

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

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. NM LC 068399, NM LC 063537, NM NM 0000783, NM NM 00001084, NM LC 0063484
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
MANZANO, LLC

3a. Address
P.O. BOX 2107
ROSWELL, NM 88202-2107

3b. Phone No. (include area code)
575-623-1996

7. If Unit of CA/Agreement, Name and/or No.
BIG EDDY UNIT NM 62249X

8. Well Name and No.
BIG EDDY UNIT 331H

9. API Well No. 30-015-42493

10. Field and Pool or Exploratory Area
WC WILLIAMS SINK (BONE SPRING)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
@ SURFACE: 2050' FNL & 1975' FWL OF SECTION 10-T20S-R31E
@ BOTTOM HOLE: 2000' FNL & 330' FEL OF SECTION 11-T20S-R31E

11. County or Parish, State
EDDY, NM

12. CHECK THE 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 <u>REQUEST TO AMEND BHL</u>
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Manzano hereby requests to change the approved Bottom Hole Location for this well from 2000' FNL & 330' FEL of Section 11-T20S-R31E to 2000' FNL & 330' FEL of Section 12-T20S-R31E. The proposed change would require amending the following portions of the approved Form 3160-3:

Box 4 - Please change At proposed prod. zone location to "BHL: 2000' FNL & 330' FEL - SECTION 12-T20S-R31E"

Box 5 - Please add federal lease NM LC 0063484

Box 16 - Please change to "2758.31 acres"

Box 17 - Please change to "400 acres (S2NE-SECTION 10-T20S-R31E, S2N2-SECTION 11-T20S-R31E, & S2N2-SECTION 12-T20S-R31E)"

Box 19 - Please change to "TVD 9423' MD 22442"

Box 22 - Please change to '09/01/2014"

The Drilling Plan attached to the approved Form 3160-3 will need to be amended to show the new MD @ TD of 22442'.

In addition, please find attached:

- (1) a revised directional plan reflecting the proposed changes.
- (2) a revised NMOCD Form C102 survey plat showing the new BHL as well as the new spacing unit

No COA changes

Accepted for record
7/19/2014
NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 19 2014

RECEIVED

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
MIKE HANAGAN

Title MANAGING MEMBER

Signature

Date 07/22/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

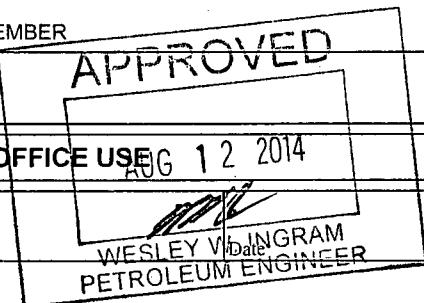
Title

Office

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.

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.

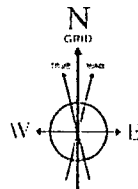
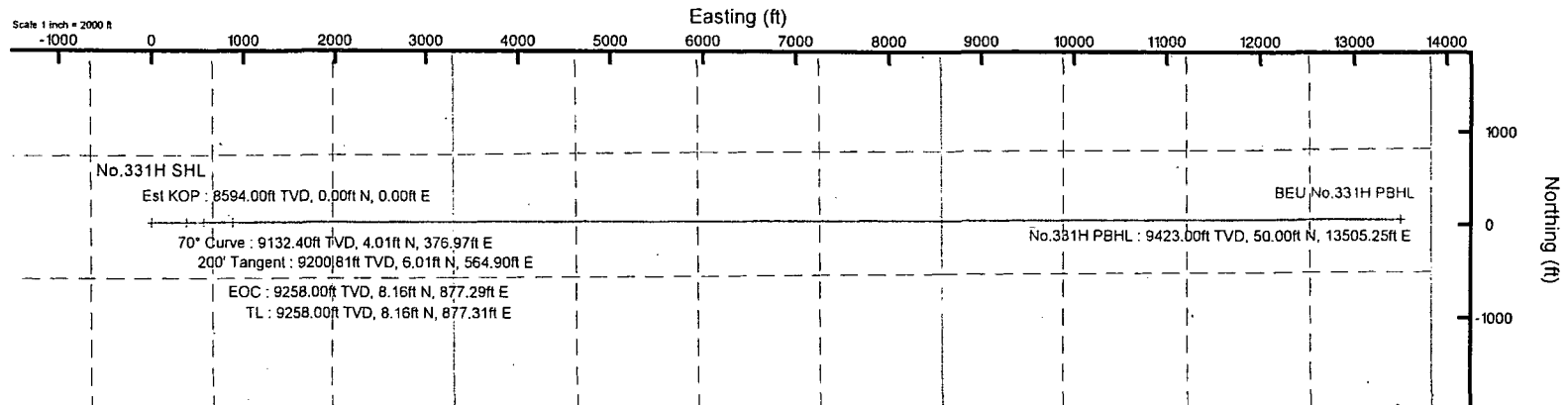
(Instructions on page 2)



WTD - West Texas Division

Location: Eddy County, NM
Field: Big Eddy Unit
Facility: BEU No.331H

Slot: No.331H SHL
Well: No.331H
Wellbore: No.331H PWB



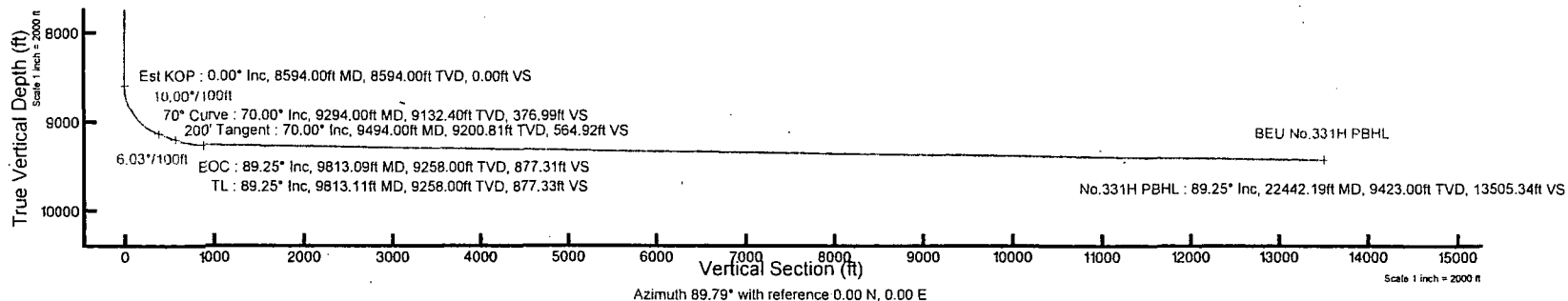
IGRF-11 (1900.0 thru 2014.0) Dip: 60.40° Field: 48496.4 nT
Magnetic North is 7.37 degrees East of True North (at 7/16/2014)
Grid North is 0.26 degrees East of True North
To correct azimuth from True to Grid subtract 0.26 degrees
To correct azimuth from Magnetic to Grid add 7.11 degrees

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	89.390	0.00	0.00	0.00	0.00	0.00
Est KOP	8594.00	0.000	89.390	8594.00	0.00	0.00	0.00	0.00
70° Curve	9294.00	70.000	89.390	9132.40	4.01	376.97	10.00	376.99
200' Tangent	9494.00	70.000	89.390	9200.81	6.01	564.90	0.00	564.92
EOC	9813.09	89.251	89.810	9258.00	8.16	877.29	6.03	877.31
TL	9813.11	89.251	89.810	9258.00	8.16	877.31	2.00	877.33
No.331H PWB	22442.19	89.251	89.810	9423.00	50.00	13505.25	0.00	13505.34

Plot reference wellpath is B-1

True vertical depths are referenced to Rig on No.331H SHL (RT)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.331H SHL (RT)	North Reference: Grid north
Rig on No.331H SHL (RT) to Mean Sea Level: 3476 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No.331H SHL): -3476 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: BWGentry on 7/17/2014



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	No.331H SHL
Area	Eddy County, NM	Well	No.331H
Field	Big Eddy Unit	Wellbore	No.331H PWB
Facility	BEU No.331H		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	BWGentry
Scale	0.999934	Report Generated	7/17/2014 at 1:28:32 PM
Convergence at slot	0.26° East	Database/Source file	WellArchitectDB/No.331H_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W
Facility Reference Pt			646204.24	578474.39	32°35'21.966"N	103°51'31.101"W
Field Reference Pt			640125.10	530502.80	32°27'27.522"N	103°52'44.545"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No.331H SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No.331H SHL (RT) to Mean Sea Level	3476.00ft
Vertical Reference Pt	Rig on No.331H SHL (RT)	Rig on No.331H SHL (RT) to Mud Line at Slot (No.331H SHL)	0.00ft
MD Reference Pt	Rig on No.331H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.79°

Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	No.331H SHL
Area	Eddy County, NM	Well	No.331H
Field	Big Eddy Unit	Wellbore	No.331H PWB
Facility	BEU No.331H		

WELLPATH DATA (240 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	89.390	0.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Tie On
100.00†	0.000	89.390	100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
200.00†	0.000	89.390	200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
300.00†	0.000	89.390	300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
400.00†	0.000	89.390	400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
500.00†	0.000	89.390	500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
600.00†	0.000	89.390	600.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
700.00†	0.000	89.390	700.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
755.00†	0.000	89.390	755.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Rustler Anhydrite
800.00†	0.000	89.390	800.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
900.00†	0.000	89.390	900.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1000.00†	0.000	89.390	1000.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1040.00†	0.000	89.390	1040.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Top of Salt
1100.00†	0.000	89.390	1100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1200.00†	0.000	89.390	1200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1300.00†	0.000	89.390	1300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1400.00†	0.000	89.390	1400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1500.00†	0.000	89.390	1500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1600.00†	0.000	89.390	1600.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1700.00†	0.000	89.390	1700.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1800.00†	0.000	89.390	1800.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
1900.00†	0.000	89.390	1900.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2000.00†	0.000	89.390	2000.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2100.00†	0.000	89.390	2100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2200.00†	0.000	89.390	2200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2300.00†	0.000	89.390	2300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2400.00†	0.000	89.390	2400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2410.00†	0.000	89.390	2410.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Base of Salt
2500.00†	0.000	89.390	2500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2600.00†	0.000	89.390	2600.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2690.00†	0.000	89.390	2690.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Yates
2700.00†	0.000	89.390	2700.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2800.00†	0.000	89.390	2800.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2900.00†	0.000	89.390	2900.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
2990.00†	0.000	89.390	2990.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Capitan Reef
3000.00†	0.000	89.390	3000.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3100.00†	0.000	89.390	3100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3200.00†	0.000	89.390	3200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3300.00†	0.000	89.390	3300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3400.00†	0.000	89.390	3400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3500.00†	0.000	89.390	3500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3600.00†	0.000	89.390	3600.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3700.00†	0.000	89.390	3700.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3800.00†	0.000	89.390	3800.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
3900.00†	0.000	89.390	3900.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	

Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	No.331H SHL
Area	Eddy County, NM	Well	No.331H
Field	Big Eddy Unit	Wellbore	No.331H PWB
Facility	BEU No.331H		

WELLPATH DATA (240 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4000.00†	0.000	89.390	4000.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4100.00†	0.000	89.390	4100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4160.00†	0.000	89.390	4160.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Base Capitan Porosity
4200.00†	0.000	89.390	4200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4300.00†	0.000	89.390	4300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4320.00†	0.000	89.390	4320.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Delaware
4400.00†	0.000	89.390	4400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4500.00†	0.000	89.390	4500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4600.00†	0.000	89.390	4600.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4700.00†	0.000	89.390	4700.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4800.00†	0.000	89.390	4800.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
4900.00†	0.000	89.390	4900.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5000.00†	0.000	89.390	5000.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5100.00†	0.000	89.390	5100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5200.00†	0.000	89.390	5200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5300.00†	0.000	89.390	5300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5400.00†	0.000	89.390	5400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5500.00†	0.000	89.390	5500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5600.00†	0.000	89.390	5600.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5700.00†	0.000	89.390	5700.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5800.00†	0.000	89.390	5800.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
5900.00†	0.000	89.390	5900.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6000.00†	0.000	89.390	6000.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6100.00†	0.000	89.390	6100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6200.00†	0.000	89.390	6200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6300.00†	0.000	89.390	6300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6400.00†	0.000	89.390	6400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6500.00†	0.000	89.390	6500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6600.00†	0.000	89.390	6600.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6700.00†	0.000	89.390	6700.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6800.00†	0.000	89.390	6800.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
6900.00†	0.000	89.390	6900.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7000.00†	0.000	89.390	7000.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7100.00†	0.000	89.390	7100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7175.00†	0.000	89.390	7175.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Bone Spring
7200.00†	0.000	89.390	7200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7300.00†	0.000	89.390	7300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7400.00†	0.000	89.390	7400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7500.00†	0.000	89.390	7500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7600.00†	0.000	89.390	7600.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7700.00†	0.000	89.390	7700.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7800.00†	0.000	89.390	7800.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
7900.00†	0.000	89.390	7900.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
8000.00†	0.000	89.390	8000.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
8100.00†	0.000	89.390	8100.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	No.331H SHL
Area	Eddy County, NM	Well	No.331H
Field	Big Eddy Unit	Wellbore	No.331H PWB
Facility	BEU No.331H		

WELLPATH DATA (240 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8200.00†	0.000	89.390	8200.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
8300.00†	0.000	89.390	8300.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
8400.00†	0.000	89.390	8400.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	1st Bone Spring Sand
8500.00†	0.000	89.390	8500.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	
8594.00	0.000	89.390	8594.00	0.00	0.00	0.00	646204.24	578474.39	32°35'21.966"N	103°51'31.101"W	0.00	Est KOP
8600.00†	0.600	89.390	8600.00	0.03	0.00	0.03	646204.27	578474.39	32°35'21.966"N	103°51'31.101"W	10.00	
8700.00†	10.600	89.390	8699.40	9.78	0.10	9.78	646214.01	578474.49	32°35'21.967"N	103°51'30.987"W	10.00	
8800.00†	20.600	89.390	8795.59	36.63	0.39	36.63	646240.87	578474.78	32°35'21.969"N	103°51'30.673"W	10.00	
8900.00†	30.600	89.390	8885.66	79.79	0.85	79.78	646284.02	578475.24	32°35'21.971"N	103°51'30.169"W	10.00	
9000.00†	40.600	89.390	8966.87	137.92	1.47	137.92	646342.15	578475.86	32°35'21.975"N	103°51'29.489"W	10.00	
9100.00†	50.600	89.390	9036.74	209.28	2.23	209.27	646413.50	578476.62	32°35'21.979"N	103°51'28.655"W	10.00	
9200.00†	60.600	89.390	9093.17	291.68	3.11	291.67	646495.89	578477.49	32°35'21.984"N	103°51'27.692"W	10.00	
9214.23†	62.023	89.390	9100.00	304.17	3.24	304.16	646508.37	578477.63	32°35'21.985"N	103°51'27.546"W	10.00	2nd Bone Spring Sand
9294.00	70.000	89.390	9132.40	376.99	4.01	376.97	646581.19	578478.40	32°35'21.989"N	103°51'26.695"W	10.00	70° Curve
9300.00†	70.000	89.390	9134.46	382.62	4.07	382.61	646586.82	578478.46	32°35'21.990"N	103°51'26.629"W	0.00	
9400.00†	70.000	89.390	9168.66	476.59	5.07	476.58	646680.78	578479.46	32°35'21.995"N	103°51'25.531"W	0.00	
9494.00	70.000	89.390	9200.81	564.92	6.01	564.90	646769.10	578480.40	32°35'22.001"N	103°51'24.499"W	0.00	200' Tangent
9500.00†	70.362	89.399	9202.84	570.56	6.07	570.55	646774.74	578480.46	32°35'22.001"N	103°51'24.433"W	6.03	
9600.00†	76.395	89.536	9231.43	666.34	6.96	666.32	646870.51	578481.35	32°35'22.006"N	103°51'23.313"W	6.03	
9700.00†	82.428	89.667	9249.80	764.59	7.65	764.57	646968.75	578482.03	32°35'22.008"N	103°51'22.165"W	6.03	
9800.00†	88.462	89.794	9257.74	864.23	8.11	864.21	647068.38	578482.50	32°35'22.008"N	103°51'21.001"W	6.03	
9813.09	89.251	89.810	9258.00	877.31	8.16	877.29	647081.47	578482.55	32°35'22.008"N	103°51'20.848"W	6.03	EOC
9813.11	89.251	89.810	9258.00	877.33	8.16	877.31	647081.49	578482.55	32°35'22.008"N	103°51'20.847"W	2.00	TL
9900.00†	89.251	89.810	9259.14	964.22	8.45	964.19	647168.37	578482.84	32°35'22.007"N	103°51'19.832"W	0.00	
10000.00†	89.251	89.810	9260.44	1064.21	8.78	1064.19	647268.35	578483.17	32°35'22.006"N	103°51'18.663"W	0.00	
10100.00†	89.251	89.810	9261.75	1164.20	9.11	1164.18	647368.33	578483.50	32°35'22.005"N	103°51'17.495"W	0.00	
10200.00†	89.251	89.810	9263.06	1264.19	9.44	1264.17	647468.32	578483.83	32°35'22.004"N	103°51'16.326"W	0.00	
10300.00†	89.251	89.810	9264.36	1364.18	9.77	1364.16	647568.30	578484.16	32°35'22.002"N	103°51'15.157"W	0.00	
10400.00†	89.251	89.810	9265.67	1464.18	10.10	1464.15	647668.29	578484.49	32°35'22.001"N	103°51'13.989"W	0.00	
10500.00†	89.251	89.810	9266.97	1564.17	10.44	1564.14	647768.27	578484.82	32°35'22.000"N	103°51'12.820"W	0.00	
10600.00†	89.251	89.810	9268.28	1664.16	10.77	1664.13	647868.26	578485.16	32°35'21.999"N	103°51'11.651"W	0.00	
10700.00†	89.251	89.810	9269.59	1764.15	11.10	1764.12	647968.24	578485.49	32°35'21.998"N	103°51'10.483"W	0.00	
10800.00†	89.251	89.810	9270.89	1864.14	11.43	1864.11	648068.22	578485.82	32°35'21.997"N	103°51'09.314"W	0.00	
10900.00†	89.251	89.810	9272.20	1964.13	11.76	1964.10	648168.21	578486.15	32°35'21.995"N	103°51'08.146"W	0.00	
11000.00†	89.251	89.810	9273.51	2064.13	12.09	2064.09	648268.19	578486.48	32°35'21.994"N	103°51'06.977"W	0.00	
11100.00†	89.251	89.810	9274.81	2164.12	12.42	2164.09	648368.18	578486.81	32°35'21.993"N	103°51'05.808"W	0.00	
11200.00†	89.251	89.810	9276.12	2264.11	12.75	2264.08	648468.16	578487.14	32°35'21.992"N	103°51'04.640"W	0.00	
11300.00†	89.251	89.810	9277.43	2364.10	13.09	2364.07	648568.14	578487.47	32°35'21.991"N	103°51'03.471"W	0.00	
11400.00†	89.251	89.810	9278.73	2464.09	13.42	2464.06	648668.13	578487.81	32°35'21.989"N	103°51'02.302"W	0.00	
11500.00†	89.251	89.810	9280.04	2564.08	13.75	2564.05	648768.11	578488.14	32°35'21.988"N	103°51'01.134"W	0.00	
11600.00†	89.251	89.810	9281.35	2664.07	14.08	2664.04	648868.10	578488.47	32°35'21.987"N	103°50'59.965"W	0.00	
11700.00†	89.251	89.810	9282.65	2764.07	14.41	2764.03	648968.08	578488.80	32°35'21.986"N	103°50'58.796"W	0.00	
11800.00†	89.251	89.810	9283.96	2864.06	14.74	2864.02	649068.06	578489.13	32°35'21.984"N	103°50'57.628"W	0.00	
11900.00†	89.251	89.810	9285.27	2964.05	15.07	2964.01	649168.05	578489.46	32°35'21.983"N	103°50'56.459"W	0.00	
12000.00†	89.251	89.810	9286.57	3064.04	15.41	3064.00	649268.03	578489.79	32°35'21.982"N	103°50'55.291"W	0.00	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	No.331H SHL
Area	Eddy County, NM	Well	No.331H
Field	Big Eddy Unit	Wellbore	No.331H PWB
Facility	BEU No.331H		

WELLPATH DATA (240 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12100.00†	89.251	89.810	9287.88	3164.03	15.74	3163.99	649368.02	578490.12	32°35'21.981"N	103°50'54.122"W	0.00	
12200.00†	89.251	89.810	9289.19	3264.02	16.07	3263.99	649468.00	578490.46	32°35'21.980"N	103°50'52.953"W	0.00	
12300.00†	89.251	89.810	9290.49	3364.01	16.40	3363.98	649567.98	578490.79	32°35'21.978"N	103°50'51.785"W	0.00	
12400.00†	89.251	89.810	9291.80	3464.01	16.73	3463.97	649667.97	578491.12	32°35'21.977"N	103°50'50.616"W	0.00	
12500.00†	89.251	89.810	9293.10	3564.00	17.06	3563.96	649767.95	578491.45	32°35'21.976"N	103°50'49.447"W	0.00	
12600.00†	89.251	89.810	9294.41	3663.99	17.39	3663.95	649867.94	578491.78	32°35'21.975"N	103°50'48.279"W	0.00	
12700.00†	89.251	89.810	9295.72	3763.98	17.72	3763.94	649967.92	578492.11	32°35'21.973"N	103°50'47.110"W	0.00	
12800.00†	89.251	89.810	9297.02	3863.97	18.06	3863.93	650067.90	578492.44	32°35'21.972"N	103°50'45.941"W	0.00	
12900.00†	89.251	89.810	9298.33	3963.96	18.39	3963.92	650167.89	578492.77	32°35'21.971"N	103°50'44.773"W	0.00	
13000.00†	89.251	89.810	9299.64	4063.95	18.72	4063.91	650267.87	578493.11	32°35'21.970"N	103°50'43.604"W	0.00	
13100.00†	89.251	89.810	9300.94	4163.95	19.05	4163.90	650367.86	578493.44	32°35'21.968"N	103°50'42.435"W	0.00	
13200.00†	89.251	89.810	9302.25	4263.94	19.38	4263.89	650467.84	578493.77	32°35'21.967"N	103°50'41.267"W	0.00	
13300.00†	89.251	89.810	9303.56	4363.93	19.71	4363.89	650567.83	578494.10	32°35'21.966"N	103°50'40.098"W	0.00	
13400.00†	89.251	89.810	9304.86	4463.92	20.04	4463.88	650667.81	578494.43	32°35'21.965"N	103°50'38.930"W	0.00	
13500.00†	89.251	89.810	9306.17	4563.91	20.37	4563.87	650767.79	578494.76	32°35'21.963"N	103°50'37.761"W	0.00	
13600.00†	89.251	89.810	9307.48	4663.90	20.71	4663.86	650867.78	578495.09	32°35'21.962"N	103°50'36.592"W	0.00	
13700.00†	89.251	89.810	9308.78	4763.89	21.04	4763.85	650967.76	578495.42	32°35'21.961"N	103°50'35.424"W	0.00	
13800.00†	89.251	89.810	9310.09	4863.89	21.37	4863.84	651067.75	578495.76	32°35'21.959"N	103°50'34.255"W	0.00	
13900.00†	89.251	89.810	9311.40	4963.88	21.70	4963.83	651167.73	578496.09	32°35'21.958"N	103°50'33.086"W	0.00	
14000.00†	89.251	89.810	9312.70	5063.87	22.03	5063.82	651267.71	578496.42	32°35'21.957"N	103°50'31.918"W	0.00	
14100.00†	89.251	89.810	9314.01	5163.86	22.36	5163.81	651367.70	578496.75	32°35'21.956"N	103°50'30.749"W	0.00	
14200.00†	89.251	89.810	9315.32	5263.85	22.69	5263.80	651467.68	578497.08	32°35'21.954"N	103°50'29.580"W	0.00	
14300.00†	89.251	89.810	9316.62	5363.84	23.02	5363.79	651567.67	578497.41	32°35'21.953"N	103°50'28.412"W	0.00	
14400.00†	89.251	89.810	9317.93	5463.83	23.36	5463.79	651667.65	578497.74	32°35'21.952"N	103°50'27.243"W	0.00	
14500.00†	89.251	89.810	9319.23	5563.83	23.69	5563.78	651767.63	578498.07	32°35'21.950"N	103°50'26.075"W	0.00	
14600.00†	89.251	89.810	9320.54	5663.82	24.02	5663.77	651867.62	578498.41	32°35'21.949"N	103°50'24.906"W	0.00	
14700.00†	89.251	89.810	9321.85	5763.81	24.35	5763.76	651967.60	578498.74	32°35'21.948"N	103°50'23.737"W	0.00	
14800.00†	89.251	89.810	9323.15	5863.80	24.68	5863.75	652067.59	578499.07	32°35'21.946"N	103°50'22.569"W	0.00	
14900.00†	89.251	89.810	9324.46	5963.79	25.01	5963.74	652167.57	578499.40	32°35'21.945"N	103°50'21.400"W	0.00	
15000.00†	89.251	89.810	9325.77	6063.78	25.34	6063.73	652267.55	578499.73	32°35'21.944"N	103°50'20.231"W	0.00	
15100.00†	89.251	89.810	9327.07	6163.77	25.68	6163.72	652367.54	578500.06	32°35'21.942"N	103°50'19.063"W	0.00	
15200.00†	89.251	89.810	9328.38	6263.77	26.01	6263.71	652467.52	578500.39	32°35'21.941"N	103°50'17.894"W	0.00	
15300.00†	89.251	89.810	9329.69	6363.76	26.34	6363.70	652567.51	578500.73	32°35'21.940"N	103°50'16.725"W	0.00	
15400.00†	89.251	89.810	9330.99	6463.75	26.67	6463.69	652667.49	578501.06	32°35'21.938"N	103°50'15.557"W	0.00	
15500.00†	89.251	89.810	9332.30	6563.74	27.00	6563.69	652767.47	578501.39	32°35'21.937"N	103°50'14.388"W	0.00	
15600.00†	89.251	89.810	9333.61	6663.73	27.33	6663.68	652867.46	578501.72	32°35'21.936"N	103°50'13.220"W	0.00	
15700.00†	89.251	89.810	9334.91	6763.72	27.66	6763.67	652967.44	578502.05	32°35'21.934"N	103°50'12.051"W	0.00	
15800.00†	89.251	89.810	9336.22	6863.72	27.99	6863.66	653067.43	578502.38	32°35'21.933"N	103°50'10.882"W	0.00	
15900.00†	89.251	89.810	9337.53	6963.71	28.33	6963.65	653167.41	578502.71	32°35'21.932"N	103°50'09.714"W	0.00	
16000.00†	89.251	89.810	9338.83	7063.70	28.66	7063.64	653267.40	578503.04	32°35'21.930"N	103°50'08.545"W	0.00	
16100.00†	89.251	89.810	9340.14	7163.69	28.99	7163.63	653367.38	578503.38	32°35'21.929"N	103°50'07.376"W	0.00	
16200.00†	89.251	89.810	9341.45	7263.68	29.32	7263.62	653467.36	578503.71	32°35'21.928"N	103°50'06.208"W	0.00	
16300.00†	89.251	89.810	9342.75	7363.67	29.65	7363.61	653567.35	578504.04	32°35'21.926"N	103°50'05.039"W	0.00	
16400.00†	89.251	89.810	9344.06	7463.66	29.98	7463.60	653667.33	578504.37	32°35'21.925"N	103°50'03.870"W	0.00	
16500.00†	89.251	89.810	9345.36	7563.66	30.31	7563.59	653767.32	578504.70	32°35'21.924"N	103°50'02.702"W	0.00	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	No.331H SHL
Area	Eddy County, NM	Well	No.331H
Field	Big Eddy Unit	Wellbore	No.331H PWB
Facility	BEU No.331H		

WELLPATH DATA (240 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16600.00†	89.251	89.810	9346.67	7663.65	30.64	7663.59	653867.30	578505.03	32°35'21.922"N	103°50'01.533"W	0.00	
16700.00†	89.251	89.810	9347.98	7763.64	30.98	7763.58	653967.28	578505.36	32°35'21.921"N	103°50'00.365"W	0.00	
16800.00†	89.251	89.810	9349.28	7863.63	31.31	7863.57	654067.27	578505.69	32°35'21.920"N	103°49'59.196"W	0.00	
16900.00†	89.251	89.810	9350.59	7963.62	31.64	7963.56	654167.25	578506.03	32°35'21.918"N	103°49'58.027"W	0.00	
17000.00†	89.251	89.810	9351.90	8063.61	31.97	8063.55	654267.24	578506.36	32°35'21.917"N	103°49'56.859"W	0.00	
17100.00†	89.251	89.810	9353.20	8163.60	32.30	8163.54	654367.22	578506.69	32°35'21.915"N	103°49'55.690"W	0.00	
17200.00†	89.251	89.810	9354.51	8263.60	32.63	8263.53	654467.20	578507.02	32°35'21.914"N	103°49'54.521"W	0.00	
17300.00†	89.251	89.810	9355.82	8363.59	32.96	8363.52	654567.19	578507.35	32°35'21.913"N	103°49'53.353"W	0.00	
17400.00†	89.251	89.810	9357.12	8463.58	33.30	8463.51	654667.17	578507.68	32°35'21.911"N	103°49'52.184"W	0.00	
17500.00†	89.251	89.810	9358.43	8563.57	33.63	8563.50	654767.16	578508.01	32°35'21.910"N	103°49'51.015"W	0.00	
17600.00†	89.251	89.810	9359.74	8663.56	33.96	8663.49	654867.14	578508.34	32°35'21.908"N	103°49'49.847"W	0.00	
17700.00†	89.251	89.810	9361.04	8763.55	34.29	8763.49	654967.12	578508.68	32°35'21.907"N	103°49'48.678"W	0.00	
17800.00†	89.251	89.810	9362.35	8863.54	34.62	8863.48	655067.11	578509.01	32°35'21.906"N	103°49'47.510"W	0.00	
17900.00†	89.251	89.810	9363.66	8963.54	34.95	8963.47	655167.09	578509.34	32°35'21.904"N	103°49'46.341"W	0.00	
18000.00†	89.251	89.810	9364.96	9063.53	35.28	9063.46	655267.08	578509.67	32°35'21.903"N	103°49'45.172"W	0.00	
18100.00†	89.251	89.810	9366.27	9163.52	35.61	9163.45	655367.06	578510.00	32°35'21.901"N	103°49'44.004"W	0.00	
18200.00†	89.251	89.810	9367.58	9263.51	35.95	9263.44	655467.04	578510.33	32°35'21.900"N	103°49'42.835"W	0.00	
18300.00†	89.251	89.810	9368.88	9363.50	36.28	9363.43	655567.03	578510.66	32°35'21.899"N	103°49'41.666"W	0.00	
18400.00†	89.251	89.810	9370.19	9463.49	36.61	9463.42	655667.01	578510.99	32°35'21.897"N	103°49'40.498"W	0.00	
18500.00†	89.251	89.810	9371.50	9563.48	36.94	9563.41	655767.00	578511.33	32°35'21.896"N	103°49'39.329"W	0.00	
18600.00†	89.251	89.810	9372.80	9663.48	37.27	9663.40	655866.98	578511.66	32°35'21.894"N	103°49'38.160"W	0.00	
18700.00†	89.251	89.810	9374.11	9763.47	37.60	9763.39	655966.97	578511.99	32°35'21.893"N	103°49'36.992"W	0.00	
18800.00†	89.251	89.810	9375.41	9863.46	37.93	9863.39	656066.95	578512.32	32°35'21.891"N	103°49'35.823"W	0.00	
18900.00†	89.251	89.810	9376.72	9963.45	38.26	9963.38	656166.93	578512.65	32°35'21.890"N	103°49'34.655"W	0.00	
19000.00†	89.251	89.810	9378.03	10063.44	38.60	10063.37	656266.92	578512.98	32°35'21.889"N	103°49'33.486"W	0.00	
19100.00†	89.251	89.810	9379.33	10163.43	38.93	10163.36	656366.90	578513.31	32°35'21.887"N	103°49'32.317"W	0.00	
19200.00†	89.251	89.810	9380.64	10263.42	39.26	10263.35	656466.89	578513.65	32°35'21.886"N	103°49'31.149"W	0.00	
19300.00†	89.251	89.810	9381.95	10363.42	39.59	10363.34	656566.87	578513.98	32°35'21.884"N	103°49'29.980"W	0.00	
19400.00†	89.251	89.810	9383.25	10463.41	39.92	10463.33	656666.85	578514.31	32°35'21.883"N	103°49'28.811"W	0.00	
19500.00†	89.251	89.810	9384.56	10563.40	40.25	10563.32	656766.84	578514.64	32°35'21.881"N	103°49'27.643"W	0.00	
19600.00†	89.251	89.810	9385.87	10663.39	40.58	10663.31	656866.82	578514.97	32°35'21.880"N	103°49'26.474"W	0.00	
19700.00†	89.251	89.810	9387.17	10763.38	40.92	10763.30	656966.81	578515.30	32°35'21.878"N	103°49'25.305"W	0.00	
19800.00†	89.251	89.810	9388.48	10863.37	41.25	10863.30	657066.79	578515.63	32°35'21.877"N	103°49'24.137"W	0.00	
19900.00†	89.251	89.810	9389.79	10963.36	41.58	10963.29	657166.77	578515.96	32°35'21.875"N	103°49'22.968"W	0.00	
20000.00†	89.251	89.810	9391.09	11063.36	41.91	11063.28	657266.76	578516.30	32°35'21.874"N	103°49'21.800"W	0.00	
20100.00†	89.251	89.810	9392.40	11163.35	42.24	11163.27	657366.74	578516.63	32°35'21.873"N	103°49'20.631"W	0.00	
20200.00†	89.251	89.810	9393.71	11263.34	42.57	11263.26	657466.73	578516.96	32°35'21.871"N	103°49'19.462"W	0.00	
20300.00†	89.251	89.810	9395.01	11363.33	42.90	11363.25	657566.71	578517.29	32°35'21.870"N	103°49'18.294"W	0.00	
20400.00†	89.251	89.810	9396.32	11463.32	43.23	11463.24	657666.69	578517.62	32°35'21.868"N	103°49'17.125"W	0.00	
20500.00†	89.251	89.810	9397.63	11563.31	43.57	11563.23	657766.68	578517.95	32°35'21.867"N	103°49'15.956"W	0.00	
20600.00†	89.251	89.810	9398.93	11663.30	43.90	11663.22	657866.66	578518.28	32°35'21.865"N	103°49'14.788"W	0.00	
20700.00†	89.251	89.810	9400.24	11763.30	44.23	11763.21	657966.65	578518.61	32°35'21.864"N	103°49'13.619"W	0.00	
20800.00†	89.251	89.810	9401.54	11863.29	44.56	11863.20	658066.63	578518.95	32°35'21.862"N	103°49'12.450"W	0.00	
20900.00†	89.251	89.810	9402.85	11963.28	44.89	11963.20	658166.61	578519.28	32°35'21.861"N	103°49'11.282"W	0.00	
21000.00†	89.251	89.810	9404.16	12063.27	45.22	12063.19	658266.60	578519.61	32°35'21.859"N	103°49'10.113"W	0.00	

Planned Wellpath Report

B-1

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REFERENCE WELLPATH IDENTIFICATION			
Operator	WTD - West Texas Division	Slot	No.331H SHL
Area	Eddy County, NM	Well	No.331H
Field	Big Eddy Unit	Wellbore	No.331H PWB
Facility	BEU No.331H		

WELLPATH DATA (240 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
21100.00†	89.251	89.810	9405.46	12163.26	45.55	12163.18	658366.58	578519.94	32°35'21.858"N	103°49'08.945"W	0.00	
21200.00†	89.251	89.810	9406.77	12263.25	45.88	12263.17	658466.57	578520.27	32°35'21.856"N	103°49'07.776"W	0.00	
21300.00†	89.251	89.810	9408.08	12363.25	46.22	12363.16	658566.55	578520.60	32°35'21.855"N	103°49'06.607"W	0.00	
21400.00†	89.251	89.810	9409.38	12463.24	46.55	12463.15	658666.54	578520.93	32°35'21.853"N	103°49'05.439"W	0.00	
21500.00†	89.251	89.810	9410.69	12563.23	46.88	12563.14	658766.52	578521.26	32°35'21.852"N	103°49'04.270"W	0.00	
21600.00†	89.251	89.810	9412.00	12663.22	47.21	12663.13	658866.50	578521.60	32°35'21.850"N	103°49'03.101"W	0.00	
21700.00†	89.251	89.810	9413.30	12763.21	47.54	12763.12	658966.49	578521.93	32°35'21.849"N	103°49'01.933"W	0.00	
21800.00†	89.251	89.810	9414.61	12863.20	47.87	12863.11	659066.47	578522.26	32°35'21.847"N	103°49'00.764"W	0.00	
21900.00†	89.251	89.810	9415.92	12963.19	48.20	12963.10	659166.46	578522.59	32°35'21.846"N	103°48'59.596"W	0.00	
22000.00†	89.251	89.810	9417.22	13063.19	48.54	13063.10	659266.44	578522.92	32°35'21.844"N	103°48'58.427"W	0.00	
22100.00†	89.251	89.810	9418.53	13163.18	48.87	13163.09	659366.42	578523.25	32°35'21.842"N	103°48'57.258"W	0.00	
22200.00†	89.251	89.810	9419.84	13263.17	49.20	13263.08	659466.41	578523.58	32°35'21.841"N	103°48'56.090"W	0.00	
22300.00†	89.251	89.810	9421.14	13363.16	49.53	13363.07	659566.39	578523.91	32°35'21.839"N	103°48'54.921"W	0.00	
22400.00†	89.251	89.810	9422.45	13463.15	49.86	13463.06	659666.38	578524.25	32°35'21.838"N	103°48'53.752"W	0.00	
22442.19	89.251	89.810	9423.00†	13505.34	50.00	13505.25	659708.56	578524.39	32°35'21.837"N	103°48'53.259"W	0.00	No.331H PBHL

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) BEU No.331H PBHL	22442.19	9423.00	50.00	13505.25	659708.56	578524.39	32°35'21.837"N	103°48'53.259"W	point

SURVEY PROGRAM - Ref Wellbore: No.331H PWB Ref Wellpath: B-1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	22442.85	NaviTrak (Standard)		No.331H PWB

DISTRICT I
1025 N. French Dr., Hobbs, NM 88240
Phone (575) 393-8161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 334-8178 Fax: (505) 334-8170

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3480 Fax: (505) 478-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-42493	Pool Code 97650	Pool Name WC Williams Sink (Bone Spring)
Property Code	Property Name BIG EDDY UNIT NAD DOG FEDERAL COM	Well Number 331H
OGRID No. 231429	Operator Name MANZANO LLC	Elevation 3476'

Surface Location

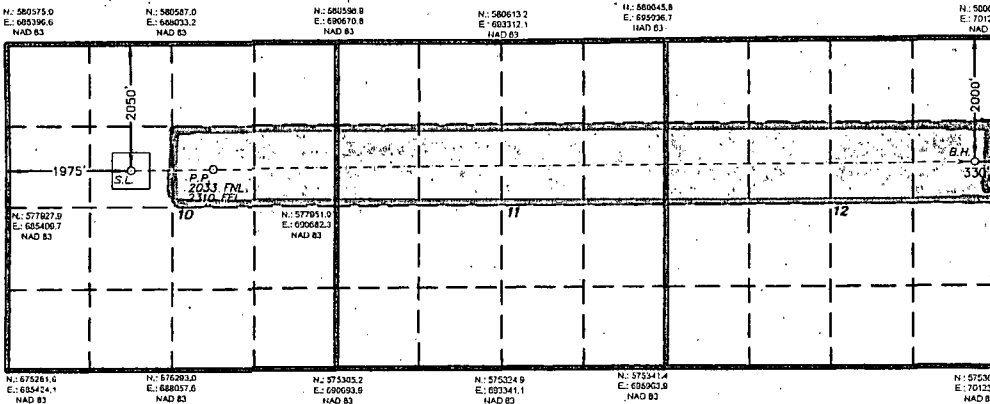
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	10	20 S	31 E		2050	NORTH	1975	WEST	EDDY

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
H	12	20 S	31 E		2000	NORTH	330	EAST	EDDY

Dedicated Acres 400	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

 SURFACE LOCATION Lat - N 32°35'22.43" Long - W 103°51'32.98" NMSPC- N 578534.2 E 687381.9 (NAD-83) BOTTOM HOLE LOCATION Lat - N 32°35'23.26" Long - W 103°48'55.13" NMSPC- N 578686.9 E 700881.5 (NAD-83)	OPERATOR CERTIFICATION I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Mike Hanagan</i> 7/24/14 Signature Date MIKE HANAGAN Printed Name <i>mike@manzanorange.com</i> Email Address 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. AUGUST 13, 2013 Date Surveyed <i>Gary L. Jones</i> Signature of Seal of Professional Surveyor Certificate No. Gary L. Jones 7977 CHASIN SURVEYS 0' 1500' 3000' 4500' 6000' SCALE: 1" = 3000' WO Num.: 29148
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