

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

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 of a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Marathon Oil Company

3. Address and Telephone No.

P.O. Box 552, Midland, TX 79702 915/687-8329

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1980' FSL, 710' FWL
Sec 5, T-20-S, R-34-E

5. Lease Designation and Serial No.

LC-064194

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Matador "5" Federal No. 1

9. API Well No.

30-025-31056

10. Field and Pool, or Exploratory Area

Quail Ridge (Bone Spring)

11. County or Parish, State

Lea County, NM

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

TYPE OF SUBMISSION

- ☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other Completion in Bone Spring Formation
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ 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 Company initiated operations on 4/12/91 to complete well in the Bone Spring formation.

1. RU pulling unit. NU hydraulic BOP. RIH w/4 5/8" bit, 5 1/2" csg scraper & SN on 2 7/8" N-80 tbg. Tagged @ 10,300'. Displaced hole w/2% KCL wtr w/clay stabilizer. Pressured csg to 1000 psig. Held OK. Bled off. Secured well. SNFN.
2. Dropped SV. Pressured tbg to 5000 psig. Held OK. Fished SV. POOH w/tbg & bit. RU Schlumberger. Tagged btm 10,282' w/wireline. Ran CET, CBT, GR, CCL log from TD to 10,000' w/o psig on csg. Relogged from TD to 6300' w/1000 psig on csg. Log indicated good cmt bond. TOC @ 6520' KB. POOH. RD Schlumberger. SDFN.
3. SD for weekend.
4. SD for weekend.

(See Attachment I)

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

Carl A. Bagwell Carl A. Bagwell

Title Engineering Technician

Date 10/17/91

(This space for Federal or State office use)

Approved by _____
Conditions of approval, if any:

Title _____

Date _____

ATTACHMENT I

5. RU Wedge W/L. RIH w/4" csg gun. Perforate 5 1/2" csg @ 10,192-98' w/2 JSPF (17 holes). POOH & RD Wedge. RIH w/5 1/2" Halliburton RTTS pkr & SN on 2 7/8" N-80 tbg. Pkr @ 10,199'. RU Dowell. Spotted 500 gals 15% NEFE acid. Pulled pkr to 10,093'. Reverse out spent acid. Set pkr @ 10,093'. Pressured annulus to 500 psig. Breakdown perfs @ 3360 psig. Est rate 1.4 bpm @ 3400 psig. Opened bypass. Spotted acid to pkr. Closed bypass. 500 psig on annulus. Acidized perfs 10,192-98' w/1000 gals 15% NEFE. Used 35 1.3 S.G. balls for divert. Saw no ball action. Avg 3 bpm @ 3500 psig. Max = 4500 psig. ISIP = 3400 psig. 5 min = 3120 psig. 10 min = 3050 psig. 15 min = 3000 psig. RD Dowell. Blew well down to 0 psig in 5 sec. RIH w/swab. FL @ surface. Made 13 swab runs in 5 hrs. Recov'd 68 BW. Final FL = 8300' FS. SWIFN.
6. SITP = 75 psig. Blew well down. RIH w/swab & tagged fluid 7300' FS. Made 9 swab runs in 10 hrs. Recov'd 22 BW. Pulling swab from SN last 7 hrs of swabbing. Final FL = 9300' FS. SWIFN.
7. SITP = 75 psig. RIH w/swab. FL @ 8900' FS. Made 1 swab run - 100% H₂O. POOH w/tbg & pkr. RU Rotary Wireline. Set Halliburton CIBP @ 10,118. Dumped 2 sx cmt on CIBP. PBTB = 10,100'. RD Rotary. Loaded csg w/73 bbls 2% KCl wtr w/clay stabilizer. Pressured csg to 1000 psig for 10 mins. Held OK. RIH w/SN on 2 7/8" N-80 tbg. SN @ 7450'. Swabbed 5 hrs. Recov'd 91 BW. Ending FL = 5000 FS. SWIFN.
8. SITP = 0 psig. FL @ 5000 FS. Swabbed well down to 7200' FS. POOH w/tbg & SN. RU Wedge. RIH w/4" perf guns. Perforate 5 1/2" csg @ 9960-70' w/4 JSPF (41 holes). POOH & RD Wedge. RIH w/5 1/2" Halliburton RTTS pkr on 2 7/8" N-80 tbg. Set pkr @ 9812'. SWIFN.
9. SITP = 0 psig. RU Dowell. Loaded & pressured backside to 500 psig. Loaded tbg w/22 bbls 2% KCL wtr w/clay stabilizer. Broke down perfs 9960-70' @ 3500 psig. Est rate of 1/2 bpm @ 2910 psig. Spotted acid to pkr. Repressure backside to 500 psig. Acidized perfs 9960-70' w/1000 gals 7 1/2% NEFE HCl. Used 83 for divert. Saw slight ball action. Max press 3890 psig. Avg = 3400 psig @ 3 bpm. ISIP = 3100 psig, 5 min = 3050 psig. 10 min = 2960 psig. 15 min = 2920 psig. RD Dowell. Blew well down. FL @ surface. Made 14 swab runs in 6 hrs. Recov'd 91 BW. Final FL=9000'. SWIFN.
10. SITP = 30 psig. RIH w/swab. Tagged fluid @ 8800'. Recov'd 1/2 bbl. Sample indicated 30% oil. 2nd swab run FL @ 9000'. Could not rec any fluid. Waited 1 hr. 3rd swab run FL @ 9000'. Could not rec any fluid. SWIFN.
11. SITP = Vac. RIH w/swab. FL = 9400'. Could not rec any fluid. Swab cup indicated oil. SWIFN.

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ATTACHMENT I

12. SITP = 0 psig. POOH w/tbg & pkr. ND BOP. NU Dowell frac head. RU Dowell. Sand fraced perfs 9960-70' w/110,000# 20/40 resin coated sand & 824 bbls cross-linked gel (Dowell YF 135). Pumped frac as follows:
167 bbls Pad
52 bbls w/2 ppg
112 bbls w/4 ppg
182 bbls w/6 ppg
250 bbls w/8 ppg
230 bbls flush
Max press = 4025 psig. Avg = 3750 psig @ 30 bpm. ISIP = 4000 psig. 5 min = 3932 psig. 10 min = 3868 psig. 15 min = 3795 psig. SWI. RD Dowell.
13. SITP = 3100 psig. Opened well to frac tank on 22/64" chk & press bled to 0 psig in 5 min. Flowing gelled wtr. Opened to full chk & press increased to 1500 psig. Pinched chk to 22/64" & well flowed 139 BW in 2.5 hrs & died. ND Dowell. Frac head & NU BOP. RIH w/4 5/8" 4 blade bit on 75 jts 2 7/8" N-80 tbg & tagged sand/gel bridge @ \pm 2375'. RU rev unit & rev circ & washed through approx 120' of bridge w/much sand & gelled wtr in returns. Circ hole clean, RIH with a total of 32 jts tbg & tagged top of sand @ 9980' indicated 120' of fill above PBTD @ 10100'. Inst circ head, power swivel & rev circ & washed to PBTD of 10,100'. Circ hole clean w/2% KCl wtr w/clay stab. PU & stands, SI & secured well. SWIFN.
14. SITP = 80 psig. Blew to 0 psig. No flow. RIH & tagged @ 10,100'. POOH w/tbg & blade bit. RIH w/4 5/8" cone bit & 5 1/2" csg scraper on 2 7/8" N-80 tbg. Tagged @ 10,100'. POOH. RIH w/5 1/2" Halliburton RTTS on 2 7/8" N-80 tbg. Set pkr @ 9812'. RIH w/swab. FL @ surface. Made 13 swab runs in 4 hrs. Recov'd 83 BW. Ending FL 6700' FS. SWIFN.
15. SITP = 30 psig. Blew to 0 psig. No flow. RIH w/swab. FL = 4800' FS. Made 12 swab runs in 3 hrs. Recov'd 4 BO & 40 BW. Ending FL = 6800' FS. POOH w/tbg & pkr. RU Wedge. RIH w/4" csg gun. Perf'd 5 1/2" csg @ 9424-44', 9456-62' & 9506-26' w/4 SPF. Total - 187 holes. POOH & RD Wedge. SWIFN.
16. RIH w/Halliburton RBP & RTTS pkr on 2 7/8" N-80 tbg. Set RBP @ 9560'. Test to 2000 psig. Held OK. Pulled pkr to 9473'. RU Dowell. Reversed circ 210 BW. Reversed out small amount of sand. Set pkr @ 9473'. Pressured backside to 500 psig. Broke down perfs 9506-26' @ 2700 psig. Est rate .4 bpm @ 2700 psig. Spotted acid to pkr. Acidized perfs w/1250 gals 7 1/2% NEFE HCl. Avg 1500 psig @ 5 bpm. Max 2700 psig. ISIP = Vac. RD Dowell. RIH w/swab. FL @ surface. Made 16 swab runs in 6 hrs. Recov'd 148 BW. Ending FL = 6000'. SWIFN.
17. SITP = slight vac. RIH w/swab. FL = 4500'. 1st swab run 100% wtr. Oil show on 11th swab run. Made 18 runs in 10 hrs. Recov'd 1 BO & 91 BW. Ending FL = 8600'. SWIFN.

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18. SD for Sunday.
19. SITP = 100 psig. FL = 7500'. Made 12 swab runs in 10 hrs. Recov'd 1 BO 19 BW. Ending FL = 8300'. SWIFN.
20. SITP = 130 psig. Released pkr. RIH & released RBP. RU Dowell. Pumped 184 BW (2% KCl w/clay stabilizer) in attempt to isolate perfs & test RBP. Set RBP @ 9491'. Tested to 2000 psig. Held OK. PU & set pkr @ 9131'. Press annulus to 500 psig. Break perfs 9424-64' @ 2500 psig. Est rate 1 bpm @ 2250 psig. Acidized perfs w/1250 gals 7 1/2% NEFE. Max = 2910 psig. Avg 2500 psig @ 4 bpm. ISIP = 2250 psig. 5 min = 2110 psig. 10 min = 2070 psig. 15 min = 2020 psig. RD Dowell. Blew well down. No flow. RIH w/swab. FL @ surface. Made 7 swab runs in 3 hrs. Recov'd 57 BW. Ending FL = 4000'. SWIFN.
21. SITP = 30 psig. FL = 1500'. Made 18 swab runs in 9 hrs. Recov'd 56 BW. EFL = 8300. Released pkr & RIH & released RBP. Continued in hole & set RBP @ 9602'. Test RBP to 2000 psig. Held OK. POOH w/pkr. Dump 2 sx sand down csg. SWIFN.
22. ND BOP. NU Dowell frac head. Ru Dowell. Frac perfs 9424-9526' w/38,000 gals of cross-linked YF1400 & 160,000# 20/40 pre-cured resin coated sand. Ramped sand on following schedule.
 - 8,000 gals - Pad
 - 4,000 gals - 2 ppg
 - 8,000 gals - 4 ppg
 - 12,000 gals - 6 ppg
 - 6,000 gals - 8 ppgFlushed w/YF1400 cross-linked gel. Max - 3250 psig. Avg - 2750 psig & 30 bpm. ISIP = 2555 psig. 5 min SIP = 2504 psig, 10 min SIP = 2472 psig. 15 min SIP = 2449 psig. 60,000# left in Dowell Sand Chief. RD Dowell. SWIFN.
23. SITP = 2100 psig. Opened well on 22/64" chk. Well flowed 168 BW in 4 hrs. Started recovering sand. FCP - 500 psig. SWIFN.
24. SITP = 1000 psig. Opened well on 22/64" chk. Well flowed 30 BW in 1 hr & died. ND Dowell frac head. NU BOP. RIH w/4 5/8" blade bit on 2 7/8" N-80 tbg. Tagged @ 9425'. RU reverse unit. Washed out sand to RBP @ 9602'. Reversed tbg clean. SOH w/tbg & bit. SWIFN.
25. SD for Sunday.
26. FOOH w/tbg & bit. RIH w/retrieving head on tbg. Reverse sand off & release RBP @ 9602'. POOH w/tbg & RBP. RU Dresser Atlas. Run Prism log across perforated interval. POOH & RD D-A. RIH w/5 1/2" Halliburton RTTS pkr on 302 jts 2 7/8" N-80 tbg. Displace annulus w/2% KCl wtr & clay stabilizer. Set pkr @ 9376'. SWIFN.

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27. SITP = 30 psig. Blew down to 0. RIH w/swab. FL @ surface. Made 25 swab runs in 11 1/2 hrs. Recov'd 2 BO & 253 BW. Strong gas blow w/each swab run. Ending FL = 5500'. SWIFN.
28. SITP = 180 psig. Blew well down. No flow. RIH w/swab. FL = 2500'. Made 24 swab runs in 11 1/2 hrs. Recov'd 5 BO & 224 BW. Ending FL 6000'. SWIFN.
29. SITP = 200 psig. Blew to 0. POOH w/tbg & pkr. RIH w/4 5/8" bit on tbg. Tagged @ 10,026'. Reversed out frac sand to PBD 10,100'. POOH w/tbg & bit. SWIFN.
30. SITP = 0 psig. Bled press to 0. RIH w/15.5' OP MA, 2 7/8" API SN, 18 jts 2 7/8" 6.5# N-80 prod tbg, TAC & 307 jts tbg. Set SN @ 10,033' & TAC @ 9474' in 11,000# tension. ND BOP, inst wellhead & RIH w/2 1/2 x 1 1/2 x 30' RHBC rod pump. 1-7/8" x 2' pony rod, 1-26K shear tool, 1-7/8" x 2' pony rod & 180-1" WCN (API Grade D) steel rods & 145-1.2" x 37.5 fiberflex fiberglass sucker rods. Used 1-1.2" x 6' fiberglass pony rod & 1-11' pony rod to space out. Inst 1 1/4" x 24' polished rod w/16' liner. Seated pump & spaced out. Left rods clamped off. SI & secured well. SWIFN. Drop from report waiting on pumping unit.
31. Set Lufkin C-456-305-144 Lufkin pumping unit in #2 stroke hole. Set DP-60 Ajax. Revamped belt guard. Built flywheel guard. Built brace for muffler & exhaust pipe. Started well pumping. Tail bearing on pumping unit knocking. SD PU.
32. Adjusted tail bearing. Started well pumping to frac tanks. #2 stroke hole. SPM - 10. 130" stroke - 1 1/2" pump.
33. Well pumped 7 BO & 475 BW in 24 hrs.
34. Well pumped 3 BO & 269 BW in 24 hrs.
35. Well pumped 2 BO & 62 BW. Ajax was down. Restarted Ajax.
36. Well pumped 3 BO & 262 BW in 24 hrs.
37. Well pumped 10 BO & 146 BW in 24 hrs.
38. No test. Belts thrown off engine & pumping unit. Replaced belts w/power band. Started well pumping.
39. Well pumped 5 BO & 165 BW in 24 hrs.
40. Well pumped 13 BO & 136 BW in 24 hrs.
41. Well pumped 9 BO & 120 BW in 24 hrs.

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42. Well pumped 10 BO & 118 BW in 24 hrs.
43. Well pumped 10 BO & 146 BW in 24 hrs.
44. Well pumped 5 BO & 101 BW in 24 hrs.
45. Well pumped 4 BO & 101 BW in 24 hrs.
46. Well pumped 2 BO & 97 BW in 24 hrs.
47. Well pumped 4 BO & 86 BW in 24 hrs.
48. Well pumped 4 BO & 94 BW in 24 hrs.
49. Well pumped 4 BO & 71 BW in 24 hrs.
50. Well pumped 4 BO & 75 BW in 24 hrs. Well pounding fluid.
51. Well pumped 4 BO & 80 BW in 24 hrs.
52. No test. Well down. Not enough csg gas to run Ajax engine.
53. Well down. Waiting on PU to isolate perfs.
54. Well down. Waiting on PU to isolate perfs.
55. RU PU. POOH w/rods & pump. ND tree. NU BOP. POOH w/2 7/8" N-80 tbg. SWIFN.
56. RIH w/5 1/2" Halliburton RBP & RTTS pkr on 2 7/8" N-80 tbg. Set RBP @ 9600'. Set pkr @ 9582'. Test RBP to 2000#. Held OK (Used 2% KCl H₂O w/clay stabilizer) POH w/tbg & pkr. SIH w/2 7/8" SOP Mud Jt. 5 1/2" TAC & SN on 2 7/8" N-80 tbg. SWIFN.
57. FIH w/2 7/8" N-80 btg. SN @ 9540'. ND BOP. NU tree. RIH w/1 1/2" bore rod pump on 1" steel & 1.2" fiberglass rods. Loaded tbg. & check pump. OK. RD pulling unit. Pumping well to test tank thru Porta-Check w/35# back pressure.
58. Well pumped 5 BO & 173 BW in 18 hrs.
59. Well pumped 18 BO & 132 BW in 14 hrs.
60. Well pumped 9 BO & 84 BW in 26 hrs. Avg. gas rate 26 MCFPD.
61. Well pumped 4 BO & 82 BW in 24 hrs. Avg. gas rate 22 MCFPD.
62. Well pumped 10 BO & 55 BW & 20 MCF in 24 hrs.

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63. Well pumped 2 BO & 62 BW in 24 hrs. Avg gas rate 35 MCFPD.
64. Well pumped 6 BO & 59 BW in 24 hrs. Avg 26 MCFPD.
65. Well pumped 6 BO & 57 BW in 24 hrs. Avg 28 MCFPD.
66. Well pumped 4 BO, 45 BW & 45 MCFD in 21 hrs. RU pulling unit. POH w/rods & pump. ND tree. NU BOP. POH w/2 7/8" N-80 tbg. RIH w/overshot f/RBP & 5 1/2" Halliburton RTTS pkr. Latch onto & release RBP & 96C0'. SWIFN.
67. Set RBP & pkr 3 times between 9462' & 9506'. Tools would not test. Tools dragging while moving up hole (suspect scale). Pull tools above all perms. Set tools. Tools would not test. POH w/tbg, pkr & RBP. RIH w/4 5/8" bit & 5 1/2" csg scraper on 2 7/8" tbg. Work csg scraper through perforated interval. SWIFN.
68. Shut down for Sunday.
69. POH w/tbg, scraper & bit. RIH w/5 1/2" Halliburton RBP & RTTS pkr on 2 7/8" N-80 tbg. Set RBP @ 9490' & pkr @ 9485'. Test RBP to 2000#. OK. Release pkr & POH w/tbg & pkr. SIH w/2 7/8" MJ, TAC & SN on 2 7/8" N-80 tbg. SWIFN.
70. FIH w/2 7/8" N-80 tbg. SN @ 9470 ND BOP. NU tree. RIH w/1 1/2" bore rod pump on 1" steel & 1.2 Fiberflex rods. Load tbg. RD pulling unit. Start well pumping to test tank.
71. Well pumped 0 BO & 225 BW in 24 hrs.
72. Well pumped 12 BO & 145 BW & 45 MCFPD in 24 hrs.
73. Well pumped 8 BO & 216 BW in 24 hrs.
74. Well pumped 4 BO & 59 BW & 9 MCFPD in 24 hrs.
75. Well pumped 12 BO & 51 BW & 9 MCFPD in 24 hrs.
76. Well pumped 7 BO & 61 BW & 9 MCFPD in 24 hrs.
77. Well pumped 6 BO & 58 BW in 24 hrs.
78. Well pumped 4 BO & 55 BW & 24 MCFPD in 24 hrs.
79. Well pumped 4 BO & 53 BW & 24 MCFPD in 24 hrs.
80. Well pumped 5 BO & 51 BW & 14 MCFPD in 24 hrs.
81. Well pumped 3 BO & 40 BW & 14 MCFPD in 24 hrs.

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82. Well pumped 10 B0, 44 BW & 14 MCFPD in 24 hrs.
83. Well pumped 6 B0, 43 BW & 16 MCFPD in 24 hrs.
84. Well pumped 4 B0, 46 BW & 14 MCFPD in 24 hrs. Echometer indicated 900' AP. Rod string shows obvious fluid pound @ btm of stroke.
85. Well pumped 0 B0, 44 BW & 14 MCFPD in 24 hrs.
86. Well pumped 9 B0, 51 BW & 14 MCFPD in 24 hrs.
87. Well pumped 9 B0, 51 BW & 14 MCFPD in 24 hrs. SWI for potential test.
88. SI for potential test.
89. SI for potential test.
90. SI for potential test. Completed test. Left well SI due to uneconomic production. Drop from report pending engineering evaluation.

FINAL REPORT.