

**District I**

1625 N. French Dr., Hobbs, NM 88240

**District II**

1301 W Grand Ave., Artesia, NM 88210

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410

**District IV**

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

June 19, 2008

WELL API NO. 30-025-22217

**RECEIVED**

DEC 26 2008

**HOBBSD**

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (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.)		6. Lease Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		7. Lease Name or Unit Agreement Name <b>J. L. Muncy</b>
2. Name of Operator <b>Marathon Oil Company</b>		8. Well Number <b>4</b>
3. Address of Operator <b>P.O Box 3487 Houston, TX 77253-3487 Mail Stop #3308</b>		9. OGRID Number <b>14021</b>
4. Well Location Unit Letter <b>H</b> : <b>1980'</b> feet from the <b>North</b> line and <b>660'</b> feet from the <b>East</b> line Section <b>24</b> Township <b>22-S</b> Range <b>37-E</b> NMPM _____ County <b>Lea</b>		10. Pool name or Wildcat <b>Blinebry - Tubb - Brunson, South, Drinkard-Abo</b>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <b>GL: 3325'</b>		

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

**NOTICE OF INTENTION TO:**

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
 DOWNHOLE COMMINGLE ☐  
 OTHER: ☐

**SUBSEQUENT REPORT OF:**

REMEDIAL WORK ☐ ALTERING CASING ☐  
 COMMENCE DRILLING OPNS. ☐ P AND A ☐  
 CASING/CEMENT JOB ☐  
**OTHER: Down-Hole Commingle Operations** ☒

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

\*Marathon Oil Company has completed down-hole commingling operations for the **J. L. Muncy #4** by approval stated in the Administrative Order DHC-314-A, in the Blinebry-Tubb-Brunson, South, Drinkard-Abo Pools. Please see the attached approval letter, procedure, wellbores, and history for details of the well work done.

\*NOTE: Fresh water used, no solids or waste generated, and Key Energy Services trucked liquid to 'SWD'.

Spud Date: **11/28/2007**

Rig Release Date: **12/17/2007**

**DHC-314-A**

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

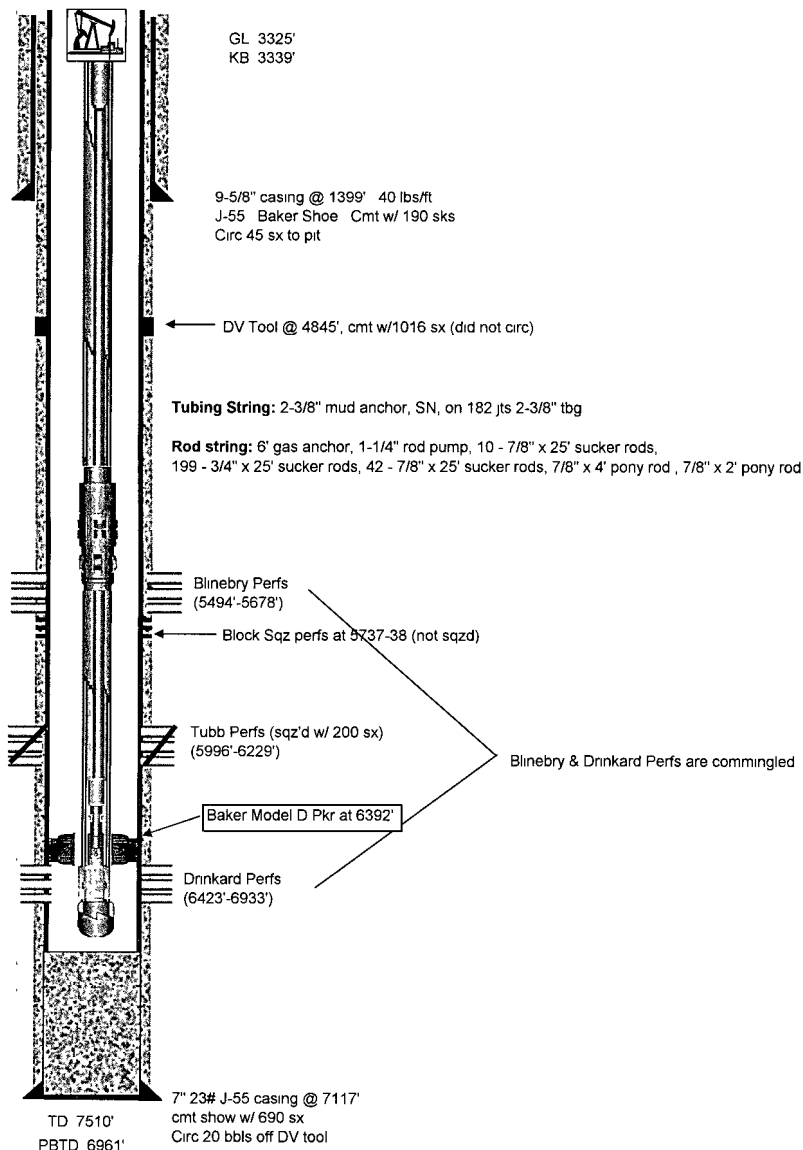
SIGNATURE **Rick R. Schell** TITLE: **Regulatory Compliance Rep.** DATE: **19-DEC-2008**

Type or print name **Rick R. Schell** E-mail address **rrschell@MarathonOil.com** PHONE: **713-296-3412**

**For State Use Only**

APPROVED BY: **[Signature]** TITLE: **PETROLEUM ENGINEER** DATE: **JAN 06 2009**

Conditions of Approval (if any):



**J.L. Muncy #4**  
County Lea  
State New Mexico  
Location 1980' FNL, 660' FEL  
Section 24, T-22-S, R-37-E  
API # 30-025-22217  
Spud Date 8/21/67  
TD 9/28/67  
Diagram Date 11/14/2007

**Notes:**

Date	Reservoir	Top	Btm	Shots/ft	Dia.	Stimulation Treatment	Other
9/29/1967	Dnnkard	6627	6933	2		20-shots total	
9/30/1967	Dnnkard	6627	6937			11 bbls 15% acid	
9/30/1967	Dnnkard	6627	6933			2000 gal 15% acid and 30 - 7/8" RCN ball sealers	
9/30/1967	Dnnkard	6627	6933			Released balls and fractured formation w/ 20000 gal lease oil and 19000# 20/40 sand	
11/4/1967	Dnnkard	6627	6858	2			
11/4/1967	Dnnkard	6882	6933	3	0.375		
11/5/1967	Dnnkard	6627	6933			Fraced w/ 11000 gal lease oil and 10000# 20/40 mesh sand preceded by 4000 gal lease oil pad w/ 1/30#/gal Adomite	
12/8/1967	Dnnkard	6423	6513	1	0.375		
12/11/1967	Dnnkard	6423	6933			Found indications of communication between perfs at 6423' - 6513' and perfs 6627' - 6698' 22,000 gal lease oil used 2,000 gal 15% spearhead acid 14,200# 20/40 mesh sand 150# of S-3 moth balls used between stages for diverting	
1/4/1968	Tubb	5996	6229	2			
1/8/1968	Tubb	5996	6229			2000 gal of 15% BD acid in 8 stages w/ 24 ball sealers for control. Pumped 5000 gal pad of lease oil w/ 1/30#/ gal Adomite, then sand fraced w/ 20000 gal of lease oil containing 1# gal Adomite and FR-3 friction reducer. Started sand frac w/ 1/2#/gal 20	
2/20/1968	Dnnkard	6423	6933	2		6000 gal of 15% acid. Used 270# rock salt as a diverting agent	
3/1/1968	Dnnkard	6423	6933			30000 gal lease oil and 1/2#/gal sand 500 gal 15% spearhead acid 700# moth balls	
4/16/1968	Blinebry	5565	5738	2			
4/17/1968	Blinebry	5565	5738			2500 gal BD acid and 30 ball sealers 30000 gal lease oil w/ 25000# 20/40 sand and 1500# 10/20 sand	

## Tubb Recompletion Procedure

### J L Muncy # 4

Surface Hole Location: 1980' FNL & 660' FEL  
Section 24, T-22-S, R-37-E, UL 'H'  
Drinkard Field  
Lea Co, NM

**Date:** November 9, 2007

**Purpose:** Temporarily Isolate Drinkard, Recomplete to Tubb, Commingle

**Current Status:** SI

**WBS #:** RW.07.15919.CAP.CMP **AFE Cost:** \$253,000  
(gross)

**WI:** 100.00 % **NRI:** 87.5 %

**Elevation:** GL: 3325' KB: 3339' TD: 7510' PBTd: 6961'

**Surface Casing:** 9-5/8", 40# set @ 1399'. Cemented w/190 sacks (circ.)

**Production Casing:** 7", 23#, J-55 set @ 7117' w/ 1660 sx

**Tubing:** 182 joints of 2-3/8", 4.7#, J-55, EUE

<u>Size, Wt, Grade</u>	<u>ID (in)</u>	<u>Drift (in)</u>	<u>Burst (psig)</u>	<u>Collapse (psig)</u>	<u>bbbl/1000 ft</u>
7", 23#, K-55	6.366	6.241	4360	3270	39.3
2-7/8", 6.5#, L-80	2.441	2.347	10570	11170	5.79
2-3/8", 4.7#, J-55	1.995	1.901	7700	8100	3.87

**Pressure Information:** Tubb ~2700 psig SIBHP, if virgin pressure

**Current Perforations:**

Blinebry: 5494-5738  
Drinkard: 6423-6933

**Recent Well Test:** 10/04/07 – 1 BO/ 1 BW/ 34 MCFPD

**Procedure:**

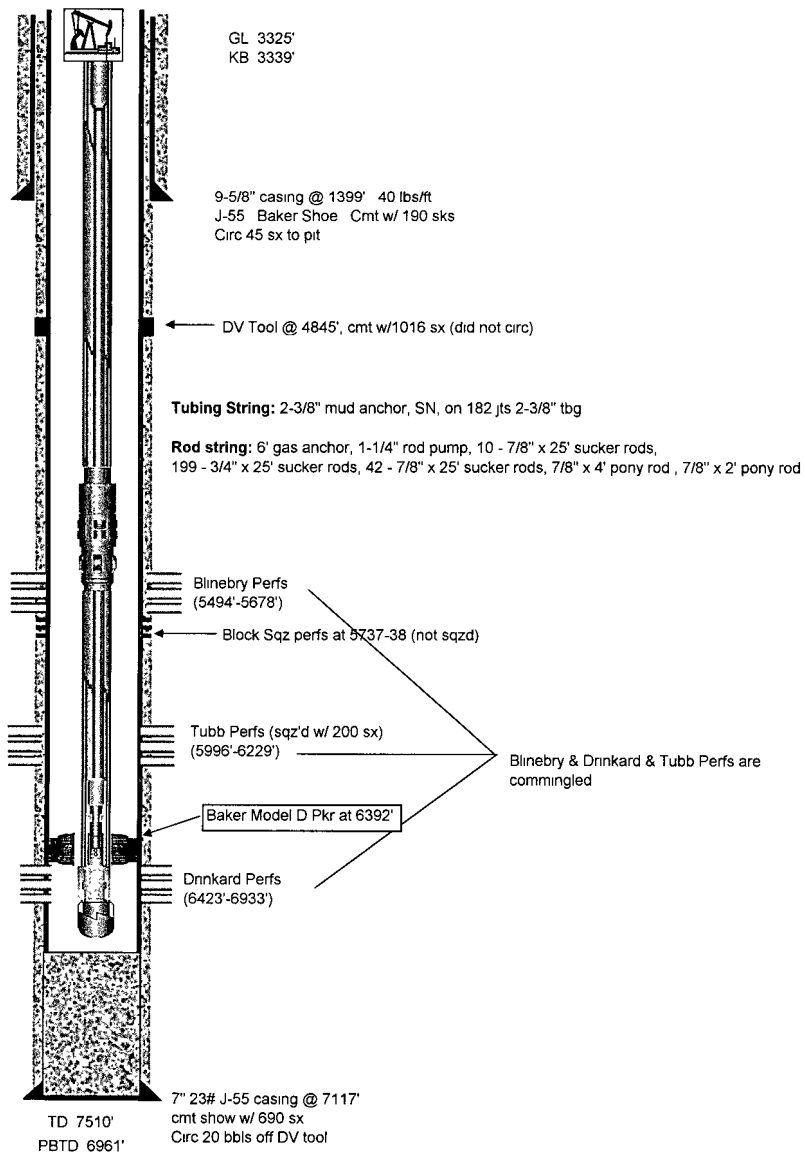
1. MIRU WSU. POOH with rods and pump. Install and test BOPE. POOH with 2-3/8" tubing.
2. Make bit and scraper run to PBTD at +/- 6961'. Please pick-up additional tubing as needed for this operation. Based on visual inspection of tubing in step one, you may wish to scan-a-log tubing while POOH.
3. RIH with retrievable bridge plug with ball catcher and set same at +/-6300'. PU end of setting tool to 6230' and pump 40 bbls of 7-1/2" NEFEHCL inhibited for 48 hours at 120 deg F. Displace acid with only 5 bbls of fresh water. Allow acid and water to fall. POOH with tubing and setting tool.
4. RU Baker Atlas electric line. Install pack-off. RU lubricator and RIH with 3-1/8" slick gun with 311T charges loaded 1 SPF, phasing is not critical. Total of 91 new holes. Use Welex micro-seismogram log dated 9-28-67 for depth control. Perforate from top-down to maximize benefit of acid.

5990-98 (9 holes)  
6012-16 (5 holes)  
6017-19 (3 holes)  
6020-25 (6 holes)  
6026-30 (5 holes)  
6032-34 (3 holes)  
6042-47 (6 holes)  
6082-86 (5-holes)  
6089-96 (8-holes)  
6100-10 (11-holes)  
6122-24 (3-holes)  
6142-46 (5-holes)  
6150-54 (5-holes)  
6166-72 (6-holes)  
6202-06 (5-holes)  
6214-16 (3-holes)  
6228-30 (3-holes)

Casing collars at: 5986, 6028, 6072, 6116, 6159, 6201, Short joint at 6201-6233. DV tool at 4832-35'.

After last gun has been shot, tag RBP with gun to verify setting depth and confirm plug has not moved. Pump 25 bbls of fresh water down casing to flush excess acid.

5. Deliver 6300' work string of 2-7/8" L-80 EUE tubing. Hydro test (6000 psi) 2-7/8" L-80 EUE tubing in hole along with treating packer and seating nipple to 5,800'. *Packer must be below block squeeze perfs at 5737-38' (not sqzd)*. Set packer and establish injection into new perforations. Pump 40 bbls of fresh water at maximum rate not to exceed 5000 psi using reverse unit or kill truck. Report rate and pressure to engineer to determine how much horsepower is needed for acid job
6. RU acid company for acid stimulation. Need a minimum of 700 HHP on location (+/- 1000 HHP is desired). It is doubtful McClaskey has this much HHP available. Therefore, Halliburton or other service company may be required. Pump +/- 200 bbls (2-transport loads) of 15% NEFEHCL inhibited for 4 hours at 120 deg F. Use a ball injector loaded with 175 (1.1 SG) ball sealers for acid diversion. Start off pumping 10 bbls of acid, then Drop 1 ball for each 1-bbl of acid pumped. After last ball pump remaining acid. Pump at maximum rate (> 10 BPM is desired) not to exceed 5000 psi surface pressure. Displace acid with 50 bbls of fresh water.
7. Release packer and lower same to knock ball sealers off perforations. POOH laying down 2-7/8" tubing, treating packer, etc.
8. RIH with retrieving tool for RBP and production tubing and recover RBP. POOH.
9. RIH with production equipment as pulled and PWOP.



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**Final Well / Event Summary**

Legal Well Name: J L MUNCY NO 4

Common Well Name: J L MUNCY NO 4

Event Name: RECOMPLETION

Start Date: 11/28/2007

End Date:

DATE	TMD	24 HOUR SUMMARY
11/28/2007	(ft)	Held Safety Meeting. MIRU Pulling Unit. Set Reverse Unit. Unbeam Well. Unseated pump. POOH w/ pony rods. Ran back w/ polish rod. Shut in Well. Secure Well. SDFN.
11/29/2007	(ft)	Held Safety Meeting. POOH w/ rods and pump. Install BOPE. Unset TAC. Pooh w/ tubing tallying. Rbih w/ kill string. Shut in Well. Secure Well. SDFN.
11/30/2007	(ft)	Safety Meeting. Kill Well. Rih w/ 2 3/8" loc seal tbg & 2 1/16" tbg & pooh laying dn. Unloaded and racked 2 7/8" N-80 work string. Rih w/ bit & Csg Scraper and 25 jts of 2 7/8" N80 for kill string. Shut in Well. Close Blind Rams. SDFN.
12/3/2007	(ft)	Safety Meeting. Kill Well. Fih tallying rest of 2 7/8" N-80 work string. Tag at 6398'. Pooh w/ bit & Csg Scraper, PU RBP & Pkr & 200 jts. Set RBP @ 6312'. Test plug to 1000psi. Unset pkr, laid dn jt, pumped 40 bls spot acid w/5 bls flush, PU 40 jts.SDFN
12/4/2007	(ft)	Safety Meeting. Kill Well. Pooh w/ tbg & pkr. Rigged up Baker Atlas to perforate. Made 7 runs. Perfed from 5990' - 6230'. Rih w/ kill string. Secure well, SDFN
12/5/2007	(ft)	Safety Meeting. Kill Well. Pooh w/ kill string. RU Hydrotesters. Had search dog & HR inspect location. (All was good) Tested in hole OK. RD testers, PUH 20 jts, left Pkr swingin @ 5100'. Pumped 15 bls water to displace acid. SDFN
12/6/2007	(ft)	Held Safety meeting. Rih w/ 20 jts, set Pkr @ 5800'. RU Acid Pump. Pump 200 bbls 15% HCL Aci @ 10.2 bpm @ 2980 psi. Drop 175 Ball Sealers. Had ball out. Flush w/ 48 bbls water Max rate 12.3, max psi - 4558, Pooh w/ Tbg & Pkr.Total load 248 bls SDFN.
12/7/2007	(ft)	Held Safety meeting. Took off thread protectors on tubing. High winds set in and shut operations down. Shut down for day.
12/8/2007	(ft)	Safety meeting. Rigged up testers. Tested BHA & production tbg bih. Tested good. ND BOPE, Set TAC & NU WH Tag @ 6916', 45' of fill to PBTD @ 6961'. Bottom perf @ 6933' 17' of Drinkard perfs covered below packer. SW SDFN.
12/10/2007	(ft)	Held Safety Meeting. RIH w/ Pump & Rods. Pumped 30 bbls dn tbg then Seated pump. Spaced out pump, hung well on. Load / test tbg. w/ 20 bls, No pump action. Tried long stroke. No pump action. Unseat pump, reseated, pmped 10 bls, no action. SDFN.
12/11/2007	(ft)	Safety Meeting. L & T tbg, wouldn't hold. Flushed down csg to maybe clear any trash in pump, lon stroke pump, still no pump action. POOH w/ rods and pump. Install BOPE. Unset TAC. Pooh w/ 160 jts 2 3/8". Shut down. Secure Well. SDFN.
12/12/2007	(ft)	Safety meeting. Foooh w/ production tbg & BHA. Wait for new SN & make sure hold dn on pump match for sure. Rbih w/ 2 3/8" & 2 1/16" w/ bha. ND BOPE, set TAC & NU WH. Rih w/ pump and rods. Hung on, Spaced pump. L&T no good. SW SDFN.

**Final Well / Event Summary**

Legal Well Name: J L MUNCY NO 4

Common Well Name: J L MUNCY NO 4

Event Name: RECOMPLETION

Start Date: 11/28/2007

End Date:

DATE	TMD	24 HOUR SUMMARY
12/13/2007	(ft)	Safety Meeting. POOH with rods and pump. POOH tubing. Found split collar. Close well in. Secure Well. SDFN
12/14/2007	(ft)	Safety Meeting. RU, Run Hydro-Test on tubing. Tested Good. Close well in. Secure Well. SDFN
12/15/2007	(ft)	Safety Meeting. RBIH with pump and rods. Hung well on, load and test. Held good w/ good pump action. Left Pumping to facility. Secure well. SDFN.
12/17/2007	(ft)	Held Safety meeting. Clean and Inspect Location. RDMO Pulling Unit. RDMO Reverse Unit. Well pumping to facility.