

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 Contact: SORINA FLORES E-Mail: sorina.flores@apachecorp.com		6. If Indian, Allottee or Tribe Name
3a. Address 303 VETERANS AIRPARK LANE SUITE 3000 MIDLAND, TX 79705	3b. Phone No. (include area code) Ph: 432-818-1167	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 6 T17S R31E SESE 0920FSL 0155FEL 32.858687 N Lat, 103.900501 W Lon		8. Well Name and No. NFE FEDERAL 28H
		9. API Well No. 30-015-42653-00-X1
		10. Field and Pool, or Exploratory CEDAR LAKE
		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
	☐ 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 recomplete 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.)

BLM-CO-1463 NATIONWIDE / NMB000736

APACHE CORP REQUEST TO CHANGE TVD & MD FOR THE NFE FEDERAL #28H
FROM: TVD: 4750' MD: 9159'
TO: TVD: 4850' MD: 9297' LANDING TVD: 4987'

NEW DIRECTIONAL PLAN ATTACHED. NO OTHER CHANGE FROM ORIGINAL DRILLING PLAN.

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 26 2015

RECEIVED

Original COAs still stand. keep 9-5/8" casing fluid filled.

Accepted by BLM
2/4/15

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #288595 verified by the BLM Well Information System For APACHE CORPORATION, sent to the Carlsbad Committed to AFMSS for processing by JENNIFER MASON on 01/20/2015 (15JAM0197SE)	
Name (Printed/Typed) SORINA FLORES	Title SUBMITTING CONTACT
Signature (Electronic Submission)	Date 01/20/2015
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
APPROVED	
JAN 20 2015	
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.	Date
	Office

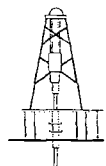
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

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



Azimuths to Grid North
True North: -0.23°
Magnetic North: 7.29°
Magnetic Field
Strength: 48548.5nT
Dip Angle: 60.62°
Date: 1/19/2015
Model: BGGM2014

NFE Federal #28H #28H
Eddy County, NM (NAD27 NME)
Northing: (Y) 676373.90
Easting: (X) 632910.80
Plan #1



KB=11' @ 3763.00usft (Capstar 119)
Ground Level: 3752.00

WELL DETAILS:

	Ground Level:	3752.00			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	676373.90	632910.80	32° 51' 31.272 N	103° 54' 1.804 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4509.81	0.00	0.00	4509.81	0.00	0.00	0.00	0.00	0.00	
5276.08	91.95	269.62	4987.00	-3.28	-493.72	12.00	269.62	493.73	
9297.38	91.95	269.62	4850.00	-30.00	-4512.60	0.00	0.00	4512.70	PBHL (#28H)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL (#28H)	4850.00	-30.00	-4512.60	676343.90	628398.20

SITE DETAILS: NFE Federal #28H
Site Centre Northing: 676373.90
Easting: 632910.80

Positional Uncertainty: 0.00
Convergence: 0.23
Local North: Grid

PROJECT DETAILS: Eddy County, NM (NAD27 NME)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001

System Datum: Mean Sea Level

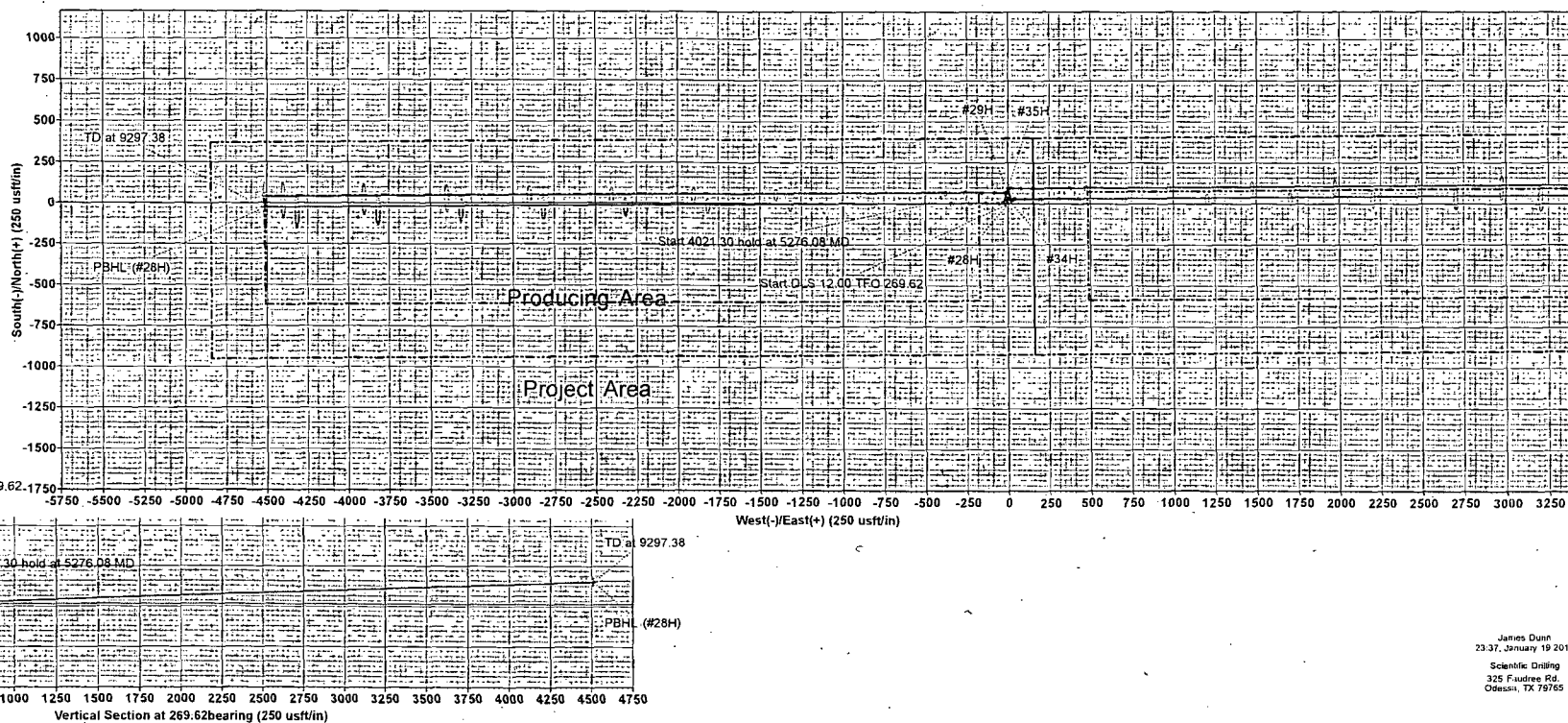
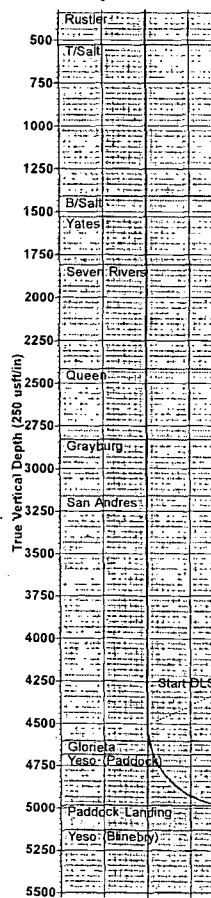
LEGEND

→ #29H, OH, Plan #1 V0
→ #34H, OH, Plan #1 V0
→ #35H, OH, Plan #1 V0
→ Plan #1

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 #28H, Grid North
Latitude: 32° 51' 31.272 N
Longitude: 103° 54' 1.804 W
Grid East: 632910.80
Grid North: 676373.90
Scale Factor: 1.000

Geomagnetic Model: BGGM2014
Sample Date: 19-Jan-15
Magnetic Declination: 7.52°
Dip Angle from Horizontal: 60.62°
Magnetic Field Strength: 48548

To convert Magnetic North to Grid, Add 7.29°
To convert Magnetic North to True, Add 7.52° East
To convert True North to Grid, Subtract 0.23°



James Dunn
23.37, January 19 2015
Scientific Drilling
325 Faudree Rd
Odessa, TX 79765





Apache Corporation

Eddy County, NM (NAD27 NME)

NFE Federal #28H

#28H

OH

Plan: Plan #1

Standard Planning Report

19 January, 2015



www.scientificdrilling.com



Planning Report



Database:	Midland District	Local Co-ordinate Reference:	Well #28H:
Company:	Apache Corporation	TVD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Site:	NFE Federal #28H	North Reference:	Grid:
Well:	#28H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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 #28H		
Site Position:		Northing:	676,373.90 usft
From:	Map	Easting:	632,910.80 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 51' 31.272 N
		Longitude:	103° 54' 1.804 W
		Grid Convergence:	0.23 °

Well:	#28H		
Well Position	+N-S	0.00 usft	Northing:
	+E-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 51' 31.272 N
		Longitude:	103° 54' 1.804 W
		Ground Level:	3,752.00 usft

Wellbore:	OH		
Magnetics	Model/Name	Sample Date	Declination
	BGGM2014	1/19/2015	7.52
			Dip/Angle
			60.62
			Field Strength
			48.548

Design:	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(bearing)
			269.62

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(bearing)	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	
4,509.81	0.00	0.00	4,509.81	0.00	0.00	0.00	0.00	0.00	0.00	
5,276.08	91.95	269.62	4,987.00	-3.28	-493.72	12.00	12.00	-11.79	269.62	
9,297.38	91.95	269.62	4,850.00	-30.00	-4,512.60	0.00	0.00	0.00	0.00	PBHL (#28H)

Database:	Midland District	Local Co-ordinate Reference:	Well #28H
Company:	Apache Corporation	TVD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Project:	Eddy County, NM (NAD27-NME)	MD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Site:	NFE Federal #28H	North Reference:	Grid
Well:	#28H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

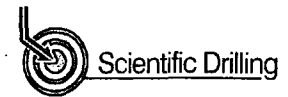
Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
343.00	0.00	0.00	343.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rustler										
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
528.00	0.00	0.00	528.00	0.00	0.00	0.00	0.00	0.00	0.00	
T/Salt										
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,413.00	0.00	0.00	1,413.00	0.00	0.00	0.00	0.00	0.00	0.00	
B/Salt										
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,533.00	0.00	0.00	1,533.00	0.00	0.00	0.00	0.00	0.00	0.00	
Yates										
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,813.00	0.00	0.00	1,813.00	0.00	0.00	0.00	0.00	0.00	0.00	
Seven Rivers										
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,417.00	0.00	0.00	2,417.00	0.00	0.00	0.00	0.00	0.00	0.00	
Queen										
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,833.00	0.00	0.00	2,833.00	0.00	0.00	0.00	0.00	0.00	0.00	
Grayburg										
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,163.00	0.00	0.00	3,163.00	0.00	0.00	0.00	0.00	0.00	0.00	
San Andres										
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	

Database	Midland District	Local Co-ordinate Reference:	Well #28H
Company	Apache Corporation	TVD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Project	Eddy County NM (NAD27 NME)	MD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Site	NFE Federal #28H	North Reference:	Grid
Well:	#28H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,509.81	0.00	0.00	4,509.81	0.00	0.00	0.00	0.00	0.00	0.00	
4,525.00	1.82	269.62	4,525.00	0.00	-0.24	0.24	12.00	12.00	0.00	
4,550.00	4.82	269.62	4,549.95	-0.01	-1.69	1.69	12.00	12.00	0.00	
4,575.00	7.82	269.62	4,574.80	-0.03	-4.44	4.44	12.00	12.00	0.00	
4,600.00	10.82	269.62	4,599.46	-0.06	-8.49	8.49	12.00	12.00	0.00	
4,603.60	11.26	269.62	4,603.00	-0.06	-9.18	9.18	12.00	12.00	0.00	
Glorieta										
4,625.00	13.82	269.62	4,623.89	-0.09	-13.83	13.83	12.00	12.00	0.00	
4,650.00	16.82	269.62	4,647.99	-0.14	-20.43	20.43	12.00	12.00	0.00	
4,675.00	19.82	269.62	4,671.72	-0.19	-28.29	28.29	12.00	12.00	0.00	
4,687.04	21.27	269.62	4,683.00	-0.22	-32.52	32.52	12.00	12.00	0.00	
Yeso (Paddock)										
4,700.00	22.82	269.62	4,695.01	-0.25	-37.38	37.38	12.00	12.00	0.00	
4,725.00	25.82	269.62	4,717.79	-0.32	-47.68	47.68	12.00	12.00	0.00	
4,750.00	28.82	269.62	4,740.00	-0.39	-59.15	59.15	12.00	12.00	0.00	
4,775.00	31.82	269.62	4,761.57	-0.48	-71.77	71.77	12.00	12.00	0.00	
4,800.00	34.82	269.62	4,782.46	-0.57	-85.50	85.50	12.00	12.00	0.00	
4,825.00	37.82	269.62	4,802.60	-0.67	-100.31	100.31	12.00	12.00	0.00	
4,850.00	40.82	269.62	4,821.94	-0.77	-116.15	116.15	12.00	12.00	0.00	
4,875.00	43.82	269.62	4,840.42	-0.88	-132.98	132.98	12.00	12.00	0.00	
4,900.00	46.82	269.62	4,858.00	-1.00	-150.75	150.76	12.00	12.00	0.00	
4,925.00	49.82	269.62	4,874.62	-1.13	-169.42	169.43	12.00	12.00	0.00	
4,950.00	52.82	269.62	4,890.24	-1.26	-188.94	188.94	12.00	12.00	0.00	
4,975.00	55.82	269.62	4,904.82	-1.39	-209.24	209.25	12.00	12.00	0.00	
5,000.00	58.82	269.62	4,918.31	-1.53	-230.28	230.29	12.00	12.00	0.00	
5,025.00	61.82	269.62	4,930.69	-1.68	-252.00	252.01	12.00	12.00	0.00	
5,050.00	64.82	269.62	4,941.91	-1.82	-274.34	274.34	12.00	12.00	0.00	
5,075.00	67.82	269.62	4,951.95	-1.98	-297.23	297.24	12.00	12.00	0.00	
5,100.00	70.82	269.62	4,960.78	-2.13	-320.61	320.62	12.00	12.00	0.00	
5,125.00	73.82	269.62	4,968.37	-2.29	-344.43	344.44	12.00	12.00	0.00	
5,150.00	76.82	269.62	4,974.70	-2.45	-368.61	368.62	12.00	12.00	0.00	
5,175.00	79.82	269.62	4,979.76	-2.61	-393.09	393.10	12.00	12.00	0.00	
5,200.00	82.82	269.62	4,983.53	-2.78	-417.80	417.81	12.00	12.00	0.00	
5,225.00	85.82	269.62	4,986.01	-2.94	-442.68	442.69	12.00	12.00	0.00	
5,243.61	88.06	269.62	4,987.00	-3.07	-461.26	461.27	12.00	12.00	0.00	
Paddock Landing										
5,250.00	88.82	269.62	4,987.17	-3.11	-467.65	467.66	12.00	12.00	0.00	
5,276.08	91.95	269.62	4,987.00	-3.28	-493.72	493.73	12.00	12.00	0.00	
5,300.00	91.95	269.62	4,986.18	-3.44	-517.63	517.64	0.00	0.00	0.00	
5,400.00	91.95	269.62	4,982.78	-4.11	-617.57	617.58	0.00	0.00	0.00	
5,500.00	91.95	269.62	4,979.37	-4.77	-717.51	717.52	0.00	0.00	0.00	
5,600.00	91.95	269.62	4,975.96	-5.43	-817.45	817.46	0.00	0.00	0.00	
5,700.00	91.95	269.62	4,972.56	-6.10	-917.39	917.41	0.00	0.00	0.00	
5,800.00	91.95	269.62	4,969.15	-6.76	-1,017.33	1,017.35	0.00	0.00	0.00	
5,900.00	91.95	269.62	4,965.74	-7.43	-1,117.26	1,117.29	0.00	0.00	0.00	



Planning Report



Database:	Midland District	Local/Co-ordinate Reference:	Well #28H
Company:	Apache Corporation	TVD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Project:	Eddy County NM (NAD27 NME)	MDI Reference:	KB=11' @ 3763.00usft (Capstar 119)
Site:	NFE Federal #28H	North Reference:	Grid
Well:	#28H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
6,000.00	91.95	269.62	4,962.34	-8.09	-1,217.20	1,217.23	0.00	0.00	0.00	
6,100.00	91.95	269.62	4,958.93	-8.76	-1,317.14	1,317.17	0.00	0.00	0.00	
6,200.00	91.95	269.62	4,955.52	-9.42	-1,417.08	1,417.12	0.00	0.00	0.00	
6,300.00	91.95	269.62	4,952.11	-10.09	-1,517.02	1,517.06	0.00	0.00	0.00	
6,400.00	91.95	269.62	4,948.71	-10.75	-1,616.96	1,617.00	0.00	0.00	0.00	
6,500.00	91.95	269.62	4,945.30	-11.41	-1,716.90	1,716.94	0.00	0.00	0.00	
6,600.00	91.95	269.62	4,941.89	-12.08	-1,816.84	1,816.88	0.00	0.00	0.00	
6,700.00	91.95	269.62	4,938.49	-12.74	-1,916.78	1,916.83	0.00	0.00	0.00	
6,800.00	91.95	269.62	4,935.08	-13.41	-2,016.72	2,016.77	0.00	0.00	0.00	
6,900.00	91.95	269.62	4,931.67	-14.07	-2,116.66	2,116.71	0.00	0.00	0.00	
7,000.00	91.95	269.62	4,928.27	-14.74	-2,216.60	2,216.65	0.00	0.00	0.00	
7,100.00	91.95	269.62	4,924.86	-15.40	-2,316.54	2,316.59	0.00	0.00	0.00	
7,200.00	91.95	269.62	4,921.45	-16.06	-2,416.48	2,416.53	0.00	0.00	0.00	
7,300.00	91.95	269.62	4,918.05	-16.73	-2,516.42	2,516.48	0.00	0.00	0.00	
7,400.00	91.95	269.62	4,914.64	-17.39	-2,616.36	2,616.42	0.00	0.00	0.00	
7,500.00	91.95	269.62	4,911.23	-18.06	-2,716.30	2,716.36	0.00	0.00	0.00	
7,600.00	91.95	269.62	4,907.83	-18.72	-2,816.24	2,816.30	0.00	0.00	0.00	
7,700.00	91.95	269.62	4,904.42	-19.39	-2,916.18	2,916.24	0.00	0.00	0.00	
7,800.00	91.95	269.62	4,901.01	-20.05	-3,016.12	3,016.19	0.00	0.00	0.00	
7,900.00	91.95	269.62	4,897.61	-20.72	-3,116.06	3,116.13	0.00	0.00	0.00	
8,000.00	91.95	269.62	4,894.20	-21.38	-3,216.00	3,216.07	0.00	0.00	0.00	
8,100.00	91.95	269.62	4,890.79	-22.04	-3,315.94	3,316.01	0.00	0.00	0.00	
8,200.00	91.95	269.62	4,887.39	-22.71	-3,415.88	3,415.95	0.00	0.00	0.00	
8,300.00	91.95	269.62	4,883.98	-23.37	-3,515.82	3,515.90	0.00	0.00	0.00	
8,400.00	91.95	269.62	4,880.57	-24.04	-3,615.76	3,615.84	0.00	0.00	0.00	
8,500.00	91.95	269.62	4,877.17	-24.70	-3,715.70	3,715.78	0.00	0.00	0.00	
8,600.00	91.95	269.62	4,873.76	-25.37	-3,815.64	3,815.72	0.00	0.00	0.00	
8,700.00	91.95	269.62	4,870.35	-26.03	-3,915.58	3,915.66	0.00	0.00	0.00	
8,800.00	91.95	269.62	4,866.94	-26.70	-4,015.52	4,015.61	0.00	0.00	0.00	
8,900.00	91.95	269.62	4,863.54	-27.36	-4,115.46	4,115.55	0.00	0.00	0.00	
9,000.00	91.95	269.62	4,860.13	-28.02	-4,215.40	4,215.49	0.00	0.00	0.00	
9,100.00	91.95	269.62	4,856.72	-28.69	-4,315.34	4,315.43	0.00	0.00	0.00	
9,200.00	91.95	269.62	4,853.32	-29.35	-4,415.28	4,415.37	0.00	0.00	0.00	
9,297.38	91.95	269.62	4,850.00	-30.00	-4,512.60	4,512.70	0.00	0.00	0.00	

Design Targets										
Target Name	Hit/miss target	Dip Angle (°)	Dip Dir (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (#28H)		0.00	0.00	4,850.00	-30.00	-4,512.60	676,343.90	628,398.20	32° 51' 31.155 N	103° 54' 54.708 W
	- plan hits target center									
	- Point									

Database:	Midland District	Local Co-ordinate Reference:	Well #28H
Company:	Apache Corporation	TVD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Project:	Eddy County, NM (NAD27 NME)	MD Reference:	KB=11' @ 3763.00usft (Capstar 119)
Site:	NFE Federal #28H	North Reference:	Grid
Well:	#28H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip Direction (bearing)
343.00	343.00	Rustler		
528.00	528.00	T/Salt		
1,413.00	1,413.00	B/Salt		
1,533.00	1,533.00	Yates		
1,813.00	1,813.00	Seven Rivers		
2,417.00	2,417.00	Queen		
2,833.00	2,833.00	Grayburg		
3,163.00	3,163.00	San Andres		
4,603.60	4,603.00	Glorieta		
4,687.04	4,683.00	Yeso (Paddock)		
5,243.61	4,987.00	Paddock Landing		