Form 3160-5
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs
HOBBS OCD
MAR 22 2013
RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

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.

SUBMIT IN TRIPLICATE – *Other instructions on page 2.*

1. Type of Well ☐ Oil Well ☐ Gas Well ☒ Other	5. Lease Serial No. NMLC057210
	6. If Indian, Allottee or Tribe Name
	7. If Unit of CA/Agreement, Name and/or No.
	8. Well Name and No. MCA Unit 472
2. Name of Operator ConocoPhillips Company	9. API Well No. 30-025-39409
3a. Address P. O. Box 51810 Midland TX 79710 3b. Phone No. *(include area code)* (432)688-9174	10. Field and Pool or Exploratory Area Maljamar; Grayburg-San Andres
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* UL E, 1980' FNL & 160' FWL, Sec 27, 17S, 32E	11. County or Parish, State Lea NM

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

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

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 must 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 must be filed once testing has been completed. Final Abandonment Notices must 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 request to stimulate this injection well per attached procedures.

SUBJECT TO LIKE
APPROVAL BY STATE

APPROVED
MAR 22 2013
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*
Rhonda Rogers — Title Staff Regulatory Technician

Signature — Date 02/13/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by — Title — Date

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. — Office

4-8-2013

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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.

(Instructions on page 2)

APR 09 2013

ConocoPhillips

API # 30-05-39409
MCA 472W: Grayburg Frac
Maljamar Field

The subject workover consists of frac-treating the Grayburg gross completion interval: 3804-3886 w/ 22,500 gal 20# x-link gel w/ 48,000# 16/30 sand & 22,000# 16/30 resin-coated sand.

MCA 472W was drilled during September 2010 and initially completed as an injection well. MCA 480W was not frac-treated on initial completion. The well remained shut-in until well was placed in injection service during 3rd qtr 2011.

WELL CATEGORY, BOP CLASS AND EXCEPTIONS

Well Category One:

H2S: 0 ppm (water injection well).
Well Rate: P&A

H2S	ROE- ft.
100 ppm	0
500 ppm	0

BOPE Class One: Hydraulic BOP recommended.

PROCEDURE

1. Spot 3 clean 500 bbl frac tanks. Load tanks w/ 2% KCl water prior to frac date. Water to be biocide-treated by frac-service provider.

2. MI & RU service unit. The following is a well file source summary of current well configuration (last well service: 03.2012):

MCA 472W (30-025-39409)	Depth (RKB): ft.		
1980 FNL & 160 FWL, 27E-17S-32E	KB - GL: 14 ft.		
Elev.: 4018 KB; 4004 GL	top	btm	
8-5/8", 24#, J-55 in 12-1/4" hole	surface	945	09.20.10: Cmt w/ 570 sx (163 bbl). Circ 57 bbl (185 sx) to surface
5-1/2", 17#, J-55 in 7-7/8" hole	surface	790	09.25.10: Cmt w/ 760 sx (282 bbl). Circ 46 bbl (100 sx) to surface
5-1/2", 17#, J-55 w/ ECP (pack-off: 753-769)	745	781	09.29.10: per SLB cased-hole GR/CNL/CCL log
5-1/2", 17#, J-55 in 7-7/8" hole	781	4164	
Downhole Equipment:			
Tbg: 2-3/8", 4.7#, J-55 IPC	surface	3778	10.07.10:
OFT w/ 1.875" XN Profile (1.875" x 1.791")	3778	3779	10.07.10:
PKR: 2-3/8" x 5-1/2", 17#	3779	3787	10.07.10:

Completion Intervals:			
Grayburg	3804	3806	10.04.10: 2 ft @ 3 spf (6 holes)
	3820	3824	10.04.10: 4 ft @ 3 spf (12 holes)
	3831	3886	10.04.10: 55 ft @ 3 spf (165 holes)
San Andres	3917	3951	10.04.10: 34 ft @ 3 spf (102 holes)
	3976	4036	10.04.10: 60 ft @ 3 spf (180 holes)
PBD	4110	4164	09.29.10: Cased-hole logger PBD: 4110 (Driller PBD: 4120)
TD		4164	09.23.10: TD 7-7/8" hole

3. Note & record SITP.

   RU wireline unit. NU lubricator. Test @ 500# over SITP.

   Open well. RIH & set plug in XN profile nipple (1.791" No-Go ID x 1.875" packing bore).

   Test plug @ 500# over SITP.

   Bleed down pressure & check for flowback.

   RD wireline unit.

4. ND well. NU BOP. POOH w/ 2-3/8", 4.7#, IPC tbg & PKR.

   PU & RIH w/ 2-7/8", 6.5#, N-80 workstring w/ csg scraper & 4-3/4" bit (5-1/2", 17# ID: 4.892"; Drift ID: 4.767"). Clean out to below lowermost perforation: 4036; PBD: 4110).

   POOH w/ tbg, csg scraper & bit.

5. PU & RIH w/ 2-7/8", 6.5#, N-80 tbg string w/ PKR & RBP. Test tbg below slips @ 8500# while RIH (2-7/8", 6.5#, N-80 Internal Yield Prs: 10570#).

   Acidize perforated intervals w/ total of 5500 gal (131 bbl) 15% NE Fe HCl:

   NOTE:
   Initial stimulation efforts of 10.06.10 suggest Lwr San Andres & Upr San Andres completion intervals may be in communication behind 5-1/2" csg.

10.06.10	Re-set PKR @ 3959. Pump 100 gal 20% HCl to PKR. Close by-pass.
	Broke down Lwr SA perfs: 3976-4036 @ 2866#. Pump 25 bbl 20% HCl @ 4 BPM-2500#. Communicated. Flush w/ 5 BW.
	Re-set PKR @ 3896. Acd SA perfs: 3917-4036 w/ remaining (volume??) 20% HCl.
	AIR: 4 BPM. AIP: 2700#. Flush w/ 48 BW (fr wtr??). ISIP: 1514# (grad.: 0.82 psi/ft)
	Re-set RBP @ 3896. Re-set PKR @ 3765. Pump 1000 gal 15% HCl to by-pass. Close by-pass.
	Breakdown prs: 2866#. Acd Grayburg perfs: 3804-3886 w/ total 3000 gal 15% HCl.
	AIR: 4 BPM AIP: 2948#. Flush w/ 50 BW (fr wtr??). ISIP: 1775#. (grad.: 0.90 psi/ft)

Perforated Interval 3976-4036: Acidize w/ 2250gal (53.5 bbl) 15% NEFE HCl
Set RBP @ 4060

between lowermost perforation: 4036 & PBD: 4110
csg collars: 4028 & 4070

Set PKR @ 3965 (between perforations: 3951 & 3976; csg collars: 3944 & 3986).
Pump down tbg w/ 10 bbl 2% KCl water. Check for communication

If no communication:
Acidize 3976-4036 w/ 1750 gal 15% NE HCl.
Flush w/ 35 bbl 2% KCl water (anticipated treating prs: 2500# @ 3 BPM)
Record ISIP & SITP(5 min).

Perforated Interval 3917-3951: Acidize w/ 1250 gal (29.8 bbl) 15% NEFE HCl
Set RBP @ 3965 (between perforations: 3951 & 3976; csg collars: 3944 & 3986).
Set PKR @ 3910 (between perforations: 3886 & 3917; csg collars: 3860, 3902, 3944).
Pump down tbg w/ 10 bbl 2% KCl water. Check for communication.

If no communication:
Acidize 3917-3951 w/ 1000 gal 15% NE HCl.
Flush w/ 35 bbl 2% KCl water (anticipated treating prs: 2500# @ 3 BPM)
Record ISIP & SITP(5 min).

Perforated Interval 3804-3886: Acidize w/ 2000 gal (47.6 bbl) 15% NEFE HCl
Set RBP @ 3910 (between perforations: 3886 & 3917; csg collars: 3860, 3902, 3944).
Set PKR @ 3750 (above uppermost perforation @ 3804; csg collars: 3735.5 & 3778)
Obtain PIR w/ 10 bbl 2 KCl water.
Acidize 3804-3886 w/ 2000 gal 15% NE HCl
Flush w/ 35 bbl 2% KCl water (anticipated treating prs: 2500# @ 3 BPM)
Record ISIP & SITP(5 min)
Re-set PKR @ 2460 (csg collars: 2435 & 2478).

Load 2-7/8" x 5-1/2" annulus & prs up to 500#. Check for communication w/ tbg.

6. RU HES. Set treating line pop-off to release @ 8000#.
Set pump trips @ 7500#
Install spring-operated relief valve on csg-tbg annulus. Pre-set @ 500#.
Load 2-7/8" x 5-1/2" annulus. Note annulus fill volume. Place 200# on csg.
Test surface lines @ 8500#.

Frac 3804-3886 down 2-7/8", 6.5#, N-80 tbg w/ 22,500 gal 20# x-link w/ 48,000 16/30 sand & 22,000 resin-coated 16/30. Mark flush @ 2#. Flush w/ 1850 gal linear gel (capacity to uppermost perforation: 1910 gal; 45.5 bbl). Anticipated treating rate: 25 BPM @ 5000#.

			Clean Vol.			Proppant			Slurry Vol			Pump Time @ 25 BPM	
	Fluid	Proppant	gal	bbl	Cum bbl	ppg	lbs	Cum lbs	gal	bbl	Cum bbl	min.	cum min.
Pre-Pad			1,000	23.8	23.8	0.00	0	0	1,000	23.8	23.8	1.0	1.0
Pad			10,000	238.1	261.9	0.00	0	0	10,000	238.1	261.9	9.5	10.5
Stage		16/30	1,500	35.7	297.6	0.50	750	750	1,534	36.5	298.4	1.5	11.9
Stage		16/30	1,750	41.7	339.3	1.00	1,750	2,500	1,829	43.6	342.0	1.7	13.7
Stage		16/30	2,000	47.6	386.9	1.50	3,000	5,500	2,136	50.9	392.8	2.0	15.7
Stage		16/30	2,250	53.6	440.5	2.00	4,500	10,000	2,454	58.4	451.3	2.3	18.1
Stage		16/30	2,500	59.5	500.0	2.50	6,250	16,250	2,783	66.3	517.5	2.7	20.7
Stage		16/30	2,750	65.5	565.5	3.00	8,250	24,500	3,124	74.4	591.9	3.0	23.7
Stage		16/30	3,000	71.4	636.9	3.50	10,500	35,000	3,476	82.8	674.7	3.3	27.0
Stage		16/30	3,250	77.4	714.3	4.00	13,000	48,000	3,839	91.4	766.1	3.7	30.6
Stage		CRC 16/30	3,500	83.3	797.6	4.00	22,000	70,000	4,497	107.1	873.1	4.3	34.9
Flush			1,850	44.0	841.7	0.00	0	70,000	1,850	44.0	917.2	1.8	36.7
			35,350	841.7			70,000		38,521	917.2		36.7	

Report ISIP, SITP(5 min), SITP(10 min) & SITP(15 min). RD frac services.

SION to allow resin-coated sand to cure.

7. Flow back well until dead. POOH w/ 2-7/8", 6.5#, N-80 frac string & PKR.

8. RIH w/ 2-7/8" tbg & RBP retrieving tool. Wash sand off RBP. POOH & LD 2-7/8" tbg & RBP.

9. RIH w/ 2-3/8", 4.7#, J-55 IPC tbg w/ OFT & re-dressed injection PKR (5-1/2", 17#) w/ pump-out plug.

   Set PKR @ approximately 3770

uppermost perforation:	3804
previous PKR placement:	3779-3787
csg collars:	3735.5 & 3778

   Release from OFT. Circ well w/ PKR fluid (2-3/8" x 5-1/2", 17# capacity to 3770: 67.1 bbl). Engage OFT.

10. ND BOP. NU well. Shear pump-out plug. RD

11. Place well on injection @ 500 BWIPD WIC-rate. Confirm XSPOC recording of rates & pressures

	Internal Yield Prs: psi				Capacity	
	100%	80%	ID: in.	Drift ID: in.	bbl/ ft	gal/ft
2-3/8", 4.7#, J-55	7700	6160	1.995	1.901	0.00387	0.1624
2-7/8", 6.5#, N-80	10570	8456	2.441	2.347	0.00579	0.2431

5-1/2", 17#, J-55	5320	4256	4.892	4.767	0.0232	0.9764
2-3/8" x 5-1/2", 17#					0.0178	0.7463
2-7/8" x 5-1/2", 17#					0.0152	0.6392

	MCA 472W (30-025-39409)
	1980 FNL & 160 FWL, 27E-17S-32E
	Elev.: 4018 KB; 4004 GL
09.19.10	Spud
09.20.10	8-5/8", 24#, J-55 csg @ 945. Cmt w/ 570 sx (163 bbl.). Circ 185 sx (57 bbl) cmt to surface.
09.21.10	Drl 7-7/8" hole: 945-955. Run FIT. EMW: 15.7 ppg
	Drl 7-7/8" hole: 955-1816. Reported water flow while drlg: 1250-1816: 12 BPH (288 BPD)
09.22.10	Drl 7-7/8" hole: 1816-2631. Wtr flow: 3 BPH
	Drl 7-7/8" hole: 2631-3350. Wtr flow: 2-3 BPH
09.23.10	Drl 7-7/8" hole: 3350-4164 TD. Wtr flow: 3 BPH
09.24.10	5-1/2", 17#, J-55 csg @ 4164. Cmt w/ 760 sx (282 bbl). Circ 100 sx (46 bbl) cmt to surface.
09.29.10	Run cased-hole log CNL/GR/CCL. PBD: 4110. Log-indicated ECP: 745-781w/ pack-off: 753-769
	Initial Completion:
10.01.10	MI & RU. ND well. NU BOP.
10.04.10	Perforate following intervals @ 3 spf:
	Grayburg : 3804-3806 2 ft. w/ 6 holes
	: 3820-3824 4 ft. w/ 12 holes
	: 3831-3886 55 ft. w/ 165 holes
	San Andres: 3917-3951 34 ft. w/ 102 holes
	: 3976-4036 60 ft. w/ 180 holes
10.05.10	RIH w/ tbg, PKR & RBP. Set RBP @ 4100. Test @ 500#. Set PK above uppermost perforation.
	Set PKR @ 3790 (above uppermost perforation). Test csg @ 4000#. Test OK.
10.06.10	Re-set PKR @ 3959. Pump 100 gal 20% HCl to PKR. Close by-pass.
	Broke down Lwr SA perfs: 3976-4036 @ 2866#. Pump 25 bbl 20% HCl @ 4 BPM-2500#. Communicated. Flush w/ 5 BW.
	Re-set PKR @ 3896. Acd SA perfs: 3917-4036 w/ remaining 20% HCl.
	AIR: 4 BPM. AIP: 2700#. Flush w/ 48 BW (fr wtr??). ISIP: 1514# (grad.: 0.82 psi/ft)
	Re-set RBP @ 3896. Re-set PKR @ 3765. Pump 1000 gal 15% HCl to by-pass. Close by-pass.
	Breakdown prs: 2866#. Acd Grayburg perfs: 3804-3886 w/ total 3000 gal 15% HCl.
	AIR: 4 BPM AIP: 2948#. Flush w/ 50 BW (fr wtr??). ISIP: 1775#. (grad.: 0.90 psi/ft)
	Open well. Well flowing. Release PKR & killed well (w/ 10# ??). Retrieve RBP. POOH & LD 75 jts. SION.
10.07.10	SIP: 500#. Kill well (w/ 10# ??). POOH & LD tbg, PKR & RBP.
	RIH w/ 2-3/8", 4.7#, J-55 IPC tbg w/ PKR & OFT. Set PKR @ 3779 (uppermost perforation: 3804).
10.08.10	Test csg @ 560#. Chart for 35 min. Test OK (lost 20# during 35 min). RD.
	Data Acquisition: Obtain SI BHP
05.10.11	SITP: 510#. MI & RU slickline unit. RIH w/ prs gauge. Run gradient survey.
	Replace Ball-valve w/ Master Valve

06.16.11	SITP: 400# (est BHP @ 3700 KB: 2228#; 9.5# prod wtr column).
	Flow back well for 10 min. Rec gas, oil & prod wtr. Pump 18 bbl 10# brine down tbg (tbg cap: 14.6 bbl). SITP: 50#.
06.20.11	SITP: 250# (est BHP @ 3700 KB: 2174#; 10# brine column).
	Flow back well for 1 hr. Prs decr to 0#. Pump 16 bbl 10# brine to kill well. ND ball valve. NU master valve.
	NOTE:
	BHP @ 3700 KB: apx 2200 psi (06.11)
	BHP @ 3700 KB: 1363 psi (05.10.11)
	Increase in BHP within 1 month may suggest interference from MCA 486W...SW offset injection well.
	Data Acquisition: Obtain Cement Bond Log
03.22.12	MI &RU service unit. SITP: 1100#. MI & RU wireline unit. Attempt to set plug in OFT. Unable to set plug. SION.
03.23.12	MI & RU wireline unit. Set plug in OFT. RD wireline. Test tbg & plug @ 500#. Test OK. ND well. NU BOP.
	Release from OFT. POOH w/ 2-3/8" IPC tbg. SION.
03.26.12	RIH w/ CBL from 3763 (PKR @ 3779) to surface. CBL-indicated ECP pack-off: 752-768
	surf-1030: excellent
	1030-1550: very good
	1550-2035: fair-poor
	2035-2335: very good
	2335-3754: excellent
	RIH w/ 2-3/8:, 4.7#, J-55 IPC tbg w/ OFT. Test tbg @ 3000# while RIH. Engage OFT. Test annulus @ 500# for 30 min. Test OK.
	Release from OFT. SION.
03.27.12	Circ inhibited biocide-treated PKR fluid. Engage OFT. ND BOP. NU well. RU WLU. RIH & retrieve plug in XN profile nipple.
	RIH & tag @ 4010 (PBD @ 4110). RD WLU. Test csg @ 550#. Chart for 35 min. Test OK (lost 10# during 35 min). RD
	Average Injection:
10.2012	0 BWIPD @ 1362#
11.2012	0 BWIPD @ 1360#
12.2012	0 BWIPD @ 1381#
01.2013	0 BWIPD @ 1383#