

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

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMLC029435B
2. Name of Operator APACHE CORPORATION		6. If Indian, Allottee or Tribe Name
Contact: SORINA FLORES E-Mail: sorina.flores@apachecorp.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 303 VETERANS AIRPARK LANE SUITE 3000 MIDLAND, TX 79705	3b. Phone No. (include area code) Ph: 432-818-1167	8. Well Name and No. NFE FEDERAL COM 46H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 6 T17S R31E Mer NMP SWNW 1980FNL 330FWL 32.865193 N Lat, 103.915191 W Lon		9. API Well No. 30-015-43443
		10. Field and Pool, or Exploratory CEDAR LAKE; GLORIETA-YESO
		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	Change to Original A PD
	☐ 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 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 recomple 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.)

BLM-CO-1463 NATIONWIDE; NMB000736

NM OIL CONSERVATION

ARTESIA DISTRICT

FOR NFE FEDERAL COM 46H(30-015-43443), APACHE REQUEST TO CHG CSG/CMT PROGRAM:

NOV 16 2015

NEW TVD: 4859' MD: 8896' LP: 4769' TVD

OLD PROD CSG STRING:

8-3/4": 0-4336'

8-3/4": 4336'-5081'

7-7/8": 5081'-8940'

NEW PROD CSG STRING:

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

RECEIVED

Accepted for record
11/20/15
NMOC

14. I hereby certify that the foregoing is true and correct. Electronic Submission #322653 verified by the BLM Well Information System For APACHE CORPORATION, sent to the Carlsbad Committed to AFMSS for processing by KENNETH RENNICK on 11/10/2015 ()	
Name (Printed/Typed) SORINA FLORES	Title SUBMITTING CONTACT
Signature (Electronic Submission)	Date 11/10/2015
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
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 _____
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and fraudulently to make any statement or representation as to any matter within its jurisdiction.	

APPROVED
PETROLEUM ENGINEER
NOV 10 2015
Kenneth Rennick
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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

Additional data for EC transaction #322653 that would not fit on the form

32. Additional remarks, continued

8.5": 0'-4261'

8.5": 4261'-8896'

*Prod csg will be tapered string w/7" csg f/surf to KOP
(cmt thru stage tool f/KOP to 3000')

BOP OLD:

Hole: 12-1/4" Size: 13-5/8" WP: 3M Annular Test to: 2M

Hole: 9-5/8" Size: 13-5/8" WP: 3M Annular, Blind, Pipe Test to: 2M

BOP NEW:

Hole: 12-1/4" Size: 13-5/8" WP: 3M Annular Test to: 2M

Hole: 8-1/2" Size: 11" WP: 3M Annular, Blind, Pipe Test to: 2M

MUD PROGRAM OLD:

Int Shoe -TD: Brine Wgt: 9.5-10.2 Visc: 28-29 Wtr Loss: N/C

MUD PROGRAM NEW:

Int Shoe -TD: Brine Wgt: 8.6-10.2 Visc: 28-29 Wtr Loss: N/C

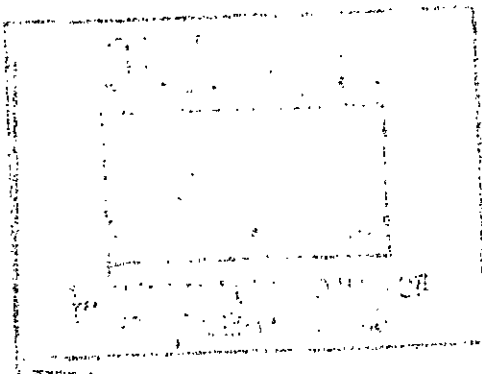
LOGGING:

Mud Log: Interval: 4261-TD

DRLG CONDITIONS:

BHP @ deepest TVD: 2138psi

****New directional plan attached.**



**NFE FEDERAL COM 46H
30-015-43443
Apache Corporation
Conditions of Approval**

Original COA still applies, except for the replacement of the cement fill behind the 7 x 5 1/2 inch production casing.

1. The minimum required fill of cement behind the 7 x 5 1/2 inch production casing is:

☒ Cement as proposed by operator. Operator shall provide method of verification. **Additional cement shall be required since excess is inadequate by 20% (AKA -20%).**

KGR 11102015



EXPLORING WHAT'S POSSIBLE

Project: Eddy County, NM (NAD27 NME)
Site: NFE Federal
Well: #46H
Wellbore: OH
Design: Plan #2 09-09-15
Rig: TBD



Asimuth to Grid North
True North: 4.2°
Magnetic North: 7.4°
Magnetic Field
Strength: 48561.9nT
Dip Angle: 60.79°
Date: 8/26/15
Model: HDGM

WELL DETAILS

Ground Level: 3750.00
Easting: 818306.50
Northing: 978722.90
Latitude: 32° 51' 54.68955 N
Longitude: 107° 54' 54.88644 W

SECTION DETAILS

Sec	MD	Inc	At	TVD	+N/S	-E/W	Orig	True	Vsect	Target	Annulation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP Stat 171100' Build
2	5203.54	88.67	89.61	4753.00	11.00	48.34	12.00	48.61	48.34	48.34	LP Stat 83.61° W
4	3084.44	88.67	89.61	4859.00	75.50	4331.50	6.00	0.00	4331.68	BH-LINE Fwd M881-2	TO M 8086.84 MD

DESIGN TARGET DETAILS

Name	TVD	-N/S	-E/W	Northing	Easting	Latitude	Longitude	Shape
LIN-LINE Fwd M881-2	4814.00	16.34	2399.02	438738.24	438718.03	32° 51' 54.70713 N	107° 54' 55.50600 W	Point
BH-LINE Fwd M881-2	4850.00	79.50	4231.50	817552.40	817572.40	32° 51' 54.81924 N	107° 54' 53.80105 W	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle
270.00	270.00	Rustler	1.33
440.00	440.00	TGS&C	1.33
1322.00	1322.00	BGS&C	1.33
1440.00	1440.00	Grayburg	1.33
1753.00	1753.00	Sandoz	1.33
2357.00	2357.00	Queen	1.33
2775.00	2775.00	Grayburg	1.33
3248.00	3248.00	San Andres	1.33
4000.00	4000.00	Permian	1.33
4503.45	4503.45	Permian (paleozoic)	1.33

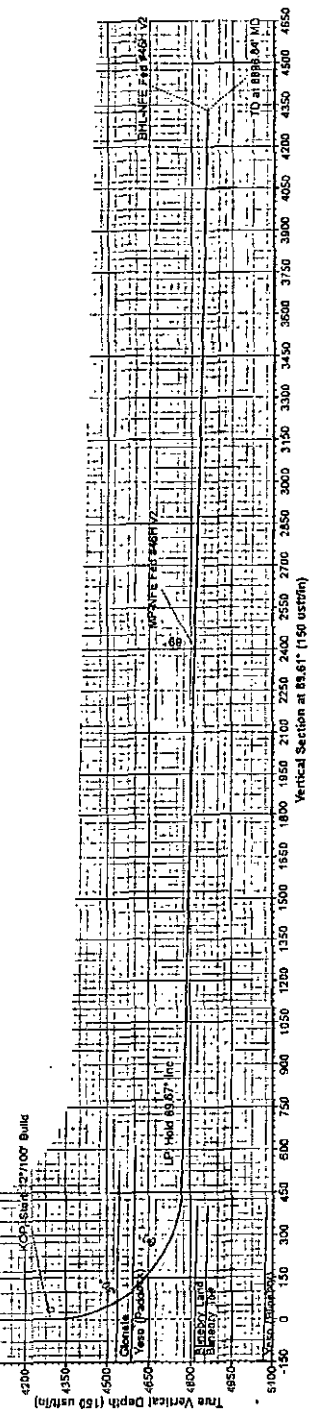
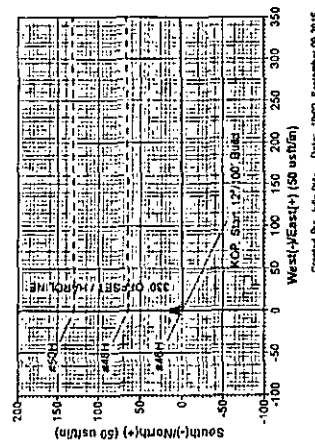
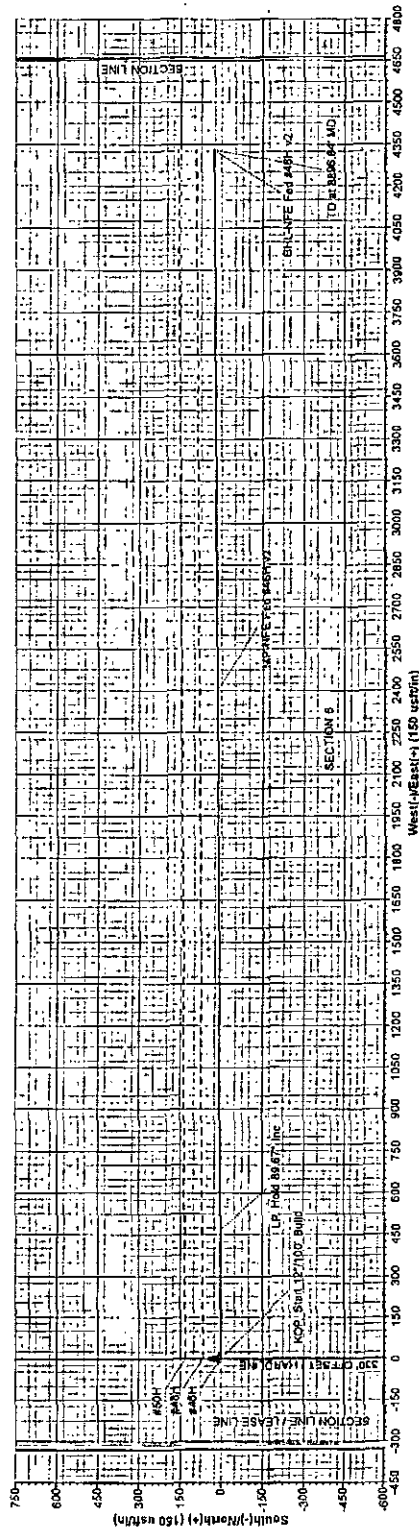
LEGEND

--- 448H, OH, Plan #2 09-09-15 VO
--- 450H, OH, Plan #1 03-08-14 VO
--- Plan #2 09-09-15

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Elevation: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: West 440H, Grid North
Latitude: 32° 51' 54.68955 N
Longitude: 107° 54' 54.88644 W
Grid East: 629890.00
Grid North: 678722.90
Scale Factor: 1.000

Geomagnetic Model: HDGM
Sample Date: 09-Sep-15
Magnetic Declination: 7.4°
Dip Angle from Horizontal: 60.79°
Magnetic Field Strength: 48562

To convert a Magnetic Direction to a Grid Direction, Add 7.4°
To convert a Grid Direction to a Magnetic Direction, Subtract 7.4°
To convert a True Direction to a Grid Direction, Subtract 0.23°



Created By: Jule PMA Date: 10/02, September 08 2015



NM OIL CONSERVATION

ARTESIA DISTRICT

NOV 16 2015

RECEIVED

Apache Corporation

Eddy County, NM (NAD27 NME)

NFE Federal

#46H

OH

Plan: Plan #2 09-09-15

Standard Planning Report

09 September, 2015



PHOENIX
TECHNOLOGY SERVICES

Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #46H
Company:	Apache Corporation	TVD Reference:	KB @ 3770.00usft (TBD)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3770.00usft (TBD)
Site:	NFE Federal	North Reference:	Grid
Well:	#46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 09-09-15		

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

Well:	#46H					
Well Position	+N/-S	5,458.20 usft	Northing:	678,722.90 usft	Latitude:	32° 51' 54.69595 N
	+E/-W	-4,912.90 usft	Easting:	628,390.60 usft	Longitude:	103° 54' 54.68644 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	Ground Level:		3,759.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/9/2015	7.65	60.78	48,562

Design:	Plan #2 09-09-15			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD):	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	89.61

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(%/100usft)	(%/100usft)	(%/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,291.66	0.00	0.00	4,291.66	0.00	0.00	0.00	0.00	0.00	0.00	
5,030.54	88.67	89.61	4,769.00	3.18	466.34	12.00	12.00	12.13	89.61	
8,896.84	88.67	89.61	4,859.00	29.50	4,331.50	0.00	0.00	0.00	0.00	BHL-NFE Fed #46H v



Phoenix Technology Services LP

Planning Report



Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #46H
Company:	Apache Corporation	TVD Reference:	KB @ 3770.00usft (TBD)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3770.00usft (TBD)
Site:	NFE Federal	North Reference:	Grid
Well:	#46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 09-09-15		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.00	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
440.00	0.00	0.00	440.00	0.00	0.00	0.00	0.00	0.00	0.00
T/Salt									
1,322.00	0.00	0.00	1,322.00	0.00	0.00	0.00	0.00	0.00	0.00
B/Salt									
1,485.00	0.00	0.00	1,485.00	0.00	0.00	0.00	0.00	0.00	0.00
Yates									
1,763.00	0.00	0.00	1,763.00	0.00	0.00	0.00	0.00	0.00	0.00
Seven Rivers									
2,357.00	0.00	0.00	2,357.00	0.00	0.00	0.00	0.00	0.00	0.00
Queen									
2,775.00	0.00	0.00	2,775.00	0.00	0.00	0.00	0.00	0.00	0.00
Grayburg									
3,098.00	0.00	0.00	3,098.00	0.00	0.00	0.00	0.00	0.00	0.00
San Andres									
4,291.66	0.00	0.00	4,291.66	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Start 12°/100' Build									
4,300.00	1.00	89.61	4,300.00	0.00	0.07	0.07	12.00	12.00	0.00
4,400.00	13.00	89.61	4,399.07	0.08	12.24	12.24	12.00	12.00	0.00
4,500.00	25.00	89.61	4,493.45	0.30	44.74	44.74	12.00	12.00	0.00
4,548.82	30.86	89.61	4,536.57	0.46	67.59	67.60	12.00	12.00	0.00
Glorieta									
4,600.00	37.00	89.61	4,579.01	0.65	96.15	96.15	12.00	12.00	0.00
4,617.10	39.05	89.61	4,592.48	0.73	106.68	106.68	12.00	12.00	0.00
Yeso (Paddock)									
4,700.00	49.00	89.61	4,652.01	1.12	164.22	164.22	12.00	12.00	0.00
4,800.00	61.00	89.61	4,709.26	1.68	245.99	245.99	12.00	12.00	0.00
4,900.00	73.00	89.61	4,748.26	2.30	337.87	337.87	12.00	12.00	0.00
5,000.00	85.00	89.61	4,767.31	2.97	435.85	435.86	12.00	12.00	0.00
5,030.54	88.67	89.61	4,769.00	3.18	466.34	466.35	12.00	12.00	0.00
LP, Hold 89.67° Inc									
5,100.00	88.67	89.61	4,770.61	3.65	535.77	535.79	0.00	0.00	0.00
5,200.00	88.67	89.61	4,772.94	4.33	635.75	635.76	0.00	0.00	0.00
5,300.00	88.67	89.61	4,775.27	5.01	735.72	735.73	0.00	0.00	0.00
5,400.00	88.67	89.61	4,777.60	5.69	835.69	835.71	0.00	0.00	0.00
5,500.00	88.67	89.61	4,779.92	6.37	935.66	935.68	0.00	0.00	0.00
5,600.00	88.67	89.61	4,782.25	7.05	1,035.63	1,035.65	0.00	0.00	0.00
5,700.00	88.67	89.61	4,784.58	7.73	1,135.60	1,135.62	0.00	0.00	0.00
5,800.00	88.67	89.61	4,786.91	8.41	1,235.57	1,235.60	0.00	0.00	0.00
5,900.00	88.67	89.61	4,789.24	9.10	1,335.54	1,335.57	0.00	0.00	0.00
6,000.00	88.67	89.61	4,791.56	9.78	1,435.51	1,435.54	0.00	0.00	0.00
6,100.00	88.67	89.61	4,793.89	10.46	1,535.48	1,535.52	0.00	0.00	0.00
6,200.00	88.67	89.61	4,796.22	11.14	1,635.45	1,635.49	0.00	0.00	0.00
6,300.00	88.67	89.61	4,798.55	11.82	1,735.42	1,735.46	0.00	0.00	0.00
6,400.00	88.67	89.61	4,800.88	12.50	1,835.39	1,835.43	0.00	0.00	0.00
6,500.00	88.67	89.61	4,803.20	13.18	1,935.36	1,935.41	0.00	0.00	0.00
6,600.00	88.67	89.61	4,805.53	13.86	2,035.33	2,035.38	0.00	0.00	0.00
6,700.00	88.67	89.61	4,807.86	14.54	2,135.30	2,135.35	0.00	0.00	0.00
6,800.00	88.67	89.61	4,810.19	15.22	2,235.27	2,235.33	0.00	0.00	0.00
6,900.00	88.67	89.61	4,812.52	15.90	2,335.25	2,335.30	0.00	0.00	0.00

Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #46H
Company:	Apache Corporation	TVD Reference:	KB @ 3770.00usft (TBD)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3770.00usft (TBD)
Site:	NFE Federal	North Reference:	Grid
Well:	#46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 09-09-15		

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)	
7,000.00	88.67	89.61	4,814.84	16.59	2,435.22	2,435.27	0.00	0.00	0.00	
7,100.00	88.67	89.61	4,817.17	17.27	2,535.19	2,535.26	0.00	0.00	0.00	
7,200.00	88.67	89.61	4,819.50	17.95	2,635.16	2,635.22	0.00	0.00	0.00	
7,300.00	88.67	89.61	4,821.83	18.63	2,735.13	2,735.19	0.00	0.00	0.00	
7,400.00	88.67	89.61	4,824.15	19.31	2,835.10	2,835.16	0.00	0.00	0.00	
7,500.00	88.67	89.61	4,826.48	19.99	2,935.07	2,935.14	0.00	0.00	0.00	
7,600.00	88.67	89.61	4,828.81	20.67	3,035.04	3,035.11	0.00	0.00	0.00	
7,700.00	88.67	89.61	4,831.14	21.35	3,135.01	3,135.08	0.00	0.00	0.00	
7,800.00	88.67	89.61	4,833.47	22.03	3,234.98	3,235.06	0.00	0.00	0.00	
7,900.00	88.67	89.61	4,835.79	22.71	3,334.95	3,335.03	0.00	0.00	0.00	
8,000.00	88.67	89.61	4,838.12	23.39	3,434.92	3,435.00	0.00	0.00	0.00	
8,100.00	88.67	89.61	4,840.45	24.07	3,534.89	3,534.97	0.00	0.00	0.00	
8,200.00	88.67	89.61	4,842.78	24.76	3,634.86	3,634.95	0.00	0.00	0.00	
8,300.00	88.67	89.61	4,845.11	25.44	3,734.83	3,734.92	0.00	0.00	0.00	
8,400.00	88.67	89.61	4,847.43	26.12	3,834.80	3,834.89	0.00	0.00	0.00	
8,500.00	88.67	89.61	4,849.76	26.80	3,934.77	3,934.87	0.00	0.00	0.00	
8,600.00	88.67	89.61	4,852.09	27.48	4,034.75	4,034.84	0.00	0.00	0.00	
8,700.00	88.67	89.61	4,854.42	28.16	4,134.72	4,134.81	0.00	0.00	0.00	
8,800.00	88.67	89.61	4,856.75	28.84	4,234.69	4,234.78	0.00	0.00	0.00	
8,896.84	88.67	89.61	4,859.00	29.50	4,331.50	4,331.60	0.00	0.00	0.00	
TD at 8896.84' MD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/S (usft)	+E/W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
MP-NFE Fed #46H v2	0.00	0.00	4,814.00	16.34	2,399.02	678,739.23	630,769.62	32° 51' 54.76273 N	103° 54' 26.55909 W	
- plan hits target center										
- Point										
BHL-NFE Fed #46H v2	0.00	0.00	4,859.00	29.50	4,331.50	678,752.40	632,722.10	32° 51' 54.81525 N	103° 54' 3.90165 W	
- plan hits target center										
- Point										

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
270.00	270.00	Rustler		1.33	89.61	
440.00	440.00	T/Salt		1.33	89.61	
1,322.00	1,322.00	B/Salt		1.33	89.61	
1,485.00	1,485.00	Yates		1.33	89.61	
1,763.00	1,763.00	Seven Rivers		1.33	89.61	
2,357.00	2,357.00	Queen		1.33	89.61	
2,775.00	2,775.00	Grayburg		1.33	89.61	
3,098.00	3,098.00	San Andres		1.33	89.61	
4,548.82	4,536.57	Glorieta		1.33	89.61	
4,617.10	4,592.48	Yeso (Paddock)		1.33	89.61	



Phoenix Technology Services LP Planning Report



Database:	Compass 5000 GCR	Local Co-ordinate Reference:	Well #46H
Company:	Apache Corporation	TVD Reference:	KB @ 3770.00usft (TBD)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB @ 3770.00usft (TBD)
Site:	NFE Federal	North Reference:	Grid
Well:	#46H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 09-09-15		

Plan Annotations:				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
4,291.66	4,291.66	0.00	0.00	KOP, Start 12"/100' Build
5,030.54	4,769.00	3.18	466.34	LP, Hold 89.67° Inc
8,896.84	4,859.00	29.50	4,331.50	TD at 8896.84' MD