Form 3160-5 (August 2007)

### **UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

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FORM APPROVED OMB NO. 1004-0135

Expires: July 31, 2010

### 5. Lease Serial No. NMLC029405B

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - 0	7. If Unit or CA/Agreement, Name and/or No.	
1. Type of Well Gas Well Other		8. Well Name and No. RUBY FEDERAL 10
Name of Operator     CONOCOPHILLIPS COMPANY     E-M	Contact: RHONDA ROGERS ail: rogerrs@conocophillips.com	9. API Well No. 30-025-40507
3a. Address P. O. BOX 51810 MIDLAND, TX 79710	3b. Phone No. (include area code) Ph: 432-688-9174 HOBBS OCD	10. Field and Pool, or Exploratory MALJAMAR; GB-SA
4. Location of Well · (Footage, Sec., T., R., M., or Sur Sec 18 T17S R32E Mer NMP SWSE 1140		11. County or Parish, and State  LEA COUNTY, NM
12 CHECK APPROPRIATE	BOX(ES) TO INDICATE NATURE: @F/NOTICE	REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
<ul><li>☑ Notice of Intent</li><li>☐ Subsequent Report</li><li>☐ Final Abandonment Notice</li></ul>	☐ Acidize ☐ Alter Casing ☐ Casing Repair ☐ Change Plans ☐ Convert to Injection	☐ Deepen ☐ Fracture Treat ☐ New Construction ☐ Plug and Abandon ☐ Plug Back	<ul> <li>□ Production (Start/Resume)</li> <li>□ Reclamation</li> <li>☑ Recomplete</li> <li>□ Temporarily Abandon</li> <li>□ Water Disposal</li> </ul>	☐ Water Shut-Off ☐ Well Integrity ☐ Other	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ConocoPhillips would like to re-complete the Ruby Federal 10 from the Yeso to the Grayburg-San Andres to determine the commercial potential of future commingling of the Grayburg-San Andres in the existing & future Yeso wells.

SEE ATTACHED FOR CONDITIONS OF APPROVA

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Attached is the procedure to recomplete & a C-102 for the Maljamar; GB-SA.

always submit current + proposed well bore diegrams

SUBJECT TO LIKE APPROVAL BY STATE

14. I hereby certify that the foregoing is true and correct.  Electronic Submission #210653 verifie  For CONOCOPHILLIPS CO  Committed to AFMSS for processing	OMPAN	Y, sent to the Hobl	bs .
Name(Printed/Typed) RHONDA ROGERS	Title	STAFF REGUL	ATORY TECHNICIAN
Signature (Electronic Submission)	Date	06/13/2013	APPROVED
THIS SPACE FOR FEDERA	AL O	R STATE OFFIC	E USE AUU CONTRACTOR
Approved By	Title		Jennata I Jam
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Offi	ce A	BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any postates any false, fictitious or fraudulent statements or representations as to any matter w	person k within it	nowingly and willfully jurisdiction.	to make to any department or agency of the United

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*



Ruby Federal-10 API #30-025-40507 Maljamar Field HOBBS OCD

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The subject workover consists of re-completing the Ruby Federal-10 from the Yeso to the Grayburg-San Andres to determine the commercial potential of future downhole commingling of the Grayburg-San Andres in the existing & future Yeso wells.

# WELL CATEGORY, BOP CLASS AND EXCEPTIONS

Well Category:

One

**BOP Class:** 

One (hydraulic recommended)

## **PROCEDURE**

NOTE: Prior to MI & RU of service unit, obtain well test from current Yeso completion.

1. MI & RU service unit. The following is a well file source summary of current well configuration (last well service: 06.2012):

Ruby Federal-10 (30-025-40507)	Depth (RKB): ft.		
1140 FSL & 2310 FEL, 18 (O)-17S-32E	(KB -GL	.: 14 ft.)	
Elev.: 3976 KB; 3962 GL	top	btm	
8-5/8", 24#, J-55	surface	742	05.15.12: Cmt w/ 510 sx. Circ 197 sx (60 bbl) cmt to surface
5-1/2", 17#, L-80	surface	6883	05.25.12: Cmt w/ 1450 sx. Circ 83 sx (38 bbl) cmt to surface
Completion Intervals (Gross):			
Paddock	5382	5475	
Mid Blinebry	5851	6257	
Lwr Blinebry	6319	6717	
PBD	6837		
TD		6902	05.23.12: Driller TD 6902; ( 05.24.12: Logger TD 6895)

- 2. POOH & LD rods & pump. ND well. NU BOP. POOH & stand-back tbg.
- 3. RIH w/ tbg & bit & scraper (5-1/2", 17#) to 5325. POOH.
- 4. RIH w/ tbg & RBP w/ equalizing valve (5-1/2", 17#). Set RBP @ 5300. Circ well w/ fresh water. (5-1/2", 17# well capacity: 123 bbl; 107 bbl w/ 2-7/8" tbg) Close pipe-rams & test RBP @ 3500# surface prs (equivalent to 5821# @ BP; 1.1 psi gradient). POOH w/ tbg.

# Stage-1: Lwr San Andres (Lwr Z10)

5. RU perforating services.

NU lubricator w/ pack-off. Test @ 500#.

Perforate following intervals (3-3/8" SLB Power Jet HMX, 22.7 gm., EHD: 0.36"):

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top	btm	Feet	SPF	Shots
5000	5008	8	1	8
5042	5052	10	1	10
5083	5093	10	1	10
5127	5137	10	1	10
5149	5156	7	1	7
5172	5184	12	1	12
5202	5214	12	1	12
5223	5235	<u>12</u>	1	<u>12</u>
		81		81

RD perforating services.

- 6. Breakdown perforations:
  - a. RIH w/ 2-7/8" tbg w/ PKR to lowermost perforation @ 5235
  - b. Spot 1000 gal 15% NE Fe HCl (23.8 bbl acid followed by 23.7 bbl water)
  - c. Pull 20 stands. Set PKR @ approximately 4000 (acid column: 4210-5235)
  - d. Displace acid w/ 40 bbl water

(16 bbl over-flush; equivalent to 3 x AIR: 3 BPM @ 3000#)

- e. Record ISIP, SITP(5 min), SITP(10 min) & SITP(15 min)
- f. POOH & LD tbg
- g. ND BOP
- h. NU frac stack

RD well service

RU HES. Set treating line pop-off: 4800#.

Set pump trips: 4500#

Test surface lines:

5500#

Acidize 5000-5235 (81 perforations) w/ 80 bbl (3360 gal) 15% NE Fe HCl w/ 100 (1.1 sg) ball

Pump 20 bbl fresh water & obtain pump-in rate: 15 BPM

Pump 15 bbl 15% HCl.

Pump 50 bbl 15% HCl. Drop 100 bs evenly spaced (2 bs/bbl)

15 bbl 15% HCI Pump

Pump 165 bbl fresh water (overflush w/ 45 bbl, equivalent to 3 x BPM treating rate)

(csg capacity: 116.2 bbl top perf; 121.6 bbl btm perf)

Anticipated treating rate: 15 BPM @ 2400#

If ball-out occurs (3400#: 1000# over treating prs), SD. Surge perfs 3 times.

Frac 5000-5235 down 5-1/2", 17#, L-80 csg.

## Stage-2: Lwr San Andres (Upr Z10)

8. RU wireline services. NU lubricator w/ pack-off. Test @ 500# over SICP (note & record SICP).

- a. RIH w/ RBP w/ equalizing valve (5-1/2", 17#) w/ pressure recorder in carrier positioned below RBP.
- b. Set RBP @ 4930.
- c. Test RBP @ 3250# surface prs (5437# @ BP; gradient: 1.1 psi/ft.)
- d. Perforate following intervals (3-3/8" SLB Power Jet HMX, 22.7 gm., EHD: 0.36"):

top	btm	Feet	SPF	Shots
4780	4790	10	2	20
4819	4830	11	2	22
4855	4866	<u>11</u>	2	22
		32		64

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e. RD wireline services

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9. RU HES.

Set treating line pop-off: 4800#.

Set pump trips:

4500#

Test surface lines:

5500#.

Acidize 4780-4866 (64 perforations) w/ 64 bbl (2688 gal) 15% NE Fe HCl w/ 80(1.1 sg) ball sealers:

Pump 20 bbl freshwater. Breakdown w/ acid on spot & obtain pump-in rate: 15 BPM.

Pump 12 bbl 15% HCl.

Pump 40 bbl 15% HCl. Drop 80 bs evenly spaced (2 bs/bbl)

Pump 12 bbl 15% HCI

Pump 160 bbl fresh water (overflush w/ 45 bbl, equivalent to 3 x BPM treating rate)

(csg capacity: 111.1 bbl top perf; 113.1 bbl btm perf)

Anticipated treating rate: 15 BPM @ 2300#

If ball-out occurs (3300#: 1000# over treating prs), SD. Surge perfs 3 times.

Frac 4780-4866 down 5-1/2", 17#, L-80 csg.

## Stage-3; Lwr San Andres (Z9)

- 10. RU wireline services. NU lubricator w/ pack-off. Test @ 500# over SICP (note & record SICP).
  - a. RIH w/ composite BP (5-1/2", 17#).
  - b. Set BP @ 4150.
  - c. Test BP @ 2750# surface prs (4596# @ BP; gradient: 1.1 psi/ft.)
  - d. Perforate following intervals (3-3/8" SLB Power Jet HMX, 22.7 gm., EHD: 0.36"):

ļ	top	btm	Feet	SPF	Shots
	4053	4057	4	3	12
	4064	4067	3	3	9
1	4074	4077	3	3	9
	4079	4086	<u>7</u>	3	21
			17		51

- e. RD wireline services
- 11. Acidize 4053-4086 (51 perforations) w/ 120 bbl (5040 gal) 15% NE Fe HCl w/ 60 (1.1 sg) ball sealers:

Pump 20 bbl fresh water. Breakdown w/ acid on spot & obtain pump-in rate: 15 BPM.

Pump 45 bbl 15% HCl.

Pump 30 bbl 15% HCl. Drop 60 bs evenly spaced (2 bs/bbl)

Pump 45 bbl 15% HCl.

#### Flush w/

2058 gal (49.0 bbl) fresh water (water column: 3914-4086; 45 bbl overflush)

1000 gal (23.8 bbl) 15% HCI (acid column: 2889-3914) 2822 gal (67.2 bbl) fresh water (water column: surf-2889)

Capacity to uppermost perforation (stage-3): 3957 gal; 94.2 bbl

HOBBS OCD Capacity to lowermost perforation (stage-3): 3990 gal; 95.0 bbl

Capacity to lowermost perforation (stage-4): 3822 gal; 91.0 bbl

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Anticipated treating rate: 15 BPM @ 2300#

If ball-out occurs (3300#: 1000# over treating prs), SD. Surge perfs 3 times.

## Stage-4: Upr San Andres (Z7)

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12. RU wireline services. NU lubricator w/ pack-off. Test @ 500# over SICP (note & record SICP).

a. RIH w/ composite BP (5-1/2", 17#)

b. Set BP @ 3980

c. Test BP @ 2650# surface prs (4421# @ BP; gradient: 1.1 psi/ft.)

d. Perforate following intervals(3-3/8" SLB Power Jet HMX, 22.7 gm., EHD: 0.36"):

top	btm	Feet	SPF	Shots
3818	3821	3	3	9
3896	3903	7	3	21
3907	3914	7	3	<u>21</u>
		17		51

- e. RD wireline services
- 13. Acidize 3818-3914 (51 perforations) w/ 120 bbl (5040 gal) 15% NE Fe HCl w/ 60 (1.1 sg) ball sealers:

Pump 20 bbl fresh water. Breakdown w/ acid on spot & obtain pump-in rate: 15 BPM.

Pump 45 bbl 15% HCl.

Pump 30 bbl 15% HCl. Drop 60 bs evenly spaced (2 bs/bbl)

Pump 45 bbl 15% HCl.

## Flush w/

2078 gal (49.5 bbl) fresh water (water column: 3721-3914; 45 bbl overflush)

1000 gal (23.8 bbl) 15% HCI (acid column: 2697-3721) 2633 gal (62.7 bbl) fresh water (water column: surf-2697)

Capacity to uppermost perforation (stage-4): 3728 gal; 88.8 bbl Capacity to lowermost perforation (stage-4): 3821 gal; 91.0 bbl Capacity to lowermost perforation (stage-5): 3633 gal; 86.5 bbl

Anticipated treating rate: 15 BPM @ 2150#

If ball-out occurs (3150#: 1000# over treating prs), SD. Surge perfs 3 times.

# Stage-5: Grayburg (Z4, Z5 & Z6)

- 14. RU wireline services. NU lubricator w/ pack-off. Test @ 500# over SICP (note & record SICP).
  - a. RIH w/ composite BP (5-1/2", 17#)
  - b. Set BP @ 3770

c. Test BP @ 2500# surface prs (4179# @ BP; gradient; 1.1 psi/ft.)

d. Perforate following intervals (3-3/8" SLB Power Jet HMX, 22.7 gm., EHD: 0.36"):

top	btm	Feet	SPF	Shots
3503	3508	5	2	10
3544	3551	7	2	14
3593	3596	3	2	6
3612	3617	5	2	10
3653	3658	5	2	10
3694	3698	4	2	8
3717	3721	4	2	8
		33		66

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e. RD wireline services

15. RU HES. Set treating line pop-off: 4800#.

Set pump trips:

4500#

Test surface lines:

5500#.

Acidize 3503-3721 (66 perforations) w/ 66 bbl (2772 gal) 15% NE Fe HCl w/ 80(1.1 sq) ball

Pump 20 bbl fresh water. Breakdown w/ acid on spot & obtain pump-in rate: 15 BPM.

Pump 13 bbl 15% HCI

Pump 40 bbl 15% HCI. Drop 80 bs evenly spaced (2 bs/bbl)

Pump 13 bbl 15% HCl.

Pump 130 bbl fresh water (overflush w/ 45 bbl, equivalent to 3 x BPM treating rate)

(csg capacity: 81.4 bbl to top perf; 86.5 bbl to btm perf)

Anticipated treating rate: 15 BPM @ 2100#

If ball-out occurs (3100#: 1000# over treating prs), SD. Surge perfs 3 times.

Frac 3503-3721 down 5-1/2", 17#, L-80 csg.

RD & release HES, SION.

- 16. Open well and flow back.
- 17. RU well service unit. ND frac stack. NU BOP.
- 18. Pick-up & RIH w/ 4-3/4" bit, 6: 3-1/2" DC & 2-7/8", 6.5#, J-55 tbg.

Drill out composite BP: 3770, 3980 & 4150

Circ well 2 hrs prior to POOH.

POOH w/ tbg. LD DC & bit.

RIH w/ tbg & retrieve RBP @ 4930 w/ pressure recorder

RBP @ 5300 will NOT be removed at this time in order to production test the Grayburg-San Andres

19. Downhole equip as per attached.

<u>Tubing:</u>	<u>Depth</u>
2-7/8", 6.5#, J-55	

TAC	3400
SN	5250
EOT	5250
Rods:	Ftq
7/8" Norris 97	2200
3/4" Norris 97	2750
1-1/2" Grade C SB	300
Pump: 1-3/4" x 24' insert	

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20. Surface equip w/ existing 912-365-168 unit. Operate at current 7.8 SPM w/ 168" stroke. Estimated RodStar-based production capacity: 402 BPD @ 95% pump efficiency

Loading: %	
Gearbox	81
Structure	58
Rods	68
ROL	78
MPRL/PPRL	22

21. Place well on test.

# **Downhole Commingle:**

- 1. MI & RU well service unit.
- 2. POOH w/ rods & pump. ND well. NU BOP. POOH w/ tbg.
- 3. RU reverse unit

4. RIH w/ tbg, 6: 3-1/2" DC & 4-3/4" bit. Drill-out composite PP @ 5300.

RIH to PBD. Circulate 2 hrs.

POOH w/ tbg. LD DC & bit.

5. Downhole equip w/ ESP.

See COA Submit on Separate Sundry

# Ruby Federal 10 30-025-40507 Conoco Phillips Company July 3, 2013 Conditions of Approval

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Notify BLM at 575-361-2822 a minimum of 24 hours prior to commencing work.

Work to be completed by October 3, 2013.

- 1. Must conduct a casing integrity test before perforating and fracturing. Submit results to BLM. The CIT is to be performed on the production casing to max treating pressure. Notify BLM if test fails.
- 2. Before casing or a liner is added or replaced, prior BLM approval of the design is required. Use notice of intent Form 3160-5.
- 3. Surface disturbance beyond the originally approved pad must have prior approval.
- 4. Closed loop system required.
- 5. All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of work over operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
- 6. Operator to have H2S monitoring equipment on location.
- 7. A minimum of a 2000 (2M) BOP to be used. All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the size of the work string shall be adequate. Tapered work strings will require an additional pipe ram. The manifold shall comply with Onshore Oil and Gas Order #2 Attachment I (2M Diagrams of Choke Manifold Equipment). The accumulator system shall have an immediately available power source to close the rams and retain 200 psi above pre-charge. The pre-charge test shall follow requirements in Onshore Order #2.
- 8. No commingling can be done until operator has approval from both the BLM and the State.

9. Subsequent sundry required detailing work done and completion report for the new formation. Operator to include new well plat and well bore schematic of current well condition when work is complete.

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