

NM OIL CONSERVATION OGD Artesia

JUN 11 2015

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT

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		8. Lease Name and Well No. LEE FEDERAL 69	
3. Address 303 VETERANS AIRPARK LN MIDLAND, TX 79705		9. API Well No. 30-015-41111	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface NESW 2420FSL 1650FWL 32.819451 N Lat, 103.895111 W Lon At top prod interval reported below NESW 2420FSL 1650FWL 32.819451 N Lat, 103.895111 W Lon At total depth NESW 2420FSL 1650FWL 32.819451 N Lat, 103.895111 W Lon		10. Field and Pool, or Exploratory CEDAR LAKE; GLORIETA-YESO	
14. Date Spudded 10/03/2014		11. Sec., T., R., M., or Block and Survey or Area Sec 20 T17S R31E Mer	
15. Date T.D. Reached 10/14/2014		12. County or Parish EDDY	
16. Date Completed ☐ D & A ☒ Ready to Prod. 12/18/2014		13. State NM	
17. Elevations (DF, KB, RT, GL)* 3646 GL			
18. Total Depth: MD 6373 TVD		19. Plug Back T.D.: MD 6330 TVD	
20. Depth Bridge Plug Set: MD TVD			
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CN/HI-RES LL/BHCS-SGR/HNGR		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		321		370		0	
11.000	8.625 J-55	32.0		3500		1310		0	
7.875	5.500 J-55	17.0		6373		940		150	

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	6294							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) GLORIETA	4620		4620 TO 5126	1.000	25	PRODUCING
B) PADDOCK	4688		5190 TO 5715	1.000	26	PRODUCING
C) BLINEBRY	5213		5772 TO 6230	1.000	23	PRODUCING
D)						

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

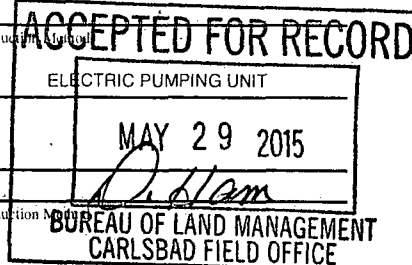
Depth Interval	Amount and Type of Material
4620 TO 5126	4792 GALS ACID, 19,908 GALS 15# PAD, 157,794 GALS 15# GEL, 227,170# SAND, 4578 GALS 10# FLUSH
5190 TO 5715	4788 GALS ACID, 22,428 GALS 15# PAD, 157,584 GALS 15# GEL, 226,373# SAND, 3780 GALS 10# FLUSH
5772 TO 6230	5111 GALS ACID, 19,992 GALS 15# PAD, 139,188 GALS 15# GEL, 198,078# SAND, 4494 GALS 10# FLUSH

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
12/18/2014	03/09/2015	24	→	71.0	199.0	222.0	37.0		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→				2803	POW	

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 #297532 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

Reclamation
Date: 9/9/15

[Signature]

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.)
SOLD

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	287	452	SANDSTONE/ANHYDRITE - N/A	RUSTLER	287
YATES	1421	1750	SANDSTONE/ANHYDRITE - N/A	YATES	1421
SEVEN RIVERS	1750	2366	SS/CARBONATE - OIL, GAS & WATER	SEVEN RIVERS	1750
SAN ANDRES	3098	4620	CARBONATE - OIL, GAS & WATER	SAN ANDRES	3098
GLORIETA	4620	4688	SANDSTONE - OIL, GAS & WATER	GLORIETA	4620
PADDOCK	4688	5213	DOLOMITE - OIL, GAS & WATER	PADDOCK	4688
BLINEBRY	5213	6289	DOLOMITE - OIL, GAS & WATER	BLINEBRY	5213
TUBB	6289		SS/CARBONATE - OIL, GAS & WATER	TUBB	6289

32. Additional remarks (include plugging procedure):

Attachments - Frac Disclosure, OCD Forms C-102 & C-104. Logs mailed 03/23/2015.

Tansill Salt 452'-1226' Salt - N/A
 Bottom Salt 1226'-1421' Salt - N/A
 Queen 2366'-3098' SS / Carbonate - Oil, Gas & Water
 Tubb - didn't drill far enough to get bottom depth of Tubb.

**SS-Sandstone

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 #297532 Verified by the BLM Well Information System.
 For APACHE CORPORATION, sent to the Carlsbad
 Committed to AFMSS for processing by DEBORAH HAM on 05/14/2015 ()

Name (please print) FATIMA VASQUEZ

Title REGULATORY ANALYST II

Signature (Electronic Submission)

Date 04/07/2015

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 ****

Additional data for transaction #297532 that would not fit on the form

32. Additional remarks, continued

Hydraulic Fracturing Fluid Product Component Information Disclosure

First Fracture Date: 11/24/2014
 Last Fracture Date: 11/25/2014
 State: NEW MEXICO
 County: EDDY
 API Number: 3001541111
 Operator Name: APACHE CORP
 Well Name and Number: LEE FEDERAL 69
 Longitude: -103.89329
 Latitude: 32.8196
 Long/Lat Projection: NAD27

Production Type:	OIL	Total Chemical Mass (lbs):	5,071,188
True Vertical Depth (TVD):	6,230	Total Max. Ingredient Mass (lbs):	5,073,691
Total Water Volume (gal):	515,340	Total Base Non-Water Volume (gal):	0



NM OIL CONSERVATION

ARTESIA DISTRICT

JUN 11 2015

Fluid Composition:

RECEIVED

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	Operator	Carrier	Water	7732-18-5	100.00%	84.6879%	
HCl, 10.1 - 15%	Baker Hughes	Acidizing	Listed with Chemicals in Ingredients	N/A		1.8607%	SmartCare Product
Activator, 330 gal tote	Baker Hughes	Activator	Listed with Chemicals in Ingredients	N/A		0.0466%	
Alpha 125	Baker Hughes	Biocide	Listed with Chemicals in Ingredients	N/A		0.0225%	SmartCare Product
GBW-15L	Baker Hughes	Breaker	Listed with Chemicals in Ingredients	N/A		0.0493%	SmartCare Product
ClayCare, tote	Baker Hughes	Clay Control	Listed with Chemicals in Ingredients	N/A		0.0070%	SmartCare Product
CI-14	Baker Hughes	Corrosion Inhibitor	Listed with Chemicals in Ingredients	N/A		0.0029%	SmartCare Product
XLW-10A	Baker Hughes	Crosslinker	Listed with Chemicals in Ingredients	N/A		0.1201%	
GW-3	Baker Hughes	Gelling Agent	Listed with Chemicals in Ingredients	N/A		0.1743%	
Ferrotrol 280L	Baker Hughes	Iron Control	Listed with Chemicals in Ingredients	N/A		0.0054%	
NE-35, 330 gl tote	Baker Hughes	Non-emulsifier	Listed with Chemicals in Ingredients	N/A		0.0914%	

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
Sand, Brown, 16/30	Baker Hughes	Proppant	Listed with Chemicals in Ingredients	N/A		10.4935%	
SiberProp, 16/30	Baker Hughes	Proppant	Listed with Chemicals in Ingredients	N/A		2.3131%	
InFlo 251G	Baker Hughes	Surfactant	Listed with Chemicals in Ingredients	N/A		0.0836%	
Chemical Ingredients	Baker Hughes	Treatment System	2-Mercaptoethanol	60-24-2	100.000000000%	0.005428%	
			Alcohols, C10-16, ethoxylated propoxylated	69227-22-1	7.000000000%	0.005848%	
			Alcohols, C12-14-Secondary, Ethoxylated	84133-50-6	70.000000000%	0.032593%	
			Alcohols, C6-12, ethoxylated propoxylated	68937-66-6	7.000000000%	0.005848%	
			Alcohols, ethoxylated	68551-12-2	8.000000000%	0.006683%	
			Amines, unsatd, alkyl, ethoxylated	68155-39-5	4.000000000%	0.003342%	
			Ammonium Hydroxide	1336-21-6	5.000000000%	0.000271%	
			Benzenesulfonic acid, hexadecyl(sulfophenoxy)-, disodium salt	65143-89-7	2.000000000%	0.001827%	
			Choline Chloride	67-48-1	75.000000000%	0.005235%	
			Crystalline Silica (Quartz)	14808-60-7	100.000000000%	10.488342%	
			Cupric Chloride	7447-39-4	5.000000000%	0.000271%	
			Enzyme solution	9012-54-8	100.000000000%	0.049251%	
			Ethanol	64-17-5	10.000000000%	0.008354%	
			Ethylene Glycol	107-21-1	25.000000000%	0.030008%	
			Fatty Acids	61790-12-3	10.000000000%	0.000286%	
			Formaldehyde	50-00-0	1.000000000%	0.000029%	
			Glutaraldehyde	111-30-8	30.000000000%	0.006750%	
			Guar Gum	9000-30-0	100.000000000%	0.174232%	
			Hydrochloric Acid	7647-01-0	15.000000000%	0.278995%	
			Methanol	67-56-1	100.000000000%	0.026195%	
			Modified Thiourea Polymer	68527-49-1	7.000000000%	0.000200%	
			Nonionic glycol ester	68400-71-5	25.000000000%	0.022838%	
			Olefin	64743-02-8	5.000000000%	0.000143%	
			Polyethylene glycol	25322-68-3	5.000000000%	0.002328%	
			Polyoxyalkylenes	68951-67-7	30.000000000%	0.000857%	
			Propargyl Alcohol	107-19-7	5.000000000%	0.000143%	
			Propylene Glycol	57-55-6	15.000000000%	0.013703%	

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
			Quartz (SiO ₂)	14808-60-7	100.000000000%	2.311927%	
			Sodium Hydroxide	1310-73-2	9.000000000%	0.010803%	
			Sodium Tetraborate	1330-43-4	12.000000000%	0.014404%	
			Sodium lauriminodipropionate	14960-06-6	1.000000000%	0.000914%	
			Sodium octylimodipropionate	94441-92-6	3.000000000%	0.002741%	
			Water	7732-18-5	85.000000000%	1.801317%	

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* 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.

Apache Corporation
303 Veterans Airpark Lane, #3000
Midland, TX 79705

NM OIL CONSERVATION

ARTESIA DISTRICT

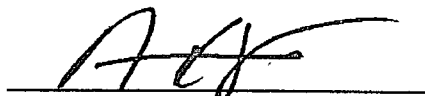
JUN 11 2015

Lee Federal #069 **API#30-015-41111**

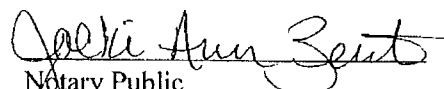
Eddy County, New Mexico **2420' FSL + 1650' FWL ULL:K 20-178-31E**

RECEIVED

268	2.68	0.50	0.88	2.35	2.35
305	0.37	0.20	0.35	0.13	2.47
544	2.39	0.20	0.35	0.84	3.31
860	3.16	0.80	1.40	4.42	7.74
1112	2.52	1.40	2.45	6.17	13.91
1303	1.91	1.60	2.80	5.35	19.26
1555	2.52	1.50	2.63	6.62	25.87
1805	2.50	1.60	2.80	7.00	32.87
2056	2.51	0.50	0.88	2.20	35.07
2313	2.57	1.00	1.75	4.50	39.57
2600	2.87	0.75	1.31	3.77	43.33
2850	2.50	1.00	1.75	4.38	47.71
3093	2.43	2.00	3.50	8.51	56.21
3314	2.21	1.70	2.98	6.57	62.79
3472	1.58	1.00	1.75	2.77	65.55
3698	2.26	1.30	2.28	5.14	70.69
3856	1.58	1.10	1.93	3.04	73.74
4077	2.21	1.10	1.93	4.25	77.99
4310	2.33	0.80	1.40	3.26	81.25
4563	2.53	1.30	2.28	5.76	87.01
4740	1.77	1.00	1.75	3.10	90.10
4930	1.90	1.50	2.63	4.99	95.09
5164	2.34	1.10	1.93	4.50	99.60
5220	0.56	1.10	1.93	1.08	100.67
5480	2.60	1.10	1.93	5.01	105.68
5733	2.53	3.10	5.43	13.73	119.41
5986	2.53	2.80	4.90	12.40	131.80
6235	2.49	3.60	6.30	15.69	147.49
6416	1.81	3.60	6.30	11.40	158.89


Archie Brown - General Manager

The attached instrument was acknowledged before me on the 22nd day of October, 2014 by
Archie Brown - General Manager, CapStar Drilling, Inc.


Notary Public

