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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONTACT RECEIV, OFFICE FOR NUMBEK 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.)

5. LEASE DESIGNATION AND SERIAL NO.: NM-12412

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Meridian Oil Inc.

8. FARM OR LEASE NAME: Federal "AW"

3. ADDRESS OF OPERATOR: 21 Desta Dr., Midland, TX 79705

3a. AREA CODE & PHONE NO.: 915-686-5600

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1980' FNL & 660' FW

10. FIELD AND POOL, OR WILDCAT: ~~East Lusk (Delaware)~~

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 26, T19S, R32E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 3581.8' GR.

12. COUNTY OR PARISH: Lea

13. STATE: NM

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF		PULL OR ALTER CASING		WATER SHUT-OFF		REPAIRING WELL	
FRACTURE TREAT		MULTIPLE COMPLETE		FRACTURE TREATMENT		ALTERING CASING	
SHOOT OR ACIDIZE	X	ABANDON*		SHOOTING OR ACIDIZING		ABANDONMENT*	
REPAIR WELL		CHANGE PLANS		(Other)			
(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 pertinent to this work.)*

Add additional pay within the Delaware and stimulate for production. The procedure is attached.

RECEIVED
JAN 16 10 45 AM '91

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

SIGNED Robert L. Bradshaw TITLE Sr. Staff Env./Reg. Spec. DATE 17 January 1991

(This space for Federal or State office use)

APPROVED BY Orig. Signed by Adam Salamon TITLE PETROLEUM ENGINEER DATE 1-22-91

CONDITIONS OF APPROVAL, IF ANY:

*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.

Federal AW #1
East Lusk (Delaware) Field
Lea County, New Mexico

Workover Procedure

1. MIRU pulling unit. ND pumping tee. POOH with rod string and pump. Kill well with treated 2% KCl water. ND tubing head. NU BOP. Release TAC and POOH with production tubing.

2. TIH with 4 3/4" bit and scraper for 5 1/2" casing to 5200'. POOH.

"E" SAND

3. RU electric line. RU pack-off head on top of BOP. RIH with GR/CCL tool and correlate across Delaware sands (4800'-5200'). POOH.

4. RU electric line to perforate. RIH with 4" casing guns and perforate the Delaware "E" sand at 4990'-5000' (4 SPF, 90° phasing, total 44 holes). POOH and RD electric line.

   NOTE: Use 4" 41B Hyperjet II charges (entry hole 9 5/8" casing = .27").

5. TIH with 5 1/2" treating packer, 2.25" SN, and 2 7/8" 6.5# N-80 tubing. Set packer below perforations. Test tubing to 2000 psi. Release packer. PU and set packer at 4900'. NU stimulation valve.

6. MIRU stimulation company. RU surface lines and test to 5000 psi. RU pump on 2 7/8" x 5 1/2" annulus. Monitor annulus throughout the job. Pump 500 gallons 7 1/2% NEFe HCl acid. Space out 66 RCNBS throughout the job (sp. gr. = 1.3). Displace acid to bottom perforation with treated 2% KCl water. If ballout occurs, surge balls off perfs and continue displacement.

Treating Rate	= 4-5 BPM
Treating Pressure	= 2500 psi
Maximum Treating Pressure	= 5000 psi

   RDMO stimulation company.

7. Swab test well recording rates/volumes/cuts. If fluid entry is limited, continue with fracturing procedure.

8. ND stimulation valve. Release packer and RIH through perforations. Reset packer at 4900'. NU stimulation valve.

9. MIRU stimulation company. RU surface lines and test to 5000 psi. RU pump on 2 7/8" x 5 1/2" annulus. Monitor throughout the job. Fracture stimulate the Delaware "E" sand (4990'-5000') according to the attached fracture stimulation schedule. Radioactively tag the pad and sand stages with scandium and iridium isotopes respectively.

Fracture Fluid Type/Volume	= 18,000 gallons Boragel G 3.5185
Proppant	= 52,900 lbs 20/40 Ottawa Sand
Treating Rate	= 12 BPM
Treating Pressure	= 3100 psi
Maximum Treating Pressure	= 5000 psi @ 0 BPM

   Flush stimulation to top perforation with treated 2% KCl water.

10. Shut well in to RD stimulation company and RU flowline. Leave well SI overnight. Flow well back on small choke to recover load water.

11. Swab test well recording rates/volumes/cuts.

"D" SAND TEST/"C-2" SAND REFRAC

12. Kill well with treated 2% KCl water. Release packer and POOH.

13. RU electric line. RU packoff head on top of BOP. RIH and set 5 1/2" CIBP at 4980'. POOH.

14. RU electric line to perforate. RIH with 4" casing guns and perforate the Delaware "D" sand at 4904'-4930' (4 SPF, 90° phasing, total 108 holes). RIH with 4" casing guns and reperforate the Delaware "C-2" sand at 4848'-4866' (2 SPF, 90° phasing, total 38 holes). POOH and RD electric line.

   NOTE: Use 4" 41B Hyperjet II charges (entry hole 9 5/8" casing = .27").

15. TIH with 5 1/2" RBP, 5 1/2" treating packer, 2.25" SN, and 2 7/8" 6.5# N-80 tubing. Set RPB at 4960'. PU 10' and set packer. Test tubing/RBP to 2000 psi. Release packer. PU and set packer at 4875'. NU stimulation valve.

16. MIRU stimulation company. RU surface lines and test to 5000 psi. RU pump on 2 7/8" x 5 1/2" annulus. Monitor annulus throughout the job. Pump 1300 gallons 7 1/2% NEFe HCl acid. Space out 160 RCNBS throughout the job (sp. gr. = 1.3). Displace acid to bottom perforation with treated 2% KCl water. If ballout occurs, surge balls off perfs and continue displacement.

Treating Rate	= 2-3 BPM
Treating Pressure	= 2200 psi
Maximum Treating Pressure	= 5000 psi

17. Bleed off pressure. ND stimulation valve. Release packer and drop down to RBP. Release RBP and reset at 4890'. PU 10' and set packer. Test RBP to 2000 psi. Release packer. PU and set packer at 4750'. NU stimulation valve.

18. Pump 900 gallons of 7 1/2% NEFe HCl acid. Space out 75 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 with displacement.

Treating Rate	= 3-4 BPM
Treating Pressure	= 2200 psi
Maximum Treating Pressure	= 5000 psi

RDMO stimulation company.

19. ND stimulation valve. Release packer and RBP. Reset RBP at 4960'. PU and set packer at 4750'.

20. Swab test well recording rates/volumes/cuts. If fluid entry is limited, continue with fracturing procedure.

21. Release packer and drop down to RBP. Release RBP and POOH.

22. MIRU stimulation company. ND BOP. NU stimulation valve. Fracture stimulate the Delaware "D" (4904'-4930') and "C-2" (4848'-4866') sands according to the attached fracture stimulation schedule. Radioactively tag the pad and sand stages with scandium and antimony isotopes respectively.

Fracture Fluid Type/Volume	= 40,000 gallons Boragel G 3.5185
Proppant	= 161,700 lbs 20/40 Ottawa sand
Treating Rate	= 25 bpm
Treating Pressure	= 2800 psi
Maximum Treating Pressure	= 5000 psi

Flush stimulation to top perforation with treated 2% KCl water.

23. Shut well in to RD stimulation company and RU flowline. Leave well SI overnight. Flow well back on small choke to recover load water.

24. Kill well with treated 2% KCl water. ND frac valve. NU BOP. TIH with 4 3/4" bit and 2 7/8" tubing. Wash sand and drill out CIBP at 4980'. POOH.

25. RU electric line. RU packoff-head on top of BOP. RIH with 3 5/8" PRISM tool and log from 5200'-4800'. POOH and RD electric line.

26. TIH with production tubing as follows:

- Bull Plugged MA
- Perforated Sub
- Mechanical SN (2.25" ID)
- 8 joints of 2 7/8" 6.5# N-80 tubing
- 5 1/2" TAC
- ±4700' of 2 7/8" 6.5 N-80 tubing

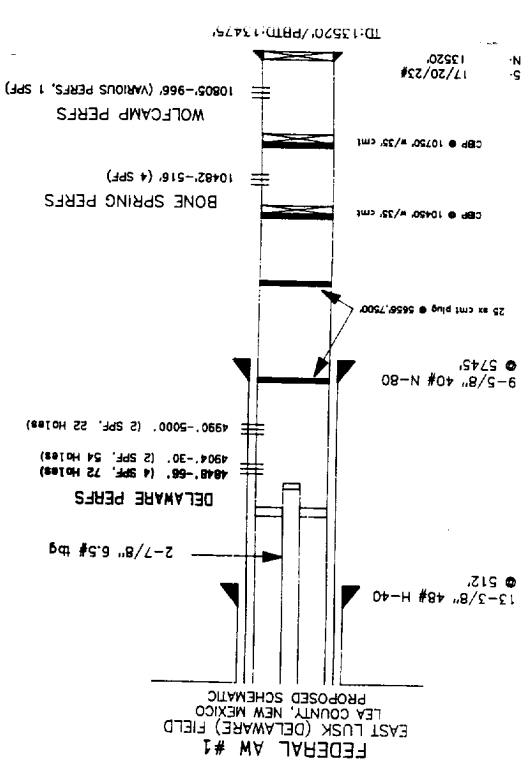
Set TAC with SN above perfs. ND BOP, NU pump tee. TIH with following rod string:

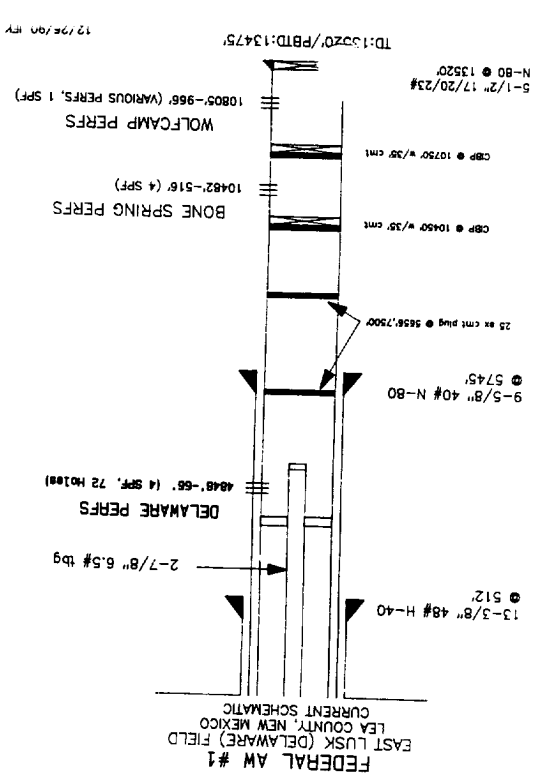
- 2 1/2" x 1 1/4" x 24' RHBM pump
- ±3350' of 3/4" grade "D" steel sucker rods
- ±1350' of 7/8" grade "D" steel sucker rods

Hang rods on beam. Report production volumes to Midland office. Sheave unit as required to keep well pumped off if possible. Discuss lowering pump setting depth after 1-2 months production.

Approved: _____ Date: _____
T. J. Harrington

RRS





Federal AW #1
East Lusk (Delaware) Field
Lea County, New Mexico

MECHANICAL DATA

Type Tubular:	OD (in)	ID (in)	Weight (#/ft)	Grade	Conn.	Depth (ft)	Collapse (psi)	Burst (psi)	Tensile (M lbs)	TOC (ft)
Surface Casing	13 3/8	12.715	48.0	H-40	STC	512	770	1730	322	Surf
Intermediate Casing	9 5/8	8.835	40.0	N-80	LTC	5745	3090	5750	737	35
Production Casing	5 1/2	4.892	17.0	N-80	LTC	0-1305	6280	7740	348	
	5 1/2	4.778	20.0	N-80	LTC	1305-6635	8830	9190	428	3055
	5 1/2	4.670	23.0	N-80	LTC	6635-13520	11160	9880	502	
Tubing	2 7/8	2.441	6.5	N-80	8rd	5000	11160	10570	145	

PBTD = Tagged bottom at 4893' with production string 12/13/90
(pipe tally - no KB included)
A 25 sack cmt plug was spotted at ±5650' while abandoning the Bone Spring.