Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: Tract 251–Contract 154

6. If Indian, Allottee or Tribe Name: Jicarilla Apache

7. If Unit or CA, Agreement Designation:

1. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.: Jicarilla Apache # 8

2. Name of Operator: Marathon Oil Company

9. API Well No.: 30-039-06280

3. Address and Telephone No.: P.O. Box 552 Midland, Tx. 79702 915-687-8324

10. Field and Pool, or Exploratory Area: Jicarilla,M. Verde, BD

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
UL "P" 990' FSL & 990' FEL
SEC 27, T-26-N, R-5-W

11. County or Parish, State: Rio Arriba Co., N M

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☒ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. 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.)*

Marathon Oil Co. is proposing to recomplete the Mesa Verde and dual with the existing Dakota completion. The completion will be accomplised using a concentric coiled tubing design. The proposed procedure is attached.

RECEIVED
JUN 10 1994
OIL CON. DIV.
DIST. 3

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

Signed Thomas M Price Thomas M. Price Title Advanced Engineering Technician Date 5-11-94

(This space for Federal or State office use)

Approved by 5/Joseph Jaramillo Acting Title Chief, Lands and Mineral Resources Date JUN 6 1994
Conditions of approval, if any:

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.

*See Instruction on Reverse Side

"REVISED"
WORKOVER PROCEDURE

JICARILLA APACHE WELL NO. 8
990' FSL and 990' FEL
Section 27, T-26-N, R-5-W
Jicarilla Field
Rio Arriba County, New Mexico

Date: April 25, 1994

AFE NO.: 655994

Purpose: Recomplete to Mesaverde and dual with existing Dakota using concentric coiled tubing design.

Elevation: 6,673' KB; 6,660' GL

TD: 7,520' PBTD: 7,493'

Surface Casing: 10-3/4", 32.75#, H-40 set at 169'. Cement w/125 sx.

Production Casing: 7", 20#, J-55 set at 3,070' KB. Cement w/100 sx. Temp log indicates TOC @ 2,340'.

Liner: 4-1/2", 11.6#, J-55 set at 7,511' KB. DV tool 5,595' KB. Total cement both stages - 343 sx. Temp log indicates TOC @ 2,975' KB.

Production Tubing: 2-3/8", 4.7#, J-55 and N-80 set @ 7,264'.

Current Completion: Lower Dakota Sand: 7,421'-24', 7,430'-33', 7,437'-39', 7,477'-80, 7,482'-84', 7,487'-90' w/2 JSPF (32 holes).

Upper Dakota Sand: 7,348'-52', 7,354'-56', 7,387'-90', 7,391'-94', 7,398'-7,402' w/2 JSPF (32 holes)

Graneros: 7,258'-62' w/2 JSPF (8 holes)

Drilling Mud Weight: Drilled with gas

Estimated BHP: 900 psi - DK; 1,600 psi - MV

Estimated Surface Shut-In Pressure: 750 psi - DK; 1,000 psi - MV

Expected Reservoir Fluids: Gas with condensate and water.

Safety Considerations:
- Hold safety meeting explaining the procedure.
- Well work will be performed with well live.

Other Considerations:
- Try not to put water on formation.
- Obtain Jicarilla Apache Tribe work permit (call E. A. Nelson). All contractors and MOC personnel must have permit in vehicle at all times.
- Obtain BLM approval for recompletion (call T. M. Price).

1. Install and test safety anchors to 22,500#.

2. RU wireline unit with lubricator.

3. RIH with 1.781" gauge ring down 2-3/8" production tubing to check for constrictions, profiles, nipples (no tubing record available - tubing probably has a 1.81" Baker "F" nipple at bottom) to 7264'. POOH.

4. RIH with sinker bar and tag PBTD at 7,493' KB to check for fill over Graneros/Dakota perfs (7,258'-7,490'). If perfs covered, clean out fill with 1-1/4" coiled tubing and N_2 foam to PBTD (7,493' KB).

5. RIH with 1.81" Baker "F" plug with top No-Go on running tool and set in "F" nipple (no tubing record available to indicate depth of nipple). If no profile in tubing string, RIH with wireline set Baker Model "N"-023 CIBP and set at bottom of 2-3/8" tubing.

6. Dig, line, and fence pit. Build large wall on downwind side. Lay 2" line to pit and stake down. Blow well down to pit through casing valves.

7. MIRU PU. ND wellhead and master valve.

8. NU hydraulic BOP assembly with blind rams on bottom and 2-3/8" pipe rams on top. Install 7-1/16" X 5-1/2' drilling spool with 7" Blooie line to pit with 4-1/16" valve. Install Rector stripping head on top of spool.

9. Open 7" line to pit and finish blowing down well after unlocking tubing hanger mandrel. Test BOP. Strip out of hole with 2-3/8" tubing with well flowing to pit.

10. RU wireline unit with lubricator.

11. RIH under pressure with GR-CCL and Baker 4-1/2" - 43A wireline set RBP (maximum OD = 3.771" and length = 60" with retrieving head) and set RBP at 5,550' KB (stage tool at 5,595'). Spot 1 sx of sand on top of RBP.

12. Load hole with 2% KCl water.

13. RIH with Baker Model "C" Fullbore packer and Baker Model "C" RBP and check for possible casing leak to 1000 psi.

14. RU loggers and packoff. RIH with GR-CBL-CCL to PBTD of 5,550'. Log well under 1,000 psi if microannulus present. Pull log to 200' over TOC.

15. If bond appears good, RU lubricator to perforate Mesaverde/Point Lookout. If no cement across proposed Point Lookout perforations, prepare to squeeze. (Note: Schlumberger CBL run 12/29/66 indicates probable TOC at 5,396'; however, the log was not run across the Point Lookout Pay.)

16. Perf Point Lookout pay with 3-1/8" casing gun using 2 JSPF, 180° phasing as follows: 5,250'-60', 5,264'-72', 5,275'-80', 5,282'-92', 5,295'-5,300', 5,302'-11', 5,314'-22', 5,351'-55', and 5,377'-81'.

17. RD loggers. Change out pipe rams to 2-7/8".

18. Pick up and RIH with Baker Model "C" Fullbore packer (maximum OD = 3.771" and length = 78" in running position), 1.875" Baker Model "R" profile frac nipple with bottom No-Go, 2' X 2-7/8" pup joint, 1.875" Baker Model "F" profile frac nipple on 2-7/8", 6.5#, N-80 workstring, hydrotesting to 9,500 psi.

19. Set packer at ± 5,148'.

20. RU stimulation company. Breakdown with 2% KCl water, open bypass and circulate acid down to packer, close bypass and acidize with 7-1/2% NEFE acid, dropping ball sealers to divert.

21. Unset packer and knock balls off perfs. PUH and reset at ± 5,148'.

22. Prepare to frac well. Quality control frac fluids and proppant.

23. Frac Mesaverde/Point Lookout perfs (5,250'-5,381') down 2-7/8" workstring at 25 BPM as follows with 72,500 gal of 65 quality N_2 foam and 167,500# proppant using:

    - 30# Linear Gel (Guar)
    - 20/40 Brady (Vulcan Texsan) Proppant

STAGE	FOAM VOLUME	SAND
Pad	20,000 gal	--
1 ppg	10,000 gal	10,000#
2 ppg	10,000 gal	20,000#
3 ppg	10,000 gal	30,000#
4 ppg	10,000 gal	40,000#
5 ppg	7,500 gal	37,500#
6 ppg	5,000 gal	30,000#
Flush	1,200 gal	--
TOTAL	**73,700 gal**	**167,500#**

    Shut well in for 30 minutes to rig up flowback manifold as per attached diagram and RD service company. Open well up on 8/64" positive choke and flowback well to frac tank. Divert well to lined pit when gas is to surface.

24. Leave well open to frac tank to flow back overnight.

25. If well dies, release Baker Model "C" Fullbore packer and POOH with 2-7/8" workstring, laying down and go to Step 26. If well continues to flow, release packer and dump packer fluid on formation, open backside and Blooie line to pit, and POOH with 2-7/8" work string and packer, laying down (well should be dead). If well is not dead, RIH with 1.875" Baker Model "R" plug and strip out of hole.

26. Change out pipe rams to 2-3/8" and RIH with 4-1/2" - 43A RBP retrieving head, 1.875" Baker Model "R" profile frac nipple with bottom No-Go, 2' X 2-3/8" pup joint, 1.875" Baker Model "F" profile frac nipple on 2-3/8", 4.7# tubing. Tag fill. If fill covers perfs 5,250'-5,381', then RU nitrogen truck. Install string float. Clean out with N_2 foam to 5,500' KB (do not latch on to RBP @ 5,550'). PUH and land 2-3/8" tubing at 5,248'. If fill not covering perfs, PUH and land 2-3/8" tubing at ± 5,248'. NU wellhead.

27. Kick well off flowing. RU swab if well dies.

28. RD pulling unit.

29. Turn well through test unit and monitor gas, oil, and water rates and pressures.

30. Test well for one week allowing well to clean up and any possible back flow of sand into wellbore.

31. RU pulling unit and stripping BOP assembly. Open backside and 7" Blooie line to pit and blow down well.

32. RU nitrogen unit. Install string float and RIH and cleanout to PBTD (5,550') with N_2 foam. Latch on to RBP @ 5,550' with retrieving head. RU wireline and set plug in 1.875" Baker Model "R" profile frac nipple.

33. Strip out of hole with 2-3/8" tubing. Close blind rams on BOP.

34. Open blind rams on BOP and strip in hole with Baker 2-3/8" X 1.812" Model R profile nipple with bottom No-Go with plug in place, ± 1,750' of 2-3/8", 4.7# production tubing, Baker 4-1/2" X 2-3/8" Model A-3 Lok-Set packer (maximum OD = 3.771" and length = 37"), 1 joint 2-3/8", 4.7# tubing, Baker 2-3/8" X 1.812" Model F profile nipple, 1 joint 2-3/8", 4.7# tubing, (7) 20' X 2-3/8" X 3.063" blast joints (across Point Lookout perfs 5,250'-5,381'), 10' X 2-3/8" pup joint, Baker 2-3/8" X 1.875" Model L sliding sleeve, and 2-3/8", 4.7# tubing to surface. Land packer ± 5,450' KB and bottom of tailpipe ± 7,200' KB.

35. Land tubing hanger mandrel in bowl. Lock down pins to create seal.

36. ND BOP. NU master valve portion of tree only.

37. RU wireline unit with lubricator.

38. RIH and shift Baker 1.875" Model L sliding sleeve open. RD wireline unit.

39. RU swab. Swab Mesaverde (upper zone) and kick off flowing. RD swab and pulling unit.

40. Evaluate/monitor gas and water rates from Mesaverde prior to running coiled tubing in Step 42.

41. RU wireline unit and lubricator. Retrieve plug in Baker 1.812" Model "R" profile nipple. RD wireline unit.

42. RU coiled tubing unit.

43. Install coiled tubing wellhead hanger assembly (CTWHA) body on top of master valve. Install outlet valves on CTWHA.

44. Install pipe rams (4-1/16" X 10M-Bowen) with 1.5" OD guides with adapter flanges on top and bottom.

45. Install quad BOP's, access window, and injector head on top of pipe rams. Installation assembly must line up vertical (no leaning) to ensure proper landing of CTWHA pack-off. Measure distance from CTWHA hanger seat to set mark in access window -- measured length (ML).

46. Open master valve and RIH with ± 1,993', 1.5" OD (0.125" wall with internal weld removed) CT tailpipe with pump-out plug on bottom. Set slips.

47. Close pipe rams. Bleed off pressure above. Open access window. Cut CT and install seal assembly with roll-on connectors (top and bottom). Be sure not to overstress roll-on connections.

48. Close window. Open pipe rams. Release slips. RIH with ± 5,406', 1.5" OD (0.125" wall) CT and land seal assembly in Baker 1.812" Model F profile nipple at ± 5,416' KB with 3,000# compression and bottom of CT tailpipe at ± 7,410' KB. Mark coiled tubing. Pick CT up ML distance above set mark in access window. Set slips.

49. Close pipe rams. Bleed off pressure above. Open access window. Install split clamps (above and below pack-off), split pack-off assembly and segmented wraparound slips around 1.5" OD CT. Close access window. Open pipe rams. Release slips.

50. RIH ML distance and land slips and pack-off in CTWHA. Fully lock down pins to energize pack-off.

51. Bleed off pressure on coil using valve on end of reel (N_2 used to pressure test tubing combined with elevation and temperature change will expand and put pressure on coil). Verify pump out plug is holding. Open access window. Cut CT.

52. Remove injector head, access window, quad BOP's. ND pipe rams (remove with local crane).

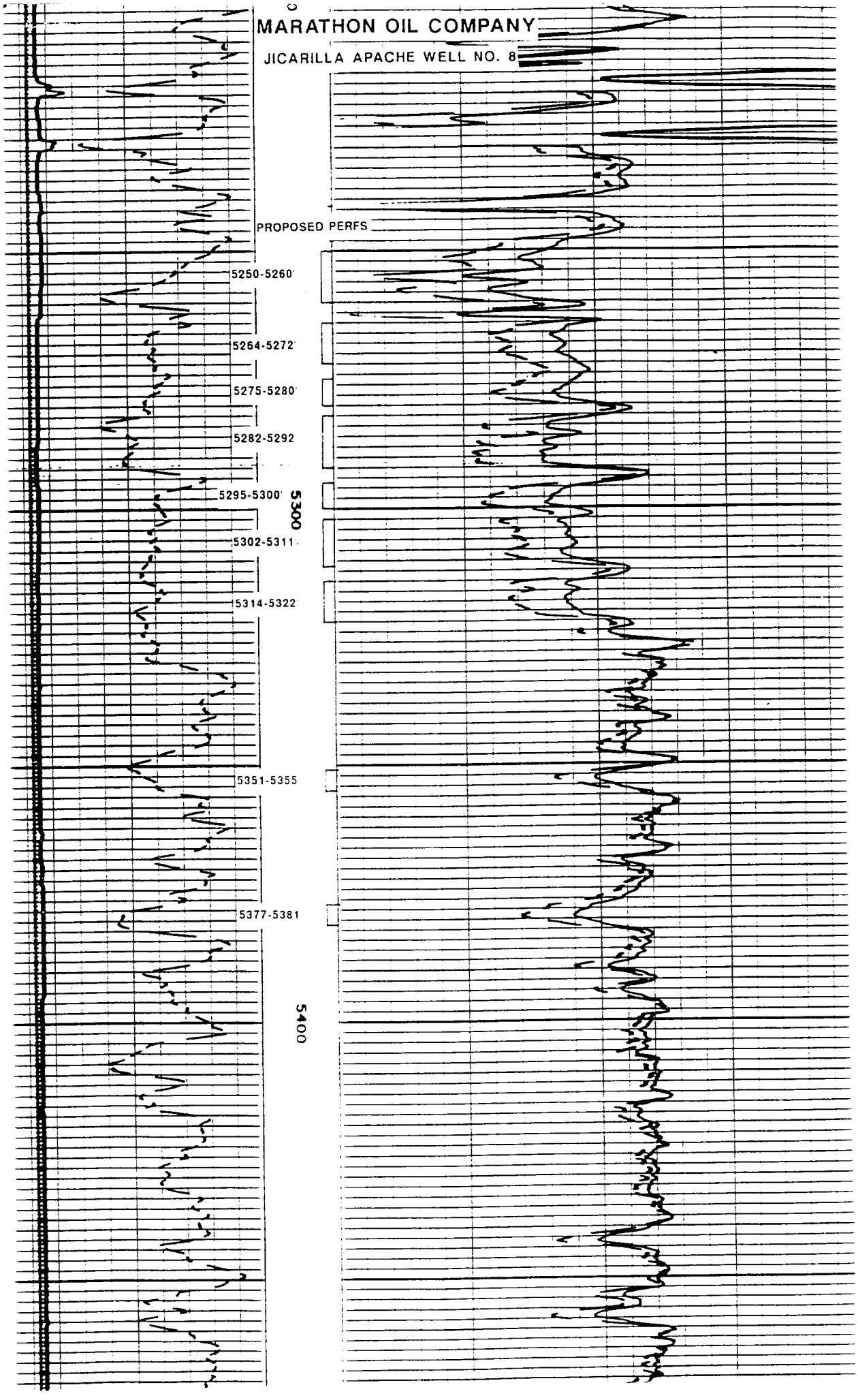
53. Make final tubing cut 6"-8" above CTWHA. Install pre-assembled production tree (see production set-up figure).

54. RU nitrogen unit on top swab valve of tree assembly. Pump out plug w/30,000 scf-N_2 @ 500 scf/min and max pressure of 2,000 psig. Immediately blow back N_2. When fluid hits surface, turn well through separator and blow to tank for 5 hours to unload near wellbore fluids. Turn well into Marathon's Jicarilla gas gathering system.

55. Monitor gas, oil, and water rates and flowing pressures.

R. W. Tracy
Operations Supervisor
Midland Operations

T. B. Arnold
Drilling Superintendent
Midland Operations


MARATHON OIL COMPANY
JICARILLA APACHE WELL NO. 8
PROPOSED PERFS
5250-5260'
5264-5272'
5275-5280'
5282-5292
5295-5300'
5300
5302-5311'
5314-5322'
5351-5355
5377-5381
5400