

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., 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 & Natural Resources

Form C-104  
Revised August 1, 2011

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit one copy to appropriate District Office

AMENDED REPORT

**I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT**

<sup>1</sup> Operator name and Address Apache Corporation 303 Veterans Airpark Lane Suite 3000 Midland TX 79705		<sup>2</sup> OGRID Number 873
		<sup>3</sup> Reason for Filing Code/ Effective Date NW / 12/16/2014
<sup>4</sup> API Number 30-015-40918	<sup>5</sup> Pool Name Cedar Lake; Glorieta-Yeso	<sup>6</sup> Pool Code 96831
<sup>7</sup> Property Code 39330	<sup>8</sup> Property Name Raven Federal	<sup>9</sup> Well Number 021H

**II. <sup>10</sup>Surface Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
P	07	17S	31E		330	South	180	East	Eddy

**<sup>11</sup> Bottom Hole Location**

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	07	17S	31E	4	346	South	332	West	Eddy
<sup>12</sup> Lse Code F	<sup>13</sup> Producing Method Code P	<sup>14</sup> Gas Connection Date 12/16/2014	<sup>15</sup> C-129 Permit Number	<sup>16</sup> C-129 Effective Date	<sup>17</sup> C-129 Expiration Date				

**III. Oil and Gas Transporters**

<sup>18</sup> Transporter OGRID	<sup>19</sup> Transporter Name and Address	<sup>20</sup> O/G/W
221115	Frontier Field Services LLC 4200 East Skelly Drive Suite 700 Tulsa OK 74135	G
252293	Holly Energy Pipeline 311 W Quay / PO Box 1360 Artesia NM 88210	O
<b>NM OIL CONSERVATION</b> ARTESIA DISTRICT APR 27 2015 RECEIVED		

**IV. Well Completion Data**

<sup>21</sup> Spud Date	<sup>22</sup> Ready Date	<sup>23</sup> TD	<sup>24</sup> PBTB	<sup>25</sup> Perforations	<sup>26</sup> DHC, MC
08/26/2014	12/16/2014	9121'	7909'	5408'-8981'	
<sup>27</sup> Hole Size	<sup>28</sup> Casing & Tubing Size	<sup>29</sup> Depth Set	<sup>30</sup> Sacks Cement		
17-1/2"	13-3/8"	402'	470 sx Class C		
12-1/4"	9-5/8"	3510'	1350 sx Class C		
8-3/4"	5-1/2" / 7" (tapered)	9086'	600 sx Poz / H		
Tubing	2-7/8"	4618'			

**V. Well Test Data**

<sup>31</sup> Date New Oil	<sup>32</sup> Gas Delivery Date	<sup>33</sup> Test Date	<sup>34</sup> Test Length	<sup>35</sup> Tbg. Pressure	<sup>36</sup> Csg. Pressure
12/16/2014	12/16/2014	04/09/2015	24		
<sup>37</sup> Choke Size	<sup>38</sup> Oil	<sup>39</sup> Water	<sup>40</sup> Gas	<sup>41</sup> Test Method	
	601	2295	1107	P	

<sup>42</sup> I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.  
Signature: \_\_\_\_\_

OIL CONSERVATION DIVISION	
Approved by:	<i>[Signature]</i>
Title:	<i>Dist. Supervisor</i>
Approval Date:	<i>5-1-15</i>
Pending BLM approvals will subsequently be reviewed and scanned <i>(10)</i>	

Printed name: Fatima Vasquez	E-mail Address: Fatima.Vasquez@apachecorp.com
Date: 04/22/2015	Phone: (432) 818-1015

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

**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.*

5. Lease Serial No.  
NMLC029435A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well  
 Oil Well  Gas Well  Other

8. Well Name and No.  
RAVEN FEDERAL 21H

2. Name of Operator  
APACHE CORPORATION  
Contact: FATIMA VASQUEZ  
E-Mail: fatima.vasquez@apachecorp.com

9. API Well No.  
30-015-40918

3a. Address  
303 VETERANS AIRPARK LN  
MIDLAND, TX 79705

3b. Phone No. (include area code)  
Ph: 432-818-1015

10. Field and Pool, or Exploratory  
CEDAR LAKE; GLORIETA-YESO

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 7 T17S R31E SESE 330FSL 180FEL  
32.842674 N Lat, 103.901189 W Lon

11. County or Parish, and State  
EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Production Start-up
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recompleat 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 recompleat 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.)

Apache completed this well as follows:

- 10/07/2014 Run logs, TOC @ surface (CBL).
- 10/13/2014 Tag DV Tool @ 4348'. DO on DV tool. Circ clean @ 4351'.
- 10/14/2014 RIH w/ mill, mill debris sub.
- 10/15/2014 Finish mill debris sub.
- 11/21/2014 Frac Paddock using Packer Plus Packer Sleeve System.
- Stage 1 - Frac 8977'-8981' w/ 109 bbls 15% HCl & 180,334# sand (100 Mesh & 40/70).
- Stage 2 - Frac 8749'-8753' w/ 109 bbls 15% HCl & 178,667# sand (100 Mesh & 40/70).
- Stage 3 - Frac 8473'-8477' w/ 109 bbls 15% HCl & 180,282# sand (100 Mesh & 40/70).
- Stage 4 - Frac 8190'-8194' w/ 109 bbls 15% HCl & 180,359# sand (100 Mesh & 40/70).
- Stage 5 - Frac 7909'-7913' w/ 108.8 bbls 15% HCl & 178,991# sand (100 Mesh & 40/70).

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #299117 verified by the BLM Well Information System For APACHE CORPORATION, sent to the Carlsbad**

Name (Printed/Typed) FATIMA VASQUEZ Title REGULATORY ANALYST II

Signature (Electronic Submission) Date 04/22/2015

**THIS SPACE FOR FEDERAL OR STATE OFF**

Approved By \_\_\_\_\_ Title \_\_\_\_\_

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 \_\_\_\_\_

*Pending BLM approvals will subsequently be reviewed and scanned* 

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.

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

## Additional data for EC transaction #299117 that would not fit on the form

### 32. Additional remarks, continued

Stage 6 - Frac 7624'-7628' w/ 109.2 bbls 15% HCl & 179,963# sand (100 Mesh & 40/70).  
11/22/2014 Stage 7 - Frac 7353'-7357' w/ 109.2 bbls 15% HCl & 180,080# sand (100 Mesh & 40/70).  
Stage 8 - Frac 7072'-7076' w/ 91 bbls 15% HCl & 181,412# sand (100 Mesh & 40/70).  
Stage 9 - Frac 6796'-6800' w/ 108.7 bbls 15% HCl & 178,259# sand (100 Mesh & 40/70).  
Stage 10 - Frac 6520'-6524' w/ 108.7 bbls 15% HCl & 175,180# sand (100 Mesh & 40/70).  
Stage 11 - Frac 6240'-6244' w/ 108 bbls 15% HCl & 178,899# sand (100 Mesh & 40/70).  
Stage 12 - Frac 5968'-5972' w/ 104.6 bbls 15% HCl & 179,980# sand (100 Mesh & 40/70).  
11/23/2014 Stage 13 - Frac 5687'-5691' w/ 109 bbls 15% HCl & 179,125# sand (100 Mesh & 40/70).  
Stage 14 - Frac 5408'-5412' w/ 109 bbls 15% HCl & 176,397# sand (100 Mesh & 40/70).  
11/24/2014 RIH w/ mill.  
11/25/2014 DO frac ports #1-#8. Lost pressure & circ.  
11/26/2014 DO frac port #9. Lost circ, unable to regain circ.  
12/01/2014 Unload well & cont. staging in frac port #10.  
12/02/2014 Stage in, unload well. Unable to break circ. POH. Frac ports #10-#13 still intact.  
PBD @ 7909'.  
12/15/2014 RIH w/ 2-7/8" prod tbg. Submersible @ 4142'. Desander @ 4293'. ETD @ 4618'. RDMOSU.  
Clean loc.  
12/16/2014 POP.

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

APR 27 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

**RECEIVED**

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.  
NMLC029435A

1a. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other			6. If Indian, Allottee or Tribe Name		
b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> 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 LN 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)* At surface Sec 7 T17S R31E Mer SESE 330FSL 180FEL 32.842674 N Lat, 103.901189 W Lon			8. Lease Name and Well No. RAVEN FEDERAL 21H		
At top prod interval reported below Sec 7 T17S R31E Mer			9. API Well No. 30-015-40918		
At total depth SWSW Lot 4 346FSL 332FWL			10. Field and Pool, or Exploratory CEDAR LAKE; GLORIETA-YESO		
14. Date Spudded 08/26/2014			15. Date T.D. Reached 09/08/2014		
16. Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod. 12/16/2014			17. Elevations (DF, KB, RT, GL)* 3716 GL		
18. Total Depth: MD 9121 TVD 4774		19. Plug Back T.D.: MD 7909 TVD		20. Depth Bridge Plug Set: MD TVD	
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CNGR/SBGR(2)/MWD GAMMA-R0P 5"			22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 H-40	48.0		402		470		0	
12.250	9.625 J-55	32.0		3510		1350		0	
8.750	7.000 L-80	29.0		9086				0	
8.750	5.500 L-80	20.0		9086		600		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	4618							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) PADDOCK	4653	5141	5408 TO 8981			PRODUCING
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
5408 TO 8981	1502 BBLs ACID & 2,507,928# 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
12/16/2014	04/09/2015	24	→	601.0	1107.0	2295.0	37.0		ELECTRIC PUMP SUB-SURFACE
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→				1842	POW	

28a. Production - Interval B

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

Pending BLM approvals will subsequently be reviewed and scanned *[Signature]*

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

ELECTRONIC SUBMISSION #299123 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

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	262	497	SANDSTONE/ANHYDRITE - N/A	RUSTLER	262
YATES	1507	1786	SANDSTONE/ANHYDRITE - N/A	YATES	1507
SEVEN RIVERS	1786	2403	SS/CARBONATE - OIL, GAS & WATER	SEVEN RIVERS	1786
QUEEN	2403	2792	SS/CARBONATE - OIL, GAS & WATER	QUEEN	2403
SAN ANDRES	2792	4595	CARBONATE - OIL, GAS & WATER	SAN ANDRES	2792
GLORIETA	4595	4653	SANDSTONE - OIL, GAS & WATER	GLORIETA	4595
PADDOCK	4653	5141	DOLOMITE - OIL, GAS & WATER	PADDOCK	4653
BLINEBRY	5141		DOLOMITE - OIL, GAS & WATER	BLINEBRY	5141

32. Additional remarks (include plugging procedure):

Attachments - Frac Disclosure, OCD Forms C-102 & C-104. Logs mailed 04/14/2015.

\*Ran tapered production csg string - 5-1/2" & 7".

Continued Summary of Porous Zones:

Tansill Salt 497'-1329' Salt - N/A

Bottom Salt 1329'-1507' Salt - N/A

Blinebry - didn't drill far enough to get bottom depth of Blinebry.

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 #299123 Verified by the BLM Well Information System.  
For APACHE CORPORATION, sent to the Carlsbad**

Name (please print) FATIMA VASQUEZ Title REGULATORY ANALYST II

Signature \_\_\_\_\_ (Electronic Submission) Date 04/22/2015

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 #299123 that would not fit on the form**

**32. Additional remarks, continued**

\*\*SS-Sandstone