

Submit 1 Copy To Appropriate District Office

District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

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" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-44683
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator Marathon Oil Permian LLC		6. State Oil & Gas Lease No.
3. Address of Operator 5555 San Felipe St., Houston, TX 77056		7. Lease Name or Unit Agreement Name FLOWMASTER 15 WA FEE
4. Well Location Unit Letter <u>N</u> : <u>340</u> feet from the <u>NORTH</u> line and <u>390</u> feet from the <u>WEST</u> line Section <u>15</u> Township <u>24S</u> Range <u>34E</u> NMPM County <u>LEA</u>		8. Well Number <u>6H</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3,523' GR		9. OGRID Number 372098
		10. Pool name or Wildcat ANTELOPE RIDGE; WOLFCAMP

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: Remediation Procedure <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Marathon Oil Permian LLC requests to perform the following 7" casing remediation procedure as discussed via telephone with the OCD. Please see attached for procedure details.

Spud Date:

10/25/2018

Rig Release Date:

1/6/2019

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

SIGNATURE



TITLE

CTR - Technician HES

DATE 1/30/2019

Type or print name

Adrian Covarrubias

E-mail address:

acovarrubias@marathonoil.com

PHONE: 713-296-3368

For State Use Only

APPROVED BY:



TITLE A/OI

DATE 1/30/2019

Conditions of Approval (if any):

Flowmaster Fee 24 34 15 WA 6H

7" Casing Remediation Procedure Outline

Procedure

- 1) RIH with retrievable bridge plug and set inside 4-1/2" liner at ~11500' with wireline.
- 2) Move in/Rig Up Workover Rig
- 3) Pick up tension set packer assembly, RIH on tubing and set packer at ~900'
- 4) Test casing below packer to 9500 psi for 30 minutes
- 5) Bleed off pressure, release packer and lay down tubing/packer assembly.
- 6) Run Weatherford MetalSkin casing patch across casing leak and set
- 7) Test 7" casing and liner top to 9500 psi for 30 minutes
- 8) Run caliper log across casing patch.
- 9) RIH with 4-1/2" 13.5# P-110 frac string with PBR seal assembly and sting into liner hanger PBR
- 10) Pressure test frac string to 9500 psi for 30 minutes
- 11) Pull retrievable bridge plug
- 12) Rig Down/Move out Workover Rig
- 13) Rig up pump down trucks
- 14) Commence toe sleeve opening (~9500 psi) and establish injection rate with 2500 psi on backside of frac string
- 15) Drop ball and seat in toe sleeve.
- 16) Pressure test frac string/production liner system to 9500 psi for 30 minutes with 2500 psi on backside of frac string.
- 17) Wait 2-3 days for ball to dissolve.
- 18) Confirm ball is dissolved
- 19) Wait on frac operations.

Josh Shannon with MRO jshannon@marathonoil.com

John Hashman with MRO jhashman@marathonoil.com

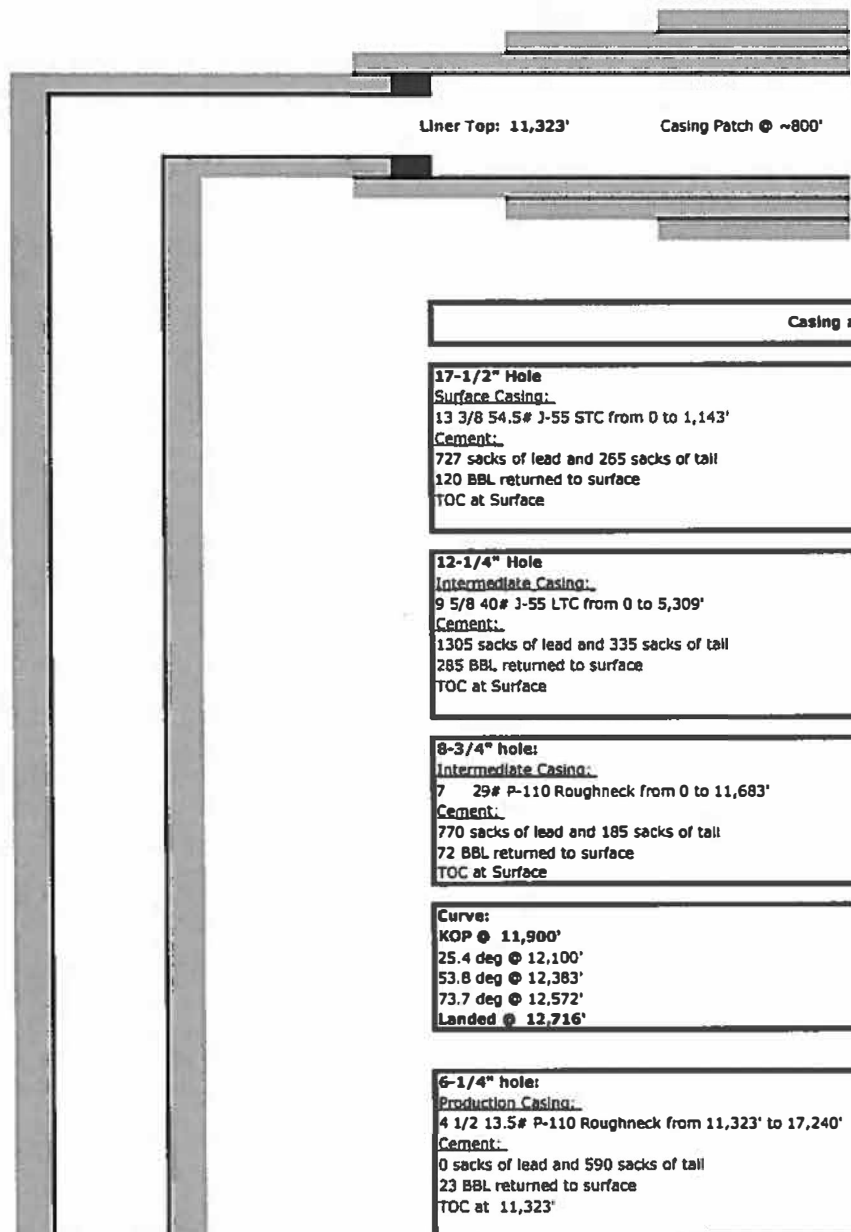
Jacob Beaty with MRO jabeaty@marathonoil.com



Flowmaster Fee 24 34 15 WA 6H

Wellbore Diagram

Wolfcamp A
 Lea County, New Mexico
 API #: 30-025-44683
 WBS #: DD.18.00840.C1
 Rig Released: 1/6/2019



Liner Top: 11,323'

Casing Patch @ ~800'

SHL: 340' FNL & 390' FWL, S15, T24S, R34E
 BHL: 200' FSL & 330' FWL, S15, T24S, R34E
 KB Elev: 3,550'
 GL Elev: 3,523'
 KB-GL: 27'
 Spud Date: 10/25/2018
 Rig Release: 1/6/2019

Casing and Cement Info

17-1/2" Hole
Surface Casing:
 13 3/8 54.5# J-55 STC from 0 to 1,143'
Cement:
 727 sacks of lead and 265 sacks of tail
 120 BBL returned to surface
 TOC at Surface

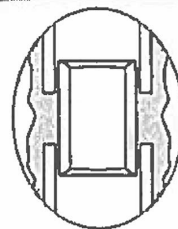
12-1/4" Hole
Intermediate Casing:
 9 5/8 40# J-55 LTC from 0 to 5,309'
Cement:
 1305 sacks of lead and 335 sacks of tail
 285 BBL returned to surface
 TOC at Surface

8-3/4" hole:
Intermediate Casing:
 7 29# P-110 Roughneck from 0 to 11,683'
Cement:
 770 sacks of lead and 185 sacks of tail
 72 BBL returned to surface
 TOC at Surface

Curves:
 KOP @ 11,900'
 25.4 deg @ 12,100'
 53.8 deg @ 12,383'
 73.7 deg @ 12,572'
 Landed @ 12,716'

6-1/4" hole:
Production Casing:
 4 1/2 13.5# P-110 Roughneck from 11,323' to 17,240'
Cement:
 0 sacks of lead and 590 sacks of tail
 23 BBL returned to surface
 TOC at 11,323'

Tool Sleeve Top @ 17,150'
 MD = 17,240'
 PSTD = 17,194'
 Avg TVD Lat = 12,400'
 TVD @ Heel = 12,407'
 TVD @ Toe = 12,399'
 Lat. Length = 4,478'
 Estimated BHT = 165'

**Weatherford®****Solid Expandable Systems****MetalSkin® Cased-Hole Liner-High Pressure (MCL-HP)****5 1/2 in. OD, 16.89 lbs/ft x 7 in. OD, 29.0 lbs/ft****Base Casing**

Nominal OD	7.000	in.
Nominal Weight	29.00	lbs/ft
Wall Thickness	0.408	in.
Nominal ID	6.184	in.
Drift Diameter	6.059	in.

Setting System

Maximum Expansion Rate	15.00	ft/min
Maximum Expansion Pressure	5,000	psi
Tensile Rating	250,000	lb
Maximum Temperature	300	°F
Connection to Work String	3-1/2 IF	

Recommended Inner String

Size	3.500	in.
Connection Max OD	4.500	in.

Liner Specifications

	Pre	Post
Nominal OD	5.500 in.	5.998 in.
Nominal Weight	16.89 lbs/ft	N/A lbs/ft
Wall Thickness	0.304 in.	0.286 in.
Nominal ID	4.892 in.	5.426 in.
Drift Diameter	4.767 in.	5.336 in.
Connection Type	FODC-OR™	FODC-OR™
Max. Connection OD	5.706 in.	6.147 in.
Connection ID	4.811 in.	5.390 in.
Min. Yield Strength	50,000 psi	60,000 psi
Internal Pressure (Unsupported)	4,970 psi	5,150 psi
Internal Pressure (Supported)	4,970 psi	10,000 psi
External Pressure	4,340 psi	3,470 psi
Tension Strength	150,000 lb	150,000 lb
Compression Strength	150,000 lb	75,000 lb
Maximum Run-In OD	5.865 in.	N/A in.

Liner System

Elastomer Thickness	0.150 in.
Maximum Dogleg Severity **	12 °/100ft
Expansion Ratio	10.2 %
Shrinkage Percentage	3.4 %
Make-up Torque (Min)	2,200 ft-lbs
Make-up Torque (Max)	2,600 ft-lbs
Connection Lubricant	Any Premium Thread Compound that does not include PTFE.

Notes:

1. Maximum Temperature: 300°F.
2. Post Expansion Pipe OD and Pipe Wall Thickness are based on test and FEA data.
3. Post Expansion Pipe ID is calculated from Post Expansion OD and Wall.
4. Post Expansion Connection OD is based on test data.
5. Post Expansion Connection ID is based on test and FEA data.
6. Pre and Post Expansion Connection Tension and Compression Strengths have been verified by testing.
7. Pre and Post Expansion Connection Internal and External Pressure have been verified by testing.

**** Contact your local representative****Form Number - 550700MCL290HP Form Rev 1****weatherford.com**

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