

April 30, 1990

Oil Conservation Division
P. O. Box 2088
State Land Office Bldg.
Santa Fe, NM 87501

RE: Application for Authorization to Inject
Wood, McShane & Thams
South Leonard (Queen) Unit, Well No. 13
Lea County, New Mexico

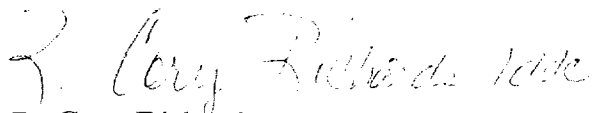
Gentlemen:

Enclosed please find Form C-108, Application for Authorization to Inject and attachments thereto.

If you have any questions regarding this application, please contact me at our Monahans, Texas office captioned below.

Sincerely,

J. MCSHANE, INC. for
WOOD, MCSHANE & THAMS



R. Cory Richards
Petroleum Geologist

RCR:ddc

Attachments

cc: Oil Conservation Division
P. O. Box 1980
Hobbs, NM 88240

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Wood, McShane & Thams
Address: P. O. Box 968, Monahans, TX 79756
Contact party: Cory Richards, Geologist Phone: (915)943-7531
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☒ yes ☐ no
If yes, give the Division order number authorizing the project R-3421.
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- * VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- 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: Cory Richards Title Petroleum Geologist
Signature: *Cory Richards* Date: 04/20/90
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

AFFIDAVIT OF PUBLICATION

State of New Mexico.
County of Lea.

I, DON TEER

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period

of _____

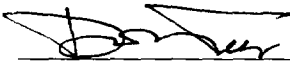
ONE DAY weeks.

Beginning with the issue dated

APRIL 22, 19 90

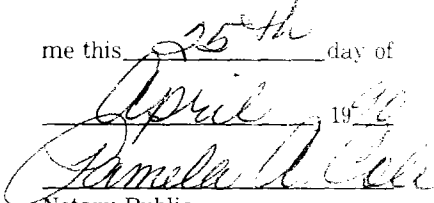
and ending with the issue dated

APRIL 22, 19 90


BUSINESS MANAGER
Sworn and subscribed to before

me this 25th day of

April, 19 90


Notary Public.

My Commission expires _____

JULY 12, 19 93

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE

44 April 22, 1990

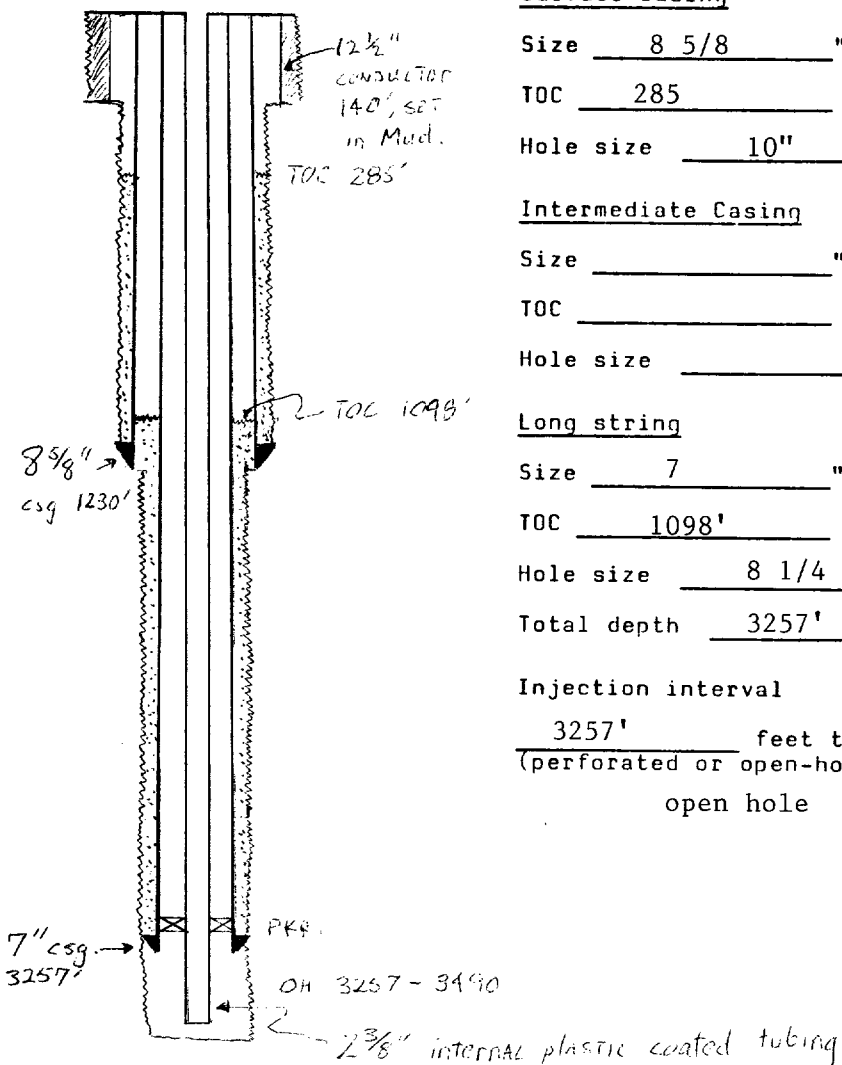
NOTICE is hereby given of the Application of Wood, McShane & Thams, P.O. Box 968, Monahans, Texas 79756 to the Oil Conservation Division, New Mexico Energy & Minerals Department for approval of the following injection well for the purpose of enhanced oil recovery. Direct all inquiries regarding this application to Cory Richards, Geologist, of Wood, McShane & Thams at (915) 943-7531.

The applicant proposes to inject produced water into the Queen formation, which is productive of oil and gas. The proposed injection is on the South Leonard Queen Unit, Well number 13, located 1980' FSL and 1980' FWL of Section 24, Unit letter K, T26S, R37E in Lea County. Water will be injected into the Queen formation through subsurface depths 3257' to 3490'. Expected maximum injection rate of 600 BWPD with an average injection pressure of 1600 p.s.i.

Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501 within fifteen (15) days.

INJECTION WELL DATA SHEET

OPERATOR		LEASE		
Wood, McShane & Thams		South Leonard Unit (Queen)		
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
13	1980' FSL and 1980' FWL	24	265	37E

SchematicTabular DataSurface Casing

Size 8 5/8 " Cemented with 100 sx.
 TOC 285 feet determined by Calc
 Hole size 10"

Intermediate Casing

Size " Cemented with sx.
 TOC feet determined by
 Hole size

Long string

Size 7 " Cemented with 150 sx.
 TOC 1098' feet determined by Calc.
 Hole size 8 1/4
 Total depth 3257'

Injection interval

3257' feet to 3490 feet
 (perforated or open-hole, indicate which) open hole

Tubing size 2 3/8 lined with Plastic set in a
 (material)
Baker AD packer at 3256 feet
 (brand and model)
 (or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Queen Sand
- Name of Field or Pool (if applicable) South Leonard Unit
- Is this a new well drilled for injection? ☐ Yes ☒ No
 If no, for what purpose was the well originally drilled? Oil Production
- 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) No
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. None known

Wood, McShane & Thams
South Leonard Queen Unit #13

Form 108-C, Item III.

Geologic Data on Injection Zone

The South Leonard Unit in southeast Lea County of New Mexico produces from the Queen formation found at an average depth of 3350 feet below the surface in this area. The Queen formation is best described as a series of sandstone stringers that comprise the "main pay" interval, which averages 30 feet thick. On the western edge of the unit, a separate sand body overlies the "main pay" and varies in thickness.

The lithologies of both sand bodies are similar; fine to very fine grained sandstones cemented with a calcareous cement. Porosities average 14% with water saturations in the range of 35%.

There are no known drinking water zones above the Queen formation in this area. In fact, the make-up for this water flood project must come from the San Andres formation which is below the Queen formation. The water analysis for the San Andres formation indicates dissolved solids are over 69,000 mg/l.

Form 108-C, Item XI.

There are no fresh water wells within one mile of the proposed injection well.

Wood, McShane & Thams
South Leonard Queen Unit #13

Form C-108, Item VII.

Proposed Operation:

1. Proposed average injection rate is approximately 360 BWPD with maximum injection volume of 600 BWPD.
2. Injection system is closed.
3. Proposed average injection pressure is approximately 1100 p.s.i. with a maximum expected injection pressure of 1600 p.s.i.
4. Analysis of injection fluids on attached sheets. Make-up water is compatible with receiving formation and has been used in this project for many years with no problems. Make-up water is from the San Andres formation and is analyzed from a sample taken from WSW #1, which is the only source of make-up water for this lease.

----- VISCO Water Analysis

Prepared for WOOD, MCSHANE AND THAMS
KERMIT, TEXAS

WAYNE NAIL
NALCO Chemical Company
16-Jul-85

Well Number : SOUTH LEONARD QUEENS
Water Source : COMINGLED

*injected fluid - combination of Queen produced
water and San Andres Make-Up Water*

DISSOLVED SOLIDS

=====

Cations		mg/l	meq/l		mg/l
=====		=====	=====		=====
Sodium	Na+	19,050.76	828.29	as NaCl	
Calcium	Ca++	2,680.00	134.00	as CaCO3	6,700.00
Magnesium	Mg++	2,405.70	197.99	as CaCO3	9,900.00
Barium	Ba++			as CaCO3	
Total Cations		24,136.46	1,160.28		

Anions		mg/l	meq/l		mg/l
=====		=====	=====		=====
Chloride	Cl-	38,241.00	1,078.40	as NaCl	63,000.00
Sulfate	SO4=	3,359.72	69.88	as Na2SO4	4,970.00
Carbonate	CO3=			as CaCO3	
Bicarb.	HCO3-	732.00	12.00	as CaCO3	600.00
Total Anions		42,332.72	1,160.28		

Total Solids 66,469.18

Total Iron,Fe			as Fe	
Acid to Phen,CO2	220.00		as CaCO3	500.00

SCALING INDICES

=====

Temp	CaCO3	CaSO4	BaSO4
-----	-----	-----	-----
50 F	+0.10	+14.62	
77 F	+0.34		
95 F	+0.55	+14.03	
122 F	+0.93	+14.39	
149 F	+1.38		
176 F	+1.92	+17.29	
203 F	+2.54		

Positive values indicate scaling is likely.
Scaling Indices calculated using ASTM standard practices.

OTHER PROPERTIES

=====

pH	6.80
Specific Gravity	1.05
Turbidity	
Oxygen, as O2 ppm	
Sulfide as H2Sppm	
Temperature F	70.00

VISCO Water Analysis

Prepared for WOOD, MCSHANE AND THAMS
KERMIT, TEXAS

WAYNE NAIL
NALCO Chemical Company
16-Jul-85

Well Number : SOUTH LEONARD QUEENS
Water Source : UN. WSW #1

----- *San Andres Make Up Water* -----

DISSOLVED SOLIDS
=====

Cations		mg/l	meq/l		mg/l
=====		=====	=====		=====
Sodium	Na+	25,207.21	1,095.97	as NaCl	
Calcium	Ca++	960.00	48.00	as CaCO3	2,400.00
Magnesium	Mg++	437.40	36.00	as CaCO3	1,800.00
Barium	Ba++			as CaCO3	
-----		-----	-----		
Total Cations		26,604.61	1,179.96		

Anions		mg/l	meq/l		mg/l
=====		=====	=====		=====
Chloride	Cl-	38,848.00	1,095.51	as NaCl	64,000.00
Sulfate	SO4=	3,386.76	70.44	as Na2SO4	5,010.00
Carbonate	CO3=			as CaCO3	
Bicarb.	HCO3-	854.00	14.01	as CaCO3	700.00
-----		-----	-----		
Total Anions		43,088.76	1,179.96		

Total Solids 69,693.37

Total Iron, Fe			as Fe	
Acid to Phen, CO2	308.00		as CaCO3	700.00

SCALING INDICES
=====

Temp	CaCO3	CaSO4	BaSO4
-----	-----	-----	-----
50 F	-0.21	-16.20	
77 F	+0.02		
95 F	+0.23	-16.70	
122 F	+0.61	-16.66	
149 F	+1.07		
176 F	+1.61	-13.86	
203 F	+2.24		

Positive values indicate scaling is likely.
Scaling Indices calculated using ASTM standard practices.

OTHER PROPERTIES
=====

pH	6.80
Specific Gravity	1.05
Turbidity	
Oxygen, as O2 ppm	
Sulfide as H2S ppm	
Temperature F	70.00

VISCO Water Analysis

Prepared for WOOD, MCSHANE AND THAMS
KERMIT, TEXAS

WAYNE NAIL
NALCO Chemical Company
16-Jul-85

Well Number : SOUTH LEONARD QUEENS
Water Source : PRODUCED WATER AT WATER STATION

(Queen)

DISSOLVED SOLIDS

Cations		mg/l	meq/l		mg/l
=====		=====	=====		=====
Sodium	Na+	34,315.42	1,491.97	as NaCl	
Calcium	Ca++	4,680.00	234.00	as CaCO3	11,700.00
Magnesium	Mg++	4,860.00	399.98	as CaCO3	20,000.00
Barium	Ba++			as CaCO3	

Total Cations		43,855.42	2,125.95		

Anions		mg/l	meq/l		mg/l
=====		=====	=====		=====
Chloride	Cl-	72,233.00	2,036.97	as NaCl	119,000.00
Sulfate	SO4=	3,508.44	72.98	as Na2SO4	5,190.00
Carbonate	CO3=			as CaCO3	
Bicarb.	HCO3-	976.00	16.01	as CaCO3	800.00

Total Anions		76,717.44	2,125.95		
Total Solids		120,572.86			

Total Iron, Fe			as Fe	
Acid to Phen, CO2	176.00		as CaCO3	400.00

SCALING INDICES

Temp	CaCO3	CaSO4	BaSO4
-----	-----	-----	-----
50 F	+0.84	+28.67	
77 F	+1.09		
95 F	+1.30	+27.96	
122 F	+1.68	+29.04	
149 F	+2.14		
176 F	+2.68	+31.09	
203 F	+3.30		

Positive values indicate scaling is likely.
Scaling Indices calculated using ASTM standard practices.

OTHER PROPERTIES

=====

pH	7.20
Specific Gravity	1.10
Turbidity	
Oxygen, as O2 ppm	
Sulfide as H2S ppm	
Temperature F	70.00

**Wood, McShane & Thams
South Leonard(Queen)Unit #13
Form C-108, Item VI**

Wood, McShane & Thams -- South LeonardQueen#4

Loc.: 660' FNL & 1980' FWL, Sec. 24, Unit C, T-26-S, R-37-E

Status: Producer

Date Drilled: 6/12/50 TD: 3445'

Construction: 9 5/8" csg. set @ 299' w/250 sx.
7" csg. set @ 3250' w/500 sx (2 staged)
2 3/8" J55 Tubing @ 3325'

Completion: OH 3250'-3445'; sand-oil fraced 10/62 w/20,000#
sand and 500# MKII Adomite. A/3000 gals. 15% NeFe
Acid 1-9-78.

Wood, McShane & Thams -- South LeonardQueen#12

Loc.: 1980' FSL & 660' FWL, Sec. 24, Unit L, T-26-S, R-37-E

Status: Producer

Date Drilled: 11/4/50 TD: 3505'

Construction: 12 1/2" csg. set @ 160' w/50 sx.
8 5/8" csg. set @ 1190' w/100 sx.
7" csg. set @ 3250' w/100 sx.
2 3/8" Tubing @ 3273'

Completion: OH, orig. shot, OH w/110 Qts. Nitro @ 3417'-3455' (11/50)
Fraced OH 3250'-3505', 28,000# sand & 20,000 gals. w/500#
blocking material (10/74)
Fraced OH 3250'-3505', 40,000# 20/40 sand, 20,000# 12/20 sand
w/x-linked gel and A/1000 gals. 15% NeFe Acid. (4/85)

Wood, McShane & Thams -- South LeonardQueen#11

Loc.: 1980' FSL & 660' FEL, Sec. 23, Unit I, T-26-S, R-37-E

Status: Active Injector

**Wood, McShane & Thams
South Leonard(Queen)Unit #13
Form C-108, Item VI**

Wood, McShane & Thams -- South LeonardQueen#11 -- Cont.

Date Drilled: 6/1/51 TD: 3482'

Construction: 13 3/8" csg. set @ 168' w/50 sx.
 8 5/8" csg. set 1214' w/100 sx.
 7" csg. set @ 3246' w/100 sx.
 2 3/8" I.P.C. Tubing @ 3196'
 Baker Tension Pkr. @ 3196'

Completion: OH, orig. shot OH w/80 Qts. Nitro (3438'-3458') in 6/51.
 A/1500 gals. 15% NeFe Acid

Wood, McShane & Thams -- South LeonardQueen#8

Loc.: 1980' FNL & 1980 FWL, Sec. 24, Unit F, T-26-S, R-37-E

Status: Active Injector

Date Drilled: 2/4/50 TD: 3569'

Construction: 8 5/8" csg. set @ 1210' w/100 sx.
 7" csg. set @ 3253' w/100 sx.
 4 1/2" liner set @ 3091'-3569' w/100 sx.
 2 3/8" I.P.C. J55 Tubing @ 3356'
 Baker Model AD-1 Pkr. set @ 3356'

Completion: Perf. 3409'-3448', A/1500 gals.

Wood, McShane & Thams -- South LeonardQueen#7

Loc.: 1980' FNL & 660' FWL, Sec. 24, Unit E, T-26-S, R-37-E

Status: Producer

Date Drilled: 6/10/60 TD: 3522'

Construction: 13 3/8" csg. set @ 170' w/50 sx.
 8 5/8" csg. set @ 1240' w/110 sx.
 7" csg. set @ 3250' w/100 sx.
 2 3/8" J55 Tubing @ 3450'

**Wood,McShane & Thams
South Leonard(Queen)Unit #13
Form C-108, Item VI**

Wood, McShane & Thams -- **South LeonardQueen#7 -- Cont.**

Completion: OH 3250'-3522'
A/3000 gals. 15% NeFe Acid

Wood, McShane & Thams -- **South LeonardQueen#10**

Loc.: 990' FEL & 1980' FNL, Unit H, Sec. 24 T-26-S, R-37-E

Status: Active Injector

Date Drilled: 10/25/68 TD: 3620'

Construction: 7 5/8" csg. set @ 1005' w/350 sx.
4 1/2" csg. set @ 3620' w/300 sx.
2 3/8" I.P.C. Tubing @ 3465'
Baker model 43-A Tandum Pkr. set @ 3476'

Completion: Perf. 3495'-3611'; A/4500 gal. 15% NeFe Acid

Wood, McShane & Thams -- **South LeonardQueen#9**

Loc.: 1980 FNL & 2310 FEL, Sec. 24, Unit G, T-26-S, R-37-E

Status: Producer

Date Drilled: 7/28/50 TD: 3570'

Construction: 8 3/8" csg. set @ 295' w/150 sx.
5 1/2" csg. set @ 3250' w/400 sx.
2 7/8" Tubing @ 3443'

Completion: OH 3250'-3570'; A/3000 gals. 15% NeFe Acid

Wood, McShane, & Thams -- **South LeonardQueen#14**

Loc.: 1980' FSL & 2310' FEL, Sec. 24, Unit "J", T-26-S, R-37-E

Status: Producer

Date Drilled: 11/3/50 TD: 3484'

**Wood, McShane & Thams
South Leonard (Queen) Unit #13
Form C-108, Item VI**

Wood, McShane & Thams -- South Leonard Queen #14 -- Cont.

Construction: 9 5/8" csg. set @ 294' w/125 sx.
5 1/2" csg. set @ 3411' w/400 sx. (2 stages)
2 3/8" J55 tubing @ 3401'

Completion: OH, orig. shot OH w/120 qts. (3421'-3484') in 7/51.
A/OH (3401'-3484') w/3000 gals. 15% NeFe w/55 gals.
scale inhibitor in 4/77.

Wood, McShane & Thams -- South Leonard Queen #15

Loc.: 990' FSL & 660' FWL, Sec. 24, Unit M, T-26-S, R-37-E

Status: Active Injector

Date Drilled: 11/7/50 TD: 3540'

Construction: 10 3/4" csg. set @ 298' w/150 sx.
5 1/2" csg. set @ 3348' w/400 sx. (2 stages)
2 3/8" I.P.C. Tubing @ 3390'
Baker Model AD-1 Pkr. set @ 3303'

Completion: OH, orig. shot OH (3340'-3500') w/190 qts. Nitro
and A/3500 gals. in 11/51.
A/1500 gals. Mod 202 acid in 4/77

Wood, McShane & Thams -- South Leonard Queen #16

Loc.: 1980' FWL & 990' FSL, Sec. 24, Unit N, T-26-S, R-37-E

Status: Active Injector

Date Drilled: 10/10/50 TD: 3480'

Construction: 9 5/8" csg. set @ 300' w/150 sx.
5 1/2" csg. set @ 3260' w/400 sx. (2 stages)
2 3/8" I.P.C. Tubing @ 3215'
Baker Tension Pkr set @ 3215'

**Wood,McShane & Thams
South Leonard(Queen)Unit #13
Form C-108, Item VI**

Wood, McShane & Thams -- South LeonardQueen#16 -- Cont.

Completion: OH, orig. shot OH (3260'-3480') w/160 qts. Nitro in 8/51.
Hydrafraced w/3000 gal. in 10/52.
A/1800 gals.

Herman Ledbetter -- #2 Jay

Loc.: 990' FSL & 1980' FEL, Sec. 24, Unit O, T-26-S, R-37-E

Status: TA

Date Drilled: 7-7-77 TD: 3693'

Construction: 8 5/8" csg. set @ 1022' w/350 sx.
4 1/2" csg. set @ 3683' w/400 sx.

Completion: Perf. 3483'-3615', A/2000 gals.
Frac. 30,000 gals. & 30,000# sand
Sqzd. 3484'-3615' w/150 sx.
Perf. 3516-3526' A/500 gals.
Frac. 10,000 gals. & 10,000# sand

Herman Ledbetter -- #1 W. J. Frost

Loc.: 990' FSL & 330' FEL, Sec. 23, Unit P, T-26-S, R-37-E

Status: Temp. SI

Date Drilled: 11-2-70 TD: 3726'

Construction: 8 5/8" csg. set @ 1024' w/225 sx.
4 1/2" csg. set @ 3725' w/400 sx.

Completion: Perf. 3390'-3450'
A/2500 gals.
Frac. 15,000 gals. & 20,500# sand

430-B3

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS



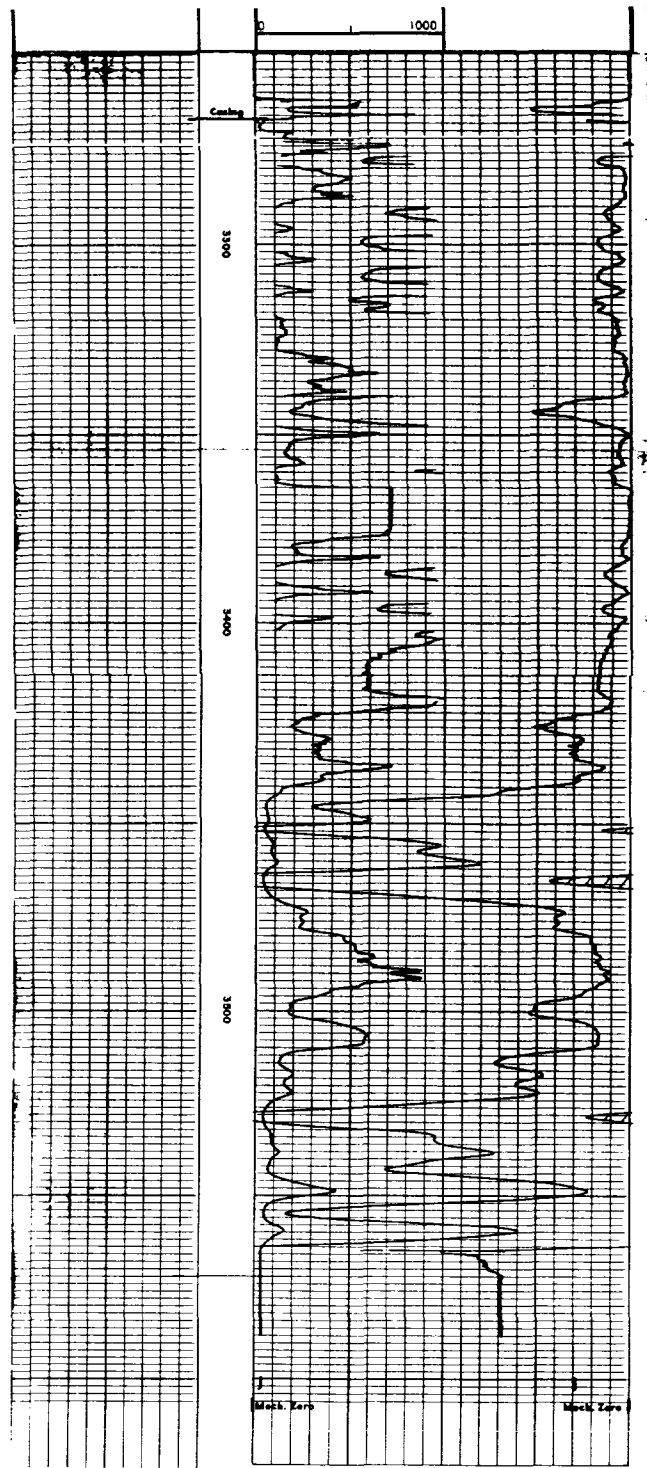
Induction Log

COUNTY LEA FIELD or LOCATION SOUTH LEONARD WELL SCARBOROUGH # 2 COMPANY SHELL OIL COMPANY	COMPANY SHELL OIL COMPANY	Other Surveys FDL-GR
	WELL <u>SLU #13</u> <u>SCARBOROUGH # 2</u>	Location of Well 1980' FROM S/L 1980' FROM W/L
	FIELD SOUTH LEONARD	Elevation: D.F.: CHF : 2987 or G.L.:
	LOCATION SEC. 24-26S-37E	FILING No.
	COUNTY LEA	
	STATE NEW MEXICO	

RUN No.	ONE				
Date	10-24-62				
First Reading	3572				
Last Reading	3267				
Feet Measured	305				
Csg. Schlum.	3267				
Csg. Driller	3257				
Depth Reached	3573				
Bottom Driller	3590				
Depth Datum	CHF				
Mud Nat.	OIL & WATER				
Dens. Visc.					
Mud Resist.	.059 @ 60 °F	@ °F	@ °F	@ °F	@ °F
" Res. BHT	.045 @ 80 °F	@ °F	@ °F	@ °F	@ °F
Rmf	@ °F	@ °F	@ °F	@ °F	@ °F
Rmc	@ °F	@ °F	@ °F	@ °F	@ °F
" pH	@ °F	@ °F	@ °F	@ °F	@ °F
" Wtr. Loss	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.
Bit Size	6 1/4"				
Spcgs.					
IND.					
Opr. Rig Time	6FF40				
Truck No.	1 HOUR				
Recorded By	3701-HOBBS				
Witness	SCHAEFFER				
	COFFEY				

TEXAS PACIFIC OIL COMPANY
Property as of 8-29-80

This is the
only log we have
for this well



April 30, 1990

Dwight Tipton
 Box 1025
 Lovington, NM 88260

RE: Application for Authorization to Inject
 Wood, McShane & Thams
 South Leonard (Queen) Unit, Well No. 13
 Lea County, New Mexico

Gentlemen:

Pursuant to requirement XIII on the attached application, please find enclosed a copy of Form C-108, Application for Authorization to Inject and a copy of the legal verification published because this is an application subject to administrative approval.

If you have any questions regarding this application, please contact me at our Monahans, Texas office.

Sincerely,

J. MCSHANE, INC. for
 WOOD, MCSHANE & THAMS

R. Cory Richards

R. Cory Richards
 Petroleum Geologist

RCR:ddc
 Attachments

P 671 917 370
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to Dwight Tipton	
Street and No. Box 1025	
P.O. State and ZIP Code Lovington, NM 88260	
Postage \$	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$2.00
Postmark or Date	

Fold at line over top of envelope to the right of the return address

PS Form 3800, June 1985

April 30, 1990

Texaco Producing, Inc.
Box 728
Hobbs, NM 88240

RE: Application for Authorization to Inject
Wood, McShane & Thams
South Leonard (Queen) Unit, Well No. 13
Lea County, New Mexico

Gentlemen:

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Sincerely,

J. MCSHANE, INC. for
WOOD, MCSHANE & THAMS

R Cory Richards 1ddc

R. Cory Richards
Petroleum Geologist

RCR:ddc
Attachments

P 671 917 368

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Texaco Producing, Inc.	
Street and No. Box 728	
P.O. State and ZIP Code Hobbs, NM 88240	
Postage \$	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees \$	
Postmark or Date	

PS Form 3800, June 1985

Fold at line over top of envelope to the right of the return address

April 30, 1990

Herman J. Ledbetter
Box 95
Loco Hills, NM 88255

RE: Application for Authorization to Inject
Wood, McShane & Thams
South Leonard (Queen) Unit, Well No. 13
Lea County, New Mexico

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Sincerely,

J. MCSHANE, INC. for
WOOD, MCSHANE & THAMS

R. Cory Richards
R. Cory Richards
Petroleum Geologist

RCR:ddc
Attachments

P 672 917 366

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Receipt)

Sent to Herman J. Ledbetter Street and No Box 95 P.O. State and Zip Code Loco Hills, NM 88255	Postage \$	Certified Fee	Special Delivery Fee	Restricted Delivery Fee	Return Receipt showing to whom and Date Delivered	Return Receipt showing to whom, Date, and Address of Delivery	TOTAL Postage and Fees \$ 2.00	Postmark or Date
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PS Form 3800, June 1985

Fold at line over top of envelope to the right
of the return address.

J. McSHANE, INC.
MANAGEMENT - OPERATIONS
OIL • GAS • WATER

April 30, 1990

Shell Oil Company
Box 576
Houston, TX 77001

RE: Application for Authorization to Inject
Wood, McShane & Thams
South Leonard (Queen) Unit, Well No. 13
Lea County, New Mexico

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Sincerely,

J. MCSHANE, INC. for
WOOD, MCSHANE & THAMS

R Cory Richards ddc

R. Cory Richards
Petroleum Geologist

RCR:ddc
Attachments

PS Form 3800, June 1965

Sent to Shell Oil Company	
Street and No Box 576	
P.O. State and Zip Code Houston, TX 77001	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date and Address of Delivery	
TOTAL Postage and Fees	\$ 7.00
Postmark or Date	

Fold at line over top of envelope to the right
of the return address

P 671 917 367
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

April 30, 1990

C&K Petroleum
c/o W.D. Kennedy
550 W. Texas
Midland, TX 79701

RE: Application for Authorization to Inject
Wood, McShane & Thams
South Leonard (Queen) Unit, Well No. 13
Lea County, New Mexico

Gentlemen:

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Sincerely,

J. MCSHANE, INC. for
WOOD, MCSHANE & THAMS

R. Cory Richards ddc

R. Cory Richards
Petroleum Geologist

RCR:ddc
Attachments

P 671 917 369
RECEIPT FOR CERTIFIED MAIL
NO RETURNED MAIL
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to	C&K Petroleum
Street and No	c/o W.D. Kennedy
	550 W. Texas
P.O. State and ZIP Code	Midland, TX 79701
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom Date and Address of Delivery	
TOTAL Postage and Fees	\$ 2.00
Postmark or Date	

PS Form 3800, June 1985



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

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

RE: Proposed:

MC	_____
DHC	_____
NSL	_____
NSP	_____
SWD	_____
WFX	☒
PMX	_____

50 MAY 7 AM 9 33

Gentlemen:

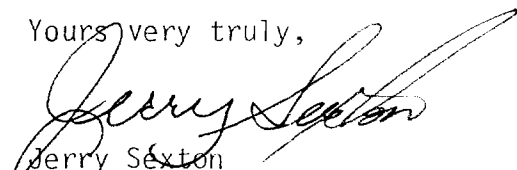
I have examined the application for the:

<u>Wood McShane & Thomas</u>	<u>L. Leonard Unit Tr. 3</u>	<u>#13-K</u>
Operator	Lease & Well No.	Unit S-T-R
		<u>24-26-37</u>

and my recommendations are as follows:

OK

Yours very truly,


Jerry Sexton
Supervisor, District 1

/ed