

Form 3160-5
(July 1989)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONTACT RECEIVED
OFFICE FOR NUMBER
OF COPIES REQUIRED
(Other instructions on reverse
side)

BLM Roswell District
Modified Form No.
NM060-3160-4

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"/> | | 5. LEASE DESIGNATION AND SERIAL NO. NM-32410 |
| 2. NAME OF OPERATOR Meridian Oil Inc. | | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME |
| 3. ADDRESS OF OPERATOR P.O. Box 51810, Midland, TX 79710-1810 | 3a. AREA CODE & PHONE NO. 915-686-5600 | 7. UNIT AGREEMENT NAME |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1980' FSL & 1980' FWL K | | 8. FARM OR LEASE NAME Shinnery Federal |
| 14. PERMIT NO. 30-025-30247 | | 9. WELL NO. 1 |
| 15. ELEVATIONS (Show whether DF, RT, GR, etc.) 3831' GR. | | 10. FIELD AND POOL, OR WILDCAT South Corbin (Wolfcamp) |
| | | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 13, T18S, R32E |
| | | 12. COUNTY OR PARISH Lea |
| | | 13. STATE NM |

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

| NOTICE OF INTENTION TO: | | SUBSEQUENT REPORT OF: | |
|---------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------|
| TEST WATER SHUT-OFF <input type="checkbox"/> | PULL OR ALTER CASING <input type="checkbox"/> | WATER SHUT-OFF <input type="checkbox"/> | REPAIRING WELL <input type="checkbox"/> |
| FRACTURE TREAT <input type="checkbox"/> | MULTIPLE COMPLETE <input type="checkbox"/> | FRACTURE TREATMENT <input type="checkbox"/> | ALTERING CASING <input type="checkbox"/> |
| SHOOT OR ACIDIZE <input type="checkbox"/> | ABANDON* <input type="checkbox"/> | SHOOTING OR ACIDIZING <input type="checkbox"/> | ABANDONMENT* <input type="checkbox"/> |
| REPAIR WELL <input type="checkbox"/> | CHANGE PLANS <input type="checkbox"/> | (Other) <input type="checkbox"/> | (Other) <input type="checkbox"/> |
| (Other) Re-Enter Wolfcamp & Recomplete <input checked="" type="checkbox"/> | | (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.)*

We propose to abandon the Queen formation and re-enter the Wolfcamp. The proposed procedure is attached.

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

SIGNED *Robert L. Bradshaw* TITLE **Sr. Staff Environmental Rep.** DATE **915-686-5678**

(This space for Federal or State office use)

APPROVED BY *Robert L. Bradshaw* TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

***See Instructions on Reverse Side**

MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-4-65

All distances must be from the outer boundaries of the Section

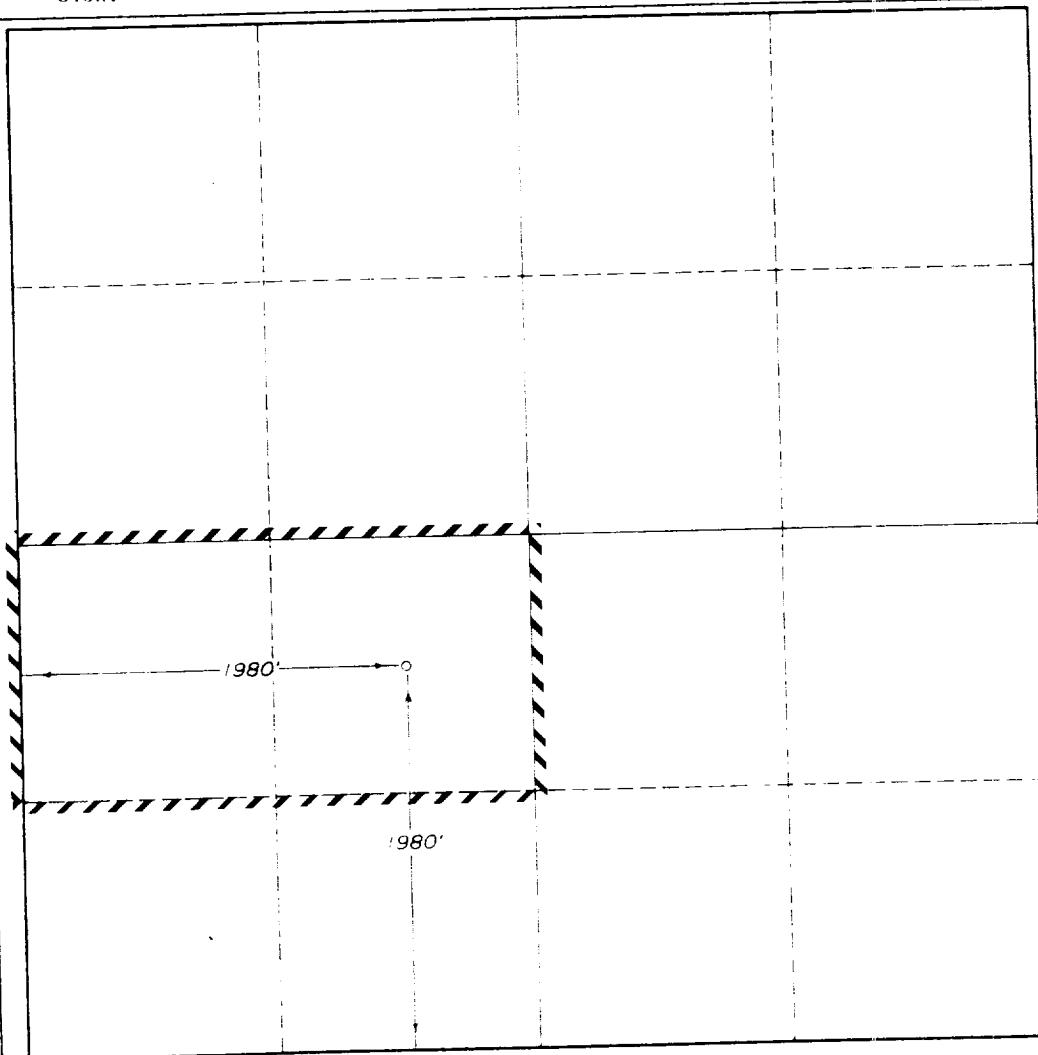
| | | | | | |
|-----------------------------------|---------------------------------|------------------------------|--------------------------|---------------|-------|
| Operator MERIDIAN OIL COMPANY | | Lease SHINNERY FEDERAL | | Well No. | |
| Unit Letter K | Section 13 | Township 18-SOUTH | Range 32-EAST | County LEA | |
| Actual Footage Location of Well: | | | | | |
| 1980 feet from the SOUTH line and | | 1980 feet from the WEST line | | | |
| Ground Level Elev. 3831' | Producing Formation Wolfcamp | Pool South Corbin | Dedicated Acreage: 80 | | Acres |

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Robert L. Bradshaw
Name Robert L. Bradshaw

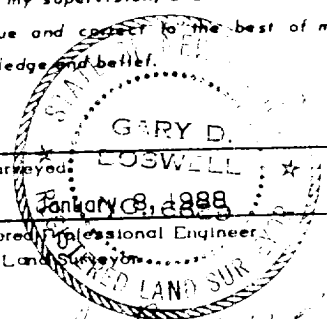
Sr. Staff Environmental Rep.

Position
Meridian Oil Inc.

Company
5/10/91

Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.



Date Surveyed: January 8, 1988

Registered Professional Engineer and/or Land Surveyor

Gary D. Goswell
Certificate No.

6689

**Shinnery Federal #1
South Corbin (Wolfcamp) Field
Lea County, New Mexico**

Wolfcamp Re-entry Procedure

Project Engineer: David Cook

**Office: (915) 686-5663
Residence: (915) 687-0908**

1. Order and deliver 7500' of 2 7/8", N-80, 6.5#, EUE, inspected tubing to location.
2. MIRU pulling unit. MIRU kill truck. Circulate freshwater down tubing-casing annulus allowing for returns on tubing.
3. ND pumping tee. TOOH with steel sucker rods and pump. ND wellhead and NU BOP. Release TAC and TOOH with 2 7/8", N-80 tubing, TAC, four joints of 2 7/8" tubing, perforated sub and mud anchor.
4. TIH with casing scraper suitable for 5 1/2", 17# casing. RIH to 4100'. TOOH. TIH with a CIBP suitable for 5 1/2", 17# casing and $\pm 4060'$ of 2 7/8" tubing. Set CIBP at 4060'. TOOH.
5. TIH with a cement retainer and $\pm 3900'$ of 2 7/8" tubing. Set retainer at $\pm 3950'$. Test tubing to 6200 psi. Test tubing-casing annulus and cement retainer to 1000 psi.
6. MIRU cement company. NU surface lines and test to 3000 psi. Establish injection into Queen perforations using treated fresh water. Cement squeeze Queen perforations with 250 sacks of cement (4006'-4024'; 37 holes) using the attached recommended cement slurry. If possible, displace cement to retainer. Pull out of retainer and reverse out any excess cement. TOOH. RDMO cement company. WOC overnight.
7. MIRU reverse unit. TIH with a 4 3/4" bit, 3 1/2" drill collars, and 2 7/8" tubing. Drill out cement retainer and cement to 4040'. Close BOP and test cement squeeze to 1000 psi. If squeeze perforations take fluid, contact production engineer and discuss remedial squeeze plans. If cement squeeze holds pressure, continue with procedure.
8. TIH and drill out CIBP. TIH to $\pm 4600'$. TOOH.
9. TIH with a cement retainer and $\pm 4500'$ of 2 7/8" tubing. Set retainer at $\pm 4500'$. Test tubing to 6200 psi. Test tubing-casing annulus and cement retainer to 1000 psi.
10. MIRU cement company. NU surface lines and test to 3000 psi. Establish injection into Queen perforations using treated fresh water. Cement squeeze Queen perforations with 250 sacks of cement (4542'-4552'; 21 holes) using the attached recommended cement slurry. If possible, displace cement to retainer. Pull out of retainer and reverse out any excess cement. TOOH. RDMO cement company. WOC overnight.

11. TIH with a 4 3/4" bit, 3 1/2" drill collars, and 2 7/8" tubing. Drill out cement retainer and cement to 4600'. Close BOP and test cement squeeze to 1000 psi. If squeeze perforations take fluid, contact production engineer and discuss remedial squeeze plans. Otherwise, continue with procedure.
12. TIH to 4944'. Drill out cement retainer and cement to 5150'. Close BOP and test cement squeeze to 1000 psi. If squeeze perforations take fluid, contact production engineer and discuss remedial squeeze plans. Otherwise, continue with procedure.
13. TIH to 8540'. Drill out cement retainer and cement to 8750'. Close BOP and test cement squeeze to 1000 psi. If squeeze perforations take fluid, contact production engineer and discuss remedial squeeze plans. Otherwise, continue with procedure.
14. Drill out cement to 9000'. Close BOP and test cement squeeze to 1000 psi. If squeeze perforations take fluid, contact production engineer and discuss remedial squeeze plans. Otherwise, continue with procedure.
15. TIH to 9630'. Drill out cement retainer and cement to 9800'. Close BOP and test cement squeeze to 1000 psi. If squeeze perforations take fluid, contact production engineer and discuss remedial squeeze plans. Otherwise, continue with procedure.
16. RIH and drill out CIBP located at 11,140' and drill out retainer and cement at 11,190'. Clean out to PBTD at 12,409'. Circulate hole clean with treated 2% KCl water. TOOH.
17. RU electric line to perforate. RIH with 4" casing guns and perforate the Wolfcamp from 11,240'-11,256', 11,416'-11,426' (2 SPF, 90° phasing, total of 56 holes). POOH and RD electric line.
18. TIH with 5 1/2" treating packer, RBP with ball catcher, 2.25" SN, and ±11,500' of 2 7/8", 6.5#, N-80 tubing. Set the RBP at ±11,500 and pull back treating packer ±10' and set. Test the tubing/packer to 6200 psi. Release the treating packer and pull up to ±11,426'. Pickle tubing with 250 gallons of 15% NEFe HCl acid. Reverse out pickling fluids. Spot 100 gallons of 15% NEFe HCl acid. PU to 11,280'. Reverse remaining acid into tubing and set packer at 11,280'. NU stimulation valve.
19. MIRU stimulation company. RU surface lines and test to 6500 psi. Place 500 psi on 2 7/8" x 5 1/2" annulus. Monitor throughout the job. Pump spot acid away and continue with 1000 gallons of 15% NEFe HCl acid. Space out 33 RCNBS (Sp. Gr. = 1.3) throughout the job. Displace acid to bottom perforation with treated 2% KCl water. If ballout occurs, surge balls off perfs and continue displacement.

| | |
|-----------------------------|------------|
| Treating Rate | = 4-6 BPM |
| Estimated Treating Pressure | = 5600 psi |
| Maximum Treating Pressure | = 6200 psi |

20. Release treating packer and TIH to RBP. Release RBP and pull up to $\pm 11,300'$. Set RBP and pull back packer $\pm 10'$. Pressure test to 6200 psi. Release treating packer and spot 100g of 15% NEFe HCl acid. Pull the packer up hole to $\pm 11,220'$. Reverse remaining acid into tubing and set packer at $\pm 11,220'$. Place 500 psi on 2 7/8" x 5 1/2" annulus. Monitor throughout the job. Pump spot acid away and continue with 1600 gallons of 15% NEFe HCl acid. Space out 30 RCNBS (Sp. Gr. = 1.3) throughout the job. Displace acid to bottom perforation with treated 2% KCl water. If ballout occurs, surge balls off perfs and continue displacement.

| | |
|-----------------------------|------------|
| Treating Rate | = 4-6 BPM |
| Estimated Treating Pressure | = 5600 psi |
| Maximum Treating Pressure | = 6200 psi |

RDMO stimulation company.

21. Release treating packer and drop down to RBP. Release and lower RBP to $\pm 11,470'$ and set. Pull back packer to $\pm 11,220'$ and set. Swab/flow test well recording rates/volumes/cuts. If zone tests wet, a plug back procedure will be provided by the production engineer. If zone is productive, continue with procedure after obtaining sufficient test data.
22. Kill well with treated 2% KCl water. ND stimulation valve. Release packer and RIH through perforations. Release RPB and TOOH.
23. RU electric line to perforate. RIH with 4" casing guns and perforate the Wolfcamp from 11,108'-11,194', (2 SPF, 90 phasing, total 174 holes). POOH and RD electric line.
24. TIH with 5 1/2" RBP with ball catcher, 5 1/2" treating packer, 2.25" SN and $\pm 11,230'$ of 2 7/8", 6.5#, N-80 tubing. Set RBP at $\pm 11,230'$. PU $\pm 10'$ and set packer. Test tubing/RBP to 6200 psi. Release packer. Spot 200 gallons of 15% NEFe HCl acid. PU to $\pm 10,980'$. Reverse remaining acid into tubing and set packer at $\pm 10,980'$. NU stimulation valve.
25. MIRU stimulation company. RU surface lines and test to 6500 psi. Place 500 psi on 2 7/8" x 5 1/2" annulus. Monitor throughout the job. Pump spot acid away and continue with 8600 gallons of 15% NEFe HCl acid. Space out 261 RCNBS (Sp. Gr. = 1.3) throughout the job. Displace acid to bottom perforation with treated 2% KCl water. If ballout occurs, surge balls off perfs and continue displacement.

| | |
|-----------------------------|------------|
| Treating Rate | = 4-6 BPM |
| Estimated Treating Pressure | = 5600 psi |
| Maximum Treating Pressure | = 6200 psi |

RDMO stimulation company.

26. Swab/flow test well recording rates/volumes/cuts. If zone tests wet, a plug back procedure will be provided by the production engineer. If zone is productive, continue with procedure after obtaining sufficient test data.

27. Kill well with treated 2% KCl water. ND stimulation valve. Release packer and RIH through perforations. Release RBP and TOOH.
28. RU electric line to perforate. RIH with 4" casing guns and perforate the Wolfcamp from 10,882' - 10,908' and 11,066'-11,086' (2 SPF, 90 phasing, total 96 holes). POOH and RD electric line.
29. TIH with 5 1/2" RBP with ball catcher, 5 1/2" treating packer, 2.25" SN, and $\pm 11,100'$ of 2 7/8", 6.5#, N-80 tubing. Set RBP at $\pm 11,100'$. PU $\pm 10'$ and set packer. Test tubing/RBP to 6200 psi. Release packer. Spot 100 gallons of 15% NEFe HCl acid. PU to $\pm 10,940'$. Reverse remaining acid into tubing and set packer at $\pm 10,940'$. NU stimulation valve.
30. MIRU stimulation company. RU surface lines and test to 6500 psi. Place 500 psi on 2 7/8" x 5 1/2" annulus. Monitor throughout the job. Pump spot acid away and continue with 2000 gallons of 15% NEFe HCl acid. Space out 63 RCNBS (Sp. Gr. = 1.3) throughout the job. Displace acid to bottom perforation with treated 2% KCl water.

| | |
|-----------------------------|------------|
| Treating Rate | = 4-6 BPM |
| Estimated Treating Pressure | = 5600 psi |
| Maximum Treating Pressure | = 6200 psi |

31. Release treating packer and TIH to RBP. Release RBP and pull up to $\pm 10,930'$. Set RBP and pull back packer $\pm 10'$. Pressure test to 6200 psi. Release treating packer and spot 100g of 15% NEFe HCl acid. Pull the packer up hole to $\pm 10,750'$ and set. Place 500 psi on 2 7/8" x 5 1/2" annulus. Monitor throughout the job. Pump spot acid away and continue with 2600 gallons of 15% NEFe HCl acid. Space out 42 RCNBS (Sp. Gr. = 1.3) throughout the job. Displace acid to bottom perforation with treated 2% KCl water. If ballout occurs, surge balls off perms and continue displacement.

| | |
|-----------------------------|------------|
| Treating Rate | = 4-6 BPM |
| Estimated Treating Pressure | = 5600 psi |
| Maximum Treating Pressure | = 6200 psi |

RDMO stimulation company.

32. Release treating packer and drop down to RBP. Release and lower RBP to $\pm 11,100'$ and set. Pull back packer to $\pm 10,800'$ and set. Swab/flow test well recording rates/volumes/cuts. If zone tests wet, a plug back procedure will be provided by the production engineer. If zone is productive, continue with procedure after obtaining sufficient test data.
33. Kill well with treated 2% KCl water. ND stimulation valve. Release packer and RIH through perforations. Release RBP and TOOH.

34. TIH with production tubing as follows (assuming all zones are productive):

- Bull Plugged MA
- Perforated Sub
- Mechanical SN (2.25" ID)
- 22 joints of 2 7/8", 6.5#, N-80 tubing
- 5 1/2" TAC
- ±10,820' of 2 7/8", 6.5#, N-80 tubing

Set TAC with SN below perfs. ND BOP, NU pumping tee. TIH with the following rod string:

- 2 1/2" x 1 1/4" x 36' RHBM
- 7/8" pony rod and shear tool
- ±6900' of 1.2" fiberglass sucker rods with SHSMC
- ±3500' of 7/8" grade "D" steel sucker rods with FHSMC
- ±1150' of 1 3/8" sinker bars

35. Set and install an American conventional 640-365-144 pumping unit and hang rods on beam. Report production volumes to Midland office. Sheave unit as required to keep the well pumped off if possible.

Approved: _____

T. J. Harrington
T. J. Harrington

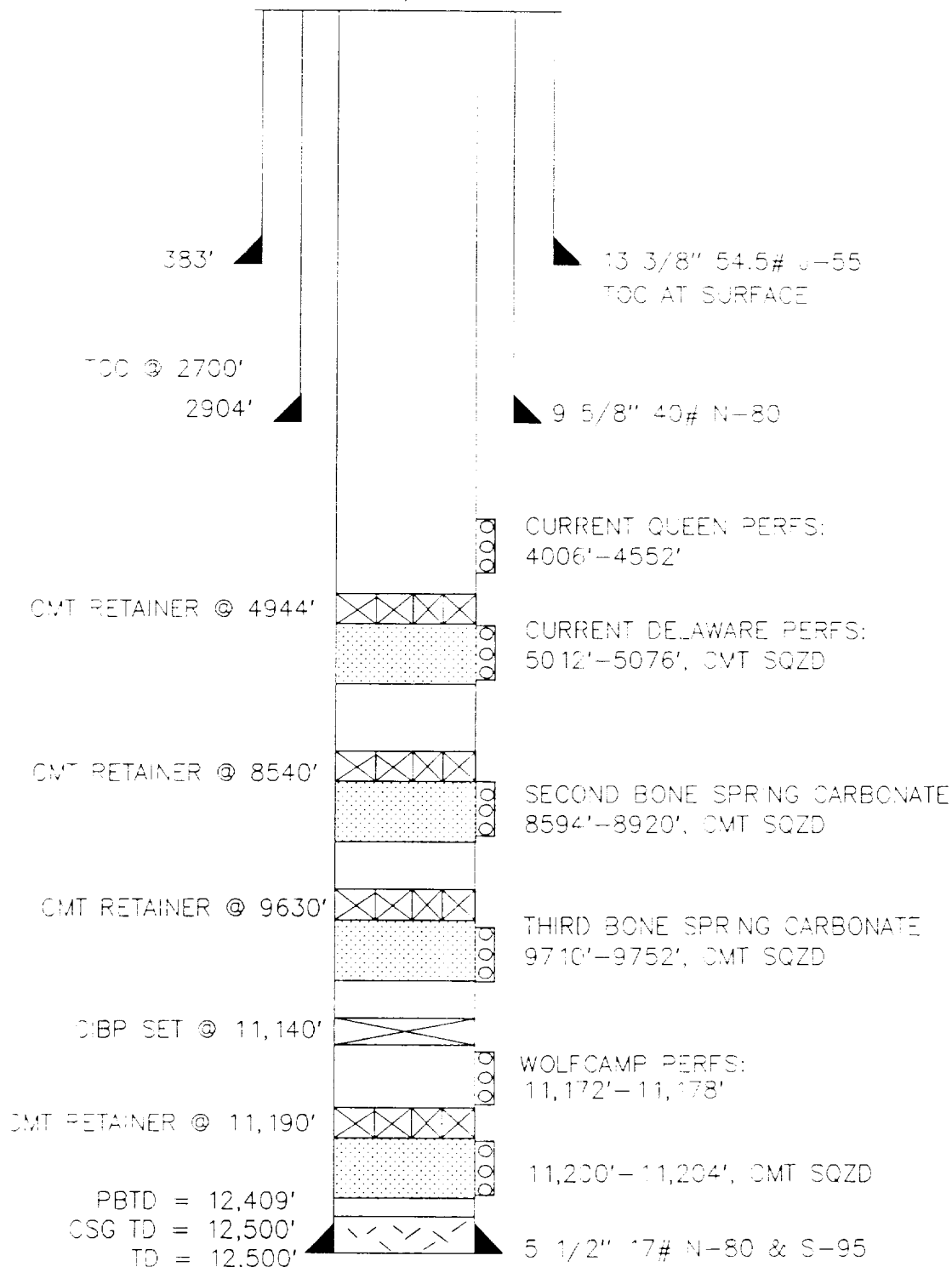
Date: _____

2 May 91

74 Δ
B.H.
4/27/91

DDO 03, 25/91

MERIDIAN OIL
SHINNERY FEDERAL #1
WILDCAT FIELD
LEA COUNTY, NEW MEXICO



Shinnery Federal No. 1
South Corbin (Wolfcamp) Field
Lea County, New Mexico

MECHANICAL DATA

| <u>Type Tubular:</u> | <u>OD</u> <u>(in)</u> | <u>ID</u> <u>(in)</u> | <u>Weight</u> <u>(#/ft)</u> | <u>Grade</u> | <u>Conn.</u> | <u>Depth</u> <u>(ft)</u> | <u>Collapse</u> <u>(psi)</u> | <u>Burst</u> <u>(psi)</u> | <u>Tensile</u> <u>(M lbs)</u> | <u>TOC</u> <u>(ft)</u> |
|----------------------|--------------------------|--------------------------|--------------------------------|--------------|--------------|-----------------------------|---------------------------------|------------------------------|----------------------------------|---------------------------|
| Surface Casing | 13 3/8 | 12.615 | 54.5 | J-55 | STC | 383 | 1,130 | 2,730 | 547 | Surf |
| Intermediate Casing | 9 5/8 | 8.835 | 40 | N-80 | LTC | 2,904 | 3,090 | 5,750 | 737 | Surf |
| Production Casing | 5 1/2 | 4.892 | 17 | N-80 | LTC | 0-9,826 9,826-12,500 | 6,280 | 7,740 | 348 | ±2700' |
| | 5 1/2 | 4.892 | 17 | S-95 | LTC | | 8,580 | 9,190 | 392 | |
| Tubing | 2 7/8 | 2.441 | 6.5 | N-80 | EUE | 11,140 | 11,160 | 10,570 | 145 | ---- |

GL = 3,831'

KB = 24'

DV Tool @ ±10,075'