

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
ArtesiaFORM 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.

CEDAR LAKE FEDERAL CA 724H

2. Name of Operator
APACHE CORPORATIONContact: EMILY FOLLIS
E-Mail: Emily.Follis@apachecorp.com

9. API Well No.

30-015-43363-00-X1

3a. Address
303 VETERANS AIRPARK LANE SUITE 3000
MIDLAND, TX 797053b. Phone No. (include area code)
Ph: 432-818-180110. Field and Pool, or Exploratory
CEDAR LAKE

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 7 T17S R31E Lot 3 2245FSL 505FWL

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			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Production Start-up
	☐ 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 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 THE WELL AS FOLLOWS: RR 12/12/15 TOC@ 167

12/17/16 SET ANCHORS - FINAL CUT, GR-CNL-CBL LOGS RD WL SI SDFN
01/05/16MIRU PU & RU, RACK & TALLY 6500' 2-7/8" L80 TBG, NU BOP 7 5K SPOOL, TEST CSG @5K#, PU & RIH
W/6" BIT, BS(4) 3-1/2"DC'S ON TBG, TAG DV TOOL@4817' DO DV TOOL CIRC CAP POOH W/BIT & TBG SDFN
01/06/16 FOUND WELL@ 0# PU SWVL, NU STRIPPER HD, BRK CIRC, MO DEBRIS CAP, LD SWVL RIH TO 5663' CIRC
CAP, ND STRIPPER HD, POOH ABOVE X-OVER LEAVE BIT SWINGING SI SDFN
01/07/16 POOH WITH MILL & TBG RDMO WOR ND 5K BOP CAP WELL CLEAN LOCATION, FRAC @ LATER DATE
05/07/16 REMOVE PRESURE MONITOR FROM DFIT PREPARE FOR FRAC
05/07 -8 /16 C & J FRAC - (1-14 STAGE FRAC) (UPPER BLINEBRY)5613-9244'
05/09/16 STAGE 14 RDMO

NM OIL CONSERVATION

ARTESIA DISTRICT

AUG 29 2016

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

Electronic Submission #346543 verified by the BLM Well Information System
For APACHE CORPORATION, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 08/08/2016 (16PP1920SE)

Name (Printed/Typed) EMILY FOLLIS

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 08/02/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

AUG 24 2016

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

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 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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #346543 that would not fit on the form

32. Additional remarks, continued

TOTAL ACID 2254 BBL
TOTAL SAND 2,640,880 #

05/15/16 DRILL OUT
05/17/16 FINISH POOH, RIG DOWN, ND BOP, RIG DOWN, TURN OVER TO PRODUCTION
07/13/16 SFTY MEETING, MIRU, NU WH, & BOP, RACK & TALLY TBG, ASSEMBLE GE ESP, PU & RIH ON TBG, ND
BOP, NU WH, RDMO
07/26/16 SET SURFACE, RUN ELECTRICAL, PLUMB INTO BATTERY, FINAL REPORT

Apache Corporation
303 Veterans Airpark Lane, #3000
Midland, TX 79705
original name
Raven Federal Com #024H
Eddy County, New Mexico

API #30-015-43363
2245' FSL + 505' FWL
Sec. 7 T17S R31E
Eddy Co. New Mexico

252	2.52	0.50	0.88	2.21	2.21
398	1.46	2.00	3.50	5.11	7.32
504	1.06	2.60	4.55	4.82	12.14
736	2.32	1.90	3.33	7.71	19.85
1025	2.89	0.80	1.40	4.05	23.90
1281	2.56	0.80	1.40	3.58	27.48
1496	2.15	1.30	2.28	4.89	32.37
1750	2.54	0.80	1.40	3.56	35.93
2006	2.56	0.60	1.05	2.69	38.62
2262	2.56	0.20	0.35	0.90	39.51
2484	2.22	0.40	0.70	1.55	41.07
2740	2.56	0.10	0.18	0.45	41.52
2996	2.56	0.40	0.70	1.79	43.31
3250	2.54	0.10	0.18	0.44	43.75
3475	2.25	0.40	0.70	1.58	45.33
3705	2.30	0.40	0.70	1.61	46.94
3961	2.56	0.40	0.70	1.79	48.73
4217	2.56	0.40	0.70	1.79	50.52
4430	2.13	0.20	0.35	0.75	51.27
4803	3.73	0.20	0.35	1.31	52.57

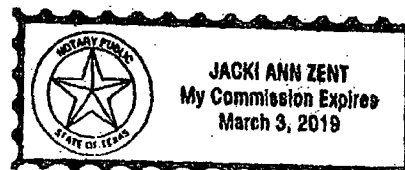
* new name - Cedar Lake Federal CA 724#

Archie Brown

Archie Brown - General Manager

The attached instrument was acknowledged before me on the 16th day of December, 2015
by Archie Brown - General Manager, CapStar Drilling, Inc.

Jacki Ann Zent
Notary Public



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 **NM OIL CONSERVATION**
Energy, Minerals & Natural Resources **ARTESIA DISTRICT**

Form C-104
Revised August 1, 2011

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

AUG 29 2016
Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Apache Corporation 303 Veterans Airpark Lane Suite 1000 Midland TX 79705		² OGRID Number 873
		³ Reason for Filing Code/ Effective Date NW /07/26/2016
⁴ API Number 30-015-43363	⁵ Pool Name CEDAR LAKE; GLORIETA-YESO	⁶ Pool Code [96831]
⁷ Property Code 315935	⁸ Property Name CEDAR LAKE FEDERAL COM CA	⁹ Well Number 724H

II. ¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
L	7	17S	31E	3	2308	SOUTH	330	EAST	EDDY

III. 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
	7	17S	31E	1	2310.7	SOUTH	331	EAST	EDDY
¹² Lse Code F	¹³ Producing Method Code P	¹⁴ Gas Connection Date 07/26/2016	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
252293	Holly Energy Pipeline 311 W Quay / PO Box 1360 Artesia NM 88210	O
221115	Frontier Field Services LLC 4200 East Skelly Drive Suite 700 Tulsa OK 74135	G
	original well name - Raven Federal Com 24H	

IV. Well Completion Data

²¹ Spud Date 11/29/15	²² Ready Date 07/26/2016	²³ TD 9264'	²⁴ PBDT 9264'	²⁵ Perforations 5613-9244'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17.5	13.375 H40 #48	432	455 sx Class C		
12.25	9.625 j55 40#	3510	1450 sx Class C		
8.5	7" L80 29#/5.5 L80 20#	4822 /9253	580 sx Class C		
Tubing	2.875	5091'			

V. Well Test Data

³¹ Date New Oil 07/26/2016	³² Gas Delivery Date 07/26/2016	³³ Test Date 07/30/2016	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil 517	³⁹ Water 1011	⁴⁰ Gas 856		⁴¹ Test Method P

⁴² 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:

Printed name:

Emily Folis

Title:

Reg Analyst

E-mail Address:

emily.folis@apachecorp.com

Date:

08/02/2016

Phone:

432-818-1801

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:



NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 29 2016

RECEIVED

Apache Corporation

Eddy County, NM (NAD27 NME)

Raven Federal

#24H

OH / Job #1514707

Design: Surveys (Capstar 114)

Standard Survey Report

10 December, 2015





Phoenix Technology Services LP

Survey Report



Company:	Apache Corporation	Local Coordinate Reference:	Well #24H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3735.00usft (Capstar 114)
Site:	Raven Federal	MD Reference:	KB @ 3735.00usft (Capstar 114)
Well:	#24H	North Reference:	Grid
Wellbore:	OH / Job #1514707	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	Database:	Compass 5000 GCR

Project:	Eddy County, NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Raven Federal		
Site Position:		Northing:	673,239.70 usft
From:	Map	Easting:	633,303.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 51' 0.24298 N
		Longitude:	103° 53' 57.35087 W
		Grid Convergence:	0.24 °

Well:	#24H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 50' 52.02357 N
		Longitude:	103° 54' 52.69693 W
		Ground Level:	3,724.00 usft

Wellbore:	OH / Job #1514707		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/1/2015	7.63	60.77	48,533

Design:	Surveys (Capstar 114)		
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Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
				0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	88.76

Survey Program		Date: 12/10/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	4,200.00	Phoenix Gyro Surveys (OH / Job #151470	PHX_SPT_GTD	PHX Continuous north-seeking gyro	
4,234.00	9,264.00	Phoenix MWD Surveys (OH / Job #151470	PHX+MWD+HDGM	PHX+OWSG MWD + HDGM	

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.20	60.64	100.00	0.09	0.15	0.15	0.20	0.20	0.00
200.00	0.64	268.71	200.00	0.16	-0.25	-0.25	0.82	0.44	-151.93
300.00	1.49	245.53	299.98	-0.39	-2.00	-2.00	0.94	0.85	-23.18
400.00	2.64	239.79	399.91	-2.09	-5.17	-5.21	1.17	1.15	-5.74
500.00	2.86	237.40	499.80	-4.59	-9.26	-9.36	0.25	0.22	-2.39
600.00	2.55	236.10	599.69	-7.18	-13.21	-13.36	0.32	-0.31	-1.30
700.00	1.99	228.54	699.61	-9.57	-16.36	-16.56	0.63	-0.56	-7.56
800.00	1.87	222.81	799.55	-11.91	-18.77	-19.02	0.23	-0.12	-5.73
900.00	1.78	226.49	899.50	-14.18	-21.00	-21.30	0.15	-0.09	3.68



Phoenix Technology Services LP Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #24H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3735.00usft (Capstar 114)
Site:	Raven Federal	MD Reference:	KB @ 3735.00usft (Capstar 114)
Well:	#24H	North Reference:	Grid
Wellbore:	OH / Job #1514707	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	Database:	Compass 5000 GCR

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.86	230.46	999.47	-15.73	-22.71	-23.04	0.92	-0.92	3.97
1,100.00	0.33	185.30	1,099.47	-16.49	-23.31	-23.66	0.67	-0.53	-45.16
1,200.00	0.69	142.13	1,199.46	-17.25	-22.97	-23.34	0.50	0.36	-43.17
1,300.00	0.67	136.21	1,299.46	-18.15	-22.20	-22.58	0.07	-0.02	-5.92
1,400.00	1.01	127.87	1,399.45	-19.11	-21.10	-21.50	0.36	0.34	-8.34
1,500.00	1.19	140.46	1,499.43	-20.46	-19.74	-20.18	0.30	0.18	12.59
1,600.00	1.15	146.40	1,599.41	-22.09	-18.52	-19.00	0.13	-0.04	5.94
1,700.00	0.88	149.51	1,699.39	-23.59	-17.58	-18.08	0.28	-0.27	3.11
1,800.00	0.68	150.65	1,799.38	-24.77	-16.90	-17.43	0.20	-0.20	1.14
1,900.00	0.52	158.07	1,899.38	-25.71	-16.44	-16.90	0.18	-0.16	7.42
2,000.00	0.39	175.48	1,999.37	-26.47	-16.24	-16.81	0.19	-0.13	17.41
2,100.00	0.32	165.34	2,099.37	-27.08	-16.14	-16.72	0.09	-0.07	-10.14
2,200.00	0.37	150.42	2,199.37	-27.63	-15.91	-16.51	0.10	0.05	-14.92
2,300.00	0.43	112.61	2,299.37	-28.05	-15.41	-16.01	0.27	0.06	-37.81
2,400.00	0.13	153.88	2,399.37	-28.30	-15.01	-15.62	0.34	-0.30	41.27
2,500.00	0.30	174.99	2,499.37	-28.66	-14.94	-15.55	0.18	0.17	21.11
2,600.00	0.54	118.84	2,599.36	-29.15	-14.50	-15.13	0.45	0.24	-56.15
2,700.00	0.28	85.75	2,699.36	-29.36	-13.85	-14.48	0.34	-0.26	-33.09
2,800.00	0.32	142.72	2,799.36	-29.56	-13.43	-14.07	0.29	0.04	56.97
2,900.00	0.58	98.04	2,899.36	-29.86	-12.76	-13.41	0.42	0.26	-44.68
3,000.00	0.18	339.56	2,999.36	-29.78	-12.32	-12.96	0.68	-0.40	-118.48
3,100.00	0.37	112.83	3,099.35	-29.76	-12.07	-12.71	0.51	0.19	133.27
3,200.00	0.18	197.65	3,199.35	-30.03	-11.82	-12.47	0.40	-0.19	84.82
3,300.00	0.28	115.03	3,299.35	-30.29	-11.65	-12.30	0.31	0.10	-82.62
3,400.00	0.20	288.61	3,399.35	-30.33	-11.59	-12.25	0.48	-0.08	173.58
3,500.00	0.30	333.78	3,499.35	-30.04	-11.87	-12.52	0.21	0.10	45.17
3,600.00	0.15	90.34	3,599.35	-29.81	-11.86	-12.50	0.39	-0.15	116.56
3,700.00	0.35	76.14	3,699.35	-29.74	-11.43	-12.07	0.21	0.20	-14.20
3,800.00	0.19	194.91	3,799.35	-29.82	-11.18	-11.82	0.47	-0.16	118.77
3,900.00	0.46	44.03	3,899.35	-29.70	-10.94	-11.58	0.63	0.27	-150.88
4,000.00	0.32	81.65	3,999.35	-29.37	-10.39	-11.02	0.28	-0.14	37.62
4,100.00	0.62	23.32	4,099.34	-28.83	-9.90	-10.52	0.53	0.30	-58.33
4,200.00	0.38	56.23	4,199.34	-28.15	-9.41	-10.01	0.36	-0.24	32.91
Tie In to Phoenix Gyros									
4,234.00	0.20	173.90	4,233.34	-28.14	-9.31	-9.91	1.49	-0.53	346.09
First Phoenix MWD Surveys									
4,334.00	0.20	131.00	4,333.34	-28.43	-9.16	-9.77	0.15	0.00	-42.90
4,434.00	0.30	130.30	4,433.34	-28.72	-8.82	-9.44	0.10	0.10	-0.70
4,534.00	0.30	174.50	4,533.34	-29.15	-8.60	-9.23	0.23	0.00	44.20
4,634.00	0.60	237.90	4,633.33	-29.69	-9.02	-9.66	0.54	0.30	63.40
4,734.00	0.70	242.00	4,733.33	-30.25	-10.00	-10.65	0.11	0.10	4.10
4,819.00	1.50	69.30	4,818.32	-30.10	-9.42	-10.07	2.58	0.94	-203.18
4,861.00	6.10	72.70	4,860.22	-29.24	-6.77	-7.40	10.96	10.95	8.10



Phoenix Technology Services LP

Survey Report



Company:	Apache Corporation	Local Co-ordinate Reference:	Well #24H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3735.00usft (Capstar 114)
Site:	Raven Federal	MD Reference:	KB @ 3735.00usft (Capstar 114)
Well:	#24H	North Reference:	Grid
Wellbore:	OH / Job #1514707	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	Database:	Compass 5000 GCR

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,904.00	11.10	77.30	4,902.72	-27.65	-0.55	-1.15	11.73	11.63	10.70
4,946.00	16.50	80.00	4,943.49	-25.73	9.28	8.72	12.94	12.86	6.43
4,989.00	22.20	81.60	4,984.05	-23.48	23.34	22.82	13.31	13.26	3.72
5,031.00	27.60	80.50	5,022.13	-20.71	40.80	40.34	12.90	12.86	-2.62
5,074.00	33.20	78.30	5,059.20	-16.68	62.17	61.79	13.28	13.02	-5.12
5,117.00	38.80	78.40	5,093.98	-11.58	86.91	86.64	13.02	13.02	0.23
5,160.00	44.70	79.40	5,126.04	-6.08	115.00	114.84	13.81	13.72	2.33
5,202.00	50.90	80.20	5,154.24	-0.58	145.61	145.56	14.83	14.76	1.90
5,245.00	57.00	81.70	5,179.54	4.87	179.92	179.99	14.46	14.19	3.49
5,288.00	61.70	81.80	5,201.45	10.17	216.52	216.69	10.93	10.93	0.23
5,331.00	65.50	81.20	5,220.57	15.87	254.61	254.89	8.93	8.84	-1.40
5,373.00	69.40	80.40	5,236.67	22.07	292.89	293.30	9.45	9.29	-1.90
5,416.00	73.70	80.70	5,250.28	28.76	333.12	333.66	10.02	10.00	0.70
5,459.00	77.70	81.30	5,260.90	35.28	374.26	374.94	9.40	9.30	1.40
5,501.00	81.70	81.70	5,268.40	41.39	415.12	415.92	9.57	9.52	0.95
5,544.00	85.70	81.20	5,273.12	47.74	457.38	458.31	9.37	9.30	-1.16
5,572.00	88.40	80.40	5,279.71	68.18	583.55	584.89	2.20	2.11	-0.63
5,800.00	90.80	84.10	5,280.60	85.43	710.35	712.03	3.45	1.88	2.89
5,928.00	90.00	89.00	5,279.71	93.13	838.08	839.89	3.88	-0.63	3.83
6,056.00	88.00	90.70	5,281.94	93.47	966.04	967.84	2.05	-1.56	1.33
6,184.00	87.40	91.40	5,287.08	91.12	1,093.92	1,095.63	0.72	-0.47	0.55
6,312.00	86.80	91.90	5,293.56	87.44	1,221.70	1,223.31	0.61	-0.47	0.39
6,440.00	86.80	90.40	5,300.70	84.88	1,349.47	1,350.99	1.17	0.00	-1.17
6,568.00	87.80	89.70	5,306.73	84.77	1,477.33	1,478.82	0.95	0.78	-0.55
6,696.00	89.20	89.80	5,310.08	85.33	1,605.28	1,606.75	1.10	1.09	0.08
6,824.00	88.00	89.80	5,313.21	85.77	1,733.24	1,734.69	0.94	-0.94	0.00
6,952.00	87.30	89.70	5,318.46	86.33	1,861.13	1,862.56	0.55	-0.55	-0.08
7,080.00	88.50	90.10	5,323.15	86.55	1,989.04	1,990.45	0.99	0.94	0.31
7,208.00	88.30	89.40	5,326.72	87.11	2,116.99	2,118.38	0.57	-0.16	-0.55
7,336.00	90.00	89.70	5,328.62	88.12	2,244.96	2,246.34	1.35	1.33	0.23
7,464.00	89.80	90.80	5,328.84	87.56	2,372.96	2,374.30	0.87	-0.16	0.86
7,592.00	89.00	90.80	5,330.18	85.77	2,500.94	2,502.21	0.63	-0.63	0.00
7,720.00	89.00	90.60	5,332.42	84.21	2,628.91	2,630.12	0.16	0.00	-0.16
7,848.00	88.50	90.20	5,335.21	83.31	2,756.88	2,758.03	0.50	-0.39	-0.31
7,976.00	88.90	90.20	5,338.11	82.87	2,884.84	2,885.96	0.31	0.31	0.00
8,104.00	88.60	90.30	5,340.91	82.31	3,012.81	3,013.89	0.25	-0.23	0.08
8,232.00	88.90	89.20	5,343.70	82.87	3,140.78	3,141.83	0.89	0.23	-0.86
8,360.00	89.10	88.10	5,345.93	85.88	3,268.72	3,269.81	0.87	0.16	-0.86
8,487.00	89.60	89.20	5,347.37	88.87	3,395.67	3,396.80	0.95	0.39	0.87
8,616.00	89.50	89.20	5,348.39	90.68	3,524.66	3,525.79	0.08	-0.08	0.00
8,744.00	90.00	89.50	5,348.95	92.13	3,652.65	3,653.79	0.46	0.39	0.23
8,872.00	89.30	89.80	5,349.73	92.91	3,780.64	3,781.77	0.59	-0.55	0.23
9,000.00	89.50	90.00	5,351.07	93.13	3,908.63	3,909.73	0.22	0.16	0.16
9,128.00	88.60	89.90	5,353.19	93.24	4,036.62	4,037.69	0.71	-0.70	-0.08



Phoenix Technology Services LP

Survey Report



Company:	Apache Corporation	Local/Coordinate Reference:	Well #24H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3735.00usft (Capstar 114)
Site:	Raven Federal	MD Reference:	KB @ 3735.00usft (Capstar 114)
Well:	#24H	North Reference:	Grid
Wellbore:	OH / Job #1514707	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Capstar 114)	Database:	Compass 5000 GCR

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
9,192.00	88.20	90.00	5,354.98	93.30	4,100.59	4,101.65	0.64	-0.63	0.16
Final Phoenix MWD Survey									
9,264.00	88.20	90.00	5,357.24	93.30	4,172.55	4,173.60	0.00	0.00	0.00
Projection to TD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,200.00	4,199.34	-28.15	-9.41	Tie In to Phoenix Gyros
4,234.00	4,233.34	-28.14	-9.31	First Phoenix MWD Surveys
9,192.00	5,354.98	93.30	4,100.59	Final Phoenix MWD Survey
9,264.00	5,357.24	93.30	4,172.55	Projection to TD



Project: Eddy County, NM (NAD27 NME)
Site: Raven Federal
Well: #24H
Wellbore: OH / Job #1514707
Design: Plan #4 12-05-15
Rig: Capstar 114



Admission to Old North
True North: 4.23°
Magnetic North: 7.41°
Survey: 12/05/15
Date: 12/05/15
Model: HDGM

WELL DETAILS			
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114

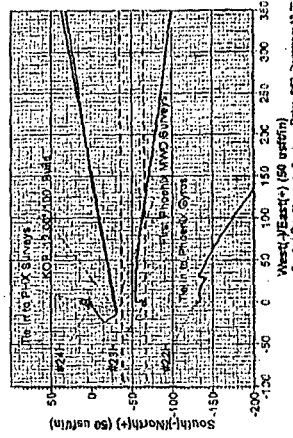
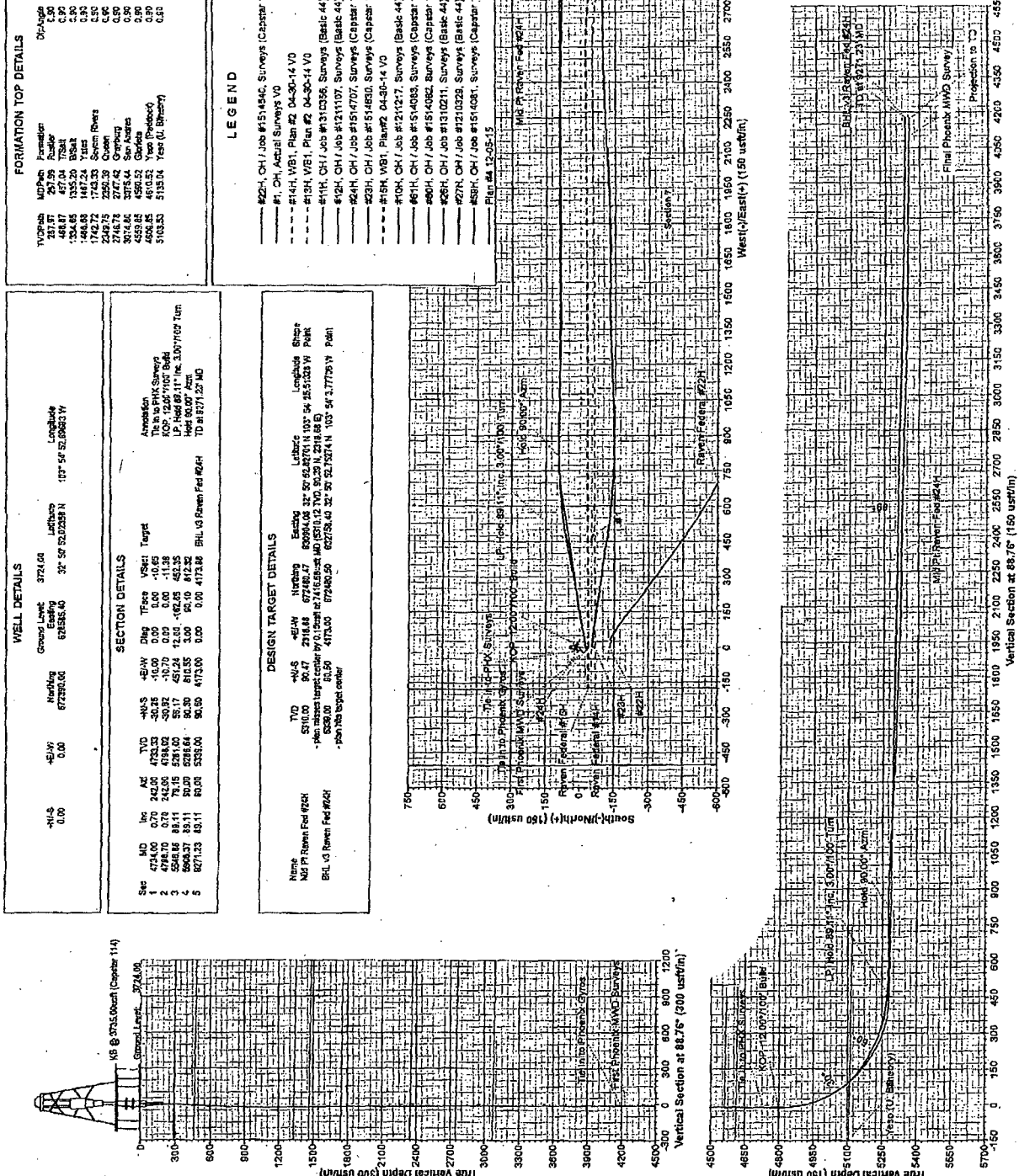
SECTION DETAILS			
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114

DESIGN TARGET DETAILS			
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114

FORMATION TOP DETAILS			
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114

LEGEND			
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114
Well	OH	Wellbore	OH / Job #1514707
Design	Plan #4 12-05-15	Rig	Capstar 114

Map System: US State Plane 1927 (Elev. 1927)
Datum: NAD 83 (NAD 83 CONUS)
Zone: 10N
Local Origin: Well #24H, Old North
Latitude: 32° 59' 52.0000 N
Longitude: 102° 54' 52.0000 W
Grid East: 625545.40
Grid North: 672330.50
Scale Factor: 1.000
Geometric Model: HDGM
Sample Date: 01-04-15
Magnetic Declination: 7.41°
Dip Angle from Horizontal: 80.77°
Magnetic Field Strength: 48333
To convert a Magnetic Direction to a Grid Direction, Add 7.41°
To convert a Magnetic Direction to a True Direction, Add 7.41° East
To convert a True Direction to a Grid Direction, Subtract 0.37°



PHOENIX

TECHNOLOGY SERVICES

Company: Apache
Well: Raven Federal 24H
Location: Eddy Co, New Mexico
Rig: Capstar 114

Job Number: 1514727
Grid Corr.: -0.23
Lat: 32.85
Long: -103.92

Date: 12/04/15
Calculation Method: Minimum Curvature
Proposed Azimuth: 11°
RKB - MSL in feet: 11'
Tie Info: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Angle (deg)	Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
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Enter Tie-In Survey on Line 10

FIELD COPY, NON-DEFINITIVE

TIE IN	0			0	0	0	0	0					
Gyro	100.00	0.20	60.64	100	100.00	0.09	0.09 N	0.15 E	0.17	60.64	0.20	0.20	60.64
	200.00	0.64	268.71	100	200.00	0.16	0.16 N	0.25 W	0.30	301.96	0.82	0.44	208.07
	300.00	1.49	245.53	100	299.98	-0.39	0.39 S	2.00 W	2.03	258.87	0.94	0.85	-23.18
	400.00	2.64	239.79	100	399.91	-2.09	2.09 S	5.17 W	5.58	247.99	1.17	1.15	-5.74
	500.00	2.86	237.40	100	499.80	-4.59	4.59 S	9.26 W	10.34	243.62	0.25	0.22	-2.39
	600.00	2.55	236.10	100	599.69	-7.18	7.18 S	13.21 W	15.03	241.48	0.32	-0.31	-1.30
	700.00	1.99	228.54	100	699.61	-9.57	9.57 S	16.36 W	18.95	239.67	0.63	-0.56	-7.56
	800.00	1.87	222.81	100	799.55	-11.91	11.91 S	18.77 W	22.23	237.59	0.23	-0.12	-5.73
	900.00	1.78	226.49	100	899.50	-14.18	14.18 S	21.00 W	25.34	235.97	0.15	-0.09	3.68
	1000.00	0.86	230.46	100	999.47	-15.73	15.73 S	22.71 W	27.62	235.29	0.92	-0.92	3.97
	1100.00	0.33	185.30	100	1099.47	-16.49	16.49 S	23.31 W	28.56	234.72	0.67	-0.53	-45.16
	1200.00	0.69	142.13	100	1199.46	-17.25	17.25 S	22.97 W	28.73	233.09	0.50	0.36	-43.17
	1300.00	0.67	136.21	100	1299.46	-18.15	18.15 S	22.20 W	28.67	230.72	0.07	-0.02	-5.92
	1400.00	1.01	127.87	100	1399.45	-19.11	19.11 S	21.10 W	28.47	227.82	0.36	0.34	-8.34
	1500.00	1.19	140.46	100	1499.43	-20.46	20.46 S	19.74 W	28.43	223.98	0.30	0.18	12.59
	1600.00	1.15	146.40	100	1599.41	-22.09	22.09 S	18.52 W	28.83	219.98	0.13	-0.04	5.94
	1700.00	0.88	149.51	100	1699.39	-23.59	23.59 S	17.58 W	29.42	216.69	0.28	-0.27	3.11
	1800.00	0.68	150.65	100	1799.38	-24.77	24.77 S	16.90 W	29.98	214.30	0.20	-0.20	1.14
	1900.00	0.52	158.07	100	1899.38	-25.71	25.71 S	16.44 W	30.51	212.59	0.18	-0.16	7.42
	2000.00	0.39	175.48	100	1999.37	-26.47	26.47 S	16.24 W	31.05	211.53	0.19	-0.13	17.41
	2100.00	0.32	165.34	100	2099.37	-27.08	27.08 S	16.14 W	31.52	210.80	0.09	-0.07	-10.14
	2200.00	0.37	150.42	100	2199.37	-27.63	27.63 S	15.91 W	31.88	209.94	0.10	0.05	-14.92
	2300.00	0.43	112.61	100	2299.37	-28.05	28.05 S	15.41 W	32.01	208.77	0.27	0.06	-37.81
	2400.00	0.13	153.88	100	2399.37	-28.30	28.30 S	15.01 W	32.03	207.94	0.34	-0.30	41.27
	2500.00	0.30	174.99	100	2499.36	-28.66	28.66 S	14.94 W	32.32	207.53	0.18	0.17	21.11
	2600.00	0.54	118.84	100	2599.36	-29.15	29.15 S	14.50 W	32.56	206.45	0.45	0.24	-56.15
	2700.00	0.28	85.75	100	2699.36	-29.36	29.36 S	13.85 W	32.46	205.25	0.34	-0.26	-33.09
	2800.00	0.32	142.72	100	2799.36	-29.56	29.56 S	13.43 W	32.47	204.44	0.29	0.04	56.97
	2900.00	0.58	98.04	100	2899.36	-29.86	29.86 S	12.76 W	32.47	203.14	0.42	0.26	-44.68
	3000.00	0.18	339.56	100	2999.35	-29.78	29.78 S	12.32 W	32.23	202.47	0.68	-0.40	241.52



PHOENIX

TECHNOLOGY SERVICES

Company: Apache
Well: Raven Federal 24H
Location: Eddy Co, New Mexico
Rig: Capstar 114

Job Number: 1514727
Grid Corr.: -0.23
Lat: 32.85
Long: -103.92

Calculation Method: Minimum Curvature
Proposed Azimuth: 11°
RKB - MSL in feet: Surface
Tie Into:

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
	3100.00	0.37	112.83	100	3099.35	-29.76	29.76 S	12.07 W	32.11	202.08	0.51	0.19	-226.73
	3200.00	0.18	197.65	100	3199.35	-30.03	30.03 S	11.82 W	32.28	201.49	0.40	-0.19	84.82
	3300.00	0.28	115.03	100	3299.35	-30.29	30.29 S	11.65 W	32.45	201.04	0.31	0.10	-82.62
	3400.00	0.20	288.61	100	3399.35	-30.33	30.33 S	11.59 W	32.47	200.92	0.48	-0.08	173.58
	3500.00	0.30	333.78	100	3499.35	-30.04	30.04 S	11.87 W	32.31	201.57	0.21	0.10	45.17
	3600.00	0.15	90.34	100	3599.35	-29.81	29.81 S	11.86 W	32.08	201.69	0.39	-0.15	-243.44
	3700.00	0.35	76.14	100	3699.35	-29.74	29.74 S	11.43 W	31.86	201.03	0.21	0.20	-14.20
	3800.00	0.19	194.91	100	3799.35	-29.82	29.82 S	11.18 W	31.85	200.55	0.47	-0.16	118.77
	3900.00	0.46	44.03	100	3899.35	-29.70	29.70 S	10.94 W	31.65	200.23	0.63	0.27	-150.88
	4000.00	0.32	81.65	100	3999.35	-29.37	29.37 S	10.39 W	31.15	199.48	0.28	-0.14	37.62
	4100.00	0.62	23.32	100	4099.34	-28.83	28.83 S	9.90 W	30.48	198.95	0.53	0.30	-58.33
	4200.00	0.38	56.23	100	4199.34	-28.15	28.15 S	9.41 W	29.68	198.48	0.36	-0.24	32.91

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 748-9720

DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

NM OIL CONSERVATION Form C-102
ARTESIA DISTRICT Revised August 1, 2011
Submit one copy to appropriate District Office

AUG 29 2016

RECEIVED AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-43363	Pool Code 96831	Pool Name Cedar Lake ; Glorieta - Yaso
Property Code 315935	Property Name Cedar Lake Federal CA	Well Number 724H
GRID No. 873	Operator Name APACHE CORPORATION	Elevation 3724'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	7	17-S	31-E		2245	SOUTH	505	WEST	EDDY

As-Drilled Bottom Hole & Last Take Point Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	7	17-S	31-E		2310.7	SOUTH	331.4	EAST	EDDY
Dedicated Acres 151.78		Joint or Infill	Consolidation Code	Order No.					

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

GEODETIC COORDINATES NAD 83 NME SURFACE LOCATION Y= 672453.9 N X= 669764.1 E LAT.=32.847901" N LONG.=103.915145" W LAT.=32°50'52" N LONG.=103°54'55" W	FIRST TAKE POINT NAD 83 NME Y= 672447.9 N X= 669879.4 E LAT.=32.847883" N LONG.=103.914770" W LAT.=32°50'52" N LONG.=103°54'53" W	AS-DRILLED BOTTOM HOLE & LAST TAKE POINT LOCATION NAD 83 NME Y= 672547.2 N X= 673935.6 E LAT.=32.848111" N LONG.=103.901561" W LAT.=32°50'53" N LONG.=103°54'06" W	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unless mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature <i>Emily Follis</i> Date 8/2/16 Printed Name Emily Follis E-mail Address emily.follis@apachecorp.com
GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y= 672390.0 N X= 628585.4 E LAT.=32.847784" N LONG.=103.914638" W LAT.=32°50'52" N LONG.=103°54'53" W	FIRST TAKE POINT NAD 27 NME Y= 672384.0 N X= 628700.7 E LAT.=32.847766" N LONG.=103.914263" W LAT.=32°50'52" N LONG.=103°54'51" W	AS-DRILLED BOTTOM HOLE & LAST TAKE POINT LOCATION NAD 27 NME Y= 672483.2 N X= 632757.0 E LAT.=32.847994" N LONG.=103.901054" W LAT.=32°50'53" N LONG.=103°54'04" W	
CORNER COORDINATES TABLE NAD 83 NME A - Y=672845.7 N, X=669257.9 E B - Y=672878.9 N, X=674265.0 E C - Y=671525.9 N, X=669262.1 E D - Y=671495.1 N, X=674272.6 E CORNER COORDINATES TABLE NAD 27 NME A - Y=672781.8 N, X=628079.2 E B - Y=672814.9 N, X=633086.4 E C - Y=671462.0 N, X=628083.4 E D - Y=671495.1 N, X=633093.9 E NOTE: AS-DRILLED PATH & BOTTOM HOLE LOCATION PLOTTED FROM PHOENIX TECHNOLOGY SERVICES STANDARD SURVEY REPORT DECEMBER 10, 2015			

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my direct supervision and that the same is true and correct to the best of my belief.

Date of Survey
Signature Seal of **3239** Registered Professional Surveyor

Ronald J. Eidson 12/21/2015
Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

ACK REV: 12/21/15 REL W.O.: 15.13.0250 JWSC W.O.: 15.13.1110

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	5/7/2016
State	New Mexico
County	Eddy
API Number	30-015-43363
Operator Name	Apache
Well Name and Number	Raven Federal Com 24H
Longitude	-103.914638
Latitude	32.847784
Long/Lat Projection	NAD27
Production Type	Oil
True Vertical Depth (TVD)	5,322
Total Water Volume (gal)	2,338,350

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
FR-15	C&J	Friction Reducer	Distillates (petroleum), Hydroreated lig	64742-47-8	60.00%	0.01047%	
			Polyacrylamide Copolymer	Proprietary	40.00%	0.00698%	
			Surfactant Blend	Proprietary	6.00%	0.00105%	
CI-2	C&J	Corrosion Inhibitor	Methanol	67-56-1	80.00%	0.00662%	
			Fatty Acids	Proprietary	10.00%	0.00296%	
ICA-1	C&J	Iron Control Agent	Trisodium Nitrotriacetate	5064-31-3	50.00%	0.00931%	
AP-Scale-2	SNF Inc.	Paraffin and Scale Additiv	Calcium Chloride	10043-52-4	25.00%	0.00079%	
CI-3	C&J	Corrosion Inhibitor	Ethylene Glycol	107-21-1	40.00%	0.00801%	
			Dimethylformamide	68-12-2	20.00%	0.00400%	
			2-butoxyethanol	111-76-2	15.00%	0.00300%	
			Cinnamaldehyde	104-55-2	15.00%	0.00300%	
			Tar Bases, Quinoline Derivs., Benzyl C	72480-70-7	15.00%	0.00300%	
			1-decanol	112-30-1	5.00%	0.00100%	
			4-nonylphenol, Branched, Ethoxylated	127087-87-0	5.00%	0.00100%	
			1-octanol	111-87-5	2.50%	0.00050%	
			Isopropanol	67-63-0	2.50%	0.00050%	
			Triethyl Phosphate	78-40-0	2.50%	0.00050%	
CS-1	C&J	Clay Stabilizer	Choline Chloride	67-48-1	80.00%	0.00948%	
Aquar 742	DOW Chemica	Biocidal Product	Glutaraldehyde	111-30-8	42.00%	0.00388%	
			Water	7732-18-5	48.60%	0.00449%	
			Quaternary ammonium compounds, be	66424-85-1	7.50%	0.00069%	
			Ethanol	64-27-5	1.00%	0.00009%	
Ap-Surf-2A	Bienetech Corp	Surfactant	Isopropyl Alcohol	67-63-0	45.00%	0.01%	
HC-15	C&J	Acidizing	Hydrochloric Acid	7647-01-0	15.00%	0.61%	
100 Mesh	C&J	Proppant	Silica - Crystalline, Quartz	14080-60-7	99.90%	5.95%	
			Aluminum Oxide	1344-28-1	1.10%	0.07%	
			Iron Oxide	1309-37-1	0.10%	0.00595%	
			Titanium Dioxide	13463-67-7	0.10%	0.00595%	

Hydraulic Fracturing Fluid Composition:

[illegible]

- 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.

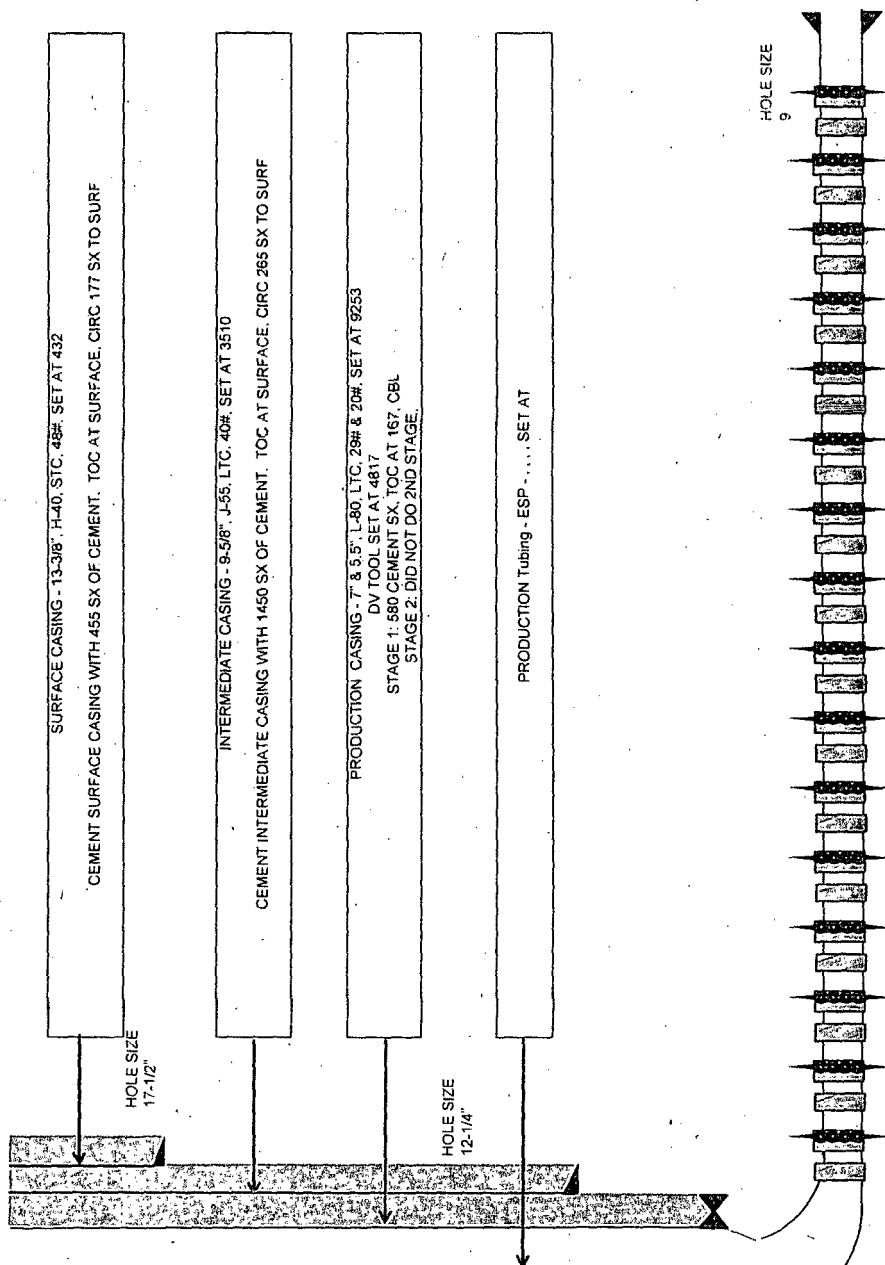
WELL NAME: RAVEN FEDERAL COM 24H
API: 30-015-43363
SPUD DATE: 11/29/2015
PRODUCING FORMATION: YESO UPPER BLINBRY
FIELD: CEDAR LAKE (BP)
COUNTY: EDDY
STATE: NEW MEXICO
WORKING INTEREST: 60.00%

SURFACE LOC: 2245' FSL & 505' FWL
SECTION: 7
TOWNSHIP: 17-S
RANGE: 31-E
SURVEY: RONALD J. EDSON
BOTTOM HOLE LOC: 2310.7' FSL & 331.4' FEL
SECTION: 7
TOWNSHIP: 17-S
RANGE: 31-E
SURVEY: RONALD J. EDSON
DRILL RIG: CAPSTAR 114
RIG RELEASE: 12/12/2015

KB (ft): 3,735.00
GL (ft): 3,724.00
KB/GL DIFF (ft): 11.00
TMD (ft): 9,264.00
TD OF PILOT HOLE (ft): N/A
FC DEPTH (ft): 9,244.00
PBMD (ft): 9,244.00
RDV DEPTH (ft): N/A
ORIO VALVE (ft): N/A
DEEPEST TVD (ft): 5,357.00

TAPERED CASING STRING:

7" 20# L-80 TO X-OVER @ 4,819'
TAPERING TO 5.5" 20# L-80 SET @ 9,253'



KOP (ft):
LATERAL LENGTH (ft):
TO OF PILOT HOLE (ft): N/A

PACKERS & SLEEVES
TOP PERF (MD):
BOTTOM PERF (MD):

TMD (ft): 9,264
FC DEPTH (ft): 9,244
PBMD (ft): 9,264
RDV DEPTH (ft): N/A
ORIO VALVE (ft): N/A

COMPLETION:

STIMULATION:

STATUS:

COMMENTS:

PACKERS & SLEEVES - 14 STAGES

TOTAL ACID (bbl)	TOTAL LTR (bbl)	TOTAL PROPPANT (lbs)	MAX WH RATE (bpm)	MAX WH PRESSURE (psi)
2,254	55,618	2,640,860	93.00	6,023

PRODUCTION METHOD	LIFT TYPE	SETTING DEPTH
Pumping	ESP	0

CROSSOVER SUB @ 4,819'

LAST UPDATED BY: HILLARI GOULD
LAST UPDATED: 4/29/2016