8/19/97	9/3/97	BS	MW	SWD

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
[DD-Directional Drilling] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

❑ NSL ❑ NSP ❑ DD ❑ SD

AUG 19 1997

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

❑ DHC ❑ CTB ❑ PLC ❑ PC ❑ OLS ❑ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

❑ WFX ❑ PMX ☑ SWD ❑ IPI ❑ EOR ❑ PPR

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ❑ Does Not Apply

[A] ❑ Working, Royalty or Overriding Royalty Interest Owners

[B] ☑ Offset Operators, Leaseholders ~~or~~ and Surface Owner

[C] ☑ Application is One Which Requires Published Legal Notice

[D] ❑ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ❑ For all of the above, Proof of Notification or Publication ~~is Attached~~ will be submitted, and/or,

[F] ❑ Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE** - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I further verify that all applicable API Numbers are included. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity

James Bruce P.O. Box 1056 Santa Fe, NM 87504	James Bruce	Attorney for Applicant	8/18/97
Print or Type Name	Signature	Title	Date

JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

SUITE B
612 OLD SANTA FE TRAIL
SANTA FE, NEW MEXICO 87501

(505) 982-2043
(505) 982-2151 (FAX)

August 19, 1997

HAND DELIVERED

David Catanach
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Application of Mallon Oil Company for administrative approval of a salt water disposal well, Eddy County, New Mexico

Dear Mr. Catanach:

Enclosed, in triplicate, is an application by Mallon Oil Company for a salt water disposal well. Proof of notice will be furnished by a subsequent letter.

Very truly yours,

James Bruce

James Bruce

Attorney for Mallon
Oil Company

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

Oil Conservation Div.
2040 Pacheco St.
Santa Fe, NM 87505

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance __X__ Disposal _____ Storage
Application qualifies for administrative approval? __Yes __No

II. OPERATOR: Mallon Oil Company

ADDRESS: 999 - 18th Street, Suite 1700, Denver, CO 80202

CONTACT PARTY: Don Erickson PHONE: 303-293-2333

III. WELL DATA: Complete the data required on the reverse side of this form for each well processed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project: ___ Yes __X__ No
If yes, give the Division order number authorizing the project _____

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 sources 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.)

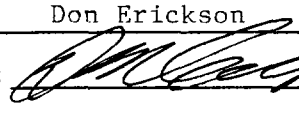
* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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: Don Erickson TITLE: Vice President - Operations

SIGNATURE:  DATE: 8/7/97

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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, PO Box 2088, Santa Fe, NM 87504-2088 within 15 days.

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

OTICE: 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.

FORM C-108 ATTACHMENT

MALLON OIL COMPANY
PENNZOIL 10 FEDERAL NO. 2
1980' FSL & 660' FWL
SECTION 10, T24S-R26E
EDDY COUNTY, NM

III. INJECTION WELL DATA

Application for re-entry with current well schematic and proposed completion is attached.

Surface Casing:
Hole Size: 17-1/2", casing: 13-3/8" @ 500', cement circulated to surface (existing casing)

Intermediate Casing:
Hole size: 12-1/4", casing: 8-5/8" @ 5450', estimate TOC @ 805' existing casing

Production Casing:
Hole size: 7-7/8", casing: 5-1/2" @ 8600', planned TOC @ 5100'

Total Depth:
8600' (plugged back)

Tubing:
2-7/8" - plastic lined tubing with loc-set packer

Name of Injection Formation:
Bone Springs

Field:
Carlsbad, South

Injection Interval:
6096-6126' proposed
7644-7660' proposed

Original Well Purpose:
The well was drilled in 1977 by C&K Petroleum to test the Morrow formation for gas and was abandoned at that time.

Perforated Intervals:
None

Depth and name of overlying and/or underlying oil and gas zones in this area:
Delaware: 1888'
Morrow: 10,946'

SHEET NO. OF

MALLON OIL COMPANY

ENGINEERING CHART

FILE

APPN

SUBJECT Pennzoil 10 Federal No. 2

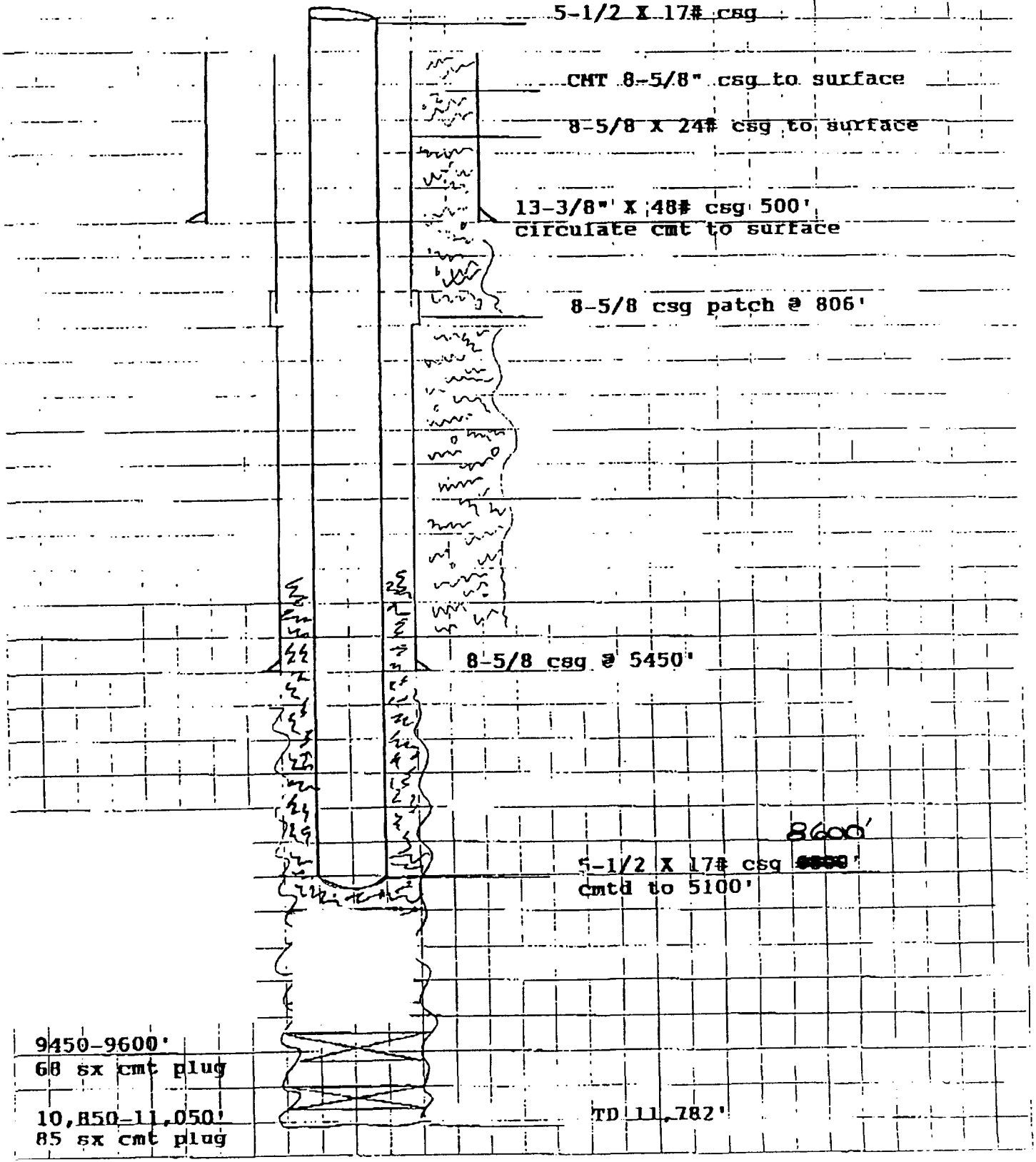
Sec. 10, T24S-R26E

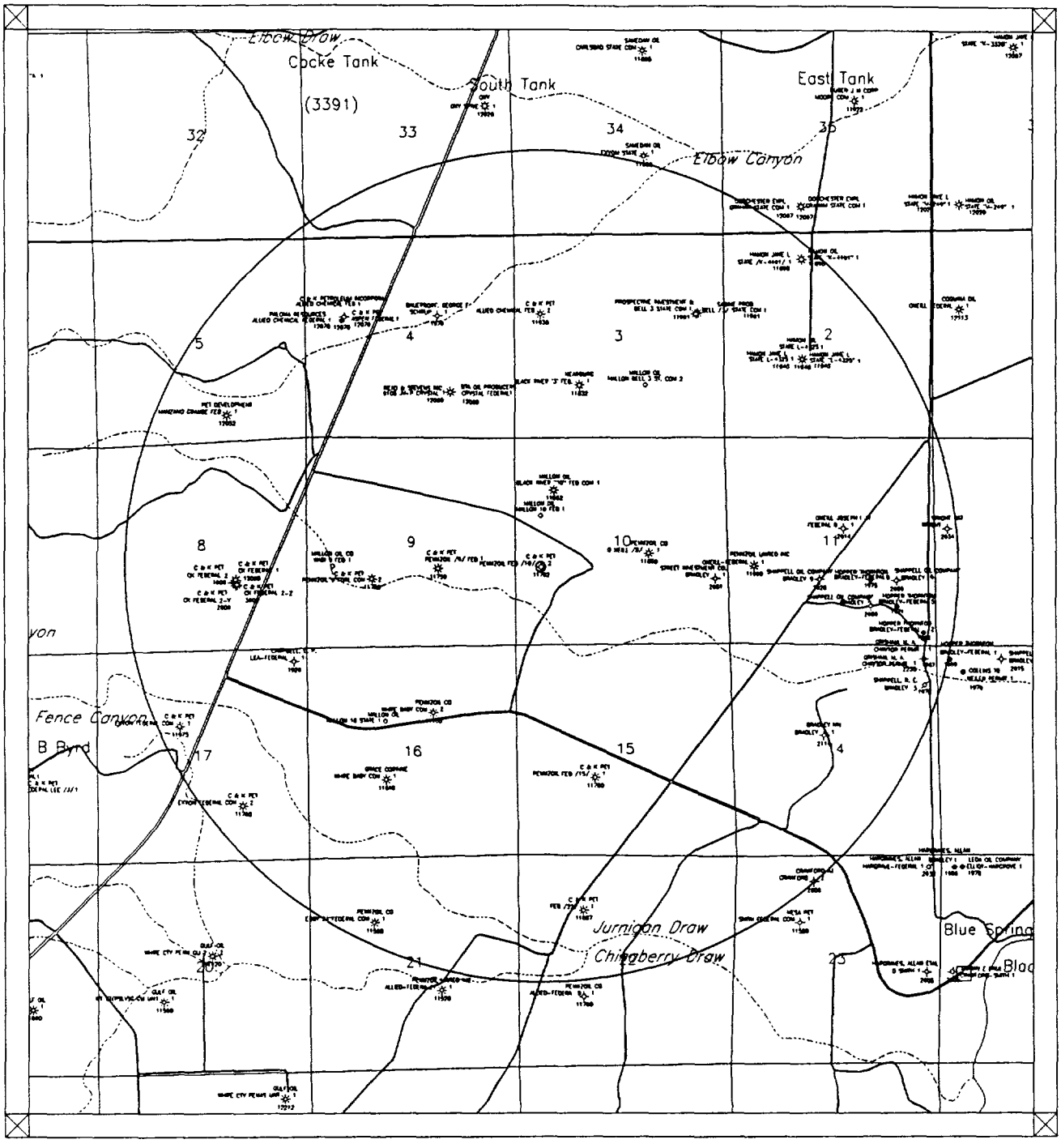
Eddy County, NM

DATE 7/28/97

BY Winkler

Proposed Well Bore Schematic



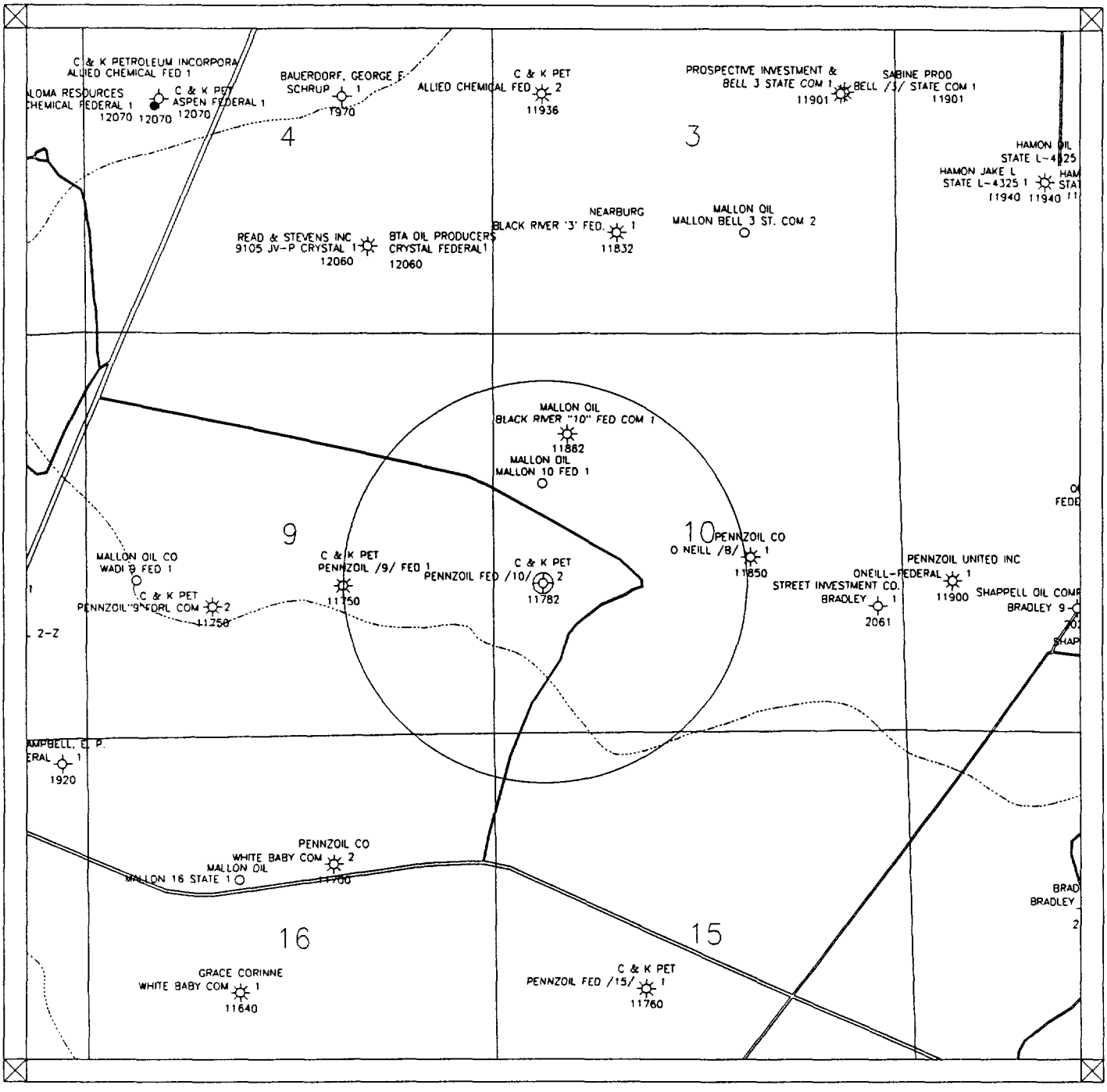


N

Scale 1:48000.

0.2 0 0.2 0.4 0.6 0.8 1 miles

MALLON OIL COMPANY		
Two Mile Radius Map C&K Petroleum - Pennzoil '10' Fed #2 Eddy County, New Mexico		
T24S R26E Sec.10		
		8/1/97



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Scale 1:24000.

0.1 0 0.1 0.2 0.3 0.4 0.5 miles

MALLON OIL COMPANY		
Half Mile Radius Map C&K Petroleum - Pennzoil '10' Fed #2 Eddy County, New Mexico		
T24S R26E Sec.10		
		8/1/97

FORM C-108 ATTACHMENT

MALLON OIL COMPANY
PENNZOIL 10 FEDERAL NO. 2
1980' FSL & 660' FWL
SECTION 10, T24S-R26E
EDDY COUNTY, NM

VI. TABULATION OF DATA ON ALL WELLS IN REVIEW AREA

Three wells have penetrated the proposed disposal zone within the area of review. All three wells are currently producing gas from the Morrow formation and were never perforated in the proposed disposal zone (Bone Springs).

The Mallon 10 Federal No. 1 in the SWNW Section 10-T24S-R26E was drilled to 5400' for the Delaware formation penetrated only 135' of the Bone Springs formation.

Well:
Mallon Oil Company
Black River 10 Fed. Comm. No. 1

Location:
1330' FNL & 990' FWL
-E-, Sec. 10, T24S-R26E
Eddy County, NM

Type Well:
Gas producer

Construction:
9-5/8" @ 3807' w/1250 sx - circulated to surface
5-1/2" @ 11,858' w/1335 sx - circulated to surface

Date Drilled:
11/12/96

Record of Completion:
Perfs: 11,340-11,350', 11,387'-11,390', 11,396-11,340', 11,412-11,430', 11,482-11,490', 11,492-11,500', 11,504-11,518', 11,744-11,748'
IPF - 10,000 MCF
Comp. - 11/12/96

Well:
Mallon Oil Company
O'Neill B Comm. No. 1

Location:
2300' FSL & 1980' FEL
-J-, Sec. 10, T24S-R26E
Eddy County, NM

FORM C-108 ATTACHMENT

MALLON OIL COMPANY
PENNZOIL 10 FEDERAL NO. 2
1980' FSL & 660' FWL
SECTION 10, T24S-R26E
EDDY COUNTY, NM

Type Well:
Gas producer

Construction:
13-3/8" @ 400' w/400 sx
9-5/8" @ 5653' w/1000 sx
4-1/2" @ 11,850' w/1325 sx

Date Drilled:
12/1/73

Record of Completion:
Perfs: 1,372-11,379', 11,414-11,431', 11,442-11,456'
Squeezed Perfs: 11,481-11,487', 11,489-11,493', 11,495-11,498'
IPF - 750 MCF
Comp. - 12/1/73

Well:
Wadi Petroleum Inc.
Pennzoil Federal 9 No. 1

Location:
1980' FSL & 1980' FEL
-J-, Sec. 9, T24S-R26E
Eddy County, NM

Type Well:
Gas producer

Construction:
13-3/8" @ 500' w/500 sx - circulated
8-5/8" @ 5467' w/2000 sx - circulated
5-1/2" @ 11,750' w/1120 sx

Date Drilled:
5/11/77

Record of Completion:
Perfs: 11,318-11,324', 11,394-11,404', 11,455-11,466', 11,632-11,637'
IPF - 2050 MCF
Comp. - 5/11/77

SHEET NO. OF

FILE

APPN

DATE

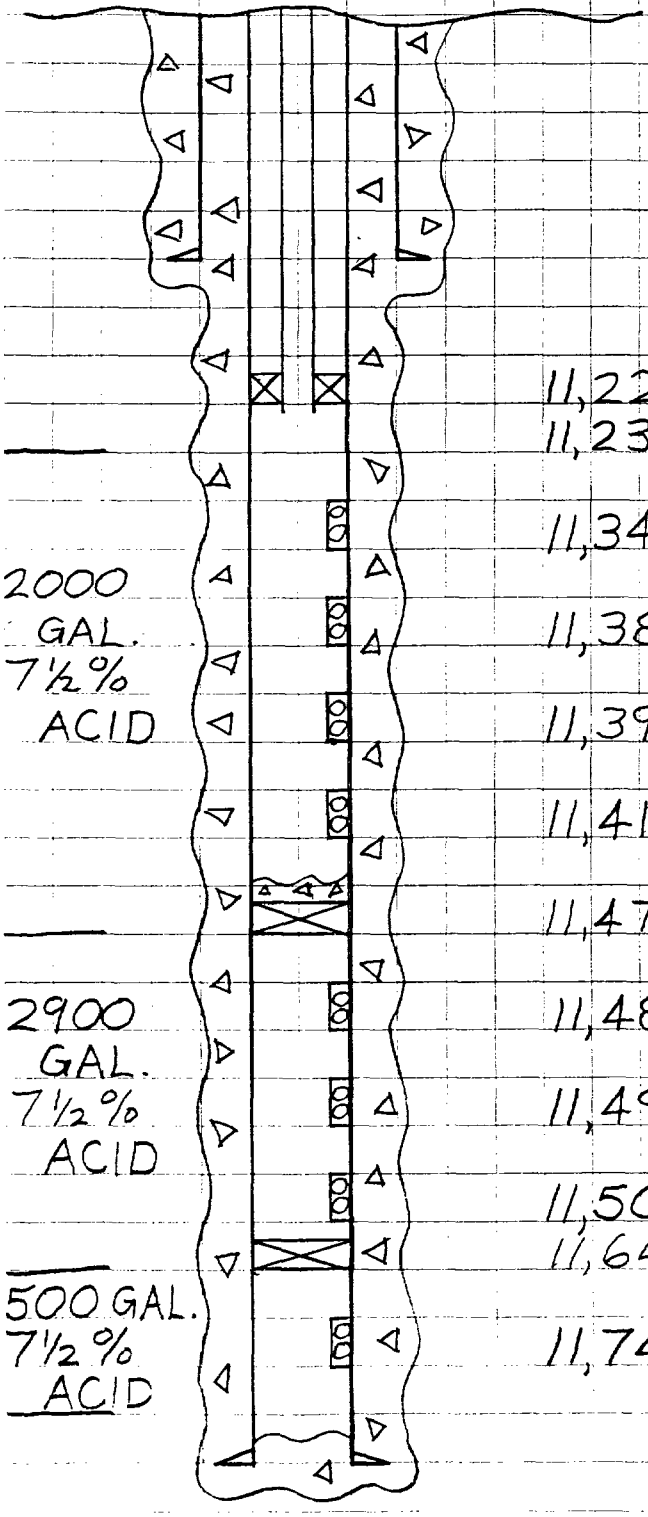
BY

MALLON OIL COMPANY

ENGINEERING CHART

SUBJECT BLACK RIVER 10 FED. COMM. NO. 1

COMPLETION DATE 11/12/96



DEPTH	BIT	CASING	CEMENT
3807'	12¼"	9⅝"	1250 sx CIRCULATED TO SURFACE
11,223'		2⅞" TUBING	
11,231'		PACKER	
11,340-11,350'		MORROW PERF.	
11,387-11,390'		MORROW PERF.	
11,396-11,340'		MORROW PERF.	
11,412-11,430'		MORROW PERF.	
11,473'		CIBP w/2 sx CEMENT	
11,482-11,490'		MORROW PERF.	
11,492-11,500'		MORROW PERF.	
11,504-11,518'		MORROW PERF.	
11,640'		CIBP	
11,744-11,748'		MORROW PERF.	
11,858'	7⅞"	5½"	1335 sx CIRCULATED TO SURFACE

PBTD 11,819'

TD 11,862'

SHEET NO. OF

MALLON OIL COMPANY

ENGINEERING CHART

FILE

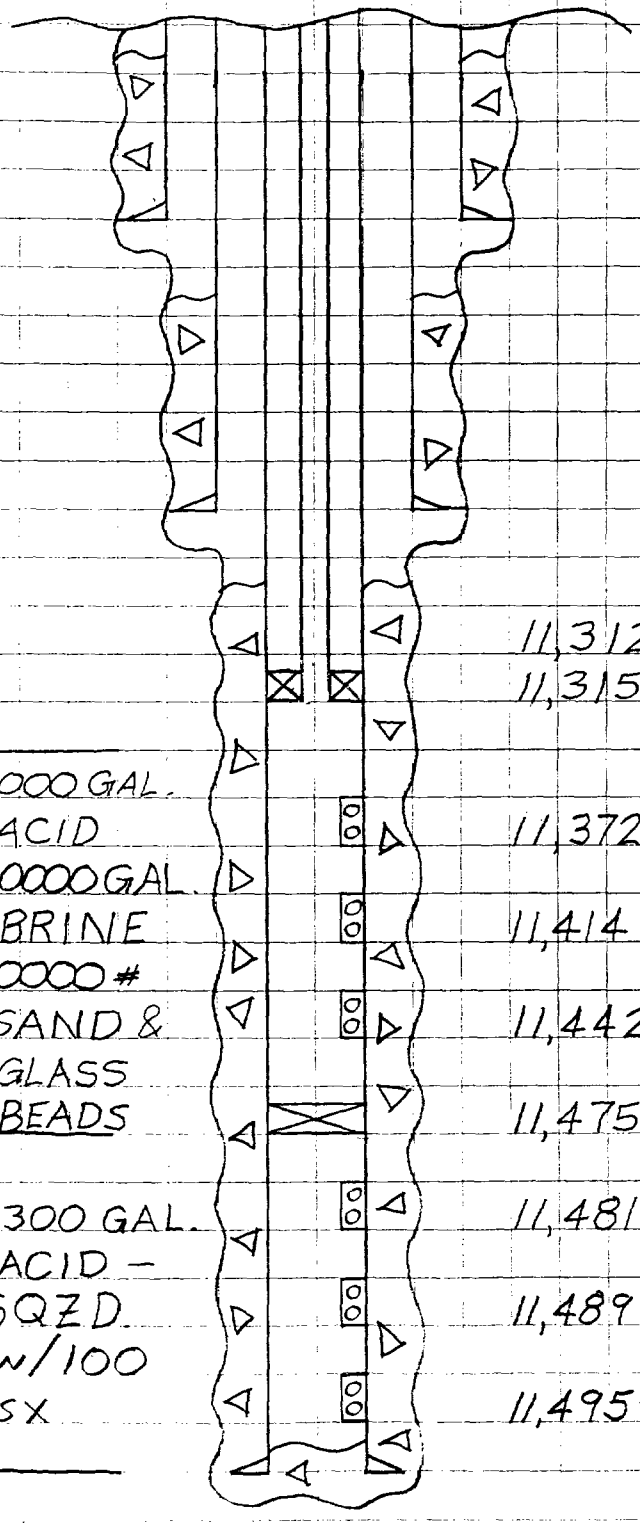
APPN

DATE

BY

SUBJECT O'NEILL 'B' COMM. #1

COMPLETION DATE 12/1/73



	DEPTH	BIT	CASING	CEMENT
	400'	17½"	13⅜"	400 sx
		TOC @ 20'		
	5653'	12¼"	9⅝"	1000 sx
		TOC @ 3546'		
	11,312'	2⅜" TUBING		
	11,315'	PACKER		
6000 GAL. ACID	11,372-11,379'	MORROW PERF.		
40000 GAL. BRINE	11,414-11,431'	MORROW PERF.		
30000 # SAND & GLASS BEADS	11,442-11,456'	MORROW PERF.		
	11,475' CICR			
2300 GAL. ACID - SQZD. w/100 sx	11,481-11,487'	SQUEEZED PERF.		
	11,489-11,493'	SQUEEZED PERF.		
	11,495-11,498'	SQUEEZED PERF.		
	11,850'	8¾"	4½"	1325 sx
		TOC @ 9003'		

11,778' PBTD

11,850' TD

SHEET NO. OF

FILE

APPN

DATE

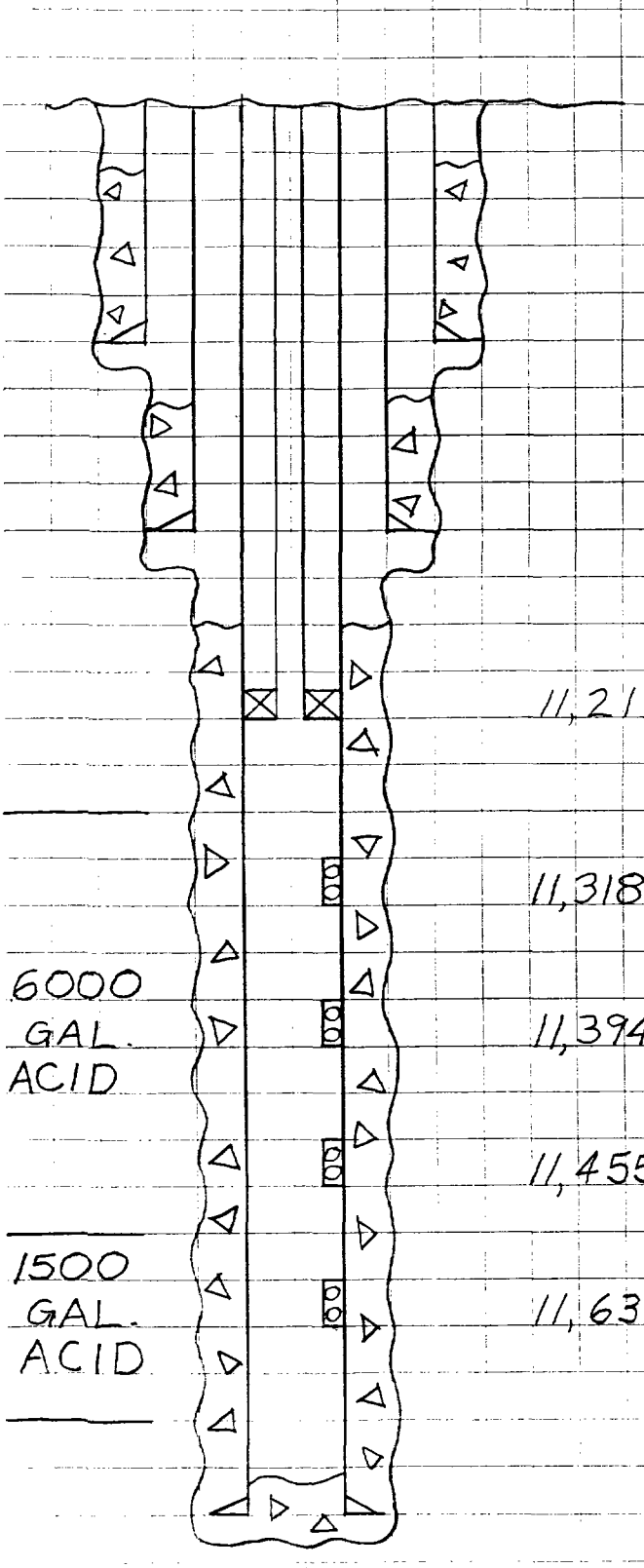
BY

MALLON OIL COMPANY

ENGINEERING CHART

SUBJECT PENNZOIL FEDERAL 9 NO. 1

COMPLETION DATE 5/11/77



	DEPTH	BIT	CASING	CEMENT
	500'	17½"	13⅜"	500 sx
		TOC @ 25'		
	5467'	12¼"	8⅝"	2000 sx
		TOC @ 2269'		
	11,210'	2⅜" TUBING AND PACKER		
	11,318-11,324'	MORROW PERF.		
	11,394-11,404'	MORROW PERF.		
	11,455-11,466'	MORROW PERF.		
	11,632-11,637'	MORROW PERF.		
	11,750'	7⅞"	5½"	1120 sx
		TOC @ 7483'		

FORM C-108 ATTACHMENT

MALLON OIL COMPANY
PENNZOIL 10 FEDERAL NO. 2
1980' FSL & 660' FWL
SECTION 10, T24S-R26E
EDDY COUNTY, NM

VII. PROPOSED OPERATION

1. The water disposal well will dispose produced water from the Black River - Delaware pool and is estimated to be 2000 BWPD initially; if the well's disposal capacity is such to handle additional water, other operator's wells in the area may be trucked into the storage tanks for disposal.

   The average injection rate is estimated at 2000 BWPD and will be subject to pressure limitation.

   The maximum injection rate initially will be 3000 BWPD and subject to pressure limitation.

2. The system is open.

3. The proposed average injection rate is 1220 psi or as determined by step rate test.

   The proposed maximum injection rate is 1250 psi or as determined by step rate test.

4. The source of injected water will be from the Delaware formation. A water analysis is attached.

5. The source of injected water will be from the Delaware formation. A water analysis is attached.

FORM C-108 ATTACHMENT

MALLON OIL COMPANY
PENNZOIL 10 FEDERAL NO. 2
1980' FSL & 660' FWL
SECTION 10, T24S-R26E
EDDY COUNTY, NM

VIII. GEOLOGIC DATA

Geologic Name:
Bone Spring Formation

Lithology:
Detrital carbonates, sandstones and siltstones, with interbedded shales and micritic carbonates

Formation Top:
5267 feet

Thickness:
3153 feet

Geological Data of Drinking Water Zone:
The fresh water aquifer is within Pleistocene alluvial deposits associated with the Pecos River system. The alluvium is present from surface to approximately 175 feet at the proposed re-entry wellsite.

FORM C-108 ATTACHMENT

MALLON OIL COMPANY
PENNZOIL 10 FEDERAL NO. 2
1980' FSL & 660' FWL
SECTION 10, T24S-R26E
EDDY COUNTY, NM

IX. PROPOSED STIMULATION PROGRAM

None at this time.

X. LOG AND TEST DATA

Previously filled by operator - C&K Petroleum

XI. ANALYSIS OF FRESH WATER WELL

Stock well K, Section 10-24S-26E, Eddy County, NM attached

XII.

After examining all available geological and engineering data, we find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII.

A copy of our application has been furnished by certified mail to the surface owner and to each leasehold operator in the 1/2 mile radius of this well.

FW01W025

BJ SERVICES COMPANY

WATER ANALYSIS #FW01W025

INJECTION WATER

ARTESIA LAB

GENERAL INFORMATION

OPERATOR:	MALLON OIL COMPANY	DEPTH:	3480-3500
WELL:	MALLON 10 FEDERAL #1	DATE SAMPLED:	07/14/97
FIELD:		DATE RECEIVED:	07/14/97
SUBMITTED BY:	MIKE BROWN	COUNTY:	EDDY STATE: NM
WORKED BY :	CRAIG BAILEY	FORMATION:	DELAWARE
PHONE NUMBER:			

SAMPLE DESCRIPTION

577 BBLS. FLUID ABOVE LOAD. SAMPLE TAKEN AT 3:00PM.

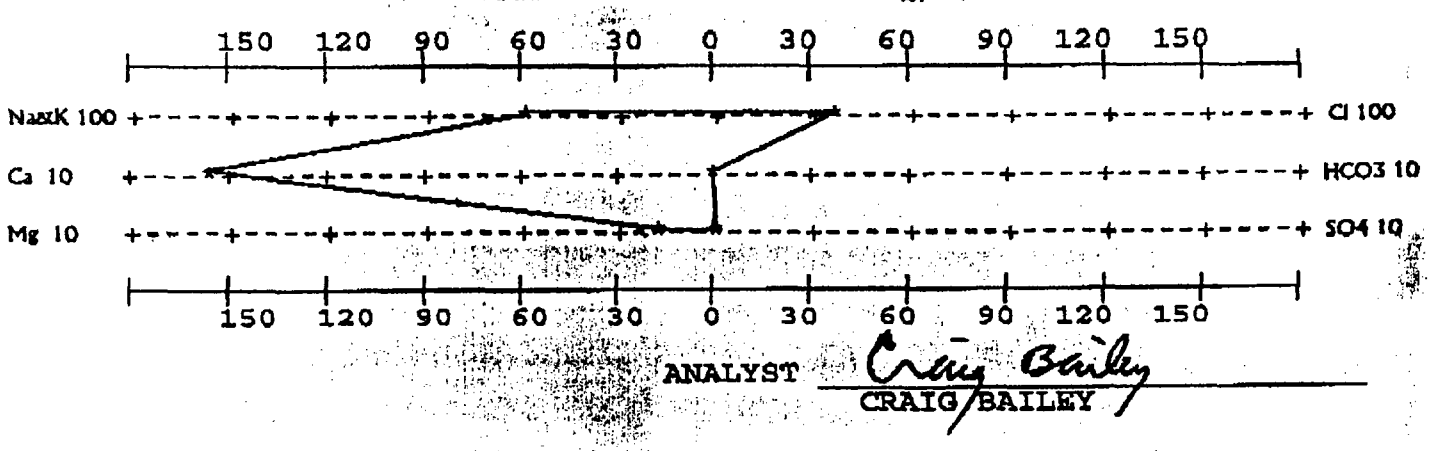
PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY: 1.165 @ 81°F PH: 5.88
RESISTIVITY (CALCULATED): 0.025 ohms @ 75°F

IRON (FE++) :	3 ppm	SULFATE:	343 ppm
CALCIUM:	30,932 ppm	TOTAL HARDNESS	85,888 ppm
MAGNESIUM:	2,086 ppm	BICARBONATE:	272 ppm
CHLORIDE:	128,726 ppm	SODIUM CHLORIDE(Calc)	211,755 ppm
SODIUM+POTASS:	59,817 ppm	TOT. DISSOLVED SOLIDS:	275,047 ppm
IODINE:		POTASSIUM CHLORIDE:	

REMARKS

STIFF TYPE PLOT (IN MEQ/L)



ANALYST Craig Bailey
CRAIG BAILEY

** TOTAL PAGE.01 **

FRESH WATER (STOCK) WELL

FW01W026

BJ SERVICES COMPANY

WATER ANALYSIS #FW01W026

ARTESIA LAB

GENERAL INFORMATION			
OPERATOR:	MALLON OIL	DEPTH:	
WELL:	WATER WELL	DATE SAMPLED:	08/07/97
FIELD:	SEC.10-T24S-R26E	DATE RECEIVED:	08/07/97
SUBMITTED BY:	DUANE WINKLER	COUNTY:	EDDY STATE: NM
WORKED BY :	KEITH JACKSON	FORMATION:	
PHONE NUMBER:			

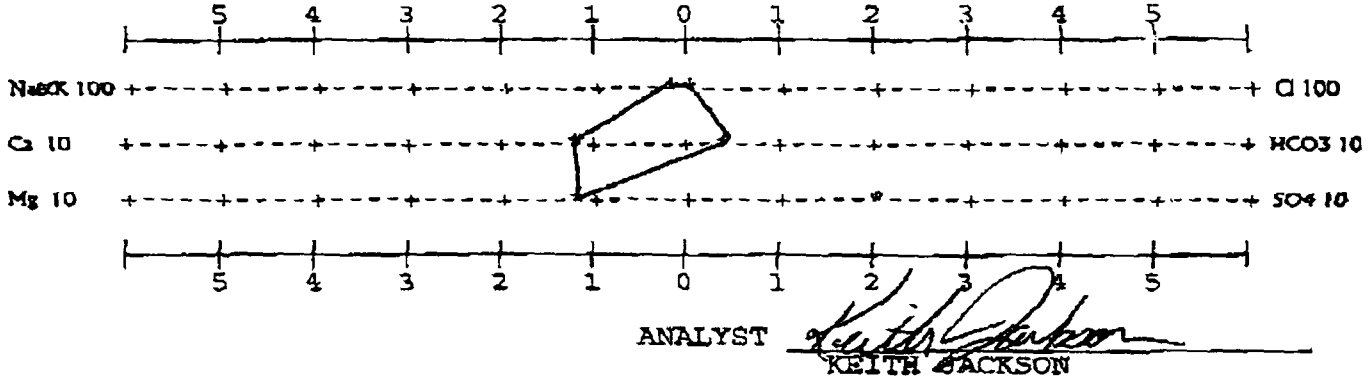
SAMPLE DESCRIPTION

PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:	1.005 @ 72°F	PH:	7.97
RESISTIVITY (CALCULATED):	1.435 ohms @ 75°F		
IRON (FE++) :	0 ppm	SULFATE:	995 ppm
CALCIUM:	255 ppm	TOTAL HARDNESS	1,195 ppm
MAGNESIUM:	135 ppm	BICARBONATE:	267 ppm
CHLORIDE:	318 ppm	SODIUM CHLORIDE(Calc)	524 ppm
SODIUM+POTASS:	317 ppm	TOT. DISSOLVED SOLIDS:	3,092 ppm
IODINE:		POTASSIUM CHLORIDE:	

REMARKS

STIFF TYPE PLOT (IN MEQ/L)



ANALYST Keith Jackson
KEITH JACKSON

Form 3160-3
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO: LC-064200

1a. TYPE OF WORK: Drill [X] Deepen [ ] Re-Entry [X]

b. TYPE OF WELL: Oil Well [X] Gas Well [ ] Other — Single Zone [X] Multiple Zone [ ]

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

2. NAME OF OPERATOR: Mallon Oil Company

8. FARM OR LEASE NAME, WELL NO: Pennzoil 10 Federal

3. ADDRESS AND TELEPHONE NO.: P.O. Box 3256, Carlsbad, NM 88220 (505) 885-4596

9. API WELL NO.: 2

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1980' FSL, 660' FWL (NW SW) Unit L
At proposed prod. zone: 1980' FSL, 660' FWL (NW SW) Unit L

10. FIELD AND POOL, OR WILDCAT: South Carlsbad

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 10, T24S-R26E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 25 miles south of Carlsbad, NM

12. COUNTY OR PARISH: Eddy County — 13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
660'	40	640
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
1320'	8,600'	Rotary

21. ELEVATIONS (SHOW WHETHER DF, RT, GR, Etc.): 3359 GR

22. APPROX. DATE WORK WILL START: August 8, 1997

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
	13-3/8"	48#	500'	CMT surface, csg existing
	8-5/8"	24#	805-5450'	CMTD, csg existing
7-7/8"	5-1/2"	15.5# & 17#	TD	sks cmt, cmt top 5100

Mallon Oil Company proposes to Re-Enter to Bone Springs at 8600'. The Re-Entry will be with a workover rig and equipment. No additional surface disturbance will be required. All guides lines set forth by Oil & Gas Onshore Orde No. 2 will be adhered to.

Re-Entry Program

Exhibit 1: Blow Out Preventor Equipment/Plan
Exhibit A: Location and Elevation Plat
Exhibit B: Existing Roads/Planned Access Roads
Exhibit C: Current Well Bore Schematic
Exhibit D: Proposed Well Bore Schematic
Exhibit E: Production Facilities
Exhibit F: Hydrogen Sulfide Drilling Plan
Exhibit G: Archaeological Survey

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED: Terry Lindeman — TITLE: Superintendent — DATE: 7/23/97

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RE-ENTRY PROGRAM

Attached to Form 3160-3
Mallon Oil Company
Pennzoil 10 Federal No. 2
1980' FSL, 660' FWL SW NW
Sec. 10, T24S-R26E
Eddy County, New Mexico

Lease Number: LC-064200

1. Geologic Name of Surface Formation is : Quaternary Alluvium

2. Estimated Tops of Important Geologic Markers:

Quaternary Alluvium	Surface
Rustler	175'
Delaware	1725'
Bone Springs	6225'
Wolfcamp	8700'
Total Depth	8600'

3. Proposed casing program:

Hole Size	Interval	Csg OD	Csg weight grade, Jt., Type Cond	
Existing	0-500'	13-3/8"	48#	
12-1/4"	0-805'	8-5/8"	24#	K55
	805-806'	8-5/8"	24#	K55 csg patch
	14-3/4"	0'-1500'	9-5/8"	36# K-55 STC
7-7/8"	0'-5300'	5-1/2"	15.5#	K-55 LTC
	5300'-TD	5-1/2"	17#	K-55 LTC

Cement Program:

13-3/8" Surface csg: Existing and cemented to surface.

5-1/2" Production csg: Cement with 60 sacks super C modified with 15#//sk Poz A, 11#/sk BA 90, 8#/sk gilsonite, .44#/sk FL-52, .44#/sk FL-25. Slurry wt - 13#/gal, yeild 1.64 ft^3/sk, TOC 5100'.

4. Minimum specifications for pressure control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (3000 psi WP) preventer. The unit will be hydraulically operated and the ram-type preventer will be equipped with blind rams on top and drill pipe rams on bottom. The BOP will be nippled up on the 8-5/8" surface csg and used continuously until TD is reached. BOP and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Pipe rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and 2" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve and choke lines and choke manifold with 3000 psi WP rating.

5. Types and characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of brine, cut brine, and polymer/KCL mud system. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
5450'-TD	Brine Water	10.0	32-34	N.C.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

6. Auxiliary Well Control and Monitoring Equipment:

(A) A Kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) The drilling fluids systems will be visually monitored at all times.

7. Testing, Logging and Coring Program:

Drill Stem Tests:	None anticipated
Logging:	N.A. Logs existing
Coring:	N.A.

8. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

   No abnormal pressures or temperatures are anticipated. The proposed mud program will be modified to control excess pressure if abnormal pressures are encountered. The estimated bottom hole temperature (BHT) at TD is 150° F and estimated maximum bottom-hole pressure (BHP) is 3200 psig. Hydrogen sulfide has been encountered, reported or is known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

9. Anticipated starting date: August 5, 1997.
   Anticipated completion of Re-entry operations: Expected duration of 1 week.

MALLON OIL COMPANY

Pennzoil 10 Federal No. 2 SWD
1980' FSL and 660' FWL SW NW
Sec. 10, T24S-R26E
Eddy County, New Mexico

GR 3359'

13-3/8" X 48# @ 500' Circulate cement to surface

8-5/8" X 24# @ 32#, 804'-5450'

Top of cmt @ 805'

8-5/8" cut off @ 805' 4-18-78

TD @ 11,782'

Well plugged and abandoned 4-18-78 as follows:

Plug No. 1	85 sx	11050'-10850'	
Plug No. 2	68 sx	9600'-9450'	
Plug No. 3	72 sx	8200'-8050'	
Plug No. 4	68 sx	6950'-6800'	
Plug No. 5	60 sx	5525'-5375'	BTM 8-5/8 csg @ 5450'
Plug No. 6	118 sx	800'-700'	Top 8-5/8" csg @ 804'

Plug No. 7	97 sx	550'-450'	BTM 13-3/8" csg @ 500'
Plug No. 8	15 sx	20'-Surface	

REENTRY PROCEDURE FOR SALT WATER DISPOSAL WELL

1. Level location, build reserve pit, install anchors, remove dry hole makers.
2. MIRU workover rig and equipment NU BOP.
3. TIH with 12-1/4" bit, drill out cement plugs to top 8-5/8" casing @ 805'±, TOOH.
4. TIH with 11-3/4" skirted mill (two foot skire) mill of one foot of 8-5/8" casing.
5. TIH with 8-5/8" casing patch, 8-5/8" casing latch onto 8-5/8" casing @ 806'.
6. Cement 8-5/8" casing, WOC 24 hours.
7. TIH with 7-7/8" cone bit, drill out cement TIH with 7,750" tapered mill. Mill out casing patch, TOOH.
8. TIH with 7-7/8" cone bit, drill out cement plugs to BTM of Bone Springs, 6300'.
9. Run 5-1/2" X 17# N80 casing.
10. Cement 5-1/2" casing.

		OD	ID	DRIFT	
13-3/8"	48#	13.375	12.715	12.559	
8-5/8"	24#	8.625	8.097	7.972	
	32#	8.625	7.921	7.796	
10-3/4"	32.75	10.750	10.192	10.036	
10-3/4"	40.5	10.750	10.050	9.894	
11-3/4"	60	11.750	10.772	10.616	Coupling 11.750

Multi-Point Surface Use and Operation Plan

Atached to Form 3160-3
Mallon Oil Company
Pennzoil 10 Federal No. 2
1980' FSL, 660' FWL SW NW
Sec. 10, T24S-R26E
Eddy County, New Mexico
Lease Number: LC-064200

1. Existing Roads:

   A. The well site and elevation plat for the proposed well is shown in Exhibit "A". It was staked by John West Engineering, Hobbs, NM

   B. All roads to the location are shown in Exhibit "B". The existing roads are illustrated in pink and are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling will be done where necessary as determined during the on site inspection.

   C. Directions to location: Go south 22 miles from Carlsbad, New Mexico on Hwy. 62/180. Turn east on lease road and travel 1 mile, turn south and travel 1/2 mile to location.

   D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

2. Proposed Access Road:

   Exhibit "C" shows the new access road to be constructed and is illustrated in yellow. The road will be constructed as follows:

   A. The maximum width of the running surface will be 15'. The road will be crowned and ditched and constructed of 6" of rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

   B. The average grade will be less than 1%.

   C. No turnouts are planned.

D. No culverts, cattle guard, gates, low-water crossings, or fence cuts are necessary.

E. Surfacing material will consist of native caliche. Caliche will be obtained from the nearest BLM-approved caliche pit. Any additional materials that are required will be purchased from the dirt contractor.

F. The proposed access road as shown in Exhibit "C" has been center line flagged by John West Engineering, Hobbs, New Mexico.

3. Location of existing and/or proposed facilities:

A. If the well proved to be commercial, the necessary production facilities and tank battery will be installed on the drilling pad.

4. Location and type of water supply:

A. It is planned to re-enter the proposed well with the brine water that will be obtained from private or commercial sources and will be transported over the existing access roads. No water well will be drilled on the location.

5. Source of construction materials:

A. Caliche for surfacing the proposed access road and well site pad will be obtained from a BLM-approved caliche pit.

6. Methods of handling waste disposal:

   A. Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.

   B. Drilling fluids will be contained in steel metal tanks. The reserve pit will contain any excess drilling fluid or flow from the well during drilling, cementing, and completion operations. The reserve pit will be an earthen pit, approximately 150' x 150' x 6' deep and fenced on three sides prior to re-entry. It will be fenced on the fourth side immediately following rig removal. The reserve pit will be plastic-lined (5-7 mil thickness) to minimize lose of drilling fluids and saturation of the ground with brine water.

   C. Water produced from the well during completion may be disposed into the reserve pit or a steel tank (depending on the rates). After the well is permanently placed on production, produced water will be collected in tanks (fiberglass or steel) until hauled by transport to an approved disposal system; produced oil will be collected in steel tanks until sold.

   D. A portable chemical toilet will be provided on the location for human waste during the drilling and completion operations.

   E Garbage and trash produced during drilling or completion operations will be contained in portable trash basket and hauled to approved disposal facilities. All water and fluids will be disposed of into the reserve pit. Salts and other chemicals produced during drilling or testing will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be produced by this operation.

F. After the rig is moved out and the will is either completed or abandoned, all waste materials will be cleaned up within 30 days. No adverse materials will be left on the location. The reserve pit will be completely fenced and flagged and kept closed until it has dried. When the reserve pit is dry enough to breakout and fill and, as weather permits, the un-used portion of the well site will be leveled and re-seeded as per BLM specifications. Only that part of the pad required for production facilities will be kept in use. In the event of a dry hole, only a dry-hole marker will remain.

7. Ancillary Facilities:

A. None required.

8. Well Site Layout:

A. Exhibit "E" shows the relative location and dimensions of the well pad, reserve pits, and location of major rig components are shown. Top soil, if available, will be stockpiled per BLM specifications as determined at the on site inspection. Because the pad is almost level no major cuts will be required.

B. Exhibit "E" shows the planned orientation for the rig and associated drilling equipment, reserve pit, pipe racks, turn-around and parking areas, and access road. No permanent living facilities are planned but a temporary foreman trailer will be on location during the drilling operations.

C. The reserve pit will be lined with a high-quality plastic sheeting (5-7 mil thickness).

9. Plans for restoration of the surface:

   A. Upon completion of the proposed operations, if the well is to be abandoned, the caliche will be removed from the location, road and returned to the pit from which it was taken. The pit area, after allowing to dry, will be broken out and leveled. The original top soil will be returned to the entire location which will be leveled and contoured to as nearly the original topography as possible.

      All trash, garbage will be hauled away in order to leave the location in an aesthetically pleasing condition.

   B. The disturbed area will be re-vegetated as recommended by the BLM.

   C. Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time that the rig is removed the reserve pit will be fenced on the rig (fourth) side and flagged to prevent livestock or wildlife from being entrapped. The fencing and flagging will remain in place until the pit area is cleaned up and leveled. No oil will be left on the surface of the fluid in the pit. The entire reserve pit will be flagged until the fluid has completely evaporated.

   D. Upon completion of the proposed operations, if the well is completed, the reserve pit will be treated as outlined above within the same prescribed time. The caliche from any area of the original drill site not needed for production operations or facilities will be removed and used for construction of thicker pads or firewalls for the tank battery installation. Any additional caliche required for facilities will be obtained from a BLM-approved caliche pit. Top soil removed from the drill site will be used to re-contour the pit area and any unused portions of the drill pad to the original natural level and re-seeded as per BLM specifications.

10. Surface Ownership:

    The well site and lease is located entirely on private surface.

11. Other Information:

    A. The top soil is sandy. The vegetation is native yucca, and prickly pear.

    B. There is no permanent or live water in the immediate area.

    C. Residences and Other Structures: No residences in the immediate area. Oil production facilities on offsetting location.

    D. Land Use: Cattle grazing

    E. Surface Ownership: The proposed well site and access road is on private surface and Federal minerals.

    F. There is no evidence of any archaeological, historical or cultural sites in the area. An archaeological survey has been conducted by Pecos Archeological Consultants, Carlsbad, New Mexico. The reports have been submitted to the appropriate government agencies.

12. Operations Representative:

    A. The field representative responsible for ensuring compliance with the approved surface use and operations plan is:

    Terry Lindemanr
    Mallon Oil Company
    PO Box 3256
    Carlsbad, NM 88220
    Office Phone: (505) 885-4596
    Home Phone: (505) 745-1136

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Mallon Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: 8-4-97 Signed:

Terry Lindeman
Superintendent

MALLON OIL COMPANY

ENGINEERING CHART

SHEET NO. OF

FILE

APPN

SUBJECT Pennzoil 10 Federal No. 2

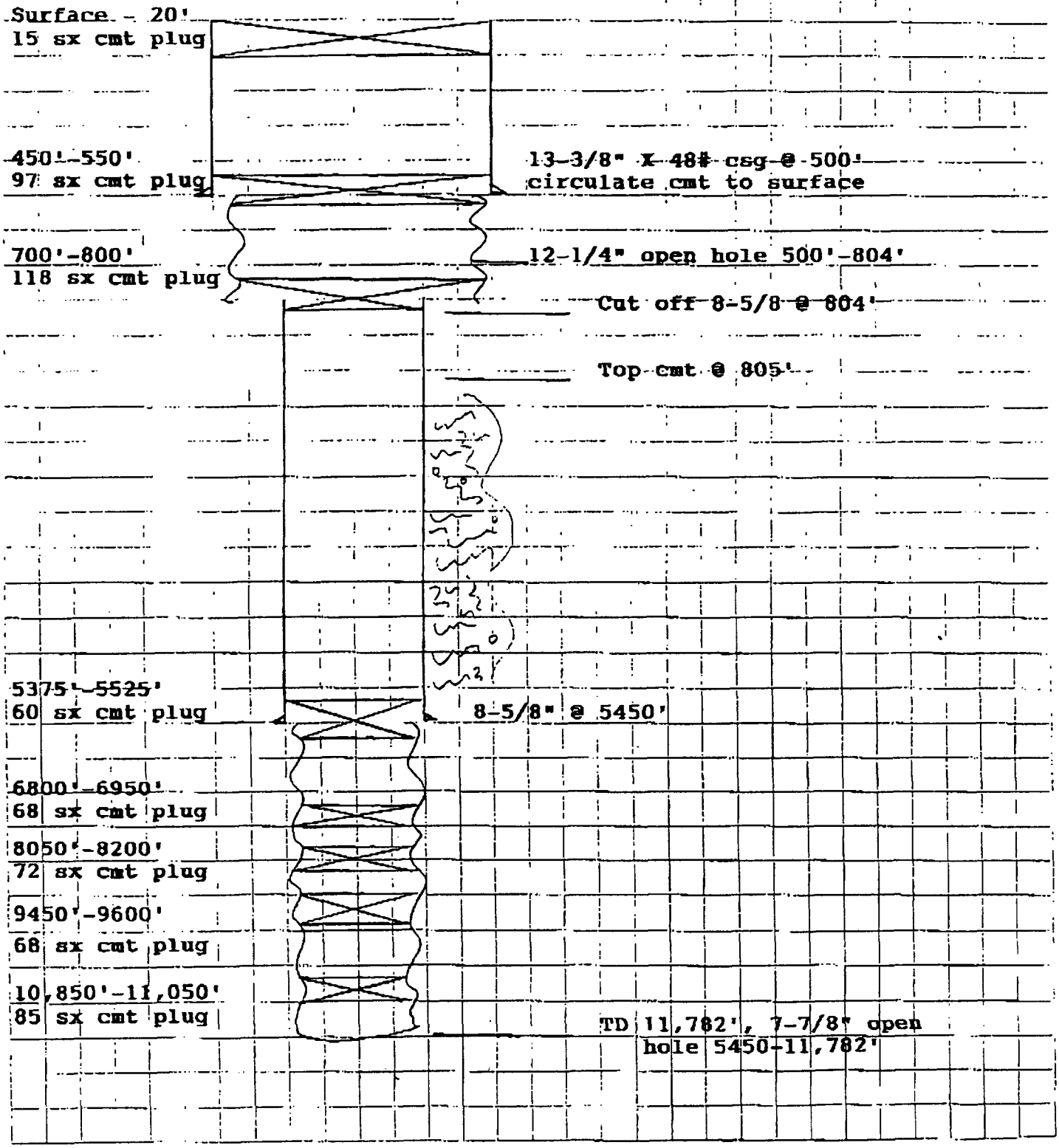
Sec. 10, T24S-R26E

Eddy County, NM

DATE 7/28/97

BY Winkler

Current Well Bore Schematic



MALLON OIL COMPANY

ENGINEERING CHART

SHEET NO. OF

FILE

APPN

SUBJECT Pennzoil 10 Federal No. 2

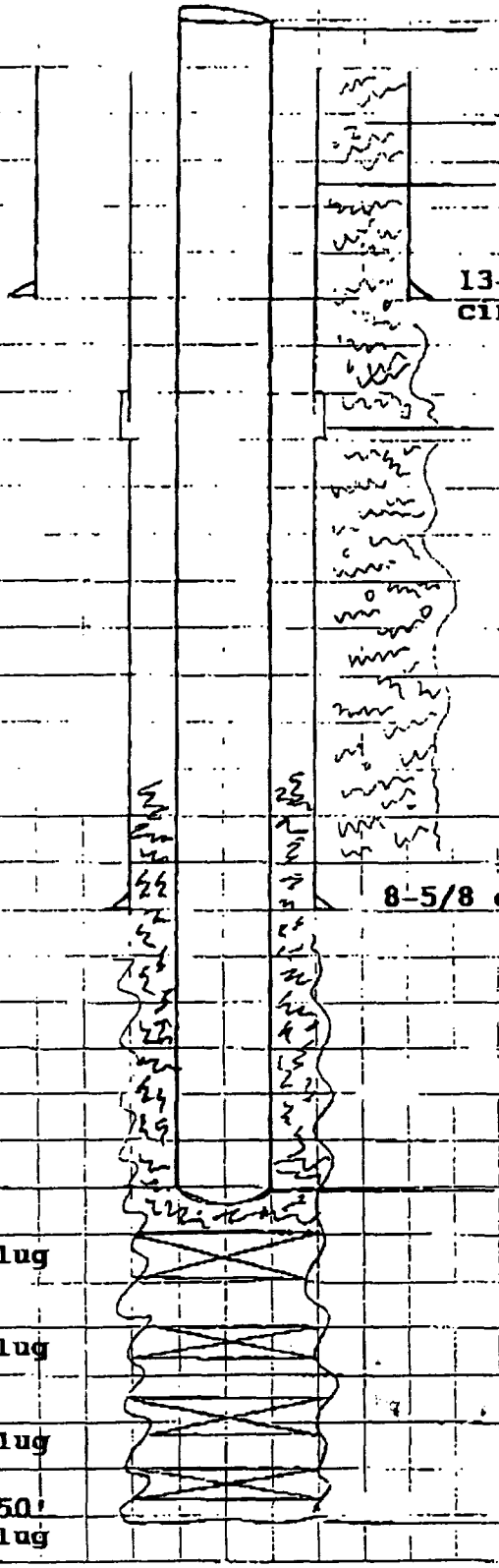
Sec. 10, T24S-R26E

Eddy County, NM

DATE 7/28/97

BY Winkler

Proposed Well Bore Schematic



5-1/2 X 17# csg

CMT 8-5/8" csg to surface

8-5/8 X 24# csg to surface

13-3/8" X 48# csg 500'
circulate cmt to surface

8-5/8 csg patch @ 806'

8-5/8 csg @ 5450'

5-1/2 X 17# csg 6300'
cmtd to 5100'

6800'-6950'
68 sx cmt plug

8050-8200'
72 sx cmt plug

9450-9600'
68 sx cmt plug

10,850-11,050'
85 sx cmt plug

TD 11,782'