

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMLC029426B

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other		6. If Indian, Allottee or Tribe Name	
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____		7. Unit or CA Agreement Name and No.	
2. Name of Operator APACHE CORPORATION		Contact: FATIMA VASQUEZ E-Mail: fatima.vasquez@apachecorp.com	
3. Address 303 VETERANS AIRPARK LANE STE 3000 MIDLAND, TX 79705		3a. Phone No. (include area code) Ph: 432-818-1015	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* Sec 10 T17S R31E Mer At surface 1013FSL 250FWL At top prod interval reported below Sec 10 T17S R31E Mer At total depth 1014FSL 331FEL		8. Lease Name and Well No. CROW FEDERAL (308711) 12H 9. API Well No. 30-015-40576 10. Field and Pool, or Exploratory FREN;GLORIETA-YESO(26770) 11. Sec., T., R., M., or Block and Survey or Area Sec 10 T17S R31E Mer 12. County or Parish EDDY 13. State NM	
14. Date Spudded 07/20/2013		15. Date T.D. Reached 08/05/2013	
16. Date Completed ☐ D & A ☒ Ready to Prod. 11/06/2013		17. Elevations (DF, KB, RT, GL)* 3886 GL	
18. Total Depth: MD 10687 TVD 6305		19. Plug Back T.D.: MD 10665 TVD	
20. Depth Bridge Plug Set: MD TVD		21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CNGR/SBGR(4) MWD GAMMA-ROP LOGS (1" & 5")	
22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit analysis) Directional Survey? ☐ No ☒ Yes (Submit analysis)			

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 H-40	48.0		598		789		0	
11.000	8.625 J-55	32.0		3423		1390		0	
7.875	5.500 L-80	17.0		10687		1820		0	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	6122							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) YESO	5099		6457 TO 10595	3.000	675	PRODUCING
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
6457 TO 10595	2686.1 BBL ACID & 2,699,480# SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
11/06/2013	12/15/2013	24	→	7.0	12.0	1025.0	36.0		ELECTRIC PUMP SUB SURFACED
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→				1714	POW	ACCEPTED FOR RECORD

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #230085 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

Need Comp Sundry Notice - Data:1

RECEIVED

JAN 15 2014

RECLAMATION

JAN 5-6 2014

CARLSBAD ARTESIA

JAN 11 2014

JAN 11 2014

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28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
FLARED

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				RUSTLER	511
				YATES	1843
				SEVEN RIVERS	2134
				QUEEN	2753
				GRAYBURG	3184
				SAN ANDRES	3515
				GLORIETA	4998
				YESO	5099

32. Additional remarks (include plugging procedure):

Attachments - Frac Disclosure, OCD Forms C-102 & C-104. Logs mailed 12/18/2013.

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7. Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #230085 Verified by the BLM Well Information System.
For APACHE CORPORATION, sent to the Carlsbad
Committed to AFMSS for processing by JOHNNY DICKERSON on 12/19/2013 ()

Name (please print) FATIMA VASQUEZ

Title REGULATORY TECH II

Signature (Electronic Submission)

Date 12/19/2013

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.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

Fracture Date:	9/7/2013
State:	NM
County:	Eddy
API Number:	30-015-40576
Operator Name:	Apache Corporation
Well Name and Number:	Crowl Federal 12
Longitude:	-103.8647693
Latitude:	32.84450399
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	6,297
Total Water Volume (gal):	2,934,834

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Swire	Carrier/Base Fluid	Water	7732-18-5	100.0000%	95.51550%	
Sand (Proppant)	TSS	Proppant	Silica Substrate	14808-60-7	100.0000%	0.10156%	
Hydrochloric Acid (15)	Reagent	Acidizing	Hydrochloric Acid	7647-01-0	15.00000%	0.57400%	
AP-Bio-1	Dow Chemical	Biocide	Glutaraldehyde	111-30-8	42.50000%	0.02174%	
			Quaternary ammonium compounds, be	68424-85-1	7.50000%	0.00384%	
			Ethanol	64-17-5	1.00000%	0.00051%	
AP-FR-1	Ashland	Friction Reducer	Hydrocarbon-aliphatic	25450-40-01	30.00000%	0.02839%	
			Fatty alcohol alkoxylate	Proprietary	5.00000%	0.00473%	
			Polyacrylate based copolymer	Proprietary	35.00000%	0.03313%	
Ferriplex 40	Chemplex	Iron Control	Sodium Hydroxide	1310-73-2	1.00000%	0.00019%	
			Sodium Sulfate Anhydrous	7757-82-6	2.00000%	0.00037%	
			Trisodium Nitrilotriacetate	5064-31-3	40.00000%	0.00741%	
Plexbreak 145	Chemplex	Non-Emulsifier	2-Butoxyethanol	111-76-2	15.00000%	0.00103%	
			Cocamide Based Surfactant	Proprietary	10.00000%	0.00068%	
			Diethanolamine	111-42-2	3.00000%	0.00021%	
			Methyl Alcohol	67-56-1	15.00000%	0.00103%	
AP-Scale-1	Blentech	Scale Inhibitor	Ethylene Glycol	107-21-1	35.00000%	0.01799%	
			Polyacrylate blend	Proprietary	7.00000%	0.00360%	
Plexhibi 256	Chemplex	Acid Inhibitor	Methyl Alcohol	67-56-1	60.00000%	0.00368%	
			Propargyl Alcohol	107-19-7	10.00000%	0.00061%	
			Thiourea/Formaldehyde Copolymer	68527-49-1	30.00000%	0.00184%	
			Polyethoxylated Alcohol Surfactant	68951-67-7	30.00000%	0.00184%	
			C-14 to C-16 Alpha Olefins	64743-02-8	5.00000%	0.00031%	
AP-Surf-1A	Blentech	Surfactant	Methanol	67-56-1	25.00000%	0.02270%	
			Sulfonate	Proprietary	4.00000%	0.00363%	
			Alkyl alkoxylate	Proprietary	11.00000%	0.00999%	
Claymax	Chemplex	Clay Stabilizer	Choline Chloride	67-48-1	65.00000%	0.12493%	

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS#)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Plexset 730	Chemplex	Proppant Consolidator	Alcohol Ethoxylates	Proprietary	60.00000%	0.02675%	
			Methyl Alcohol	67-56-1	50.00000%	0.02229%	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.