXICO

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: SUNRAY OIL COMPANY

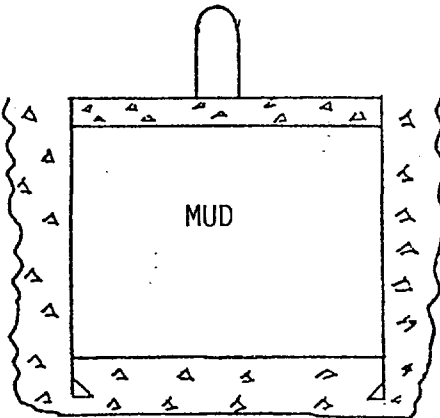
Lease Name: NM "X" FEDERAL

Well No.: 2

Location: 1980' FNL & 660' FEL, Sec. 10, T8S, R33E

Drilling and Completion Data

341' 8-5/8" csg., cmt. w/200
sx. Circulate to surface.

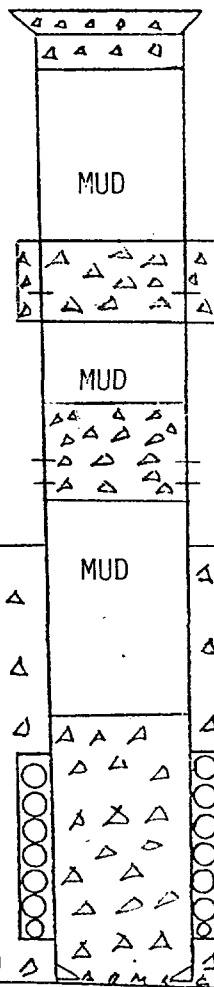


Plugging and Abandonment Data

Surface: spot 30 sx. cmt.

Spot 35 sx. cmt. plug @ 300' - 400'.

4454' 4-1/2" csg., cmt. w/200 sx.



Spot 50 sx. cmt plug @ 880' - 1070'.
Shot & pulled csg. @ 1021'.

Squeezed 50 sx. cmt. displaced to 1600'.
Shot csg. @ 1750'. Could not pull.

Squeeze 50 sx. cmt. TOC 2150'
Shot csg. @ 2426', 2688'. Not able to pull.

Spot 15 sx. cmt. plug @ 4400'. TOC 4220'.

Perforations 4340' - 4357'

4375' P.B.T.D.

4460' T.D.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIP!
(Other instructions
reverse side)TE-
re-Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

N. M. 025576

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

N. M. "X" Federal

9. WELL NO.

2

10. FIELD AND POOL, OR WILDCAT

Chaveroo

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

10 - 8S - 33E

12. COUNTY OR PARISH

Chaves

13. STATE

New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

Sun Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 1861, Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)

At surface

Unit Letter H, 1980' from the North Line and 660' from
the East Line, Section 10, Township 8-S, Range 33-E

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

4382 D.F.

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)*

1. MIRU Pool Company 9-18-73
2. Pulled rods and tubing 9-18-73
3. Ran 2" tubing to 4400' and loaded hole with 9.5 lb. mud 9-19-73
4. Spotted 15 sacks cement, plug @ 4400' to 4220' Pulled out hole & weld on casing nipple. 9-19-73
5. Shot casing @ 2688, 2426 would not pull. 9-20-73
6. Pumped 50 sacks cement down 4 1/2" casing w/CBTC plug to 2150' shut in 1 hour @ 500 psi, 9-21-73
7. Shot casing @ 1708', could not pull casing 9-21-73
8. Spotted 50 sack cement with sliper plug, Displaced to 1600' 9-21-73
9. Shot casing @ 1021' pulled and laid down 32 joints 4 1/2" casing, 9-21-73
10. Ran tubing to 1070' and spotted 50 sacks cement, plug @ 1070' to 880'. 9-21-73
11. Spotted 35 sacks cement, plug @ 400' to 300' 9-21-73
12. Spotted 30 sacks cement in top 8-5/8" casing, weld cap on 8-5/8" casing and welded on permanent marker.

18. I hereby certify that the foregoing is true and correct

SIGNED

Charles Gray

TITLE

Peroration Clerk

DATE

10-15-73

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

*See Instructions on Reverse Side

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: SUNRAY OIL COMPANY

Lease Name: NM "X" FEDERAL

Well No.: 3

Location: 660' FNL & 1980' FEL, Sec. 10, T8S, R33E

Drilling and Completion Data

354' 8-5/8" csg., cmt w/250
sx. Circulate to surface.

Plugging and Abandonment Data

Surface: spot 6 sx. cement.

Spot 35 sx. cmt. @ 320' - 420'.

4449' 5-1/2" csg., cmt. w/200 sx.

Spot 50 sx. cmt. @ 979' - 1179'.
Shot & pulled csg. @ 1179'.

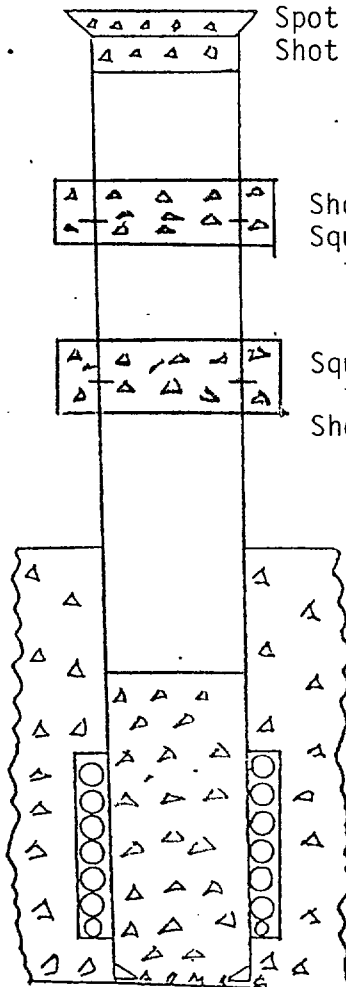
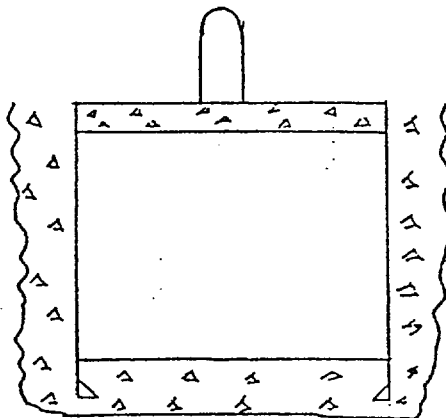
Shot csg. @ 1665'. Could not free.
Squeeze perfs @ 1665' w/60 sx. cmt; disp.
to 1500'.

Squeezed perfs @ 2410' w/60 sx. cmt; disp.
to 2300'.
Shot csg. @ 2410'. Could not free.

Spot 25 sx. cmt. @ 4090' - 4397'.

Perforations 4243' - 4356'

4414' P.B.T.D.
4450' T.D.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPI
(Other instructions
verse side)TE-
re-Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

N.M. 025576

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

N.M. "X" Federal

9. WELL NO.

3

10. FIELD AND POOL, OR WILDCAT

Chaveroo

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

10 - 8S - 33E

12. COUNTY OR PARISH

Chaves

13. STATE

New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

Sun Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 1861, Midland, Texas 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surfaceUnit Letter B, 660' from the North Line and 1980' from
the East Line, Section 10, Township 8-S, Range 33-E

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

4395 K.B.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) ☐PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☐SHOOTING OR ACIDIZING ☐(Other) ☐REPAIRING WELL ☐ALTERING CASING ☐ABANDONMENT* ☒(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)*

1. MIRU Pool Company 9-28-73
2. Started in hole w/tubing could not get first join in paraffin 9-28-73
3. Lea-Mex hotwatered well down casing IP-4PW/150 BHW. Ran tubing to 4230'. 9-28-73
4. Spotted 25 sacks cement, plug @ 4397' to 4090' 9-29-73
5. Loaded hole w/mud, pulled tubing, pulled on casing and shot @ 2410 could not pull free. 9-29-73
6. Squeeze holes @ 2410' w/60 sacks cement, followed w/rubber plug Displaced to 2300'. 9-29-73
7. Shot casing @ 1665, squeeze w/60 sacks cement, Displaced to 1500' 9-29-73
8. Shot casing @ 1179', laid down 6 joints 5½" casing. 9-29-73
9. Finished laying down 5½" casing, Ran tubing to 1179'. 10-2-73
10. Spotted 50 sacks cement, plug @ 1179' to 979'. 10-3-73
11. Spotted 35 sacks cement, plug @ 420' to 320' Pulled out of hole.
12. Spotted 6 sacks cement in top of 8-5/8" casing. Weld cap on 8-5/8" casing and placed permanent marker. 10-3-73

18. I hereby certify that the foregoing is true and correct

SIGNED

Charles Gray

TITLE

Proration Clerk

DATE

10-15-73

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

*See Instructions on Reverse Side

PLUGGING DIAGRAM.
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: SUNRAY OIL COMPANY

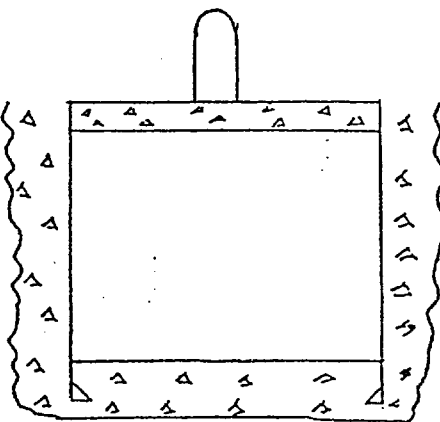
Lease Name: NM "X" FEDERAL

Well No.: 5

Location: 1980' FNL & 1980' FEL, Sec. 10, T8S, R33E

Drilling and Completion Data

347' 8-5/8" csg., cmt. w/200
sx. Circulate to surface.

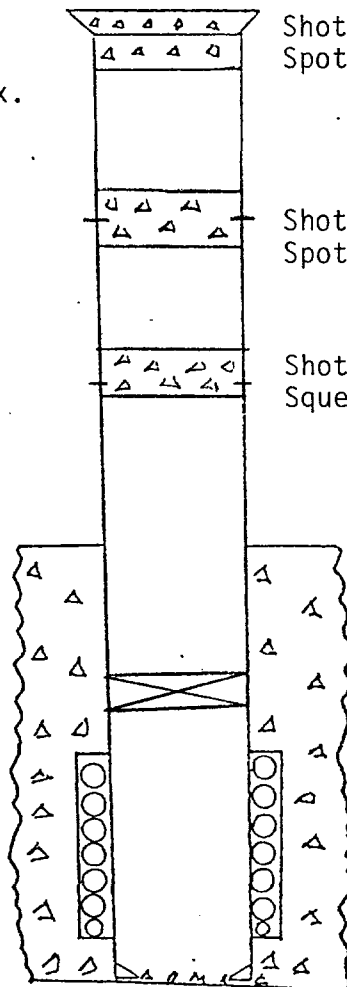


Plugging and Abandonment Data

Surface: spot 6 sx. cmt.

Spot 35 sx. cmt. @ 400'.

4447' 4-1/2" csg., cmt. w/200 sx.



Shot & pulled csg. @ 1246'.
Spot 50 sx. cmt. @ 1300'.

Shot csg. @ 1639'. Could not pull.
Spot 50 sx. cmt; displace to 1550'.

Shot csg. @ 2396'. Could not pull.
Squeeze 50 sx. cmt; displace to 2250'.

CIBP @ 4248'.

Perforations 4271' - 4358'

4426' P.B.T.D.
4448' T.D.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPL
(Other instructions
verse side)E-
re-Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

N.M. 025576

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

N. M. "X" Federal

9. WELL NO.

5

10. FIELD AND POOL, OR WILDCAT

Chaveroo

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

10-8S-33E

12. COUNTY OR PARISH

Chaves

13. STATE

New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	
2. NAME OF OPERATOR Sun Oil Company	
3. ADDRESS OF OPERATOR P. O. Box 1861, Midland, Texas 79701	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface Unit letter G, 1980' From the North Line, 1980' from the East Line, Section 10, Township 8-S, Range 33-E	
14. PERMIT NO. Blanket	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 4390 G.R.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

1. MIRU Pool Company 10-5-73.
2. Pulled tubing, Ran CI BP on WL to 4248' 10-10-73.
3. Ran tubing to 4200', circulated hole w/9.5 lb. Mud 10-11-73.
4. Pulled tubing, weld on pull nipple, shot casing @ 2396' would not pull. 10-11-73.
5. Squeeze 50 sacks cement & dip to 2250' w/wiper plug. 10-11-73.
6. Shot casing @ 1639' could not pull.
7. Pump 50 sacks cement and displaced to 1550'. 10-11-73
8. Shot casing @ 1246' pulled and laid down casing. Ran tubing to 1500'. 10-11-73
9. Pull tubing to 1300' pump 50 sacks cement plug. 10-12-73
10. Pull tubing to 400' pump 35 sacks cement plug. 10-12-73
11. Pull tubing to 30' pump 6 sacks cement plug to surface. 10-12-73
12. Weld cap on 8-5/8" casing and placed permanent marker 10-12-73.

18. I hereby certify that the foregoing is true and correct

SIGNED

Charles Gray

TITLE

Proration Clerk

DATE

10/15/73

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

*See Instructions on Reverse Side

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: HUMBLE OIL & REFINING CO.
Lease Name: Bundy Federal
Well No.: 1
Location: 665' FWL & 1986' FNL, Sec. 10, T8S, R33E

Drilling and Completion Data

402' 8-5/8" csg., cmt. w/200
sx. Circulate to surface.

Plugging and Abandonment Data

Surface: 10 sx. cmt. plug.

Spot 35 sx. cmt. plug @ 450'.

4439' 4-1/2" csg., cmt. w/380 sx.

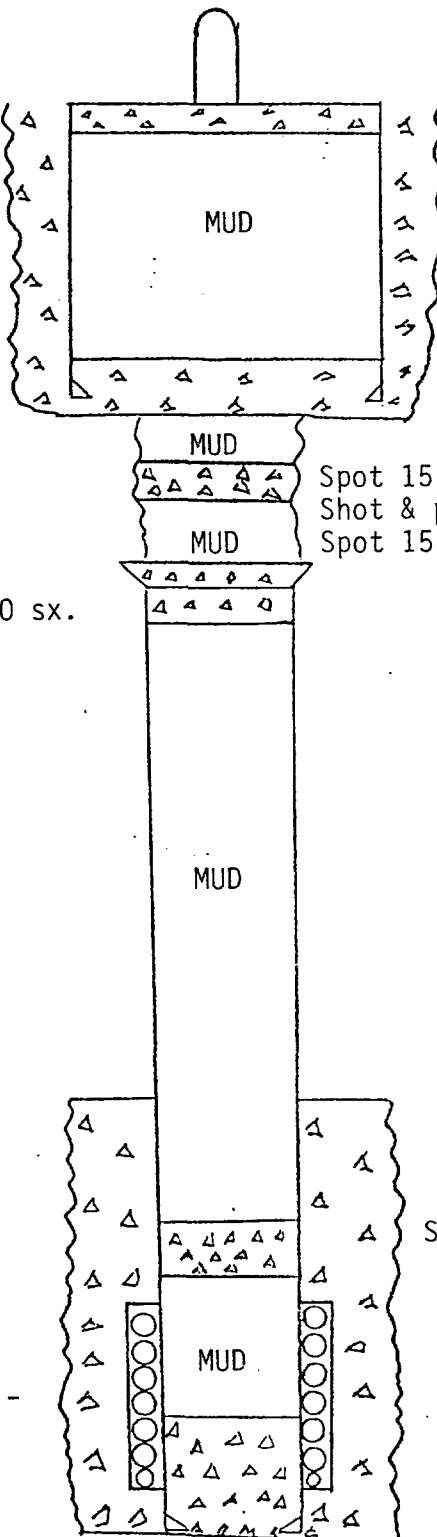
Spot 15 sx. cmt. plug @ 2100'.
Shot & pulled csg. @ 3235'.
Spot 15 sx. cmt. plug @ 3235'.

Spot 20 sx. cmt. plug @ 4310'.

Perforations 4252' - 4382'

Squeezed perforations 4370' -
4382' w/35 sx. cmt.

4416' P.B.T.D.
4440' T.D.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)Form approved.
Budget Bureau No. 42 R1421.

5. LEASE DESIGNATION AND SERIAL NO.

NM 027065

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Bundy Federal

9. WELL NO.

10. FIELD AND POOL, OR WILDCAT

Chaveroo (S. A.)

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 10, T8S, R33E

12. COUNTY OR PARISH

Chaves

13. STATE

N. M.

SUNDRY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

Humble Oil & Refining Company

3. ADDRESS OF OPERATOR

P. O. Box 1600, Midland, Texas

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*

See also space 17 below.)

At surface

665' FWL, 1,986' FNL

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, OR, etc.)

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANS

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other)

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)*

MIRU Hobbs Pipe & Supply on 1-20-67. Spotted 20 sx cmt. plug @ 4310 and filled hole with mud. Pulled tbg & removed wellhead. Welded 4 1/2" collar on csg. Rigged up csg pullers. Shot 4 1/2" csg. @ 3,390' and 3,235'. Worked csg loose and pulled 3,235' of 4 1/2" csg. leaving 1,204' in hole. Ran tbg and spotted 15 sx cmt plug @ 3,235', spotted 15 sx cmt plug @ 2,100', spotted 35 sx cmt plug @ 450', spotted 10 sx cement plug at surface. Installed dry hole marker, filled cellar and cleaned location. Rig down unit. Well P & A 1-23-67.

Form 9-330, well record, filed in December 1966. Location clean and ready for inspection.

18. I hereby certify that the foregoing is true and correct

SIGNED

D. L. Clemmer

TITLE Agent

DATE 3-2-67

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

APPROVED

J. L. GORDON
1967

*See Instructions on Reverse Side

Page 48 of 52

J. L. GORDON
ACTING DISTRICT ENGINEER

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: GLENN PETROLEUM CORPORATION

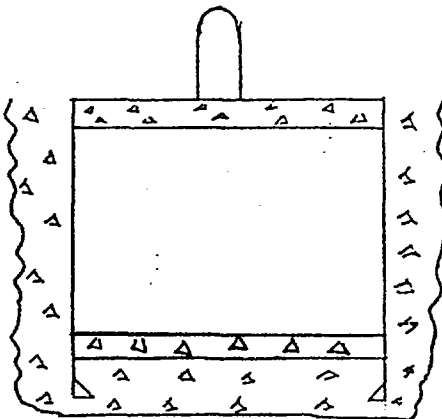
Lease Name: C. H. Hale

Well No.: 1

Location: 2310 FEL & 330 FNL, Sec. 11, T8S, R33E

Drilling and Completion Data

404' 8-5/8" csg., cmt. w/225
sx. Circulate to surface.

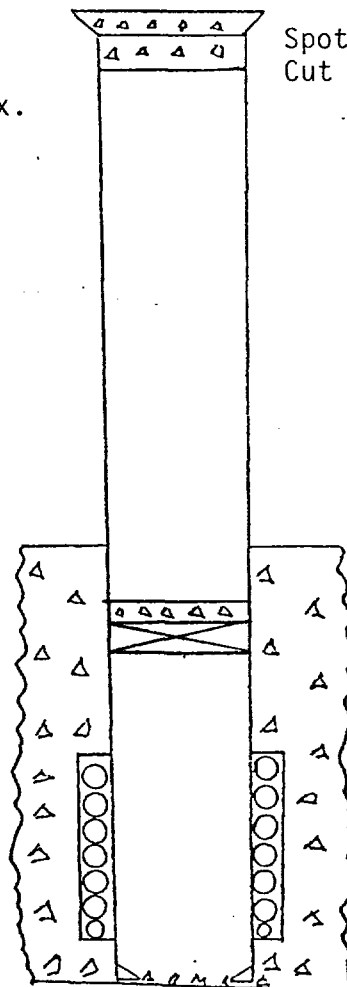


Plugging and Abandonment Data

Spot 10 sx. cmt. plug @ surface.

Spot 20 sx. cmt. plug @ 375'.

4400' 4-1/2" csg., cmt. w/450 sx.



Spot 20 sx. cmt. plug 500' - 550'.
Cut & pulled 4-1/2" csg. @ 525'.

Spot 2 sx. cmt. on top of CIBP.
Set CIBP @ 3620'.

Perforations 4261' - 4354'.

4400' T.D.

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LE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)		5a. Indicate Type of Lease State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
		5. State Oil & Gas Lease No.
		7. Unit Agreement Name none
		8. Farm or Lease Name C.H. Hale
		9. Well No. 1
		10. Field and Pool, or Wildcat Chaveroo San And.
		12. County Chaves
15. Elevation (Show whether DF, RT, GR, etc.) 4361 Gr.		

6. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>
OTHER <input type="checkbox"/>	OTHER <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>

7. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

5-15-71: Set cast iron wire line bridge plug at 3620'. Put 2 sack cement cap on CIBP with dump bailer. Cut off 4 1/2" casing at 525'. Pull casing. Set 20 sack cement plug 550'-500'. Set 20 sack plug at 375". Set 10 sack plug at surface. Welded on cap on surface and set up 4" pipe monument marker. Removed surface equipment.

5-19-71: Covered all pits.

I, I hereby certify that the information above is true and complete to the best of my knowledge and belief.		
SIGNED <u>Michael F. Hale</u>	TITLE <u>President</u>	DATE <u>8-14-71</u>
PROVED BY <u>[Signature]</u>	TITLE <u>COMMISSIONER DISTRICT</u>	DATE <u>AUG 23 1971</u>
CONDITIONS OF APPROVAL, IF ANY:		

PLUGGING DIAGRAM
Proposed Haley Chaveroo San Andres Unit
Roosevelt & Chaves Counties, New Mexico

Company Name: ROBERT N. ENFIELD

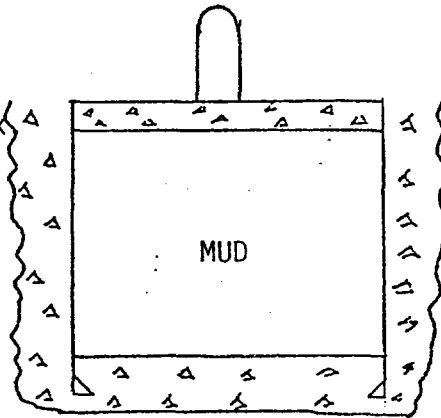
Lease Name: C. H. Hale

Well No.: 1

Location: 330FNL & 1980 FWL, Sec. 11, T8S, R33E

Drilling and Completion Data

411' 8-5/8" csg., cmt w/225 sx
Circulate to surface

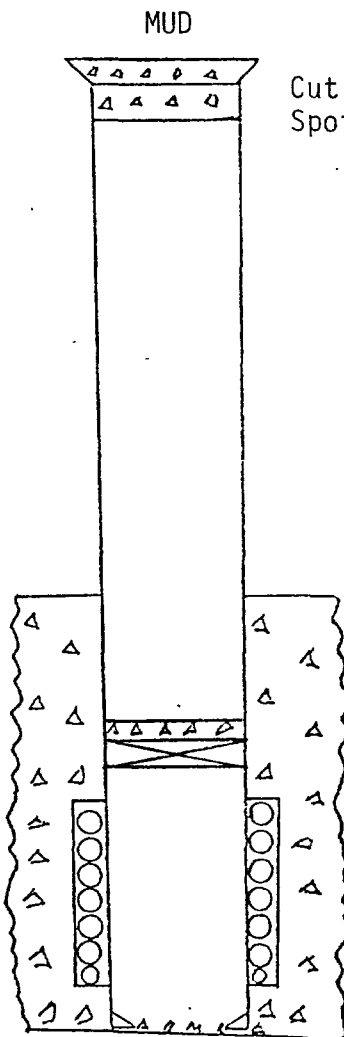


Plugging and Abandonment Data

10 sx. cement plug @ surface.

Spot 100' cement plug from 8'5/8" csg.
shoe to 457'.

4365' 4-1/2" csg., cmt w/350 sx.



Cut & pull 4-1/2" csg. @ 987'.

Spot 100' cement @ 4-1/2" csg. stub @ 987'.

Set CIBP @ 4200'. Spot 3 sx. cement.

Perforations 4242' - 4348'

4353' P.B.T.D.

4365' T.D.

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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)	
1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator ROBERT N. ENFIELD	8. Farm or Lease Name C. H. HALE
3. Address of Operator P. O. BOX 2431, SANTA FE, NEW MEXICO 87501	9. Well No. 1
4. Location of Well UNIT LETTER C 330 FEET FROM THE North LINE AND 1980 FEET FROM THE West LINE, SECTION 11 TOWNSHIP 8S RANGE 33E NMPM.	10. Field and Pool, or Wildcat Chavaroo
15. Elevation (Show whether DF, RT, GR, etc.) 4384 DF	12. County Chaves

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. Cast iron bridge plug set at 4,200'. 3 sx. cement set on top of plug
2. Cut and pulled 4-1/2" at 987'.
3. 100' cement plug at stub of 4-1/2" at 987'
4. Mud from stub of 4-1/2' to surface
5. 100' cement plug at surface pipe shoe 457'
6. 10 sx. plug at surface
7. Surface marker
8. Pad, pit and roads filled and ripped.

Work finished as of 4/15/75

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Robert N. Enfield TITLE OPERATOR DATE 5/6/75

APPROVED BY John W. Runyan TITLE Geologist DATE 5/11/75

CONDITIONS OF APPROVAL, IF ANY:

PERMIAN

Treating Chemicals, Inc.

P. O. BOX 815
TATUM, NM 88267
PHONE (505) 398-4111

August 13, 1988

Murphy Operating Corporation
P. O. Drawer 2648
Roswell, NM 88202-2648

Subject: Compatibility of fresh and produced waters from State BF -
produced, Tucker and State BF, Moore and State BF, Howard
and State BF, Tucker #2 and State BF, and fresh water
samples.

Gentlemen:

We have ran analysis on produced, fresh, and comingled waters from
the above mentioned leases (see attached copies.)

We at Permian Treating Chemicals, Inc. feel that these waters injected
seperately or comingled are very compatible.

If we can be of any further assistance, please call myself or Mr. Gale
Blackwell at anytime.

Sincerely,



David Nailon
Permian Treating Chemicals, Inc.

PERMIAN

Treating Chemicals, Inc.

P.O. BOX 728
LOVINGTON, NM 88260
PHONE (505) 396-5674

WATER ANALYSIS REPORT

Company Murphy Operating Corporation Date Sampled 8-13-88
Field Chaveroo County Chaves
Lease Unit B & Howard Sec 3, T7S, R32E State NM
Well State BF Sec 3, T8S, R33E Formation San Andres & FW
Type of Water Comingled Water, B/D
Sampling Point Sampled By Nailon

DISSOLVED SOLIDS

CATIONS

	mg/l	meq/l
Sodium, Na+(Calc)	27186	23
Calcium, Ca++	10280	20
Magnesium, Mg++	3475	12.2
Barium, Ba++		68.7
Iron, Fe (Total)		

OTHER PROPERTIES

pH 6.0
Specific Gravity 1.07
H₂S Positive
Total Dissolved Solids 111361
Total Hardness 40000

ANIONS

Chloride, Cl-	70000	35.5
Sulfate, So ₄ =	275	48
Carbonate, Co ₃ =		30
Bicarbonate, HCo ₃ -	195	61

Remarks and Recommendations

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO₃ Scaling Tendency

SAMPLE

Company Murphy

Address _____

Sample Comingled - Howard + State SF

Sample Test No. _____

Sample Date 8-13-88

Submitted By Nailo

Field _____

$$S. I. = pH - pCa - pAlk - K$$

where S. I. = stability index

pH = pH as measured on fresh sample

pCa = negative logarithm of calcium concentration

pAlk = negative logarithm of total alkalinity

K = constant, depends upon temperature and salt content

$$pH = \underline{6.0} \quad pCa = \underline{.6} \quad pAlk = \underline{2.5}$$

CALCULATION OF IONIC STRENGTH AND K VALUE

Na	(<u>.27186</u>) X (2.2 X 10 ⁻⁵) =	<u>.5980</u>
Ca	(<u>.10280</u>) X (5.0 X 10 ⁻⁵) =	<u>.5140</u>
Mg	(<u>.03425</u>) X (8.2 X 10 ⁻⁵) =	<u>.2849</u>
Cl	(<u>.70000</u>) X (1.4 X 10 ⁻⁵) =	<u>.9800</u>
HCO ₃	(<u>.00195</u>) X (0.8 X 10 ⁻⁵) =	<u>.0015</u>
SO ₄	(<u>.00225</u>) X (2.1 X 10 ⁻⁵) =	<u>.0057</u>

$$\text{TOTAL IONIC STRENGTH} = \underline{2.3}$$

$$K = \underline{3.3} \quad @ \quad \underline{80} \quad ^\circ\text{F.}$$

$$K = \underline{2.7} \quad @ \quad \underline{120} \quad ^\circ\text{F.}$$

$$SI \text{ at } (\underline{80})^\circ = (\underline{6.0}) - (\underline{.6}) - (\underline{2.5}) - (\underline{3.3}) \text{ or } \underline{-.4}$$

$$SI \text{ at } (\underline{120})^\circ = (\underline{6.0}) - (\underline{.6}) - (\underline{2.5}) - (\underline{2.7}) \text{ or } \underline{-.2}$$

$$SI = 0 \text{ or water is relatively stable at } \underline{160} \quad ^\circ\text{F.}$$

Remarks: _____

PERMIAN

Treating Chemicals, Inc.

P. O. BOX 728
LOVINGTON, NM 88260
PHONE (505) 396-5674

WATER ANALYSIS REPORT

Company Murphy Operating Corporation Date Sampled 8-10-88
Field Moore County
Lease Sec 25, T6S, R32E State NM
Well State BF Sec 3, T 8S, R 33E Formation San Andres & FW
Type of Water Comingled Water, B/D
Sampling Point Well Sampled By Nailon

DISSOLVED SOLIDS

CATIONS

	mg/l	meq/l
Sodium, Na+(Calc)	28198	23
Calcium, Ca++	11360	20
Magnesium, Mg++	3305	12.2
Barium, Ba++		68.7
Iron, Fe (Total)		

ANIONS

Chloride, Cl-	73000	35.5
Sulfate, So ₄ ⁼	300	48
Carbonate, Co ₃ ⁼		30
Bicarbonate, HCo ₃ ⁻	159	61

OTHER PROPERTIES

pH 5.9
Specific Gravity 1.08
H₂S Positive
Total Dissolved Solids 116322
Total Hardness 42000

Remarks and Recommendations

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO₃ Scaling Tendency

SAMPLE

Company Murphy Operating

Address _____

Sample Combined - Moore + STBF

Sample Test No. _____

Sample Date 8-10-88

Submitted By Dailan

Field _____

$$S. I. = pH - pCa - pAlk - K$$

where S. I. = stability index

pH = pH as measured on fresh sample

pCa = negative logarithm of calcium concentration

pAlk = negative logarithm of total alkalinity

K = constant, depends upon temperature and salt content

$$pH = 5.9 \quad pCa = .5 \quad pAlk = 2.6$$

CALCULATION OF IONIC STRENGTH AND K VALUE

$$Na \quad (.28198) \times (2.2 \times 10^{-5}) = .6203$$

$$Ca \quad (.11360) \times (5.0 \times 10^{-5}) = .5680$$

$$Mg \quad (.03305) \times (8.2 \times 10^{-5}) = .2710$$

$$Cl \quad (.73000) \times (1.4 \times 10^{-5}) = 1.0220$$

$$HCO_3 \quad (.00159) \times (0.8 \times 10^{-5}) = .0012$$

$$SO_4 \quad (.00300) \times (2.1 \times 10^{-5}) = .0063$$

$$TOTAL \ IONIC \ STRENGTH = 2.5$$

$$K = 3.1 \quad @ \quad 80 \quad ^\circ F.$$

$$K = 2.7 \quad @ \quad 120 \quad ^\circ F.$$

$$SI \text{ at } (80)^\circ = (5.9) - (.5) - (2.6) - (3.1) \text{ or } -.3$$

$$SI \text{ at } (120)^\circ = (5.9) - (.5) - (2.6) - (2.7) \text{ or } +1.6$$

$$SI = 0 \text{ or water is relatively stable at } 110 \quad ^\circ F.$$

Remarks: _____

PERMIAN

Treating Chemicals, Inc.

P. O. BOX 728
LOVINGTON, NM 88260
PHONE (505) 396-5674

WATER ANALYSIS REPORT

Company Murphy Operating Corporation Date Sampled 8-13-88
Field Tucker County Curry
Lease Sec 25, T 6S, R 32E State NM
Well St BF SWD Sec 3, T 8S, R 33E Formation San Andres & FW
Type of Water Comingled Water, B/D
Sampling Point Well Sampled By Nailon

DISSOLVED SOLIDS

CATIONS	mg/l	meq/l
Sodium, Na+(Calc)	31211	÷ 23 1357
Calcium, Ca++	12640	÷ 20 632
Magnesium, Mg++	2989	÷ 12.2 245
Barium, Ba++		÷ 68.7
Iron, Fe (Total)		

OTHER PROPERTIES

pH 6.0
Specific Gravity 1.09
H₂S Positive
Total Dissolved Solids 126335
Total Hardness 43900

ANIONS

Chloride, Cl-	79000	÷ 35.5 2225
Sulfate, So ₄ =	300	÷ 48 6
Carbonate, Co ₃ =		÷ 30
Bicarbonate, HCo ₃ -	195	÷ 61 3

Remarks and Recommendations

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO₃ Scaling Tendency

SAMPLE

Sample Test No. _____

Company Murphy

Sample Date 8-13-88

Address _____

Submitted By W. T. W.

Sample Tucker & State BF Comingled
Sec 25 T6S R32E

Field _____

$$S. I. = pH - pCa - pAlk - K$$

where S. I. = stability index

pH = pH as measured on fresh sample

pCa = negative logarithm of calcium concentration

pAlk = negative logarithm of total alkalinity

K = constant, depends upon temperature and salt content

$$pH = \underline{6.0} \quad pCa = \underline{.5} \quad pAlk = \underline{2.5}$$

CALCULATION OF IONIC STRENGTH AND K VALUE

Na	(<u>.31211</u>) X (2.2×10^{-5}) =	<u>.6866</u>
Ca	(<u>.12640</u>) X (5.0×10^{-5}) =	<u>.6320</u>
Mg	(<u>.02989</u>) X (8.2×10^{-5}) =	<u>.2450</u>
Cl	(<u>.79000</u>) X (1.4×10^{-5}) =	<u>1.1060</u>
HCO ₃	(<u>.00195</u>) X (0.8×10^{-5}) =	<u>.0015</u>
SO ₄	(<u>.00300</u>) X (2.1×10^{-5}) =	<u>.0063</u>

$$TOTAL \ IONIC \ STRENGTH = \underline{2.6}$$

$$K = \underline{3.1} \quad @ \quad \underline{80} \quad ^\circ F.$$

$$K = \underline{2.6} \quad @ \quad \underline{120} \quad ^\circ F.$$

$$SI \text{ at } (\underline{80})^\circ = (\underline{6.0}) - (\underline{.5}) - (\underline{2.5}) - (\underline{3.1}) \text{ or } \underline{-.1}$$

$$SI \text{ at } (\underline{120})^\circ = (\underline{6.0}) - (\underline{.5}) - (\underline{2.5}) - (\underline{2.6}) \text{ or } \underline{+.4}$$

SI = 0 or water is relatively stable at 90 °F.

Remarks: _____

PERMIAN

Treating Chemicals, Inc.

P. O. BOX 728
LOVINGTON, NM 88260
PHONE (505) 396-5674

WATER ANALYSIS REPORT

Company Murphy Operating Corporation Date Sampled 8-13-88
Field Chaveroo Tucker County
Lease School Sec 36, T6S, R32E State NM
Well State BF SWD Sec 3, T8S, R33E Formation San Andres & FW
Type of Water Comingled Water, B/D
Sampling Point Well Sampled By Nailon

DISSOLVED SOLIDS

OTHER PROPERTIES

CATIONS

	mg/l	meq/l
Sodium, Na+(Calc)	26197 ÷ 23	1139
Calcium, Ca++	9800 ÷ 20	490
Magnesium, Mg++	2916 ÷ 12.2	239
Barium, Ba++	÷ 68.7	
Iron, Fe (Total)		

pH 5.9
Specific Gravity 1.07
H₂S Positive
Total Dissolved Solids 105359
Total Hardness 36500

ANIONS

Chloride, Cl-	66000 ÷ 35.5	1859
Sulfate, So ₄ ⁼	275 ÷ 48	6
Carbonate, Co ₃ ⁼	÷ 30	
Bicarbonate, HCo ₃ ⁻	171 ÷ 61	3

Remarks and Recommendations

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO₃ Scaling Tendency

SAMPLE

Sample Test No. _____

Company Murphy Operating

Sample Date 8-13-81

Address _____

Submitted By Nailon

Sample Comingled - Tucker & STBF
Sec 36 T6S R32E

Field Chaveroa

$$S. I. = pH - pCa - pAlk - K$$

where

S. I. = stability index

pH = pH as measured on fresh sample

pCa = negative logarithm of calcium concentration

pAlk = negative logarithm of total alkalinity

K = constant, depends upon temperature and salt concentration

$$pH = \underline{5.9} \quad pCa = \underline{1.6} \quad pAlk = \underline{2.5}$$

CALCULATION OF IONIC STRENGTH AND K VALUE

Na	(<u>.26197</u>) X (2.2 X 10 ⁻⁵) =	<u>.5763</u>
Ca	(<u>.09800</u>) X (5.0 X 10 ⁻⁵) =	<u>.4900</u>
Mg	(<u>.02916</u>) X (8.2 X 10 ⁻⁵) =	<u>.2391</u>
Cl	(<u>.66000</u>) X (1.4 X 10 ⁻⁵) =	<u>.9240</u>
HCO ₃	(<u>.00171</u>) X (0.8 X 10 ⁻⁵) =	<u>.0013</u>
SO ₄	(<u>.00275</u>) X (2.1 X 10 ⁻⁵) =	<u>.0057</u>

$$\text{TOTAL IONIC STRENGTH} = \underline{2.2}$$

$$K = \underline{3.3} \text{ @ } \underline{80} \text{ } ^\circ\text{F.}$$

$$K = \underline{2.7} \text{ @ } \underline{120} \text{ } ^\circ\text{F.}$$

$$SI \text{ at } (\underline{80})^\circ = (\underline{5.9}) - (\underline{1.6}) - (\underline{2.5}) - (\underline{3.3}) \text{ or } \underline{-1.5}$$

$$SI \text{ at } (\underline{120})^\circ = (\underline{5.9}) - (\underline{1.6}) - (\underline{2.5}) - (\underline{2.7}) \text{ or } \underline{-.9}$$

$$SI = 0 \text{ or water is relatively stable at } \underline{145} \text{ } ^\circ\text{F.}$$

Remarks: _____

PERMIAN

Treating Chemicals, Inc.

P. O. BOX 728
LOVINGTON, NM 88260
PHONE (505) 396-5674

WATER ANALYSIS REPORT

Company Murphy Operating Corporation Date Sampled 8-12-88
Field Chaveroo County Chaves
Lease State BF SWD State NM
Well Unit B Sec 3, T8S, R33E Formation San Andres
Type of Water Produced Water, B/D _____
Sampling Point SWD Sampled By Nailon

DISSOLVED SOLIDS

CATIONS

	mg/l	meq/l
Sodium, Na+(Calc)	53590	23
Calcium, Ca++	21800	20
Magnesium, Mg++	7217	12.2
Barium, Ba++		68.7
Iron, Fe (Total)		

OTHER PROPERTIES

pH 5.6
Specific Gravity 1.30
H₂S Positive
Total Dissolved Solids 225226
Total Hardness 84200

ANIONS

Chloride, Cl-	142000	35.5
Sulfate, So ₄ =	375	48
Carbonate, Co ₃ =	-0-	30
Bicarbonate, HCo ₃ -	244	61

Remarks and Recommendations _____

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO₃ Scaling Tendency

SAMPLE

Company Murphy Operating
Address Basin 11
Sample Produce - State BF

Sample Test No. _____
Sample Date 8-12-88
Submitted By _____
Field Chaverra

S. I. = pH - pCa - pAlk - K
where S. I. = stability index
pH = pH as measured on fresh sample
pCa = negative logarithm of calcium concentration
pAlk = negative logarithm of total alkalinity
K = constant, depends upon temperature and salt content
pH = 5.6 pCa = .3 pAlk = 2.4

CALCULATION OF IONIC STRENGTH AND K VALUE

Na	(<u>.53590</u>) X (2.2 X 10 ⁻⁵) =	<u>1.1789</u>
Ca	(<u>.21800</u>) X (5.0 X 10 ⁻⁵) =	<u>1.0900</u>
Mg	(<u>.07217</u>) X (8.2 X 10 ⁻⁵) =	<u>.5917</u>
Cl	(<u>1.42000</u>) X (1.4 X 10 ⁻⁵) =	<u>1.9880</u>
HCO ₃	(<u>.00244</u>) X (0.8 X 10 ⁻⁵) =	<u>.0019</u>
SO ₄	(<u>.00375</u>) X (2.1 X 10 ⁻⁵) =	<u>.0079</u>
TOTAL IONIC STRENGTH =		<u>4.9</u>

K = 2.4 @ 80 °F.
K = 1.9 @ 120 °F.
SI at (80)° = (5.6) - (.3) - (2.4) - (2.4) or 1.5
SI at (120)° = (5.6) - (.3) - (2.4) - (1.9) or 1.5
SI = 0 or water is relatively stable at _____ °F.

Remarks: _____

MIAN
ing Chemicals, Inc.

P. O. BOX 728
LOVINGTON, NM 88260
PHONE (505) 396-5674

WATER ANALYSIS REPORT

Company Murphy Operating Date Sampled 8-10-88
Field _____ County _____
Lease Sec 3 T7S R32E State NM
Well Howard Formation F/W
Type of Water Fresh Water Water, B/D _____
Sampling Point Well Sampled By _____

DISSOLVED SOLIDS

CATIONS

	mg/l	meq/l
Sodium, Na+(Calc)	<u>1541</u> ÷ <u>23</u>	<u>67</u>
Calcium, Ca++	<u>320</u> ÷ <u>20</u>	<u>16</u>
Magnesium, Mg++	<u>97</u> ÷ <u>12.2</u>	<u>8</u>
Barium, Ba++	<u> </u> ÷ <u>68.7</u>	<u> </u>
Iron, Fe (Total)	<u> </u>	<u> </u>
_____	<u> </u>	<u> </u>
_____	<u> </u>	<u> </u>

OTHER PROPERTIES

pH 7.5
Specific Gravity 1.0
H₂S Neg.
Total Dissolved Solids 5268
Total Hardness 1200

ANIONS

Chloride, Cl-	<u>3000</u> ÷ <u>35.5</u>	<u>85</u>
Sulfate, So ₄ ⁼	<u>200</u> ÷ <u>48</u>	<u>4</u>
Carbonate, Co ₃ ⁼	<u>0</u> ÷ <u>30</u>	<u>0</u>
Bicarbonate, HCo ₃ ⁻	<u>110</u> ÷ <u>61</u>	<u>2</u>
_____	<u> </u>	<u> </u>
_____	<u> </u>	<u> </u>

Remarks and Recommendations _____

MIAN
ing Chemicals, Inc.

P. O. BOX 728
LOVINGTON, NM 88260
PHONE (505) 396-5674

WATER ANALYSIS REPORT

Company Murphy Operating Date Sampled 8/10/88
Field _____ County _____
Lease Sec 25 T6S R-32E State NM
Well Moore Formation F/W
Type of Water Fresh Water Water, B/D _____
Sampling Point Well Sampled By Nailon

DISSOLVED SOLIDS

<u>CATIONS</u>	mg/l	meq/l
Sodium, Na+(Calc)	<u>943</u>	<u>41</u>
Calcium, Ca++	<u>280</u>	<u>14</u>
Magnesium, Mg++	<u>73</u>	<u>6</u>
Barium, Ba++	<u>68.7</u>	
Iron, Fe (Total)		

OTHER PROPERTIES

pH 7.4
Specific Gravity 1.0
H₂S Neg
Total Dissolved Solids 3568
Total Hardness 1000

ANIONS

Chloride, Cl-	<u>2000</u>	<u>35.5</u>	<u>56</u>
Sulfate, So ₄ ⁼	<u>150</u>	<u>48</u>	<u>3</u>
Carbonate, Co ₃ ⁼	<u>0</u>	<u>30</u>	<u>0</u>
Bicarbonate, HCo ₃ ⁻	<u>122</u>	<u>61</u>	<u>2</u>

Remarks and Recommendations _____

MIAN
ing Chemicals, Inc.

P. O. BOX 728
LOVINGTON, NIA 88260
PHONE (505) 396-5674

WATER ANALYSIS REPORT

Company Murphy Operating Date Sampled 8/10/88
Field _____ County _____
Lease Sec 36 T6S R32E State NM
Well School (Tucker) Formation F/W
Type of Water Fresh Water Water, B/D _____
Sampling Point Well Sampled By Nailon

DISSOLVED SOLIDS

CATIONS

	mg/l	meq/l
Sodium, Na+(Calc)	<u>966</u> ± <u>23</u>	<u>42</u>
Calcium, Ca++	<u>320</u> ± <u>20</u>	<u>16</u>
Magnesium, Mg++	<u>24</u> ± <u>12.2</u>	<u>2</u>
Barium, Ba++	<u> </u> ± <u>68.7</u>	<u> </u>
Iron, Fe (Total)	<u> </u>	<u> </u>
_____	<u> </u>	<u> </u>
_____	<u> </u>	<u> </u>

OTHER PROPERTIES

pH 7.5
Specific Gravity 1.0
H₂S Neg
Total Dissolved
Solids 3545
Total Hardness 900

ANIONS

Chloride, Cl-	<u>2000</u> ± <u>35.5</u>	<u>56</u>
Sulfate, So ₄ ⁼	<u>150</u> ± <u>48</u>	<u>3</u>
Carbonate, Co ₃ ⁼	<u>0</u> ± <u>30</u>	<u>0</u>
Bicarbonate, HCo ₃ ⁻	<u>85</u> ± <u>61</u>	<u>1</u>
_____	<u> </u>	<u> </u>
_____	<u> </u>	<u> </u>

Remarks and Recommendations _____

COUNTY ROOSEVELT		COMPANY SKELLY OIL COMPANY	
FIELD or LOCATION CHAVEROC		Proposed Holey Chaveroo San Andres Unit Well #33-8	
WELL HOBBS T #5		WELL HOBBS T #5	
COMPANY SKELLY OIL CO.		COUNTY ROOSEVELT STATE NEW MEXICO	
Location: 1980' FNL 660' FEL		Other Services: LL, MLL, MOP	
Sec. 33 Twp. 7-S Rge. 33-E		Permanent Datum: GROUND LEVEL; Elev.: 4408	
Log Measured From: K. B. 12 Ft. Above Perm. Datum		Elev.: K.B. 4420; D.F. 4418; G.L. 4408	
Drilling Measured From: K. B.		Date 9-14-65	
Run No. ONE		Type Log FDC-68	
Depth—Driller 4475		Depth—Logger 4477	
Bottom Logged Interval 4475		Top Logged Interval 100-68	
Type fluid in hole SALT GEL		The Property of TAP PERMITS ASSOCIATION, INC.	
S. V. PPM. Cl. SAT		Level 10.5	
Max rec. temp., deg F. 110°		Operating rig time 4-HOURS	
Recorded by SMITH		Witnessed by MORTON	
RUN BORE-HOLE RECORD		RUN BORE-HOLE RECORD	
No. 1111 From 368 To 4475		No. 1111 From 368 To 4475	
7-7/8 368		7-7/8 368	

EQUIPMENT DATA			
Gamma-Gamma		General	
Run No. ONE	Tool Model No. PGT-D	Run No. ONE	Tool Model No. 4556
Diameter 4-1/8"	Def'r Model No. SGO-H	Inst. Truck No. 4556	Tool Serial No. 36
Type SCINT		Location ARTESIA	

LOGGING DATA					
General		Gamma Ray		Gamma-Gamma	
Run No.	Depths	Speed	T.C.	Sens.	Zero
	From To	Ft./Min.	Sec.	Settings	Div. L or R
	SURF. 3450	30	2	400	0
	T.D. 4475	20	3	400	0

Remarks: * CALIPER CLOSED @ 1610'. TOOL STICKING & COULD NOT GET LOG WITH CALIPER OPEN

GR CAL: 48; 480; 82.5; 800

FDC CAL: 384; 480; BEFORE 384; 480; AFTER

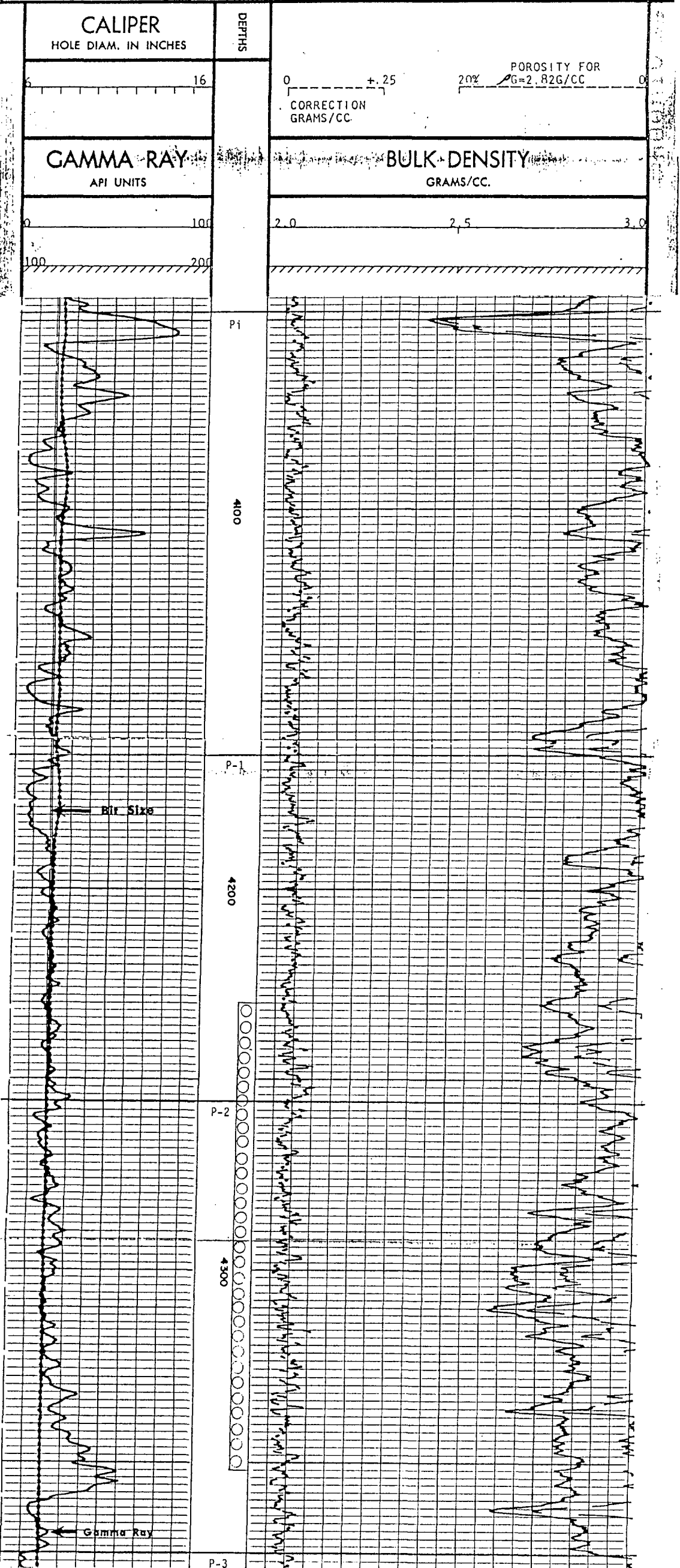


EXHIBIT X.

Schlumberger FORMATION DENSITY LOG Gamma-Gamma Schlumberger Well Surveying Corporation Houston, Texas		COMPENSATED	
COUNTY <u>ROOSEVELT</u> FIELD or LOCATION <u>CHAVEROO</u> WELL <u>HOBBS T-3</u> COMPANY <u>SKELLY OIL COMPANY</u>		COMPANY <u>SKELLY OIL COMPANY</u> Proposed Halley Chaveroo San Andres Unit Well #33-10 WELL <u>HOBBS T-3</u> FIELD <u>CHAVEROO</u> COUNTY <u>ROOSEVELT</u> STATE <u>NEW MEXICO</u> Location: <u>1980' FROM S/L</u> <u>1980' FROM E/L</u> Other Services: Sec. <u>33</u> Twp. <u>7S</u> Rge. <u>33E</u> LL, MLL, MOP	
Permanent Datum: <u>GL</u> Elev.: <u>4415</u> Log Measured From: <u>KB</u> 11 Ft. Above Perm. Datum Drilling Measured From <u>KB</u> Elev.: <u>K.B. 4426</u> <u>D.F. 4425</u> <u>G.L. 4415</u>		Date <u>9-2-65</u> Run No. <u>ONE</u> Type Log <u>THE PROPERTY OF</u> Depth—Driller <u>4475</u> <u>THE PERMIAN ASSOCIATION, INC.</u> Bottom logged interval <u>4480</u> Top logged interval <u>4479</u> Type fluid in hole <u>SALT</u> Salinity, PPM Cl. <u>150,000</u> Density <u>10.9</u> level <u>FULL</u> Max rec. temp., deg F. <u>108</u> Operating rig time <u>4 1/2 HOURS</u> Recorded by <u>WILSON-NICHOLSON</u> Witnessed by <u>MR. MORTON</u>	
RUN NO. <u>1</u> BORE-HOLE RECORD Bit From To Size Wt. From To <u>7 7/8</u> <u>CSG.</u> <u>TD</u> <u>8 5/8</u> <u>SURF.</u> <u>368</u>		CASING RECORD	
EQUIPMENT DATA			
Gamma-Gamma Run No. <u>ONE</u> Tool Model No. <u>PGT-D</u> Diameter <u>4 1/8</u> Det'r Model No. <u>PGD-0</u> Type <u>SCINT</u>		General Run No. <u>ONE</u> Hoist Truck No. <u>3722</u> Inst. Truck No. <u>3722</u> Tool Serial No. <u>5-F-13 P-73 H-64</u> Location <u>HOBBS</u>	
LOGGING DATA			
General Run No. <u>1</u> Depths From <u>0</u> To <u>TD</u> Speed Ft./Min. <u>30</u> T.C. Sec. <u>2</u> Sens. Settings <u>400</u>		Gamma-Gamma Log. T.C. <u>2</u> CALIBRATE — ACPS. P ₁ <u>392</u> P ₂ <u>500</u>	
Remarks: <u>GR:B 48 400 82.5 800</u>			

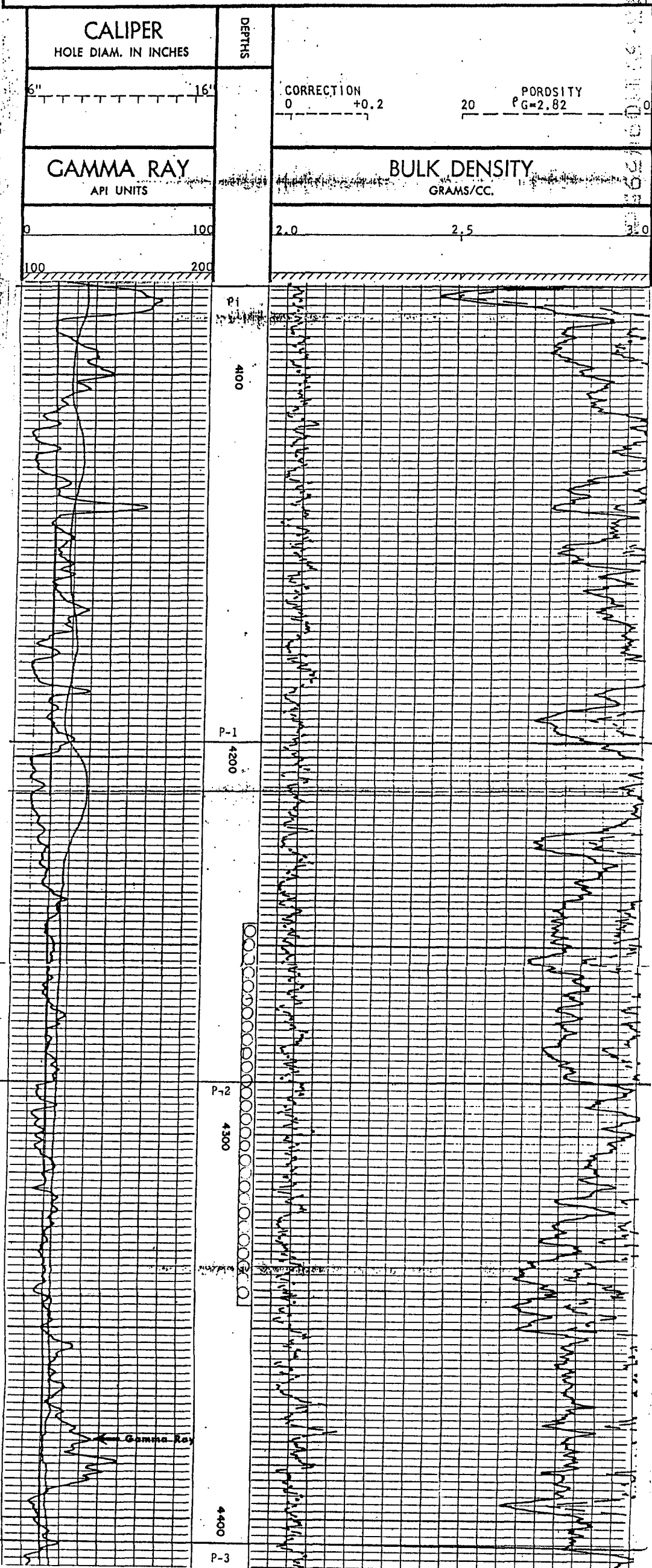


EXHIBIT X.

SIDEMALL		GAMMA RAY - NEUTRON		SCHUMBERGER WELL SURVEILING CORPORATION	
LOCATION: HOBBS "T" # 11		COMPANY: SKELLY OIL COMPANY		WELL: HOBBS "T" # 11	
PROPOSED: Haley Chaveroo San Andres Unit Well #33-15		FIELD: CHAVEEROO		COUNTY: ROOSEVELT STATE: NEW MEXICO	
Location: 660' FROM S/L		Other Services: BSGR, FDC, L.L.		MLL	
Sec. 33 Twp. 7S. Rge. 33E		Elev. K.R. 4427		Elev. D.E. 4426	
measured From: K8		measured From: K8		measured From: K8	
Log: ONE		Log: ONE		Log: ONE	
Diameter: 5 7/8"		Diameter: 5 7/8"		Diameter: 5 7/8"	
Type: SCINT		Type: SCINT		Type: SCINT	
Length: 18"		Length: 18"		Length: 18"	
Dist. to N. Source: 18"		Dist. to N. Source: 18"		Dist. to N. Source: 18"	
General		General		General	
Haist Truck No. 3701		Haist Truck No. 3701		Haist Truck No. 3701	
Inst. Truck No. 3701		Inst. Truck No. 3701		Inst. Truck No. 3701	
Tool Serial No.		Tool Serial No.		Tool Serial No.	
Location: HOBBS		Location: HOBBS		Location: HOBBS	
LOGGING DATA		LOGGING DATA		LOGGING DATA	
Run No. 1		Run No. 1		Run No. 1	
From 3450		From 3450		From 3450	
To 4200		To 4200		To 4200	
Speed 30		Speed 30		Speed 30	
T.C. 2		T.C. 2		T.C. 2	
Sens. 400		Sens. 400		Sens. 400	
Zero Div. L or R		Zero Div. L or R		Zero Div. L or R	
API G.R. Units per Log Div. 10		API G.R. Units per Log Div. 10		API G.R. Units per Log Div. 10	
T.C. 2		T.C. 2		T.C. 2	
Sens. Settings		Sens. Settings		Sens. Settings	
Zero Div. L or R		Zero Div. L or R		Zero Div. L or R	
API N. Units per Log Div.		API N. Units per Log Div.		API N. Units per Log Div.	
Reference Literature: CPS		Reference Literature: CPS		Reference Literature: CPS	
N: BEFORE 384 657/240 CPS		N: BEFORE 384 657/240 CPS		N: BEFORE 384 657/240 CPS	
Remarks:		Remarks:		Remarks:	

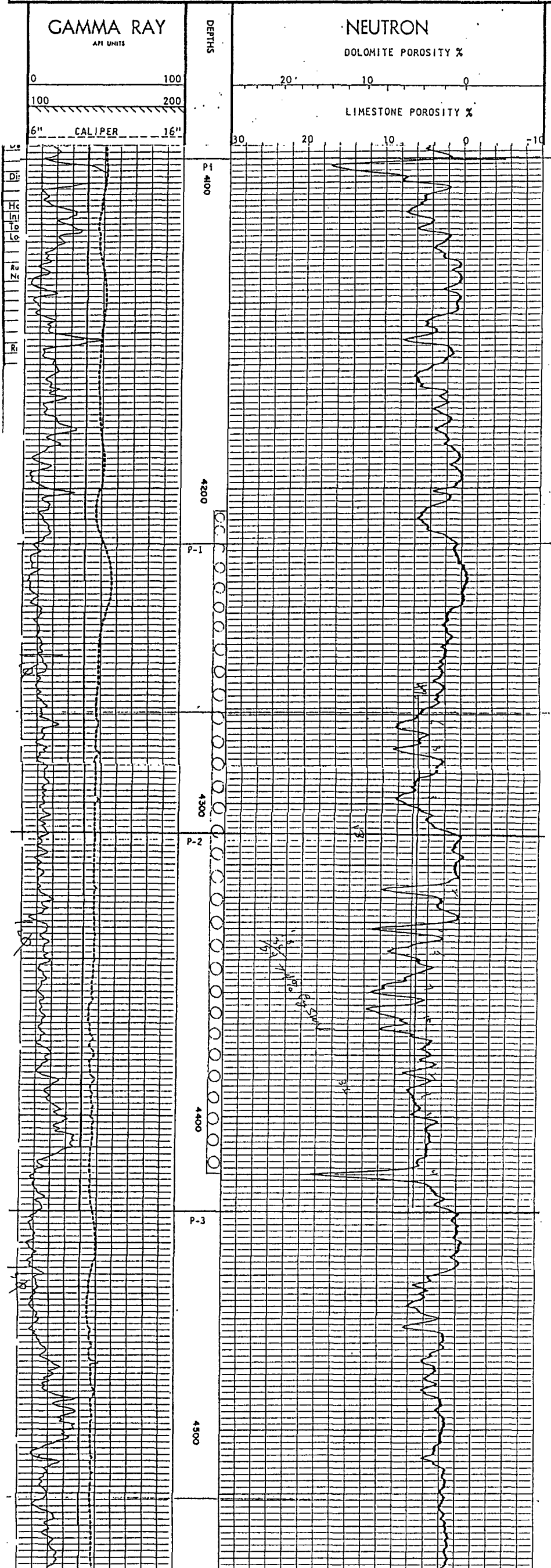


EXHIBIT X.

CALIPER		DEPTHS	FORMATION DENSITY LOG	
HOLE DIAM. IN INCHES			STANDARD COUNTS/SECOND	
6" 16"			720	420 120
GAMMA RAY			BULK DENSITY	
API UNITS			GRAMS/CC.	
0 100			2.99 2.97 2.95 2.93 2.91 2.89 2.87 2.85 2.83 2.81 2.79 2.77 2.75 2.73 2.71 2.69 2.67 2.65 2.63 2.61 2.59 2.57 2.55 2.53 2.51 2.49 2.47 2.45 2.43 2.41 2.39 2.37 2.35 2.33	
100 200		P1		
		4100		
		P-1		
		4200		
		P-2		
		4300		
Gamma Ray		P-3		

PAGE 4 OF 7

[illegible]

EXHIBIT X.
PAGE 5 OF 7

COUNTY ROOSEVELT		COMPANY SKELLY OIL COMPANY	
FIELD or LOCATION CHAV. # 7		Proposed Haley Chaveroo San Andres Unit Well #34-12	
WELL HOBBS		WELL HOBBS	
COMPANY SKELLY OIL COMPANY		WELL HOBBS	
Sec. 34, Twp. 7S, Rge. 33E		Location: 1980' FROM S/L 660' FROM W/L	
Permanent Datum: GL, Elev: 4402		Other Services: LL, MLL, MOP	
Log Measured From: KB, 10' Ft. Above Perm. Datum		Elev: K.B. 4412 D.F. 4411 G.L. 4402	
Drilling Measured From: KB		Elev: K.B. 4412 D.F. 4411 G.L. 4402	
Date 10-8-65		The Property of	
Run No. ONE		MR. PERMAN ASSOCIATES, INC.	
Type Log GG-GR		Depth-Driller 4525	
Depth-Logger 4528		Bottom logged interval 4527	
Top logged interval 15		Type fluid in hole SALT WATER	
Salinity, PPM Cl. 172,000		Density 10.3	
Density 10.3		FILL	
M. Temp. deg F. 110		Operating time 3 HOURS	
Recorded by EASTLEY		Witnessed by MR. MORTON	
RUN NO. 1		Borehole Record	
Bit From 7.8		To 360	
Size 8.5/8		Wgt. 0	
From 0		To 360	

CORRECTION 0 +.2		BULK DENSITY GRAMS/CC.	
0 20 40		2.0 2.5 3.0	
CALIPER HOLE DIAM. IN INCHES		GAMMA RAY API UNITS	
6" 16"		0 100 200	

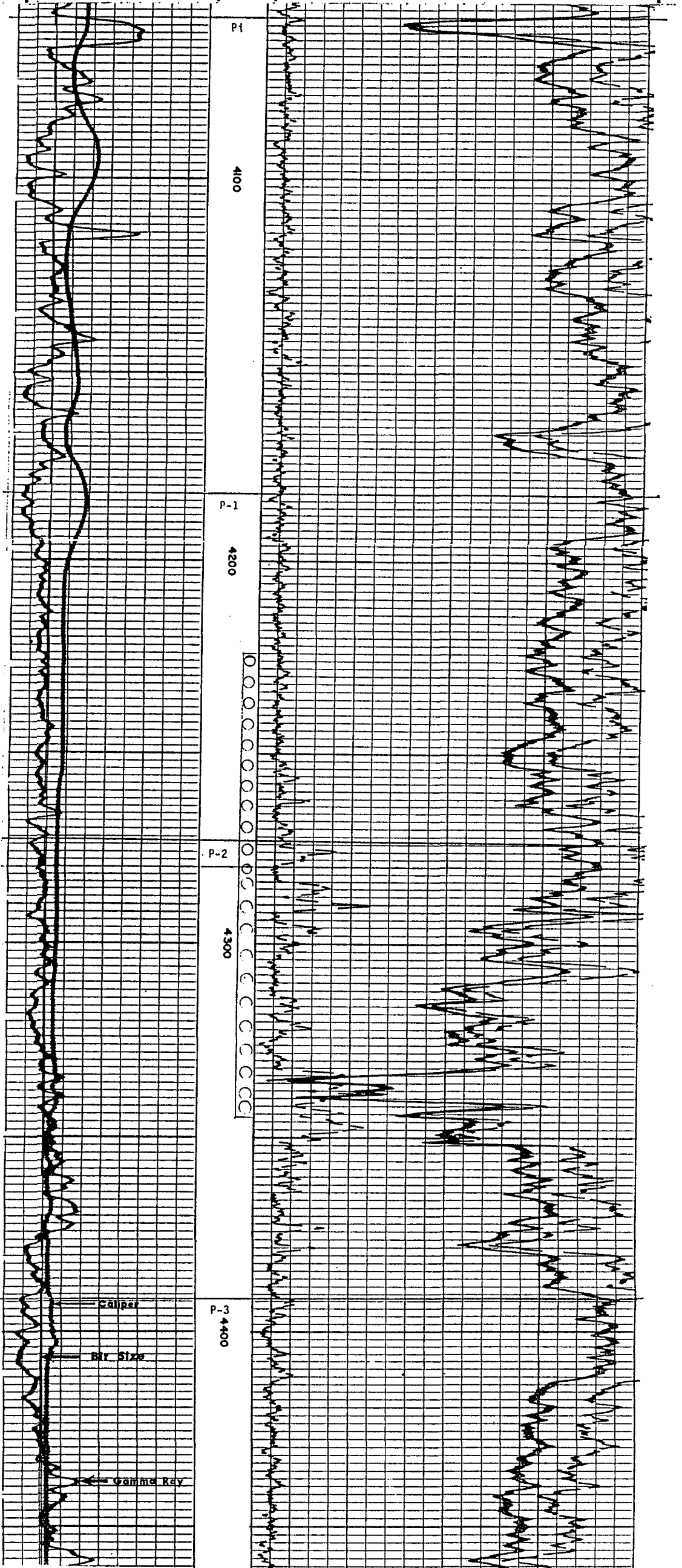



EXHIBIT X.


**BOREHOLE COMPENSATED
SONIC LOG - GAMMA RAY**
SCHLUMBERGER WELL SURVEYING CORPORATION
Houston, Texas

34-14

COUNTY ROOSEVELT FIELD CHAVEROO WELL # 13 COMPANY SKILLY OIL COMPANY	COMPANY <u>SKILLY OIL COMPANY</u>		
	Proposed <u>Haley Chaveroo S. A.</u>		
	WELL <u>HOBBS "Y" # Unit Well #34-14</u>		
	FIELD <u>CHAVEROO</u>		
	COUNTY <u>ROOSEVELT</u> STATE <u>NEW MEXICO</u>		
LOCATION <u>1980' FROM W/L</u>		Other Services: FDC, SNP, LL, MILL	
Sec. <u>34</u> Twp. <u>2S</u> Rge. <u>13E</u>			
Permanent Datum <u>GL</u> Elev. <u>4198</u>		Elev. K.B. <u>4408</u> D.F. <u>4507</u> G.L. <u>4198</u>	
Log Measured From <u>KB</u> 10 Ft. Above Perm. Datum			
Drilling Measured From <u>KB</u>			

Log No.	2-22-66
Run No.	ONE
Depth - Driller	4500
Depth - Logger	4504
Bit. Log Interval	4505
Top Log Interval	0
Casing - Driller	8 5/8" 365
Casing - Logger	374
Bit Size	7 7/8"
Type Fluid in Hole	SALT GEL
Drill. Visc.	STARCH
ph. Fluid loss	10.4 12.5
Source of Sample	P-1
1. @ Meas. Temp.	081 @ 56.4°
2. @ Meas. Temp.	052 @ 64.4°
3. @ Meas. Temp.	0 - 4°
Spindle Fm. In.	4
1. @ 91 ft.	047 @ 107.7°
Time Since Circ.	3 HOURS
Max. Rec. Temp.	110
Equip. Location	1701 HOBBS
Recorded By	LEFLER
Witnessed By	MR. HORTON

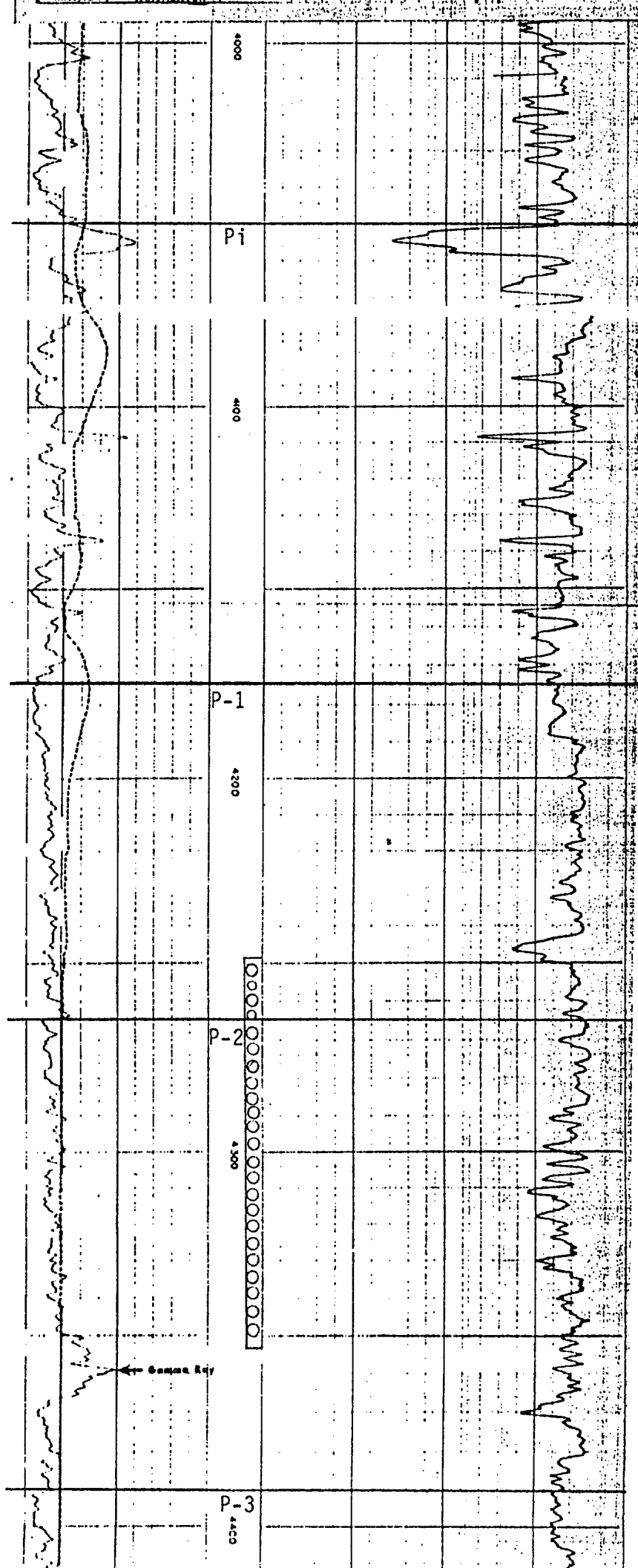


EXHIBIT X.



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ROSWELL

S. E. REYNOLDS
STATE ENGINEER

DISTRICT II
909 E. 2ND STREET
P.O. BOX 1717
ROSWELL, NEW MEXICO 88201

August 15, 1988

File: 6.9.1.C

Ms. Ann Murphy Ezzell
400 North Pennsylvania
Suite 300
Roswell, New Mexico 88201

Dear Ms. Ezzell:

This is to advise per our phone conversation of August 10, 1988, that the area you described, Township 7 South, Range 33 East, Sections 26 thru 35 and Township 8 South, Range 33 East, Sections 2 thru 5 and 8 thru 11 is in an area not declared by the State Engineer Office.

I've looked through our water level and chemical quality printout and this office hasn't measured or sampled any wells in the above described area.

If additional information or assistance is needed, please do not hesitate to contact this office.

Yours very truly,

A handwritten signature in cursive script, appearing to read "Frank Bradley".

Frank Bradley, Supervisor
Portales Water Basin

FB*bj
cc: Santa Fe

EXHIBIT **XI**.

EXHIBIT XIII.

PROPOSED HALEY CHAVEROO SAN ANDRES UNIT

SUPPLEMENTAL DATA REQUIRED BY FORM C-108

LEASEHOLD OPERATORS WITHIN ONE-HALF MILE OF PROPOSED UNIT AREA.

Mr. Tommy Willyard, Jr.
Myco Petroleum Company
Route 1, Box 104
Lovington, New Mexico 88260

Mr. Cliff Hjelm, President
Mims Texas Oil & Gas Company
7060 South Yale, Suite 707
Tulsa, Oklahoma 74136

Ms. Gayla Grosbeck
Milford Oil Company
Post Office Box 427
Tatum, New Mexico 88267

Mr. Bill Graham, President
Chaveroo Operating Company, Inc.
4800 San Felipe, Suite 620
Houston, Texas 77056

Mr. Craig Schraub, Region Landman
Marathon Oil Company
Post Office Box 552
Midland, Texas 79702

Mr. Alan Roberts
Manager, U. S. Onshore Production
Kerr-McGee Corporation
Post Office Box 25861
Oklahoma City, Oklahoma 73125

Mr. Rob Hopkins, Landman
Kaneb Operating Company Ltd.
Post Office Box 4502
Houston, Texas 77210

Mr. Steve Moses, Landman
The Wil-Mc Oil Corporation
Post Office Box 152510
Irving, Texas 75015-2510

Mr. Randy G. Patterson, Land Manager
Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210

Mr. Wylie Barrow, Regional Land Manger
Union Oil Company of California
Post Office Box 671
Midland, Texas 79702

Mr. Brian Sirgo
Collier Energy Corporation
Post Office Box 3551
Midland, Texas 79702

Mr. Mike Hinze, Division Landman
Tenneco Oil Company
7990 I H 10 West
San Antonio, Texas 78230

Mr. R. A. See, Regional Land Manager
Champlin Petroleum Company
Union Pacific Resources Company
Post Office Box 1257
Englewood, Colorado 80150

OWNER OF SURFACE OF THE LAND UPON WHICH PROPOSED INJECTORS ARE LOCATED.

Mr. Floyd O. Prando, Director
Oil and Gas Division
State of New Mexico
Commissioner of Public Lands
Post Office Box 1148
Santa Fe, New Mexico 87504-1148

Attention: Mr. Pete Martinez

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Tommy Willyard, Jr.
Myco Petroleum Company
Route 1, Box 104
Lovington, New Mexico 88260

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Willyard:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

We have requested a hearing on Wednesday, September 14th, 1988 at 8:00 A.M. in the offices of the New Mexico Oil Conservation Division, Santa Fe, New Mexico. Your appearance at this hearing is not required. Please let me know if you have any questions.

Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr
Enclosure: Application.

SENDER: Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. <u>The return receipt fee will provide you the name of the person delivered to and the date of delivery.</u> For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested. 1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. <input type="checkbox"/> Restricted Delivery ↑(Extra charge)↑ ↑(Extra charge)↑	
3. Article Addressed to: Mr. Tommy Willyard, Jr. Myco Petroleum Company Route 1, Box 104 Lovington, New Mexico 88260	4. Article Number P 665 399 490 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

TELEPHONE
505 623-7210

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

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Sincerely,

Ann Murphy Ezzell

AME:fmr

Enclosure: Application.

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1. ☐ Show to whom delivered, date, and addressee's address. 2. ☐ Restricted Delivery
 ↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: Mr. Cliff Hjelm, President Mims Texas Oil & Gas Company 7060 South Yale, Suite 707 Tulsa, Oklahoma 74136	4. Article Number P 665 399 455
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> COD <input type="checkbox"/> Express Mail
	Always obtain signature of addressee or agent and <u>DATE DELIVERED.</u>
5. Signature — Addressee X	8. Addressee's Address (<i>ONLY if requested and fee paid</i>)
6. Signature — Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Gayla Grosbeck
Milford Oil Company
Post Office Box 427
Tatum, New Mexico 88267

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Ms. Grosbeck:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

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Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fmr
Enclosure: Application.

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3. Article Addressed to: Ms. Gayla Grosbeck Milford Oil Company Post Office Box 427 Tatum, New Mexico 88267	4. Article Number P 665 399 454 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and <u>DATE DELIVERED.</u>
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Brian Sirgo
Collier Energy Corporation
Post Office Box 3551
Midland, Texas 79702

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Sirgo:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

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Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr

Enclosure: Application.

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3. Article Addressed to: Mr. Brian Sirgo Collier Energy Corporation Post Office Box 3551 Midland, Texas 79702	4. Article Number P 665 399 492 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature -- Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature -- Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Alan Roberts
Manager, U. S. Onshore Production
Kerr-McGee Corporation
Post Office Box 25861
Oklahoma City, Oklahoma 73125

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Roberts:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

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Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fmr

Enclosure: Application.

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3. Article Addressed to: Mr. Alan Roberts Manager, U. S. Onshore Production Kerr-McGee Corporation Post Office Box 25861 Oklahoma City, Oklahoma 73125	4. Article Number P 665 399 498 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Rob Hopkins, Landman
Kaneb Operating Company Ltd.
Post Office Box 4502
Houston, Texas 77210

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Hopkins:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

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Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr

Enclosure: Application.

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3. Article Addressed to: Mr. Rob Hopkins, Landman Kaneb Operating Company Ltd. Post Office Box 4502 Houston, Texas 77210	4. Article Number P 665 399 497
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Steve Moses, Landman
The Wil-Mc Oil Corporation
Post Office Box 152510
Irving, Texas 75015-2510

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Moses:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

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Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fmr

Enclosure: Application.

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3. Article Addressed to: Mr. Steve Moses, Landman The Wil-Mc Oil Corporation Post Office Box 152510 Irving, Texas 75015-2510	4. Article Number P 665 399 495 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Randy G. Patterson, Land Manager
Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Patterson:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

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Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr
Enclosure: Application.

SENDER: Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. <u>The return receipt fee will provide you the name of the person delivered to and the date of delivery.</u> For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested. 1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. <input type="checkbox"/> Restricted Delivery ↑(Extra charge)↑ ↑(Extra charge)↑	
3. Article Addressed to: Mr. Randy G. Patterson, Land Manager Yates Petroleum Corporation 105 South Fourth Street Artesia, New Mexico 88210	4. Article Number P 665 399 494 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Wylie Barrow, Regional Land Manger
Union Oil Company of California
Post Office Box 671
Midland, Texas 79702

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Barrow:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

We have requested a hearing on Wednesday, September 14th, 1988 at 8:00 A.M. in the offices of the New Mexico Oil Conservation Division, Santa Fe, New Mexico. Your appearance at this hearing is not required. Please let me know if you have any questions.

Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr
Enclosure: Application.

SENDER: Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. <u>The return receipt fee will provide you the name of the person delivered to and the date of delivery.</u> For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.	
1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. ↑(Extra charge)↑	2. <input type="checkbox"/> Restricted Delivery ↑(Extra charge)↑
3. Article Addressed to: Mr. Wylie Barrow, Regional Land Manger Union Oil Company of California Post Office Box 671 Midland, Texas 79702	4. Article Number P 665 399 493 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

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400 NORTH PENNSYLVANIA AVENUE
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ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mike Hinze, Division Landman
Tenneco Oil Company
7990 I H 10 West
San Antonio, Texas 78230

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Hinze:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

We have requested a hearing on Wednesday, September 14th, 1988 at 8:00 A.M. in the offices of the New Mexico Oil Conservation Division, Santa Fe, New Mexico. Your appearance at this hearing is not required. Please let me know if you have any questions.

Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr
Enclosure: Application.

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1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. ↑(Extra charge)↑	2. <input type="checkbox"/> Restricted Delivery ↑(Extra charge)↑
3. Article Addressed to: Mr. Mike Hinze, Division Landman Tenneco Oil Company 7990 I H 10 West San Antonio, Texas 78230	4. Article Number P 665 399 491 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and <u>DATE DELIVERED.</u>
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. R. A. See, Regional Land Manager
Champlin Petroleum Company
Union Pacific Resources Company
Post Office Box 1257
Englewood, Colorado 80150

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. See:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

We have requested a hearing on Wednesday, September 14th, 1988 at 8:00 A.M. in the offices of the New Mexico Oil Conservation Division, Santa Fe, New Mexico. Your appearance at this hearing is not required. Please let me know if you have any questions.

Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr

Enclosure: Application.

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3. Article Addressed to: Mr. R. A. See, Regional Land Manager Champlin Petroleum Company Union Pacific Resources Company Post Office Box 1257 Englewood, Colorado 80150	4. Article Number P 665 399 496 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Bill Graham, President
Chaveroo Operating Company, Inc.
4800 San Felipe, Suite 620
Houston, Texas 77056

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Graham:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

We have requested a hearing on Wednesday, September 14th, 1988 at 8:00 A.M. in the offices of the New Mexico Oil Conservation Division, Santa Fe, New Mexico. Your appearance at this hearing is not required. Please let me know if you have any questions.

Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr

Enclosure: Application.

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1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. ↑(Extra charge)↑	2. <input type="checkbox"/> Restricted Delivery ↑(Extra charge)↑
3. Article Addressed to: Mr. Bill Graham, President Chaveroo Operating Company, Inc. 4800 San Felipe, Suite 620 Houston, Texas 77056	4. Article Number P 665 399 500. Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Craig Schraub, Region Landman
Marathon Oil Company
Post Office Box 552
Midland, Texas 79702

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Dear Mr. Schraub:

Our records indicate that your company is the operator of an oil and gas lease or leases within one-half mile of the proposed designated area of the captioned Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith for your information a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed unit.

We have requested a hearing on Wednesday, September 14th, 1988 at 8:00 A.M. in the offices of the New Mexico Oil Conservation Division, Santa Fe, New Mexico. Your appearance at this hearing is not required. Please let me know if you have any questions.

Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr
Enclosure: Application.

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3. Article Addressed to: Mr. Craig Schraub, Region Landman Marathon Oil Company Post Office Box 552 Midland, Texas 79702	4. Article Number P 665 399 499 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
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August 18, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Floyd O. Prando, Director
Oil and Gas Division
State of New Mexico
Commissioner of Public Lands
Post Office Box 1148
Santa Fe, New Mexico 87504-1148

Attention: Mr. Pete Martinez

Re: NOTICE OF PROPOSED UNIT:
Proposed Haley Chaveroo San Andres Unit
Chaves and Roosevelt Counties, New Mexico

Gentlemen:

Our records indicate that the State of New Mexico is the owner of surface lands within the proposed designated area for the Haley Chaveroo San Andres Unit. Please be advised that Murphy Operating Corporation is the designated Unit Operator for this proposed Unit. Pursuant to the rules of the New Mexico Oil Conservation Division, we have enclosed herewith a copy of the "Application of Murphy Operating Corporation for Approval of a Unit and for Authority to Institute a Waterflood Project" for the proposed Unit. The engineering and geologic report and other information required by your office has been submitted to you under separate cover. We have requested a hearing date of Wednesday, September 14th, 1988 at 8:00 A.M. in the offices of the New Mexico Oil Conservation Division, Santa Fe, New Mexico. Your appearance at this hearing is not required.

Your courteous assistance and prompt responses to our numerous questions related to unit approval are greatly appreciated. Please let me know if you have any questions or require additional information.

Sincerely,

MURPHY OPERATING CORPORATION

Ann Murphy Ezzell

Ann Murphy Ezzell, Esq.
Chairman and Chief Executive Officer

AME:fnr
Enclosure: Application.

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3. Article Addressed to: Mr. Floyd O. Prando, Director Oil and Gas Division State of New Mexico Commissioner of Public Lands Post Office Box 1148 Santa Fe, New Mexico 87504-1148	4. Article Number P 665 399 487 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED .
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
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