

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

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.
NMLC029435B

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
NFE FEDERAL COM 61H

9. API Well No.

015-43250

10. Field and Pool, or Exploratory
CEDAR LAKE11. County or Parish, and State
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
APACHE CORPORATIONContact: JORDAN R EVANS
E-Mail: jordan.evans@apachecorp.com3a. Address
303 VETERANS AIRPARK LANE SUITE 3000
MIDLAND, TX 797053b. Phone No. (include area code)
Ph: 432-818-1000 Ext: 1027
Fx: 432-818-1198

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

Sec 8 T17S R31E NESE 1795FSL 25FEL

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	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 recomple 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 recompletion 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 request to change hole size after drill out of intermediate from 8-3/4" hole thru the curve and 7-7/8" in the lateral to 8-1/2" hole from under intermediate to TD.

Apache also request to change the setting depth for the 7" casing from Old: 5524' to New: 4600'. Cement volumes will remain the same as approved on APD.

Apache also request to change the measured depth and TVD from Old: 5939' TVD and 10,722' MD to New: 5077' TVD and 9,797'

New directional Plan and C102 attached. No other changes from approved APD.

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 10 2015

RECEIVED

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

Electronic Submission #311254 verified by the BLM Well Information System

For APACHE CORPORATION, sent to the Carlsbad

Committed to AFMSS for processing by CHRISTOPHER WALLS on 08/04/2015 (15CRW0087SE)

Name (Printed/Typed) JORDAN R EVANS

Title DRILLING ENGINEER

Signature (Electronic Submission)

Date 08/03/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

APPROVED

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

AUG 4 2015

Chris Walls

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 any statement or representation as to any matter within its jurisdiction.

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 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

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-43250	Pool Code 96831	Pool Name Cedar Lake, Glorieta-Yeso
Property Code 39330	Property Name NFE FEDERAL COM	Well Number 61H
OGRID No. 873	Operator Name APACHE CORPORATION	Elevation 3788'

Surface Location

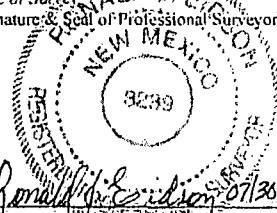
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	8	17-S	31-E		1795	SOUTH	25	EAST	EDDY

Bottom Hole 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
L	8	17-S	31-E		1795	SOUTH	331	WEST	EDDY

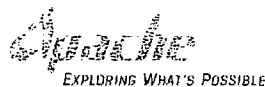
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NAD 83 NME BOTTOM HOLE LOCATION Y= 672036.1 N X= 674600.9 E LAT.=32.846699° N LONG.=103.899405° W LAT.=32°50'48" N LONG.=103°53'58" W	CORNER COORDINATES TABLE NAD 83 NME A - Y= 672878.9 N, X= 674265.0 E B - Y= 672916.6 N, X= 679544.3 E C - Y= 671596.5 N, X= 679551.8 E D - Y= 671559.1 N, X= 674272.6 E	GEODETIC COORDINATES NAD 83 NME SURFACE LOCATION Y= 672070.8 N X= 679524.1 E LAT.=32.846738° N LONG.=103.883371° W LAT.=32°50'48" N LONG.=103°53'00" 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 unleased 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. <i>Sorina L Flores</i> 7/31/15 Signature Date Sorina L Flores Printed Name sorina.flores@apachecorp.com E-mail Address
NAD 27 NME BOTTOM HOLE LOCATION Y= 671972.2 N X= 633422.2 E LAT.=32.846582° N LONG.=103.898898° W LAT.=32°50'48" N LONG.=103°53'56" W	CORNER COORDINATES TABLE NAD 27 NME A - Y= 672814.9 N, X= 633086.4 E B - Y= 672852.6 N, X= 638365.7 E C - Y= 671532.5 N, X= 638373.2 E D - Y= 671495.1 N, X= 633093.9 E	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y= 672006.8 N X= 638345.5 E LAT.=32.846621° N LONG.=103.882864° W LAT.=32°50'48" N LONG.=103°52'58" W	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 supervision, and that the same is true and correct to the best of my belief. OCTOBER 27, 2014 Date of Survey <i>Ronald J. Eidson</i> Signature Seal of Professional Surveyor:  Ronald J. Eidson 07/30/2015 Certificate Number REL. W.O.: 15.13.0251 JWSC W.O.: 15.13.0774

NOTE: WELL PATH AND BOTTOM HOLE
PLOTTED FROM PHOENIX TECHNOLOGIES
STANDARD PLANNING REPORT;
DATED JULY 29, 2015

WELL PATH PLAN



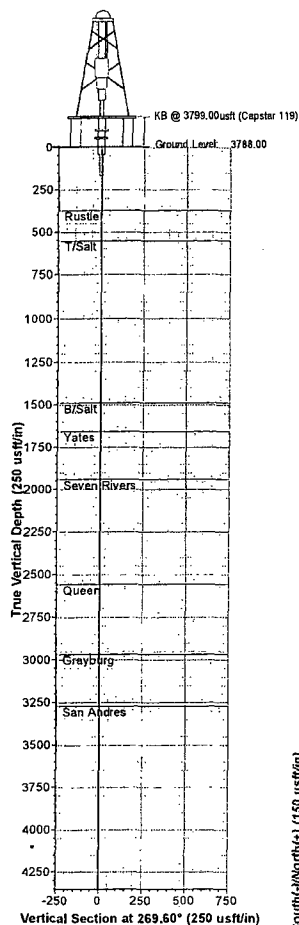
Project: Eddy County, NM (NAD27 NME)
 Site: NFE Federal
 Well: #61H
 Wellbore: OH
 Design: Plan #3 02-29-15
 Rig: Capstar 119



PHOENIX
 TECHNOLOGY SERVICES



Azimuths to Grid North
 True North: -0.24°
 Magnetic North: 7.39°
 Magnetic Field
 Strength: 48593.0nT
 Dip Angle: 60.80°
 Date: 7/29/2015
 Model: HDGM



WELL DETAILS									
	+N-S	+E-W	North	Ground Level	Easting	Latitude	Longitude		
	0.00	0.00	672006.60	3788.00	638345.50	32° 50' 47.83443 N	103° 52' 58.30925 W		

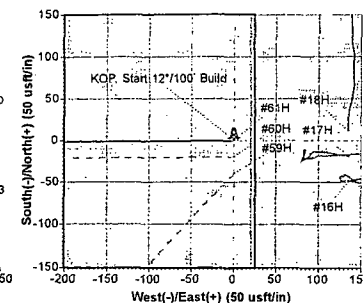
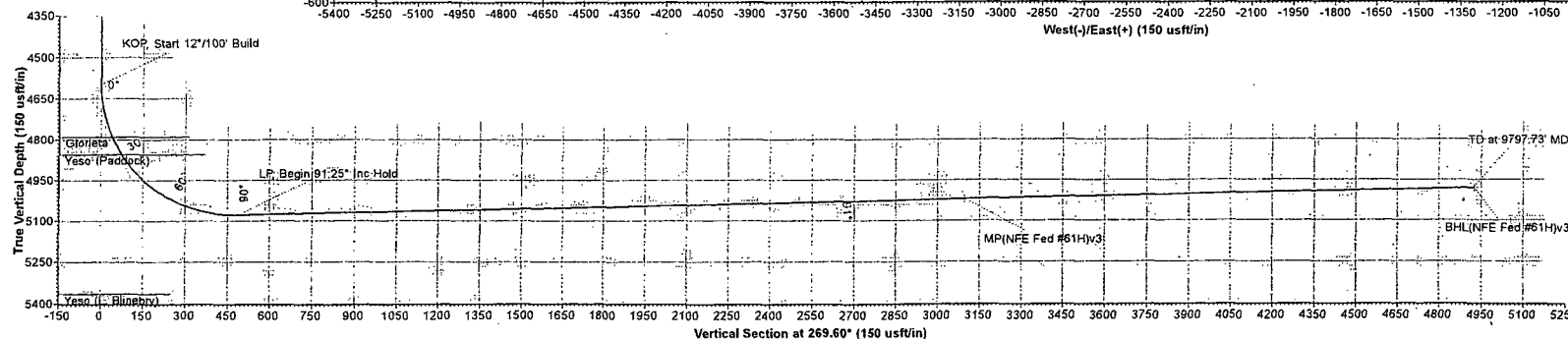
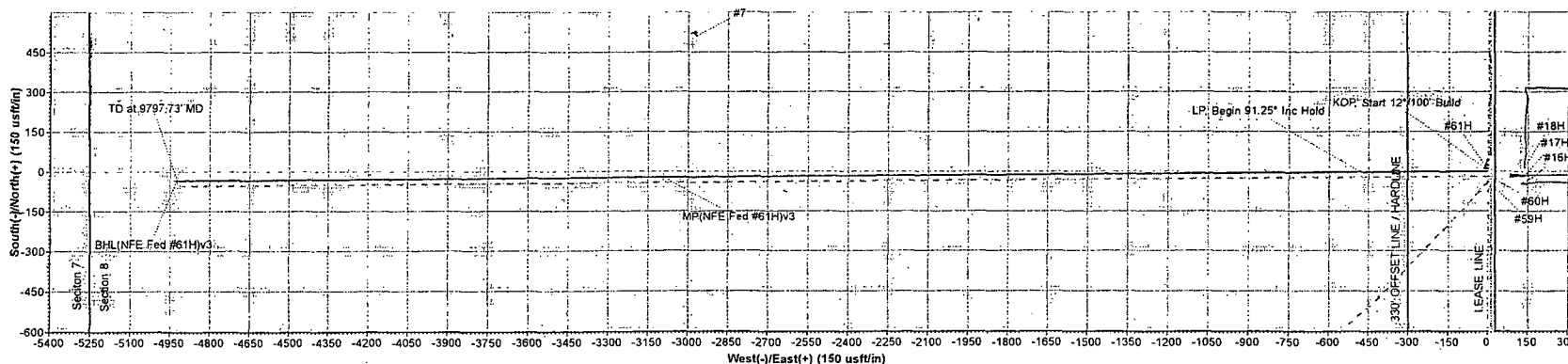
SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	V Sect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		KOP, Start 12°/100' Build
2	4599.57	0.00	0.00	4599.57	0.00	0.00	0.00	0.00	0.00		LP, Begin 91.25° Inc Hold
3	5360.14	91.25	269.60	5077.00	-3.43	-487.87	12.00	269.60	487.98		TD at 9797.73' MD
4	9797.73	91.25	269.60	4980.00	-34.60	-4924.40	0.00	0.00	4924.52	BHL(NFE Fed #61H)v3	

DESIGN TARGET DETAILS									
Name	TVD	+N-S	+E-W	North	Easting	Latitude	Longitude	Shape	
BHL(NFE Fed #61H)v3	4980.00	-34.60	-4924.40	671972.20	633421.10	32° 50' 47.69616 N	103° 53' 56.03344 W	Point	
MP(NFE Fed #61H)v3	5020.00	-21.75	-3094.97	671985.05	635250.53	32° 50' 47.74839 N	103° 53' 34.58877 W	Point	

Map System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone Name: New Mexico East 3001
 Local Origin: Well #61H, Grid North
 Latitude: 32° 50' 47.83443 N
 Longitude: 103° 52' 58.30925 W
 Grid East: 638345.50
 Grid North: 672006.60
 Scale Factor: 1.000
 Geomagnetic Model: HDGM
 Sample Date: 29-Jul-15
 Magnetic Declination: 7.63°
 Dip Angle from Horizontal: 60.80°
 Magnetic Field Strength: 48593
 To convert a Magnetic Direction to a Grid Direction, Add 7.39°
 To convert a Magnetic Direction to a True Direction, Add 7.63° East
 To convert a True Direction to a Grid Direction, Subtract 0.24°

LEGEND	
---	#60H, OH, Plan #1 01-28-15 V0
---	#7, OH, Surveys V0
---	#59H, OH, Plan #3 07-29-15 V0
---	#16H, WB1/Job #1310959, Surveys (Capstar 114) V0
---	#17H, WB1/Job #1311090, Surveys (Capstar 114) V0
---	#18H, WB1/Job #1311163, Surveys (Capstar 114) V0
---	Plan #3 02-29-15

FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
369.00	369.00	Rustle	0.00	269.60
550.00	550.00	T/Salt	0.00	269.60
1486.00	1486.00	B/Salt	0.00	269.60
1654.00	1654.00	Yates	0.00	269.60
1939.00	1939.00	Seven Rivers	0.00	269.60
2556.00	2556.00	Queen	0.00	269.60
2964.00	2964.00	Grayburg	0.00	269.60
3269.00	3269.00	San Andres	0.00	269.60
4789.00	4794.36	Glorieta	0.00	269.60
4854.00	4867.60	Yesso (Paddock)	0.00	*269.60





Apache Corporation

Eddy County, NM (NAD27 NME)

NFE Federal

#61H

OH

Plan: Plan #3 02-29-15

Standard Planning Report

29 July, 2015



PHOENIX
TECHNOLOGY SERVICES

Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #61H
Company:	Apache Corporation	TVD Reference:	KB @ 3799.00usft (Capstar 119)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3799.00usft (Capstar 119)
Site:	NFE Federal	North Reference:	Grid
Well:	#61H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3 02-29-15		

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:		NFE Federal			
Site Position:		Northing:	673,264.70 usft	Latitude:	32° 51' 0.49036 N
From:	Map	Easting:	633,303.50 usft	Longitude:	103° 53' 57.34966 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.24 °

Well:	#61H					
Well Position	+N-S	-1,257.90 usft	Northing:	672,006.80 usft	Latitude:	32° 50' 47.83443 N
	+E-W	5,042.00 usft	Easting:	638,345.50 usft	Longitude:	103° 52' 58.30925 W
Position Uncertainty	0.00 usft	Wellhead Elevation:		Ground Level:	3,788.00 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (G)	Dip Angle (G)	Field Strength (nT)
	HDGM	7/29/2015	7.63	60.80	48,593

Design:	Plan #3 02-29-15			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/S	+E/W	Direction
	(usft)	(usft)	(usft)	(G)
	0.00	0.00	0.00	269.60

Plan Sections									
Measured Depth (usft)	Inclination (G)	Azimuth (G)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Dogleg Rate (R/100usft)	Build Rate (R/100usft)	Turn Rate (R/100usft)	TFO (G)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,599.57	0.00	0.00	4,599.57	0.00	0.00	0.00	0.00	0.00	0.00
5,360.14	91.25	269.60	5,077.00	-3.43	-487.97	12.00	12.00	-11.89	269.60
9,797.73	91.25	269.60	4,980.00	-34.60	-4,924.40	0.00	0.00	0.00	0.00 BHL(NFE Fed #61H)

Database:	Compass 5000.GCR	Local Co-ordinate Reference:	Well #61H
Company:	Apache Corporation	TVD Reference:	KB @ 3799.00usft (Capstar-119)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3799.00usft (Capstar-119)
Site:	NFE Federal	North Reference:	Grid
Well:	#61H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3 02-29-15		

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
369.00	0.00	0.00	369.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
550.00	0.00	0.00	550.00	0.00	0.00	0.00	0.00	0.00	0.00
T/Salt									
1,486.00	0.00	0.00	1,486.00	0.00	0.00	0.00	0.00	0.00	0.00
B/Salt									
1,654.00	0.00	0.00	1,654.00	0.00	0.00	0.00	0.00	0.00	0.00
Yates									
1,939.00	0.00	0.00	1,939.00	0.00	0.00	0.00	0.00	0.00	0.00
Seven Rivers									
2,556.00	0.00	0.00	2,556.00	0.00	0.00	0.00	0.00	0.00	0.00
Queen									
2,964.00	0.00	0.00	2,964.00	0.00	0.00	0.00	0.00	0.00	0.00
Grayburg									
3,269.00	0.00	0.00	3,269.00	0.00	0.00	0.00	0.00	0.00	0.00
San Andres									
4,599.57	0.00	0.00	4,599.57	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Start 12°/100' Build									
4,600.00	0.05	269.60	4,600.00	0.00	0.00	0.00	12.00	12.00	0.00
4,700.00	12.05	269.60	4,699.26	-0.07	-10.52	10.52	12.00	12.00	0.00
4,794.36	23.37	269.60	4,789.00	-0.28	-39.18	39.18	12.00	12.00	0.00
Glorieta									
4,800.00	24.05	269.60	4,794.17	-0.29	-41.45	41.45	12.00	12.00	0.00
4,867.90	32.19	269.60	4,854.00	-0.52	-73.42	73.42	12.00	12.00	0.00
Yeso (Paddock)									
4,900.00	36.05	269.60	4,880.57	-0.64	-91.42	91.43	12.00	12.00	0.00
5,000.00	48.04	269.60	4,954.70	-1.11	-158.27	158.27	12.00	12.00	0.00
5,100.00	60.04	269.60	5,013.31	-1.68	-239.07	239.07	12.00	12.00	0.00
5,200.00	72.04	269.60	5,053.84	-2.32	-330.28	330.29	12.00	12.00	0.00
5,300.00	84.04	269.60	5,074.53	-3.01	-427.93	427.94	12.00	12.00	0.00
5,360.14	91.25	269.60	5,077.00	-3.43	-487.98	487.99	12.00	12.00	0.00
LP: Begin 91.25° Inc Hold									
5,400.00	91.25	269.60	5,076.13	-3.71	-527.83	527.84	0.00	0.00	0.00
5,500.00	91.25	269.60	5,073.94	-4.41	-627.80	627.81	0.00	0.00	0.00
5,600.00	91.25	269.60	5,071.76	-5.11	-727.77	727.79	0.00	0.00	0.00
5,700.00	91.25	269.60	5,069.57	-5.82	-827.75	827.77	0.00	0.00	0.00
5,800.00	91.25	269.60	5,067.39	-6.52	-927.72	927.74	0.00	0.00	0.00
5,900.00	91.25	269.60	5,065.20	-7.22	-1,027.69	1,027.72	0.00	0.00	0.00
6,000.00	91.25	269.60	5,063.01	-7.92	-1,127.67	1,127.70	0.00	0.00	0.00
6,100.00	91.25	269.60	5,060.83	-8.63	-1,227.64	1,227.67	0.00	0.00	0.00
6,200.00	91.25	269.60	5,058.64	-9.33	-1,327.61	1,327.65	0.00	0.00	0.00
6,300.00	91.25	269.60	5,056.46	-10.03	-1,427.59	1,427.62	0.00	0.00	0.00
6,400.00	91.25	269.60	5,054.27	-10.73	-1,527.56	1,527.60	0.00	0.00	0.00
6,500.00	91.25	269.60	5,052.09	-11.44	-1,627.54	1,627.58	0.00	0.00	0.00
6,600.00	91.25	269.60	5,049.90	-12.14	-1,727.51	1,727.55	0.00	0.00	0.00
6,700.00	91.25	269.60	5,047.71	-12.84	-1,827.48	1,827.53	0.00	0.00	0.00
6,800.00	91.25	269.60	5,045.53	-13.54	-1,927.46	1,927.50	0.00	0.00	0.00
6,900.00	91.25	269.60	5,043.34	-14.25	-2,027.43	2,027.48	0.00	0.00	0.00
7,000.00	91.25	269.60	5,041.16	-14.95	-2,127.40	2,127.46	0.00	0.00	0.00
7,100.00	91.25	269.60	5,038.97	-15.65	-2,227.38	2,227.43	0.00	0.00	0.00
7,200.00	91.25	269.60	5,036.78	-16.35	-2,327.35	2,327.41	0.00	0.00	0.00

Database:	Compass 5000.GCR	Local Co-ordinate Reference:	Well #61H
Company:	Apache Corporation	TVD Reference:	KB @ 3799.00usft (Capstar 119)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3799.00usft (Capstar 119)
Site:	NFE Federal	North Reference:	Grid
Well:	#61H	Survey/Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3 02-29-15		

Planned Survey										
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)	
7,300.00	91.25	269.60	5,034.60	-17.05	-2,427.32	2,427.38	0.00	0.00	0.00	
7,400.00	91.25	269.60	5,032.41	-17.76	-2,527.30	2,527.36	0.00	0.00	0.00	
7,500.00	91.25	269.60	5,030.23	-18.46	-2,627.27	2,627.34	0.00	0.00	0.00	
7,600.00	91.25	269.60	5,028.04	-19.16	-2,727.25	2,727.31	0.00	0.00	0.00	
7,700.00	91.25	269.60	5,025.85	-19.86	-2,827.22	2,827.29	0.00	0.00	0.00	
7,800.00	91.25	269.60	5,023.67	-20.57	-2,927.19	2,927.26	0.00	0.00	0.00	
7,900.00	91.25	269.60	5,021.48	-21.27	-3,027.17	3,027.24	0.00	0.00	0.00	
8,000.00	91.25	269.60	5,019.30	-21.97	-3,127.14	3,127.22	0.00	0.00	0.00	
8,100.00	91.25	269.60	5,017.11	-22.67	-3,227.11	3,227.19	0.00	0.00	0.00	
8,200.00	91.25	269.60	5,014.93	-23.38	-3,327.09	3,327.17	0.00	0.00	0.00	
8,300.00	91.25	269.60	5,012.74	-24.08	-3,427.06	3,427.15	0.00	0.00	0.00	
8,400.00	91.25	269.60	5,010.55	-24.78	-3,527.03	3,527.12	0.00	0.00	0.00	
8,500.00	91.25	269.60	5,008.37	-25.48	-3,627.01	3,627.10	0.00	0.00	0.00	
8,600.00	91.25	269.60	5,006.18	-26.19	-3,726.98	3,727.07	0.00	0.00	0.00	
8,700.00	91.25	269.60	5,004.00	-26.89	-3,826.96	3,827.05	0.00	0.00	0.00	
8,800.00	91.25	269.60	5,001.81	-27.59	-3,926.93	3,927.03	0.00	0.00	0.00	
8,900.00	91.25	269.60	4,999.62	-28.29	-4,026.90	4,027.00	0.00	0.00	0.00	
9,000.00	91.25	269.60	4,997.44	-29.00	-4,126.88	4,126.98	0.00	0.00	0.00	
9,100.00	91.25	269.60	4,995.25	-29.70	-4,226.85	4,226.95	0.00	0.00	0.00	
9,200.00	91.25	269.60	4,993.07	-30.40	-4,326.82	4,326.93	0.00	0.00	0.00	
9,300.00	91.25	269.60	4,990.88	-31.10	-4,426.80	4,426.91	0.00	0.00	0.00	
9,400.00	91.25	269.60	4,988.69	-31.81	-4,526.77	4,526.88	0.00	0.00	0.00	
9,500.00	91.25	269.60	4,986.51	-32.51	-4,626.74	4,626.86	0.00	0.00	0.00	
9,600.00	91.25	269.60	4,984.32	-33.21	-4,726.72	4,726.83	0.00	0.00	0.00	
9,700.00	91.25	269.60	4,982.14	-33.91	-4,826.69	4,826.81	0.00	0.00	0.00	
9,797.73	91.25	269.60	4,980.00	-34.60	-4,924.40	4,924.52	0.00	0.00	0.00	
TD at 9797.73' MD										

Design Targets										
Target Name	Hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL(NFE Fed #61H)v3	- plan hits target center	0.00	0.00	4,980.00	-34.60	-4,924.40	671,972.20	633,421.10	32° 50' 47.69616 N	103° 53' 56.03344 W
	- Point									
MP(NFE Fed #61H)v3	- plan hits target center	0.00	0.00	5,020.00	-21.75	-3,094.97	671,985.05	635,250.53	32° 50' 47.74839 N	103° 53' 34.58877 W
	- Point									

Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #61H
Company:	Apache Corporation	TVD Reference:	KB @ 3799.00usft (Capstar 119)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3799.00usft (Capstar 119)
Site:	NFE Federal	North Reference:	Grid
Well:	#61H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3 02-29-15		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
369.00	369.00	Rustler		0.00	269.60	
550.00	550.00	T/Salt		0.00	269.60	
1,486.00	1,486.00	B/Salt		0.00	269.60	
1,654.00	1,654.00	Yates		0.00	269.60	
1,939.00	1,939.00	Seven Rivers		0.00	269.60	
2,556.00	2,556.00	Queen		0.00	269.60	
2,964.00	2,964.00	Grayburg		0.00	269.60	
3,269.00	3,269.00	San Andres		0.00	269.60	
4,794.36	4,789.00	Glorieta		0.00	269.60	
4,867.90	4,854.00	Yeso (Paddock)		0.00	269.60	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		N/S (usft)	E/W (usft)		
4,599.57	4,599.57	0.00	0.00	KOP, Start 12"/100' Build	
5,360.14	5,077.00	-3.43	-487.98	LP, Begin 91.25" Inc Hold	
9,797.73	4,980.00	-34.60	-4,924.40	TD at 9797.73' MD	