

C-104 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
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REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT**Section 1 - Operator and Well Information**

Submittal Type: ☐ Test Allowable (C-104RT) ☒ New Well (C-104NW) ☐ Recomplete (C-104RC) ☐ Pay Add (C-104RC) ☐ Amended	
Operator Name: OXY USA INC	OGRID: 16696
Property Name and Well Number: DR PI UNIT 171H	Property Code:
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal	API Number: 30-0 25-49150
Pool Name: Bilbrey Basin; Bone Spring, South	Pool Code: 97366

Section 2 – Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	17	22S	32E		526 FSL	1924 FWL	32.385792°	-103.699110°	LEA

Section 3 – Completion Information

Producing Method	Ready Date	Perforations MD	Perforations TVD
Gas lift	07/08/24	10260'-20412'MD	10065'-10147'TVD

Section 4 – Action IDs for Submissions and Order Numbers

List Action IDs for Drilling Sundries	Was an Order required / needed (Y/N), if yes list Order number:
C-104 RT Action ID (if C-104NW):	Communitization Agreement ☐ Yes ☒ No, Order No.
Surface Casing Action ID: 336278	Unit: ☒ Yes ☐ No, Order No. NMNM143828X
Intermediate 1 Casing Action ID: 389209	Compulsory Pooling: ☐ Yes ☒ No, Order No.
Intermediate 2 Casing Action ID: NA	Down Hole Commingling: ☐ Yes ☒ No, Order No.
Production Casing Action ID: 361219	Surface Commingling: ☒ Yes ☐ No, Order No. PLC-844-D
All casing was pressure tested in accordance with NMAC ☒ Yes ☐ No	Non-standard Location: ☐ Yes ☒ No ☐ Common ownership Order No.
Liner 1 Action ID: NA	Non-standard Proration: ☐ Yes ☒ No, Order No.
Casing was installed prior to OCD's Action ID system (Y/N): N	Simultaneous Dedication: ☐ Yes ☒ No, Order No.

Section 5 - Operator Signature and Certification

☒ I hereby certify that the required Water Use Report has been, or will be, submitted for this well's completion.	
☒ I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well's completion.	
☒ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name Jana Mendiola <i>Jana Mendiola</i>	
Title Regulatory Advisor	Date 09/25/24

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type:	☐ Initial Submittal
			☐ Amended Report
		☒ As Drilled	

WELL LOCATION INFORMATION

API Number 30-025-49150	Pool Code 97366	Pool Name Bilbrey Basin; Bone Spring, South
Property Code	Property Name DR PI UNIT	Well Number 171H
OGRID No. 16696	Operator Name OXY USA INC.	Ground Level Elevation 3690.8'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL N	Section 17	Township 22S	Range 32E	Lot	Ft. from N/S 526 SOUTH	Ft. from E/W 1924 WEST	Latitude (NAD 83) 32.385792°	Longitude (NAD 83) -103.699110°	County LEA
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Bottom Hole Location

UL D	Section 8	Township 22S	Range 32E	Lot	Ft. from N/S 64 NORTH	Ft. from E/W 928 WEST	Latitude (NAD 83) 32.413180°	Longitude (NAD 83) -103.702373°	County LEA
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Dedicated Acres 640	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
Order Numbers.		Well setbacks are under Common Ownership: ☐ Yes ☐ No		

Kick Off Point (KOP)

UL M	Section 17	Township 22S	Range 32E	Lot	Ft. from N/S 41 SOUTH	Ft. from E/W 892 WEST	Latitude (NAD 83) 32.384447°	Longitude (NAD 83) -103.702451°	County LEA
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First Take Point (FTP)

UL M	Section 17	Township 22S	Range 32E	Lot	Ft. from N/S 252 SOUTH	Ft. from E/W 861 WEST	Latitude (NAD 83) 32.385025°	Longitude (NAD 83) -103.702550°	County LEA
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Last Take Point (LTP)

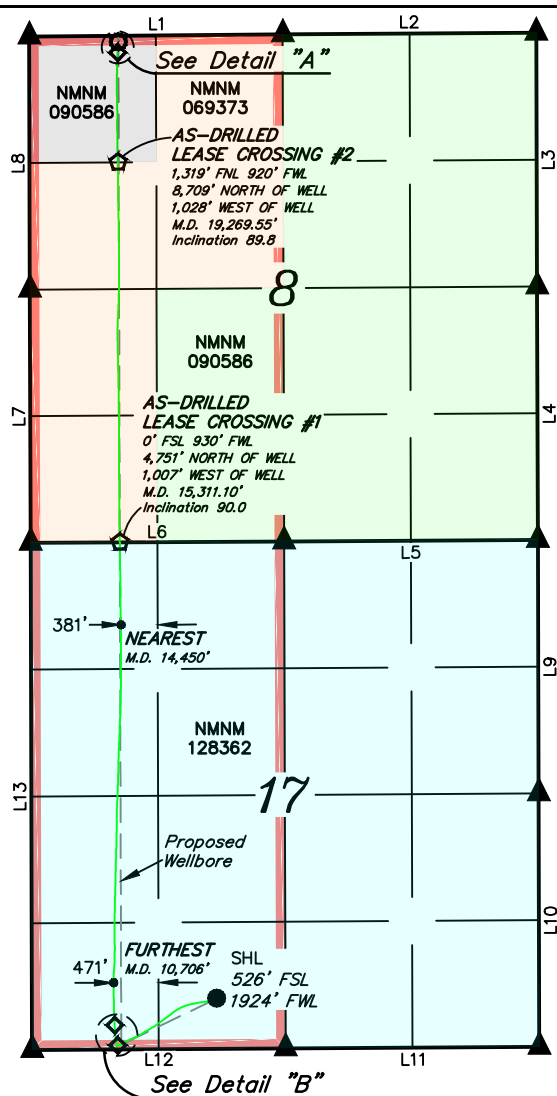
UL D	Section 8	Township 22S	Range 32E	Lot	Ft. from N/S 177 NORTH	Ft. from E/W 920 WEST	Latitude (NAD 83) 32.412870°	Longitude (NAD 83) -103.702397°	County LEA
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Unitized Area or Area of Uniform Interest NMNM143828X	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation:
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OPERATOR CERTIFICATIONS <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i> <i>Jana Mendiola</i> 09/25/24 Signature Date Jana Mendiola Printed Name janalyn_mendiola@oxy.com Email Address	SURVEYOR CERTIFICATIONS <i>I hereby certify that the well location shown on this plat was plotted from the 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.</i>  Signature and Seal of Professional Surveyor 23782 March 20, 2023 Certificate Number Date of Survey
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Note: No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

Property Name DR PI FED UNIT 17_8 DA	Well Number 71H	Drawn By T.J.S. 08-05-24	Revised By
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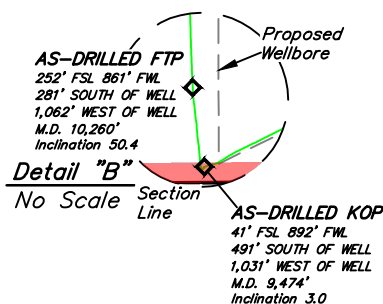
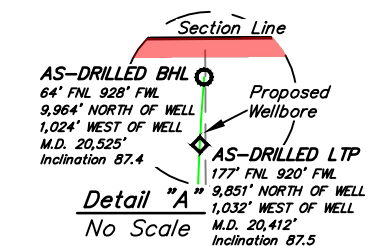
LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S89°30'51"W	2641.06'
L2	S89°37'22"W	2642.53'
L3	N00°10'37"W	2644.80'
L4	N00°10'34"W	2639.05'
L5	S89°38'44"W	2643.24'
L6	S89°42'05"W	2640.91'
L7	N00°09'34"W	2638.30'
L8	N00°10'50"W	2635.88'
L9	N00°10'15"W	2640.53'
L10	N00°09'25"W	2641.42'
L11	S89°39'10"W	2641.57'
L12	S89°38'35"W	2643.34'
L13	N00°09'21"W	5284.30'

NAD 83 (SURFACE HOLE LOCATION) LATITUDE = 32°23'08.85" (32.385792°) LONGITUDE = -103°41'56.80" (-103.699110°)	NAD 83 (AS-DRILLED LC 2) LATITUDE = 32°24'35.03" (32.409731°) LONGITUDE = -103°42'08.61" (-103.702393°)
NAD 27 (SURFACE HOLE LOCATION) LATITUDE = 32°23'08.41" (32.385669°) LONGITUDE = -103°41'55.04" (-103.698622°)	NAD 27 (AS-DRILLED LC 2) LATITUDE = 32°24'34.59" (32.409608°) LONGITUDE = -103°42'06.85" (-103.701904°)
STATE PLANE NAD 83 (N.M. EAST) N: 504663.01' E: 737113.24'	STATE PLANE NAD 83 (N.M. EAST) N: 513366.09' E: 736048.42'
STATE PLANE NAD 27 (N.M. EAST) N: 504602.56' E: 694930.84'	STATE PLANE NAD 27 (N.M. EAST) N: 513305.41' E: 694866.26'

NAD 83 (AS-DRILLED KOP) LATITUDE = 32°23'04.01" (32.384447°) LONGITUDE = -103°42'08.83" (-103.702451°)	NAD 83 (AS-DRILLED LTP) LATITUDE = 32°24'46.33" (32.412870°) LONGITUDE = -103°42'08.63" (-103.702397°)
NAD 27 (AS-DRILLED KOP) LATITUDE = 32°23'03.57" (32.384324°) LONGITUDE = -103°42'07.07" (-103.701964°)	NAD 27 (AS-DRILLED LTP) LATITUDE = 32°24'45.89" (32.412747°) LONGITUDE = -103°42'06.87" (-103.701908°)
STATE PLANE NAD 83 (N.M. EAST) N: 504167.70' E: 736084.63'	STATE PLANE NAD 83 (N.M. EAST) N: 514508.01' E: 736040.29'
STATE PLANE NAD 27 (N.M. EAST) N: 504107.27' E: 694902.22'	STATE PLANE NAD 27 (N.M. EAST) N: 514447.30' E: 694858.17'

NAD 83 (AS-DRILLED FTP) LATITUDE = 32°23'06.09" (32.385025°) LONGITUDE = -103°42'09.18" (-103.702550°)	NAD 83 (AS-DRILLED BHL) LATITUDE = 32°24'47.45" (32.413180°) LONGITUDE = -103°42'08.54" (-103.702373°)
NAD 27 (AS-DRILLED FTP) LATITUDE = 32°23'05.65" (32.384902°) LONGITUDE = -103°42'07.42" (-103.702062°)	NAD 27 (AS-DRILLED BHL) LATITUDE = 32°24'47.01" (32.413057°) LONGITUDE = -103°42'06.78" (-103.701884°)
STATE PLANE NAD 83 (N.M. EAST) N: 504377.70' E: 736052.87'	STATE PLANE NAD 83 (N.M. EAST) N: 514620.69' E: 736047.07'
STATE PLANE NAD 27 (N.M. EAST) N: 504317.27' E: 694870.47'	STATE PLANE NAD 27 (N.M. EAST) N: 514559.97' E: 694864.95'

NAD 83 (AS-DRILLED LC 1) LATITUDE = 32°23'55.87" (32.398854°) LONGITUDE = -103°42'08.45" (-103.702346°)	NAD 27 (AS-DRILLED LC 1) LATITUDE = 32°23'55.43" (32.398731°) LONGITUDE = -103°42'06.69" (-103.701858°)
STATE PLANE NAD 83 (N.M. EAST) N: 509408.98' E: 736086.25'	STATE PLANE NAD 27 (N.M. EAST) N: 509348.40' E: 694903.98'



NOTE:

- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)
- Colored areas within section lines represent oil & gas leases.
- As-Drilled well head has not been field verified.
- Wellbore data provided by Oxy USA Inc.

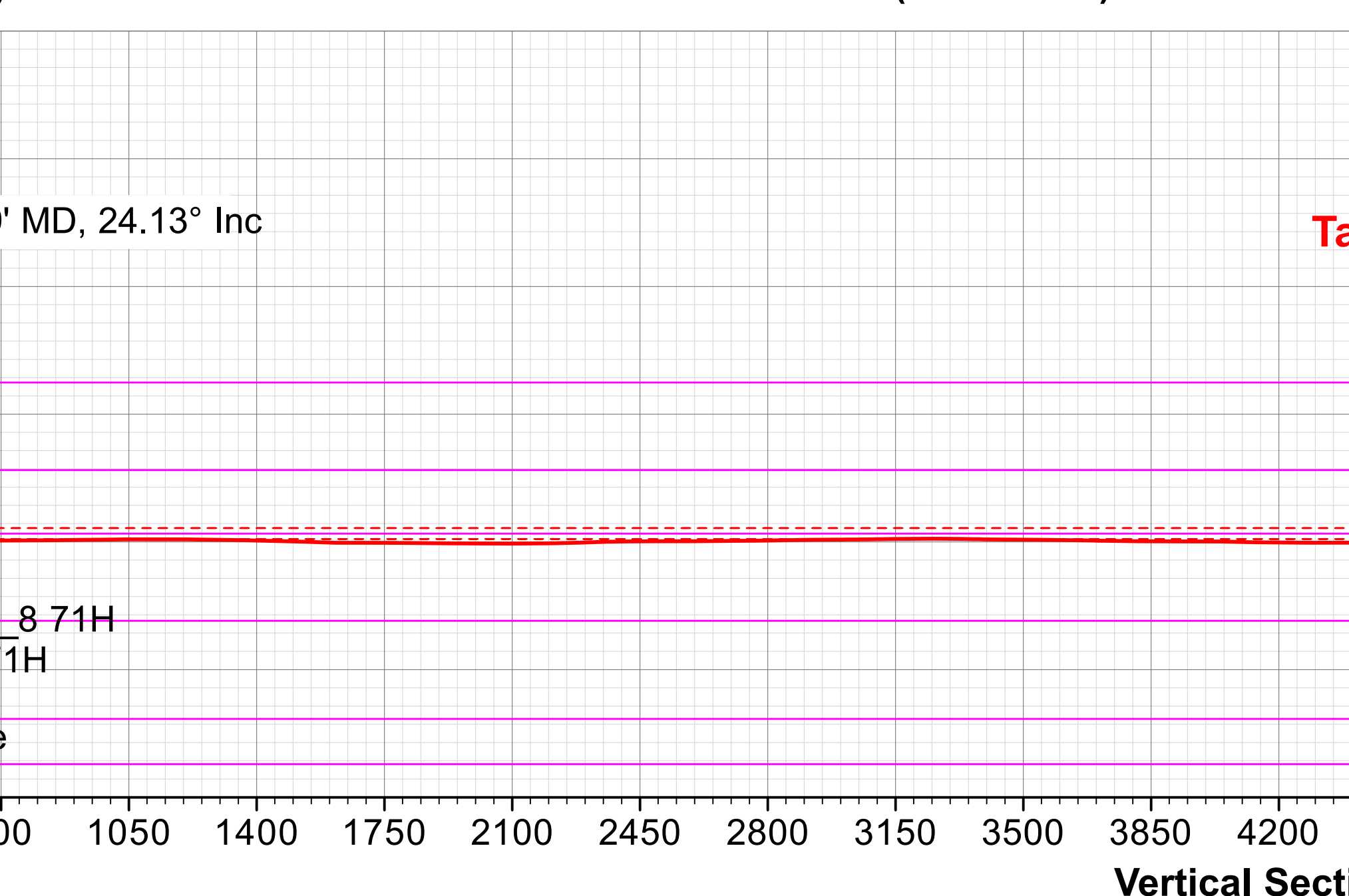
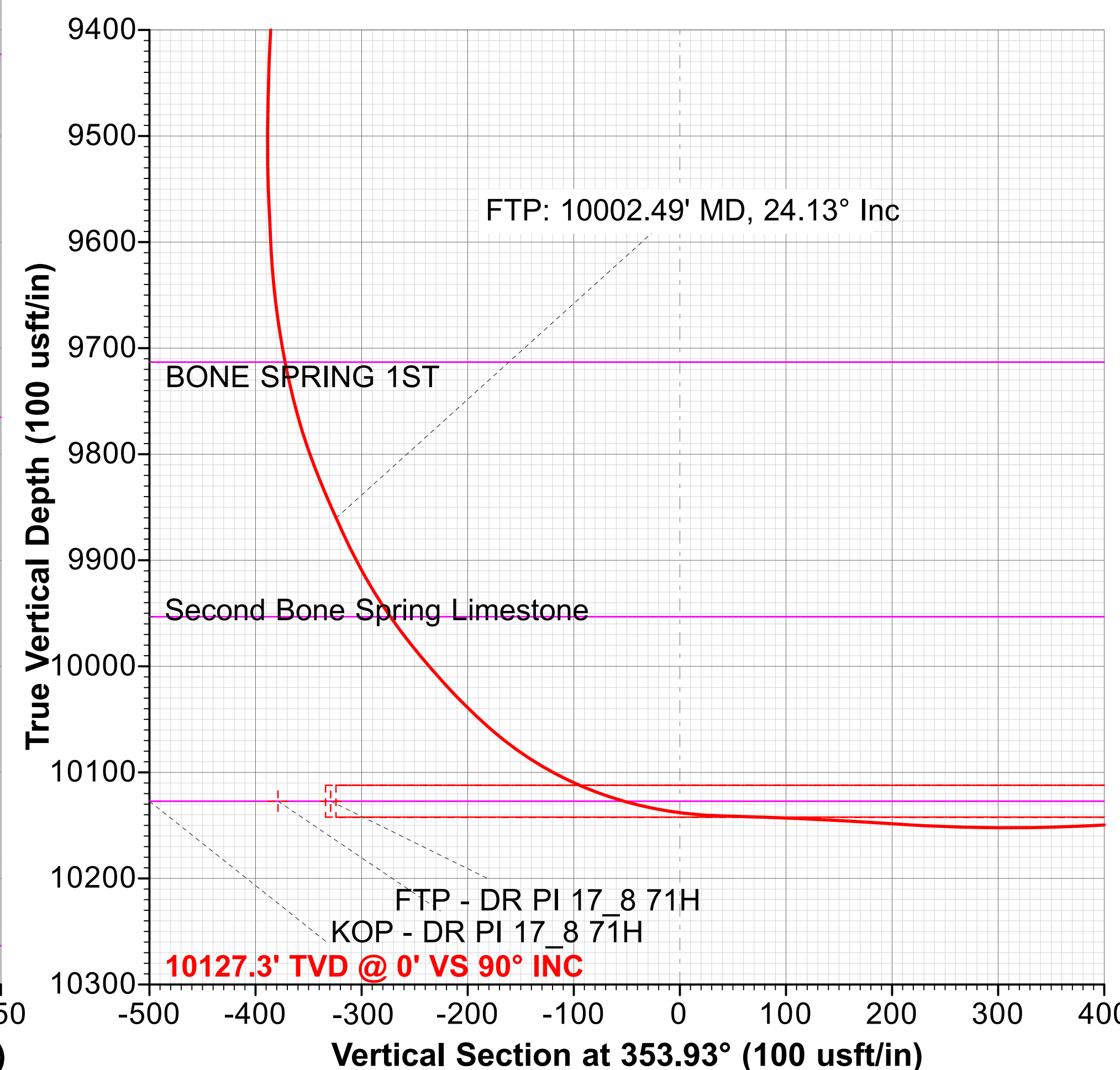
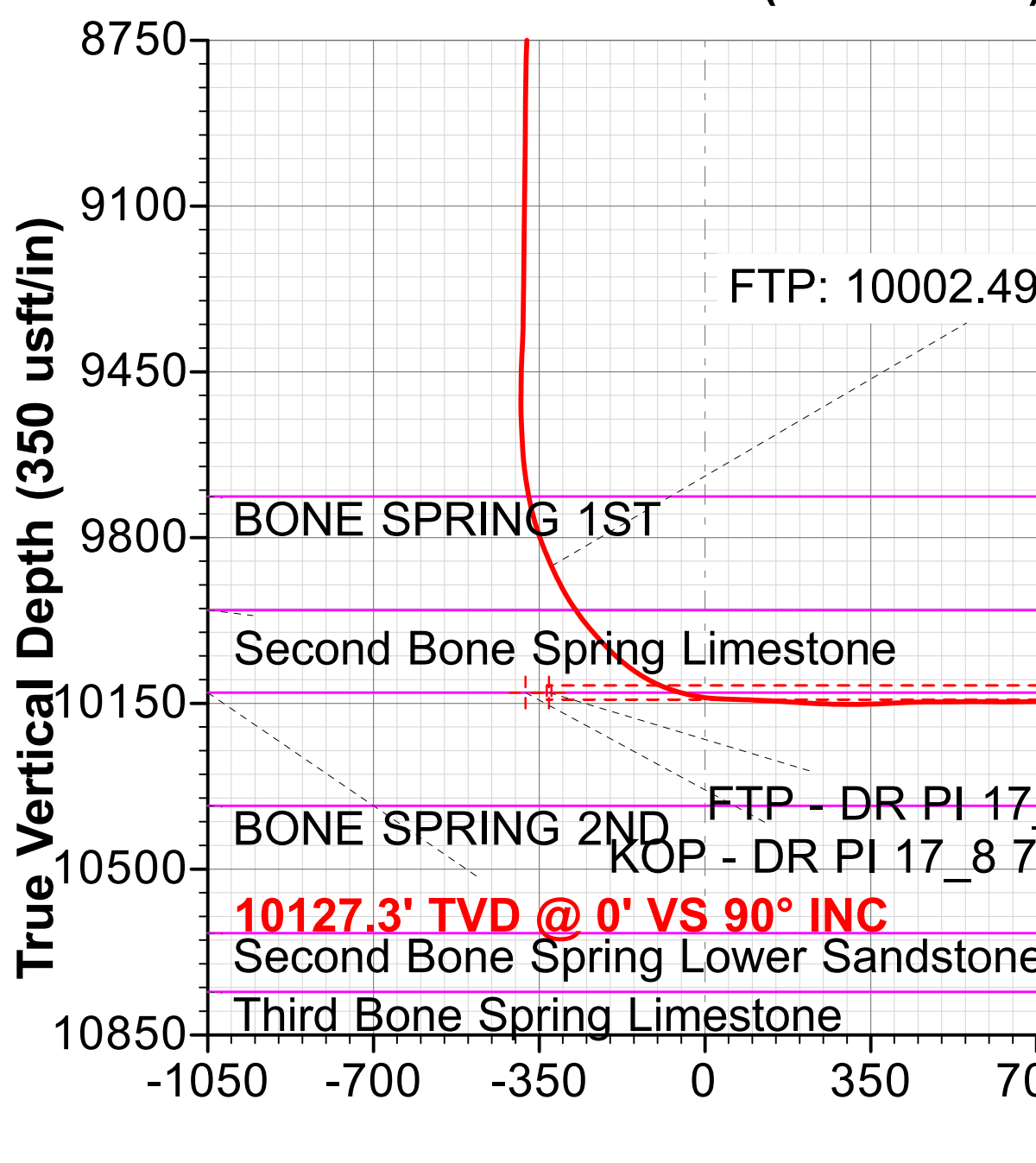
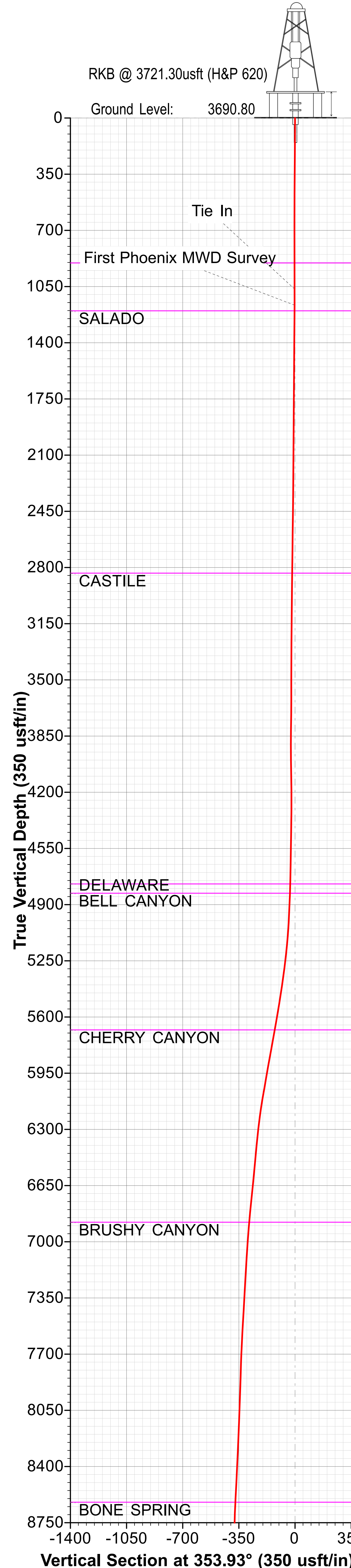
- = SURFACE HOLE LOCATION
- ◆ = AS-DRILLED TAKE POINTS
- ◇ = AS-DRILLED LEASE CROSSING
- = AS-DRILLED BOTTOM HOLE LOCATION
- ▲ = SECTION CORNER LOCATED
- = HORIZONTAL SPACING UNIT
- = AS-DRILLED WELLBORE

APPROXIMATE WELLBORE MEASURED DEPTH DISTANCE FROM FTP TO LTP	
LEASE	DISTANCE
NMNM 128362	5,051.10'
NMNM 069373	3,958.45'
NMNM 090586	1,142.45'
TOTAL	10,152.00'



SCALE

DRAWN BY: T.J.S. 08-05-24





Project: Lea County, NM (NAD83-NME)
Site: Dr Pi Fed Unit 17_8 DA
Well: Dr Pi Fed Unit 17_8 DA 71H
Wellbore: OH / 74553
Design: Plan 3 04-19-24
Rig: H&P 620



WELL DETAILS

Ground Level: 3690.80	
+N/-S	+E/-W
0.00	0.00
504663.01	737113.24
32° 23' 8.851243 N	103° 41' 56.795822 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
1065.50	0.24	297.70	1065.48	-2.78	-2.04	-2.55	5.56	Tie In
1166.00	0.49	220.11	1165.98	-3.01	-2.50	-2.73	6.20	First Phoenix MWD Survey
10002.49	24.13	352.21	9860.21	-436.92	-1044.15	-323.98	1238.72	FTP: 10002.49' MD, 24.13° Inc
15310.22	90.02	358.25	10151.98	4745.09	-1026.97	4827.12	6423.12	SL: 15310.22' MD
20407.00	87.55	2.64	10146.36	9840.01	-1073.19	9898.32	11518.97	Final Phoenix MWD Survey
20489.08	87.44	3.71	10149.98	9921.88	-1068.62	9979.25	11600.97	LTP: 20489.08' MD
20525.00	87.42	4.12	10151.59	9957.68	-1066.17	10014.59	11636.85	Projection to TD

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
903.30	903.32	RUSTLER
1201.30	1201.32	SALADO
2835.30	2835.32	CASTILE
4771.30	4801.62	DELAWARE
4829.30	4861.67	BELL CANYON
5680.30	5742.68	CHERRY CANYON
6878.30	6982.94	BRUSHY CANYON
8622.30	8749.23	BONE SPRING
9713.30	9846.44	BONE SPRING 1ST
9953.30	10137.09	Second Bone Spring Limestone
10127.30	10619.38	10127.3' TVD @ 0° VS 90° INC

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

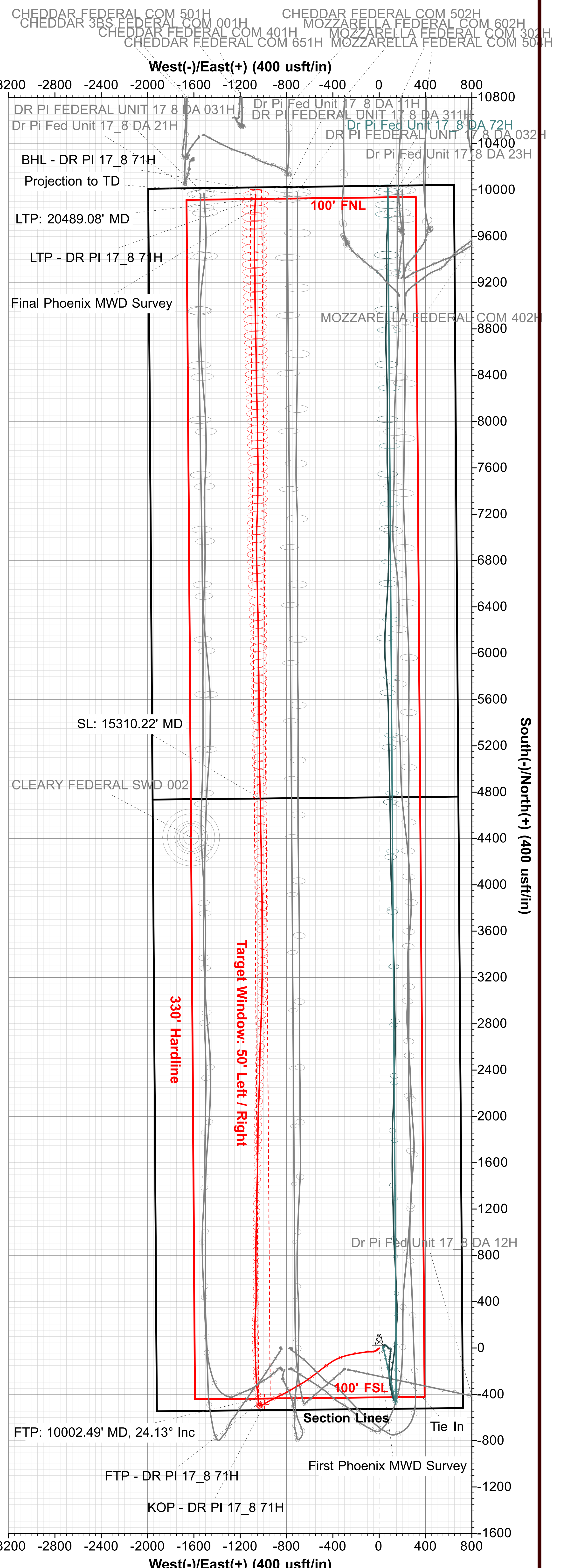
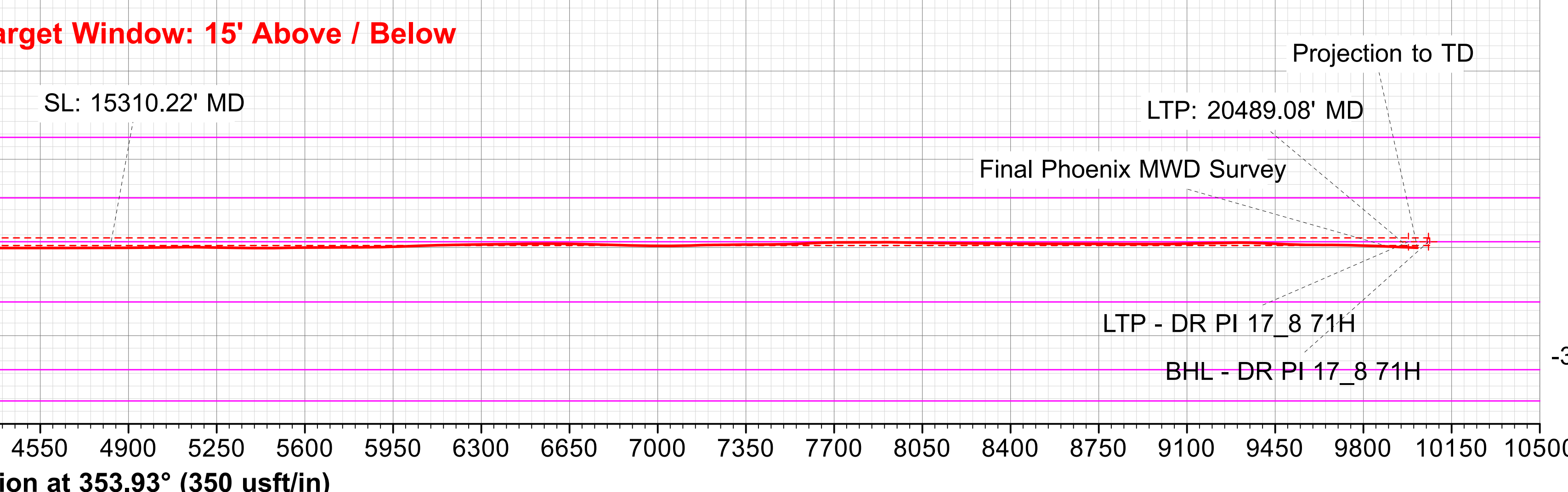
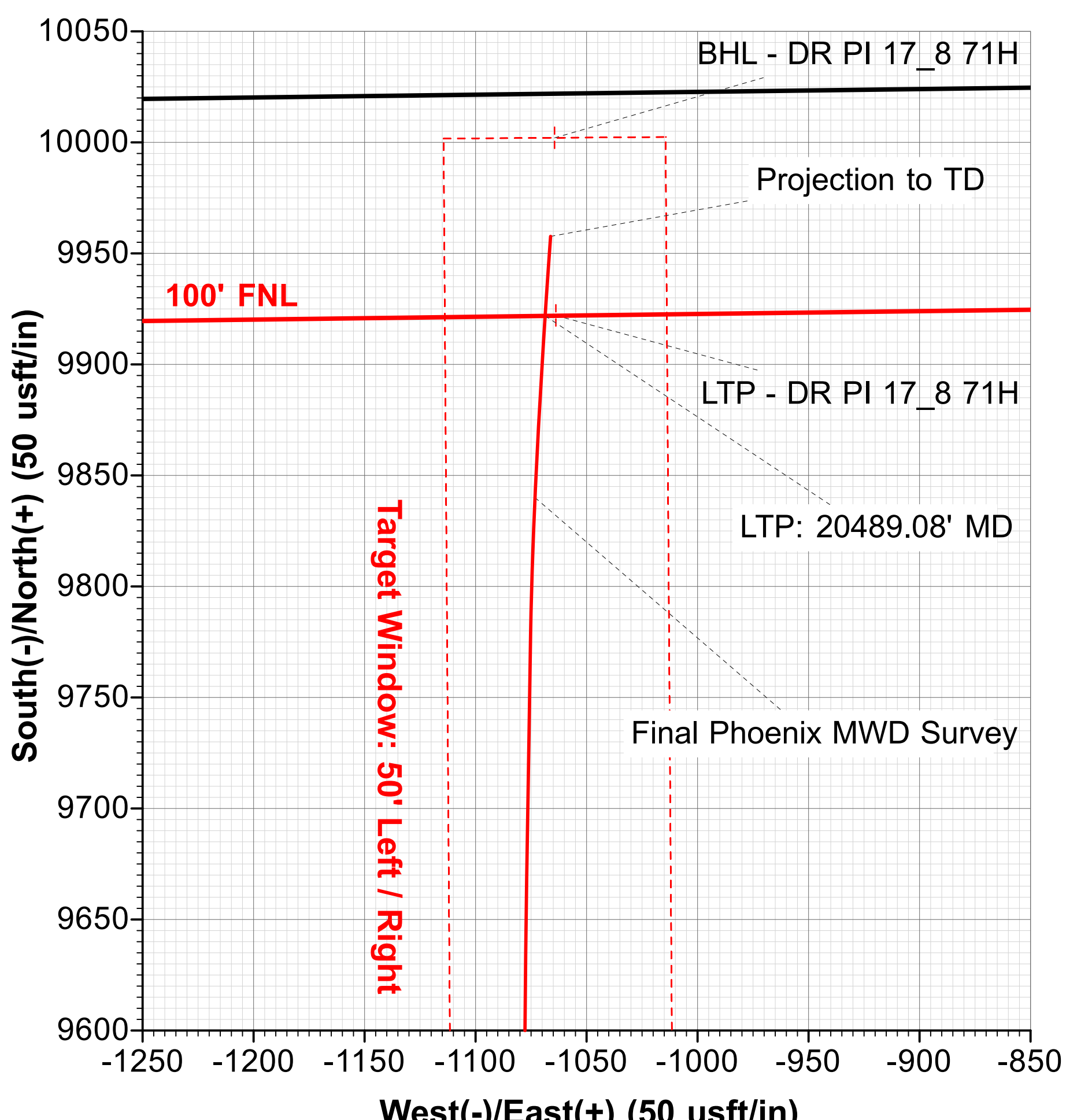
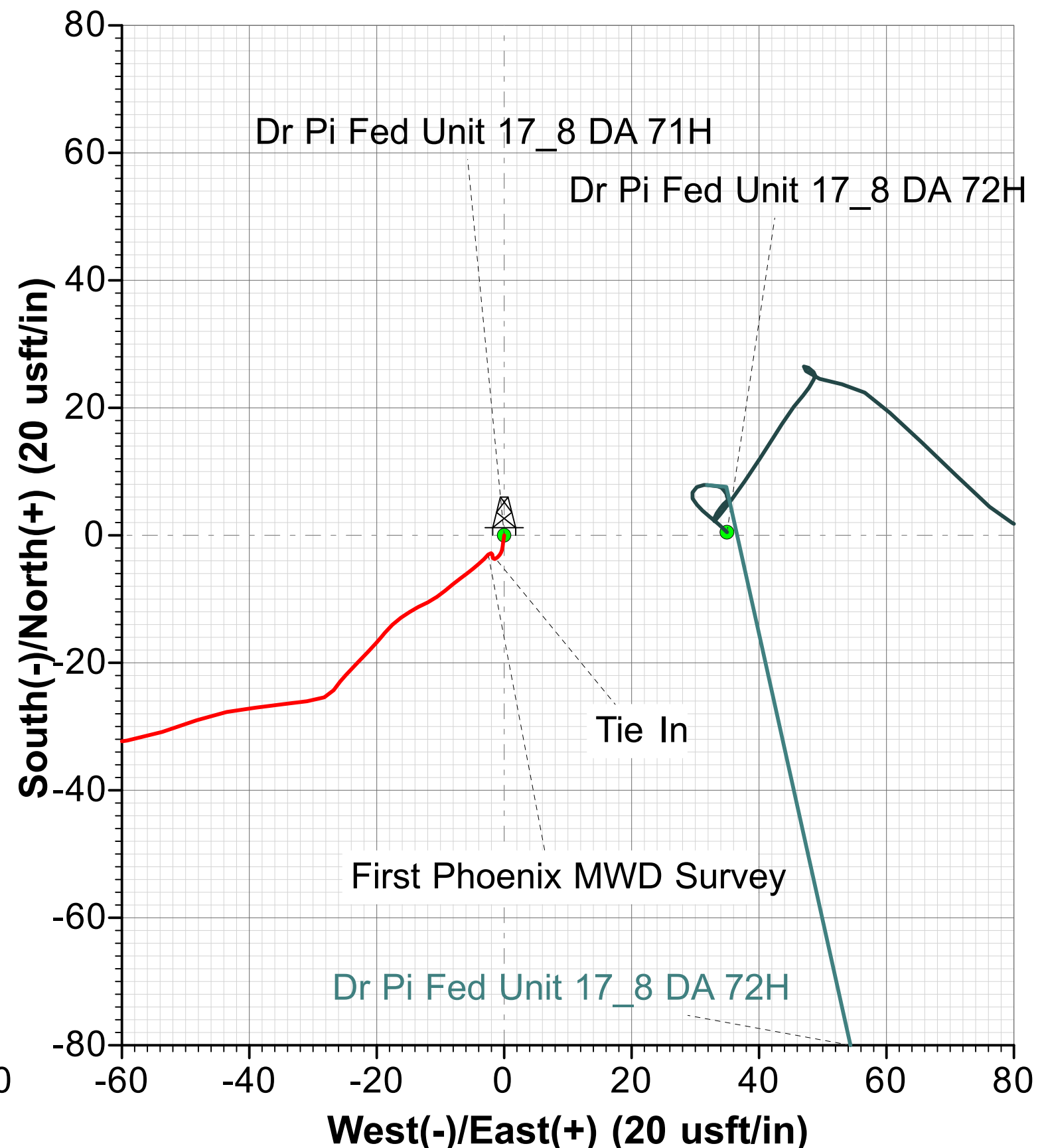
Local Origin: Well Dr Pi Fed Unit 17_8 DA 71H, Grid North

Latitude: 32° 23' 8.851243 N
Longitude: 103° 41' 56.795822 W

Grid East: 737113.24
Grid North: 504663.01
Scale Factor: 1.000

Geomagnetic Model: IFR
Sample Date: 25-Apr-24
Magnetic Declination: 6.562°
Dip Angle from Horizontal: 60.070°
Magnetic Field Strength: 47587.80000000nT

To convert a Magnetic Direction to a Grid Direction, Add 6.222°
To convert a Magnetic Direction to a True Direction, Add 6.562° East
To convert a True Direction to a Grid Direction, Subtract 0.340°





OXY USA INC.

Lea County, NM (NAD83-NME)

Dr Pi Fed Unit 17_8 DA

Dr Pi Fed Unit 17_8 DA 71H

3002549150

OH / 74553

Design: Surveys (H&P 620)

Standard Survey Report

28 May, 2024





Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

Project	Lea County, NM (NAD83-NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Dr Pi Fed Unit 17_8 DA		
Site Position:		Northing:	504,610.59 usft
From:	Map	Easting:	738,908.99 usft
Position Uncertainty:	0.90 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 23' 8.226697 N
		Longitude:	103° 41' 35.857943 W

Well	Dr Pi Fed Unit 17_8 DA 71H		
Well Position	+N/-S	0.00 usft	Northing: 504,663.01 usft
	+E/-W	0.00 usft	Easting: 737,113.24 usft
Position Uncertainty	2.00 usft	Wellhead Elevation:	usft
Grid Convergence:	0.340 °	Ground Level:	3,690.80 usft

Wellbore	OH / 74553				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IFR	4/25/2024	6.562	60.070	47,587.80000000

Design	Surveys (H&P 620)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	353.93	

Survey Program	Date	5/28/2024			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
30.50	1,065.50	HLB MWD Surveys - Adj Surface (OH / 74	A002Mc_MWD+SRGM+S	MWD+SRGM+Sag	
1,166.00	9,474.00	Phoenix MWD Surveys 1 - SQC Intermedi	SQC_C705Mb_MWD+IFF	MWD+IFR1+Sag+FDIR	
9,487.88	9,571.13	Phoenix MWD Surveys 2 - SQC Curve + L	SQC_C705Mb_MWD+IFF	MWD+IFR1+Sag+FDIR	
9,585.00	10,232.57	Phoenix MWD Surveys 3 - SQC Curve + L	A009Mc_MWD+IFR1+SA	MWD+IFR1+Sag	
10,246.00	20,525.00	Phoenix MWD Surveys 4 - SQC Curve + L	SQC_C705Mb_MWD+IFF	MWD+IFR1+Sag+FDIR	

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	
30.50	0.00	0.00	30.50	0.00	0.00	0.00	0.00	0.00	0.00	
166.50	0.46	184.64	166.50	-0.54	-0.04	-0.54	0.34	0.34	0.00	
226.50	0.36	198.14	226.50	-0.96	-0.12	-0.94	0.23	-0.17	22.50	
371.50	0.38	177.95	371.49	-1.88	-0.25	-1.84	0.09	0.01	-13.92	
458.50	0.56	203.41	458.49	-2.56	-0.41	-2.50	0.31	0.21	29.26	

Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
545.50	0.41	224.13	545.49	-3.17	-0.79	-3.07	0.26	-0.17	23.82
631.50	0.27	223.58	631.49	-3.54	-1.15	-3.40	0.16	-0.16	-0.64
718.50	0.27	264.49	718.49	-3.70	-1.49	-3.53	0.22	0.00	47.02
804.50	0.21	337.53	804.49	-3.58	-1.75	-3.37	0.34	-0.07	84.93
891.50	0.17	4.93	891.48	-3.30	-1.80	-3.09	0.11	-0.05	31.49
978.50	0.21	344.96	978.48	-3.02	-1.83	-2.81	0.09	0.05	-22.95
1,065.50	0.24	297.70	1,065.48	-2.78	-2.04	-2.55	0.21	0.03	-54.32
Tie In									
1,166.00	0.49	220.11	1,165.98	-3.01	-2.50	-2.73	0.49	0.25	-77.20
First Phoenix MWD Survey									
1,260.00	0.73	224.63	1,259.98	-3.75	-3.18	-3.39	0.26	0.26	4.81
1,353.00	0.67	231.20	1,352.97	-4.51	-4.02	-4.06	0.11	-0.06	7.06
1,448.00	0.72	228.67	1,447.96	-5.25	-4.90	-4.70	0.06	0.05	-2.66
1,543.00	0.71	234.46	1,542.96	-5.99	-5.83	-5.34	0.08	-0.01	6.09
1,637.00	0.91	232.83	1,636.95	-6.78	-6.90	-6.01	0.21	0.21	-1.73
1,732.00	0.90	231.43	1,731.93	-7.70	-8.08	-6.80	0.03	-0.01	-1.47
1,826.00	0.95	229.48	1,825.92	-8.66	-9.25	-7.64	0.06	0.05	-2.07
1,921.00	1.00	234.45	1,920.91	-9.66	-10.52	-8.49	0.10	0.05	5.23
2,016.00	1.04	244.65	2,015.89	-10.51	-11.98	-9.18	0.20	0.04	10.74
2,111.00	0.99	242.95	2,110.88	-11.25	-13.49	-9.76	0.06	-0.05	-1.79
2,205.00	0.94	236.52	2,204.86	-12.05	-14.85	-10.41	0.13	-0.05	-6.84
2,300.00	1.03	235.67	2,299.85	-12.96	-16.21	-11.17	0.10	0.09	-0.89
2,395.00	1.06	225.63	2,394.84	-14.05	-17.54	-12.12	0.20	0.03	-10.57
2,490.00	1.07	221.39	2,489.82	-15.33	-18.76	-13.26	0.08	0.01	-4.46
2,584.00	1.04	220.24	2,583.80	-16.64	-19.89	-14.44	0.04	-0.03	-1.22
2,679.00	1.02	221.67	2,678.79	-17.93	-21.01	-15.61	0.03	-0.02	1.51
2,774.00	1.07	226.27	2,773.77	-19.18	-22.21	-16.72	0.10	0.05	4.84
2,868.00	1.03	223.04	2,867.76	-20.40	-23.42	-17.81	0.08	-0.04	-3.44
2,963.00	1.06	223.12	2,962.74	-21.67	-24.60	-18.94	0.03	0.03	0.08
3,057.00	1.03	218.95	3,056.72	-22.96	-25.73	-20.11	0.09	-0.03	-4.44
3,152.00	1.00	215.61	3,151.71	-24.30	-26.75	-21.33	0.07	-0.03	-3.52
3,246.00	1.32	245.94	3,245.69	-25.40	-28.21	-22.28	0.72	0.34	32.27
3,340.00	2.12	263.80	3,339.65	-26.03	-30.93	-22.61	1.01	0.85	19.00
3,435.00	2.49	262.83	3,434.57	-26.48	-34.73	-22.66	0.39	0.39	-1.02
3,530.00	2.78	262.29	3,529.47	-27.05	-39.06	-22.76	0.31	0.31	-0.57
3,624.00	2.74	261.13	3,623.36	-27.70	-43.54	-22.94	0.07	-0.04	-1.23
3,719.00	3.21	248.78	3,718.23	-29.01	-48.26	-23.74	0.83	0.49	-13.00
3,814.00	3.69	253.31	3,813.06	-30.85	-53.67	-25.00	0.58	0.51	4.77
3,908.00	3.22	259.93	3,906.89	-32.18	-59.16	-25.74	0.66	-0.50	7.04
4,003.00	7.24	270.92	4,001.48	-32.55	-67.78	-25.20	4.34	4.23	11.57
4,097.00	8.93	270.77	4,094.54	-32.36	-81.00	-23.61	1.80	1.80	-0.16
4,192.00	9.81	266.40	4,188.27	-32.77	-96.45	-22.38	1.19	0.93	-4.60
4,286.00	12.58	263.19	4,280.48	-34.49	-114.61	-22.17	3.02	2.95	-3.41
4,381.00	15.20	260.93	4,372.69	-37.68	-137.18	-22.95	2.82	2.76	-2.38



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
4,476.00	15.00	261.00	4,464.41	-41.56	-161.62	-24.23	0.21	-0.21	0.07
4,570.00	14.50	260.34	4,555.31	-45.44	-185.24	-25.58	0.56	-0.53	-0.70
4,665.00	14.28	260.43	4,647.33	-49.39	-208.52	-27.04	0.23	-0.23	0.09
4,760.00	14.44	259.14	4,739.37	-53.57	-231.70	-28.75	0.38	0.17	-1.36
4,854.00	15.82	256.38	4,830.11	-58.79	-255.67	-31.41	1.66	1.47	-2.94
4,949.00	16.56	255.71	4,921.34	-65.18	-281.37	-35.04	0.80	0.78	-0.71
5,044.00	17.00	253.27	5,012.29	-72.52	-307.79	-39.54	0.87	0.46	-2.57
5,138.00	17.42	249.31	5,102.09	-81.45	-334.12	-45.64	1.32	0.45	-4.21
5,232.00	17.99	244.83	5,191.64	-92.59	-360.42	-53.94	1.57	0.61	-4.77
5,327.00	17.62	242.02	5,282.09	-105.58	-386.39	-64.10	0.98	-0.39	-2.96
5,421.00	17.38	236.14	5,371.75	-120.08	-410.62	-75.95	1.90	-0.26	-6.26
5,515.00	18.03	235.17	5,461.29	-136.21	-434.22	-89.50	0.76	0.69	-1.03
5,610.00	18.24	233.64	5,551.58	-153.42	-458.26	-104.07	0.55	0.22	-1.61
5,704.00	18.50	232.83	5,640.79	-171.15	-481.99	-119.19	0.39	0.28	-0.86
5,799.00	19.06	232.62	5,730.73	-189.68	-506.33	-135.03	0.59	0.59	-0.22
5,893.00	19.71	232.19	5,819.40	-208.71	-531.05	-151.34	0.71	0.69	-0.46
5,988.00	18.99	232.29	5,909.03	-227.99	-555.93	-167.88	0.76	-0.76	0.11
6,082.00	18.15	234.12	5,998.14	-245.92	-579.89	-183.18	1.09	-0.89	1.95
6,176.00	19.24	233.14	6,087.18	-263.79	-604.15	-198.38	1.21	1.16	-1.04
6,271.00	17.82	235.79	6,177.25	-281.36	-628.70	-213.25	1.74	-1.49	2.79
6,365.00	14.75	238.74	6,267.47	-295.66	-650.82	-225.13	3.38	-3.27	3.14
6,460.00	14.18	239.67	6,359.46	-307.81	-671.21	-235.05	0.65	-0.60	0.98
6,555.00	12.74	240.70	6,451.85	-318.81	-690.39	-243.97	1.54	-1.52	1.08
6,649.00	13.01	239.77	6,543.48	-329.21	-708.57	-252.38	0.36	0.29	-0.99
6,744.00	13.57	239.32	6,635.94	-340.28	-727.39	-261.40	0.60	0.59	-0.47
6,838.00	13.77	238.72	6,727.28	-351.72	-746.44	-270.76	0.26	0.21	-0.64
6,932.00	12.21	238.44	6,818.87	-362.73	-764.47	-279.80	1.66	-1.66	-0.30
7,027.00	11.61	240.82	6,911.82	-372.65	-781.37	-287.87	0.82	-0.63	2.51
7,122.00	11.61	242.60	7,004.88	-381.71	-798.21	-295.10	0.38	0.00	1.87
7,216.00	9.73	243.50	7,097.25	-389.61	-813.72	-301.31	2.01	-2.00	0.96
7,311.00	9.05	244.26	7,190.98	-396.43	-827.63	-306.63	0.73	-0.72	0.80
7,405.00	9.25	243.63	7,283.78	-403.00	-841.06	-311.74	0.24	0.21	-0.67
7,499.00	9.36	243.21	7,376.54	-409.80	-854.65	-317.06	0.14	0.12	-0.45
7,594.00	9.38	242.34	7,470.28	-416.88	-868.40	-322.64	0.15	0.02	-0.92
7,689.00	7.96	243.31	7,564.19	-423.43	-881.14	-327.81	1.50	-1.49	1.02
7,783.00	7.60	242.47	7,657.32	-429.22	-892.47	-332.37	0.40	-0.38	-0.89
7,877.00	6.17	246.31	7,750.64	-434.12	-902.60	-336.17	1.60	-1.52	4.09
7,972.00	5.59	246.48	7,845.14	-438.02	-911.52	-339.11	0.61	-0.61	0.18
8,067.00	5.66	243.87	7,939.69	-441.93	-919.97	-342.10	0.28	0.07	-2.75
8,256.00	5.88	242.08	8,127.73	-450.57	-936.89	-348.90	0.15	0.12	-0.95
8,350.00	6.12	241.26	8,221.21	-455.23	-945.54	-352.62	0.27	0.26	-0.87
8,445.00	6.34	240.28	8,315.65	-460.27	-954.54	-356.68	0.26	0.23	-1.03
8,539.00	6.50	239.76	8,409.06	-465.52	-963.64	-360.94	0.18	0.17	-0.55



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
8,634.00	6.72	238.06	8,503.43	-471.17	-973.00	-365.56	0.31	0.23	-1.79
8,728.00	6.63	236.81	8,596.79	-477.05	-982.21	-370.44	0.18	-0.10	-1.33
8,823.00	5.35	240.81	8,691.27	-482.21	-990.67	-374.67	1.42	-1.35	4.21
8,918.00	3.99	247.04	8,785.96	-485.66	-997.58	-377.37	1.53	-1.43	6.56
9,012.00	3.20	255.06	8,879.77	-487.61	-1,003.12	-378.73	0.99	-0.84	8.53
9,107.00	3.25	255.87	8,974.62	-488.96	-1,008.30	-379.51	0.07	0.05	0.85
9,202.00	3.44	252.50	9,069.46	-490.47	-1,013.63	-380.45	0.29	0.20	-3.55
9,296.00	3.49	253.08	9,163.29	-492.15	-1,019.05	-381.55	0.06	0.05	0.62
9,390.00	3.21	252.39	9,257.13	-493.78	-1,024.30	-382.62	0.30	-0.30	-0.73
9,474.00	3.03	248.47	9,341.00	-495.31	-1,028.61	-383.68	0.33	-0.21	-4.67
9,487.88	2.69	234.37	9,354.87	-495.63	-1,029.21	-383.94	5.61	-2.45	-101.59
9,501.75	2.55	219.15	9,368.72	-496.06	-1,029.67	-384.31	5.10	-1.01	-109.73
9,515.63	2.61	201.96	9,382.59	-496.59	-1,029.98	-384.81	5.57	0.43	-123.85
9,529.50	2.88	187.01	9,396.44	-497.23	-1,030.14	-385.43	5.50	1.95	-107.79
9,543.38	3.23	176.36	9,410.30	-497.97	-1,030.16	-386.16	4.79	2.52	-76.73
9,557.25	2.63	197.88	9,424.15	-498.66	-1,030.23	-386.84	8.96	-4.33	155.16
9,571.13	2.56	225.85	9,438.02	-499.18	-1,030.56	-387.32	9.05	-0.50	201.51
9,585.00	2.79	236.28	9,451.88	-499.58	-1,031.06	-387.67	3.87	1.66	75.20
9,598.43	2.57	235.68	9,465.29	-499.93	-1,031.58	-387.96	1.65	-1.64	-4.47
9,611.86	2.33	233.74	9,478.71	-500.26	-1,032.05	-388.24	1.89	-1.79	-14.45
9,625.29	1.93	232.98	9,492.13	-500.56	-1,032.45	-388.50	2.99	-2.98	-5.66
9,638.71	1.62	265.19	9,505.54	-500.71	-1,032.82	-388.61	7.67	-2.31	240.01
9,652.14	1.76	281.16	9,518.97	-500.69	-1,033.21	-388.54	3.64	1.04	118.91
9,665.57	2.12	295.19	9,532.39	-500.54	-1,033.64	-388.35	4.42	2.68	104.47
9,679.00	2.70	310.90	9,545.81	-500.23	-1,034.10	-387.99	6.51	4.32	116.98
9,692.57	2.89	318.40	9,559.36	-499.77	-1,034.57	-387.48	3.03	1.40	55.27
9,706.14	3.14	319.51	9,572.91	-499.23	-1,035.04	-386.90	1.89	1.84	8.18
9,719.71	3.72	315.44	9,586.46	-498.63	-1,035.59	-386.25	4.63	4.27	-29.99
9,733.29	3.37	319.29	9,600.01	-498.01	-1,036.16	-385.57	3.12	-2.58	28.35
9,746.86	3.88	324.90	9,613.56	-497.34	-1,036.68	-384.84	4.57	3.76	41.34
9,760.43	4.86	331.45	9,627.09	-496.46	-1,037.22	-383.91	8.09	7.22	48.27
9,774.00	5.81	337.87	9,640.60	-495.32	-1,037.75	-382.72	8.26	7.00	47.31
9,787.43	7.05	342.02	9,653.94	-493.90	-1,038.26	-381.26	9.85	9.23	30.90
9,800.86	7.81	346.28	9,667.26	-492.23	-1,038.73	-379.55	6.99	5.66	31.72
9,814.29	8.61	349.22	9,680.55	-490.36	-1,039.14	-377.64	6.73	5.96	21.89
9,827.71	9.42	353.97	9,693.81	-488.28	-1,039.44	-375.54	8.19	6.04	35.39
9,841.14	10.37	356.67	9,707.04	-485.98	-1,039.63	-373.24	7.87	7.07	20.10
9,854.57	11.76	356.11	9,720.22	-483.41	-1,039.79	-370.66	10.38	10.35	-4.17
9,868.00	12.87	355.48	9,733.34	-480.55	-1,040.00	-367.80	8.33	8.27	-4.69
9,881.57	13.97	355.14	9,746.54	-477.41	-1,040.26	-364.65	8.13	8.11	-2.51
9,895.14	15.07	354.88	9,759.67	-474.02	-1,040.56	-361.25	8.12	8.11	-1.92
9,908.71	16.72	354.46	9,772.72	-470.32	-1,040.90	-357.53	12.19	12.16	-3.10
9,922.29	17.92	355.10	9,785.69	-466.30	-1,041.27	-353.49	8.95	8.84	4.71
9,935.86	19.33	355.18	9,798.55	-461.98	-1,041.64	-349.16	10.39	10.39	0.59



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
9,949.43	20.65	355.40	9,811.30	-457.35	-1,042.02	-344.52	9.74	9.73	1.62
9,963.00	21.99	355.28	9,823.94	-452.44	-1,042.42	-339.59	9.88	9.87	-0.88
9,976.57	23.19	354.21	9,836.47	-447.25	-1,042.90	-334.38	9.35	8.84	-7.89
9,990.14	23.69	352.88	9,848.92	-441.88	-1,043.50	-328.98	5.36	3.68	-9.80
10,002.49	24.13	352.21	9,860.21	-436.92	-1,044.15	-323.98	4.17	3.54	-5.46
FTP: 10002.49' MD, 24.13° Inc									
10,003.71	24.17	352.14	9,861.32	-436.43	-1,044.22	-323.48	4.17	3.55	-5.36
10,017.29	24.72	351.83	9,873.68	-430.86	-1,045.01	-317.86	4.16	4.05	-2.28
10,030.86	25.83	352.50	9,885.96	-425.12	-1,045.79	-312.07	8.45	8.18	4.94
10,044.43	27.53	353.17	9,898.08	-419.08	-1,046.55	-305.98	12.72	12.53	4.94
10,058.00	28.85	354.44	9,910.04	-412.70	-1,047.24	-299.57	10.68	9.73	9.36
10,071.43	30.14	355.16	9,921.73	-406.12	-1,047.84	-292.96	9.96	9.61	5.36
10,084.86	31.82	355.16	9,933.24	-399.23	-1,048.42	-286.04	12.51	12.51	0.00
10,098.29	33.57	355.83	9,944.55	-392.00	-1,048.99	-278.79	13.31	13.03	4.99
10,111.71	35.21	354.05	9,955.62	-384.45	-1,049.66	-271.22	14.33	12.22	-13.26
10,125.14	36.60	352.66	9,966.50	-376.63	-1,050.58	-263.34	12.00	10.35	-10.35
10,138.57	38.33	352.90	9,977.16	-368.52	-1,051.60	-255.17	12.93	12.88	1.79
10,152.00	40.01	353.36	9,987.57	-360.10	-1,052.62	-246.69	12.69	12.51	3.43
10,165.43	40.40	353.20	9,997.83	-351.49	-1,053.63	-238.02	3.00	2.90	-1.19
10,178.86	41.22	352.89	10,007.99	-342.78	-1,054.70	-229.25	6.29	6.11	-2.31
10,192.29	42.40	352.96	10,018.00	-333.89	-1,055.80	-220.30	8.79	8.79	0.52
10,205.71	43.75	353.42	10,027.80	-324.79	-1,056.88	-211.13	10.33	10.06	3.43
10,219.14	45.50	354.14	10,037.36	-315.42	-1,057.91	-201.70	13.56	13.03	5.36
10,232.57	46.83	355.13	10,046.66	-305.77	-1,058.81	-192.01	11.24	9.90	7.37
10,246.00	48.27	355.44	10,055.73	-295.90	-1,059.62	-182.10	10.86	10.72	2.31
10,259.57	50.30	356.46	10,064.58	-285.64	-1,060.35	-171.83	16.01	14.96	7.52
10,273.14	52.68	356.80	10,073.03	-275.04	-1,060.97	-161.22	17.65	17.54	2.51
10,286.71	55.14	357.12	10,081.02	-264.09	-1,061.55	-150.27	18.23	18.13	2.36
10,300.29	57.47	357.61	10,088.55	-252.80	-1,062.07	-138.99	17.42	17.16	3.61
10,313.86	59.83	357.76	10,095.61	-241.22	-1,062.54	-127.43	17.42	17.39	1.11
10,327.43	62.34	357.45	10,102.17	-229.36	-1,063.04	-115.58	18.60	18.50	-2.28
10,341.00	64.77	357.49	10,108.22	-217.22	-1,063.57	-103.45	17.91	17.91	0.29
10,352.75	66.87	357.87	10,113.03	-206.51	-1,064.01	-92.76	18.11	17.87	3.23
10,364.50	68.99	357.81	10,117.44	-195.63	-1,064.42	-81.89	18.05	18.04	-0.51
10,376.25	71.06	357.82	10,121.46	-184.59	-1,064.84	-70.88	17.62	17.62	0.09
10,388.00	73.03	358.06	10,125.08	-173.42	-1,065.24	-59.73	16.88	16.77	2.04
10,399.75	74.71	357.99	10,128.34	-162.14	-1,065.63	-48.47	14.31	14.30	-0.60
10,411.50	76.69	357.54	10,131.25	-150.77	-1,066.07	-37.11	17.25	16.85	-3.83
10,423.25	78.59	357.68	10,133.76	-139.30	-1,066.55	-25.66	16.21	16.17	1.19
10,435.00	80.26	358.55	10,135.92	-127.76	-1,066.93	-14.14	15.97	14.21	7.40
10,448.43	82.37	357.86	10,137.94	-114.49	-1,067.35	-0.90	16.51	15.71	-5.14
10,461.86	84.65	357.80	10,139.46	-101.15	-1,067.85	12.41	16.98	16.98	-0.45
10,475.29	87.07	358.40	10,140.43	-87.77	-1,068.30	25.77	18.56	18.02	4.47



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
10,488.71	88.00	358.70	10,141.01	-74.36	-1,068.64	39.14	7.28	6.93	2.24
10,502.14	88.09	358.69	10,141.47	-60.95	-1,068.94	52.51	0.67	0.67	-0.07
10,515.57	88.14	358.66	10,141.91	-47.53	-1,069.25	65.89	0.43	0.37	-0.22
10,529.00	88.10	358.62	10,142.35	-34.11	-1,069.57	79.27	0.42	-0.30	-0.30
10,543.50	87.87	358.54	10,142.86	-19.62	-1,069.93	93.71	1.68	-1.59	-0.55
10,558.00	87.58	358.45	10,143.44	-5.14	-1,070.31	108.15	2.09	-2.00	-0.62
10,571.43	87.32	358.40	10,144.03	8.27	-1,070.68	121.53	1.97	-1.94	-0.37
10,584.86	87.09	358.37	10,144.69	21.68	-1,071.06	134.90	1.73	-1.71	-0.22
10,598.29	86.87	358.35	10,145.40	35.09	-1,071.44	148.27	1.64	-1.64	-0.15
10,611.71	86.68	358.34	10,146.15	48.48	-1,071.83	161.63	1.42	-1.42	-0.07
10,625.14	86.56	358.35	10,146.94	61.88	-1,072.22	175.00	0.90	-0.89	0.07
10,638.57	86.45	358.38	10,147.76	75.28	-1,072.60	188.36	0.85	-0.82	0.22
10,652.00	86.43	358.43	10,148.59	88.68	-1,072.97	201.73	0.40	-0.15	0.37
10,665.57	86.52	358.52	10,149.43	102.22	-1,073.33	215.23	0.94	0.66	0.66
10,679.14	86.98	358.87	10,150.20	115.77	-1,073.64	228.73	4.26	3.39	2.58
10,692.71	87.50	359.27	10,150.85	129.32	-1,073.86	242.23	4.83	3.83	2.95
10,706.29	88.04	359.67	10,151.38	142.89	-1,073.99	255.73	4.95	3.98	2.95
10,719.86	88.57	0.07	10,151.78	156.45	-1,074.02	269.22	4.89	3.91	2.95
10,733.43	89.10	0.48	10,152.06	170.02	-1,073.95	282.71	4.94	3.91	3.02
10,747.00	89.61	0.90	10,152.21	183.59	-1,073.79	296.18	4.87	3.76	3.10
10,760.43	90.08	1.32	10,152.25	197.01	-1,073.53	309.51	4.69	3.50	3.13
10,773.86	90.54	1.74	10,152.17	210.44	-1,073.17	322.82	4.64	3.43	3.13
10,787.29	90.99	2.15	10,151.99	223.86	-1,072.71	336.12	4.53	3.35	3.05
10,800.71	91.42	2.57	10,151.71	237.27	-1,072.16	349.39	4.48	3.20	3.13
10,814.14	91.84	2.97	10,151.33	250.67	-1,071.51	362.65	4.32	3.13	2.98
10,827.57	92.25	3.35	10,150.85	264.08	-1,070.77	375.90	4.16	3.05	2.83
10,841.00	92.66	3.72	10,150.28	277.47	-1,069.95	389.13	4.11	3.05	2.76
10,854.57	93.12	4.09	10,149.59	290.99	-1,069.02	402.48	4.35	3.39	2.73
10,868.14	93.22	4.17	10,148.84	304.50	-1,068.05	415.81	0.94	0.74	0.59
10,881.71	92.52	3.57	10,148.16	318.02	-1,067.13	429.16	6.79	-5.16	-4.42
10,895.29	91.81	3.03	10,147.65	331.57	-1,066.35	442.55	6.57	-5.23	-3.98
10,908.86	90.97	2.78	10,147.32	345.12	-1,065.66	455.95	6.46	-6.19	-1.84
10,922.43	90.47	2.51	10,147.15	358.68	-1,065.04	469.36	4.19	-3.68	-1.99
10,936.00	90.38	2.07	10,147.05	372.23	-1,064.49	482.79	3.31	-0.66	-3.24
10,949.14	90.36	1.79	10,146.96	385.37	-1,064.05	495.80	2.14	-0.15	-2.13
10,962.29	90.38	1.56	10,146.88	398.51	-1,063.67	508.83	1.76	0.15	-1.75
10,975.43	90.39	1.33	10,146.79	411.65	-1,063.34	521.86	1.75	0.08	-1.75
10,988.57	90.40	1.10	10,146.70	424.78	-1,063.06	534.89	1.75	0.08	-1.75
11,001.71	90.39	0.93	10,146.61	437.92	-1,062.82	547.93	1.30	-0.08	-1.29
11,014.86	90.39	0.75	10,146.52	451.07	-1,062.63	560.98	1.37	0.00	-1.37
11,028.00	90.04	0.52	10,146.47	464.21	-1,062.49	574.03	3.19	-2.66	-1.75
11,041.29	89.53	0.24	10,146.52	477.50	-1,062.40	587.24	4.38	-3.84	-2.11
11,054.57	89.41	0.07	10,146.64	490.78	-1,062.36	600.44	1.57	-0.90	-1.28



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
11,067.86	89.52	359.93	10,146.77	504.07	-1,062.36	613.65	1.34	0.83	-1.05
11,081.14	89.64	359.80	10,146.86	517.35	-1,062.39	626.86	1.33	0.90	-0.98
11,094.43	89.92	359.51	10,146.92	530.63	-1,062.47	640.09	3.03	2.11	-2.18
11,107.71	90.22	359.23	10,146.90	543.91	-1,062.62	653.31	3.09	2.26	-2.11
11,121.00	90.60	359.30	10,146.80	557.20	-1,062.79	666.54	2.91	2.86	0.53
11,134.14	90.88	359.36	10,146.63	570.34	-1,062.94	679.62	2.18	2.13	0.46
11,147.29	90.60	359.20	10,146.46	583.49	-1,063.11	692.71	2.45	-2.13	-1.22
11,160.43	90.34	359.05	10,146.36	596.63	-1,063.31	705.80	2.28	-1.98	-1.14
11,173.57	90.10	358.92	10,146.31	609.76	-1,063.54	718.88	2.08	-1.83	-0.99
11,186.71	90.11	358.93	10,146.28	622.90	-1,063.79	731.97	0.11	0.08	0.08
11,199.86	90.24	359.04	10,146.24	636.05	-1,064.02	745.07	1.30	0.99	0.84
11,213.00	90.38	359.19	10,146.17	649.19	-1,064.22	758.16	1.56	1.07	1.14
11,226.14	90.44	359.28	10,146.08	662.33	-1,064.40	771.24	0.82	0.46	0.68
11,239.29	90.48	359.31	10,145.97	675.48	-1,064.56	784.33	0.38	0.30	0.23
11,252.43	90.52	359.38	10,145.86	688.61	-1,064.71	797.41	0.61	0.30	0.53
11,265.57	90.51	359.63	10,145.74	701.75	-1,064.83	810.49	1.90	-0.08	1.90
11,278.71	90.49	359.92	10,145.62	714.89	-1,064.88	823.56	2.21	-0.15	2.21
11,291.86	90.48	0.17	10,145.51	728.04	-1,064.87	836.64	1.90	-0.08	1.90
11,305.00	90.50	0.37	10,145.40	741.18	-1,064.81	849.70	1.53	0.15	1.52
11,318.29	90.52	0.42	10,145.28	754.47	-1,064.71	862.90	0.41	0.15	0.38
11,331.57	90.54	0.31	10,145.16	767.75	-1,064.63	876.10	0.84	0.15	-0.83
11,344.86	90.56	0.21	10,145.03	781.04	-1,064.57	889.31	0.77	0.15	-0.75
11,358.14	90.57	0.11	10,144.90	794.32	-1,064.53	902.51	0.76	0.08	-0.75
11,371.43	90.58	0.02	10,144.77	807.61	-1,064.52	915.72	0.68	0.08	-0.68
11,384.71	90.59	0.16	10,144.63	820.89	-1,064.50	928.92	1.06	0.08	1.05
11,398.00	90.60	0.38	10,144.49	834.18	-1,064.43	942.13	1.66	0.08	1.66
11,411.29	90.62	0.50	10,144.35	847.46	-1,064.33	955.33	0.92	0.15	0.90
11,424.57	90.66	0.57	10,144.20	860.74	-1,064.21	968.52	0.61	0.30	0.53
11,437.86	90.69	0.60	10,144.05	874.03	-1,064.07	981.72	0.32	0.23	0.23
11,451.14	90.72	0.61	10,143.88	887.31	-1,063.93	994.91	0.24	0.23	0.08
11,464.43	90.74	0.62	10,143.71	900.60	-1,063.79	1,008.11	0.17	0.15	0.08
11,477.71	90.81	0.68	10,143.53	913.88	-1,063.64	1,021.30	0.69	0.53	0.45
11,491.00	90.75	0.70	10,143.35	927.16	-1,063.48	1,034.49	0.48	-0.45	0.15
11,504.43	90.61	0.75	10,143.19	940.59	-1,063.31	1,047.83	1.11	-1.04	0.37
11,517.86	90.43	0.81	10,143.07	954.02	-1,063.13	1,061.16	1.41	-1.34	0.45
11,531.29	90.25	0.88	10,142.99	967.45	-1,062.93	1,074.49	1.44	-1.34	0.52
11,544.71	90.06	0.95	10,142.96	980.87	-1,062.71	1,087.81	1.51	-1.42	0.52
11,558.14	89.92	1.01	10,142.96	994.29	-1,062.48	1,101.14	1.13	-1.04	0.45
11,571.57	89.78	1.13	10,142.99	1,007.72	-1,062.23	1,114.47	1.37	-1.04	0.89
11,585.00	89.74	1.03	10,143.05	1,021.15	-1,061.98	1,127.79	0.80	-0.30	-0.74
11,598.43	89.72	1.04	10,143.11	1,034.58	-1,061.74	1,141.12	0.17	-0.15	0.07
11,611.86	89.67	1.13	10,143.19	1,048.00	-1,061.48	1,154.45	0.77	-0.37	0.67
11,625.29	89.59	1.29	10,143.27	1,061.43	-1,061.20	1,167.77	1.33	-0.60	1.19
11,638.71	89.52	1.40	10,143.38	1,074.85	-1,060.88	1,181.07	0.97	-0.52	0.82



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
11,652.14	89.54	1.40	10,143.49	1,088.27	-1,060.56	1,194.39	0.15	0.15	0.00
11,665.57	89.65	1.49	10,143.58	1,101.70	-1,060.22	1,207.70	1.06	0.82	0.67
11,679.00	89.72	1.56	10,143.66	1,115.12	-1,059.86	1,221.02	0.74	0.52	0.52
11,692.43	89.71	1.66	10,143.72	1,128.55	-1,059.48	1,234.33	0.75	-0.07	0.74
11,705.86	89.75	1.67	10,143.79	1,141.97	-1,059.09	1,247.63	0.31	0.30	0.07
11,719.29	89.66	1.57	10,143.85	1,155.40	-1,058.71	1,260.94	1.00	-0.67	-0.74
11,732.71	89.56	1.46	10,143.95	1,168.81	-1,058.36	1,274.24	1.11	-0.75	-0.82
11,746.14	89.46	1.36	10,144.06	1,182.24	-1,058.03	1,287.56	1.05	-0.74	-0.74
11,759.57	89.37	1.20	10,144.20	1,195.66	-1,057.73	1,300.88	1.37	-0.67	-1.19
11,773.00	89.23	1.01	10,144.36	1,209.09	-1,057.47	1,314.20	1.76	-1.04	-1.41
11,786.57	89.06	0.79	10,144.56	1,222.66	-1,057.25	1,327.67	2.05	-1.25	-1.62
11,800.14	88.98	0.80	10,144.80	1,236.22	-1,057.07	1,341.14	0.59	-0.59	0.07
11,813.71	88.95	0.92	10,145.04	1,249.79	-1,056.86	1,354.61	0.91	-0.22	0.88
11,827.29	88.88	0.95	10,145.30	1,263.36	-1,056.64	1,368.08	0.56	-0.52	0.22
11,840.86	88.75	0.82	10,145.58	1,276.93	-1,056.43	1,381.55	1.35	-0.96	-0.96
11,854.43	88.54	0.80	10,145.90	1,290.49	-1,056.24	1,395.02	1.55	-1.55	-0.15
11,868.00	88.17	0.69	10,146.29	1,304.06	-1,056.06	1,408.49	2.84	-2.73	-0.81
11,881.57	88.04	0.57	10,146.74	1,317.62	-1,055.91	1,421.96	1.30	-0.96	-0.88
11,895.14	88.09	0.55	10,147.20	1,331.18	-1,055.78	1,435.43	0.40	0.37	-0.15
11,908.71	88.14	0.69	10,147.64	1,344.74	-1,055.64	1,448.90	1.09	0.37	1.03
11,922.29	88.20	0.85	10,148.08	1,358.32	-1,055.45	1,462.38	1.26	0.44	1.18
11,935.86	88.26	1.01	10,148.50	1,371.88	-1,055.23	1,475.84	1.26	0.44	1.18
11,949.43	88.29	1.24	10,148.90	1,385.44	-1,054.97	1,489.30	1.71	0.22	1.69
11,963.00	88.26	1.47	10,149.31	1,399.00	-1,054.65	1,502.75	1.71	-0.22	1.69
11,976.43	88.26	1.59	10,149.72	1,412.42	-1,054.29	1,516.05	0.89	0.00	0.89
11,989.86	88.25	1.68	10,150.13	1,425.84	-1,053.90	1,529.35	0.67	-0.07	0.67
12,003.29	88.24	1.76	10,150.54	1,439.25	-1,053.50	1,542.65	0.60	-0.07	0.60
12,016.71	88.25	1.82	10,150.95	1,452.66	-1,053.08	1,555.94	0.45	0.07	0.45
12,030.14	88.30	1.86	10,151.36	1,466.08	-1,052.65	1,569.24	0.48	0.37	0.30
12,043.57	88.41	1.87	10,151.74	1,479.49	-1,052.21	1,582.53	0.82	0.82	0.07
12,057.00	88.62	1.84	10,152.09	1,492.91	-1,051.78	1,595.83	1.58	1.56	-0.22
12,070.57	88.98	1.75	10,152.37	1,506.47	-1,051.35	1,609.27	2.73	2.65	-0.66
12,084.14	89.31	1.57	10,152.58	1,520.04	-1,050.96	1,622.71	2.77	2.43	-1.33
12,097.71	89.65	1.37	10,152.70	1,533.60	-1,050.61	1,636.17	2.91	2.51	-1.47
12,111.29	89.97	1.18	10,152.74	1,547.18	-1,050.31	1,649.63	2.74	2.36	-1.40
12,124.86	90.21	1.02	10,152.72	1,560.75	-1,050.05	1,663.10	2.13	1.77	-1.18
12,138.43	90.02	0.85	10,152.70	1,574.31	-1,049.83	1,676.57	1.88	-1.40	-1.25
12,152.00	90.12	0.87	10,152.68	1,587.88	-1,049.63	1,690.04	0.75	0.74	0.15
12,165.43	90.22	0.84	10,152.64	1,601.31	-1,049.43	1,703.37	0.78	0.74	-0.22
12,178.86	90.27	0.79	10,152.58	1,614.74	-1,049.23	1,716.70	0.53	0.37	-0.37
12,192.29	90.23	0.80	10,152.52	1,628.17	-1,049.05	1,730.04	0.31	-0.30	0.07
12,205.71	90.15	0.89	10,152.48	1,641.59	-1,048.85	1,743.36	0.90	-0.60	0.67
12,219.14	89.88	0.87	10,152.48	1,655.01	-1,048.64	1,756.69	2.02	-2.01	-0.15



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
12,232.57	89.59	0.74	10,152.54	1,668.44	-1,048.46	1,770.02	2.37	-2.16	-0.97
12,246.00	89.36	0.68	10,152.66	1,681.87	-1,048.29	1,783.36	1.77	-1.71	-0.45
12,259.57	89.26	0.64	10,152.82	1,695.44	-1,048.13	1,796.83	0.79	-0.74	-0.29
12,273.14	89.33	0.64	10,152.99	1,709.01	-1,047.98	1,810.31	0.52	0.52	0.00
12,286.71	89.40	0.63	10,153.14	1,722.58	-1,047.83	1,823.78	0.52	0.52	-0.07
12,300.29	89.46	0.60	10,153.28	1,736.15	-1,047.68	1,837.27	0.49	0.44	-0.22
12,313.86	89.49	0.50	10,153.40	1,749.72	-1,047.55	1,850.75	0.77	0.22	-0.74
12,327.43	89.51	0.44	10,153.52	1,763.29	-1,047.44	1,864.23	0.47	0.15	-0.44
12,341.00	89.50	0.37	10,153.64	1,776.86	-1,047.35	1,877.71	0.52	-0.07	-0.52
12,354.57	89.45	0.30	10,153.76	1,790.43	-1,047.27	1,891.20	0.63	-0.37	-0.52
12,368.14	89.38	0.25	10,153.90	1,804.00	-1,047.20	1,904.69	0.63	-0.52	-0.37
12,381.71	89.31	0.22	10,154.05	1,817.57	-1,047.15	1,918.17	0.56	-0.52	-0.22
12,395.29	89.25	0.21	10,154.23	1,831.15	-1,047.10	1,931.67	0.45	-0.44	-0.07
12,408.86	89.26	0.24	10,154.40	1,844.72	-1,047.04	1,945.16	0.23	0.07	0.22
12,422.43	89.51	0.27	10,154.55	1,858.29	-1,046.98	1,958.64	1.86	1.84	0.22
12,436.00	89.71	0.14	10,154.64	1,871.85	-1,046.93	1,972.13	1.76	1.47	-0.96
12,449.57	89.67	0.18	10,154.71	1,885.42	-1,046.90	1,985.62	0.42	-0.29	0.29
12,463.14	89.72	0.38	10,154.79	1,898.99	-1,046.83	1,999.11	1.52	0.37	1.47
12,476.71	89.77	0.56	10,154.85	1,912.56	-1,046.72	2,012.59	1.38	0.37	1.33
12,490.29	89.84	0.84	10,154.89	1,926.14	-1,046.55	2,026.07	2.13	0.52	2.06
12,503.86	89.91	1.12	10,154.92	1,939.71	-1,046.32	2,039.54	2.13	0.52	2.06
12,517.43	89.98	1.39	10,154.93	1,953.28	-1,046.02	2,053.00	2.06	0.52	1.99
12,531.00	90.04	1.63	10,154.93	1,966.84	-1,045.67	2,066.45	1.82	0.44	1.77
12,544.57	90.08	1.83	10,154.92	1,980.41	-1,045.26	2,079.90	1.50	0.29	1.47
12,558.14	90.11	2.00	10,154.90	1,993.97	-1,044.80	2,093.33	1.27	0.22	1.25
12,571.71	90.14	2.14	10,154.87	2,007.53	-1,044.31	2,106.77	1.06	0.22	1.03
12,585.29	90.18	2.25	10,154.83	2,021.10	-1,043.79	2,120.21	0.86	0.29	0.81
12,598.86	90.23	2.34	10,154.78	2,034.66	-1,043.25	2,133.63	0.76	0.37	0.66
12,612.43	90.30	2.39	10,154.72	2,048.22	-1,042.69	2,147.05	0.63	0.52	0.37
12,626.00	90.40	2.39	10,154.63	2,061.78	-1,042.12	2,160.48	0.74	0.74	0.00
12,639.43	90.56	2.32	10,154.52	2,075.19	-1,041.57	2,173.76	1.30	1.19	-0.52
12,652.86	90.74	2.21	10,154.37	2,088.61	-1,041.04	2,187.05	1.57	1.34	-0.82
12,666.29	90.93	2.08	10,154.17	2,102.03	-1,040.54	2,200.34	1.71	1.41	-0.97
12,679.71	91.12	1.96	10,153.93	2,115.44	-1,040.07	2,213.62	1.67	1.42	-0.89
12,693.14	91.37	2.06	10,153.64	2,128.86	-1,039.59	2,226.92	2.00	1.86	0.74
12,706.57	91.49	2.13	10,153.31	2,142.28	-1,039.10	2,240.21	1.03	0.89	0.52
12,720.00	91.54	2.02	10,152.95	2,155.69	-1,038.62	2,253.49	0.90	0.37	-0.82
12,733.57	91.54	1.88	10,152.59	2,169.25	-1,038.16	2,266.93	1.03	0.00	-1.03
12,747.14	91.58	1.85	10,152.22	2,182.81	-1,037.71	2,280.36	0.37	0.29	-0.22
12,760.71	91.61	1.91	10,151.84	2,196.36	-1,037.27	2,293.80	0.49	0.22	0.44
12,774.29	91.63	1.87	10,151.46	2,209.93	-1,036.82	2,307.24	0.33	0.15	-0.29
12,787.86	91.61	1.77	10,151.07	2,223.49	-1,036.39	2,320.68	0.75	-0.15	-0.74
12,801.43	91.55	1.62	10,150.70	2,237.05	-1,035.99	2,334.12	1.19	-0.44	-1.11



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
12,815.00	91.51	1.62	10,150.34	2,250.61	-1,035.61	2,347.56	0.29	-0.29	0.00
12,828.57	91.43	1.56	10,149.99	2,264.17	-1,035.23	2,361.00	0.74	-0.59	-0.44
12,842.14	91.31	1.49	10,149.66	2,277.73	-1,034.87	2,374.45	1.02	-0.88	-0.52
12,855.71	91.17	1.35	10,149.37	2,291.29	-1,034.53	2,387.90	1.46	-1.03	-1.03
12,869.29	90.94	1.28	10,149.12	2,304.87	-1,034.22	2,401.37	1.77	-1.69	-0.52
12,882.86	90.76	1.20	10,148.92	2,318.43	-1,033.93	2,414.82	1.45	-1.33	-0.59
12,896.43	90.62	1.18	10,148.75	2,332.00	-1,033.65	2,428.28	1.04	-1.03	-0.15
12,910.00	90.39	1.13	10,148.63	2,345.56	-1,033.37	2,441.75	1.73	-1.69	-0.37
12,923.43	90.12	1.05	10,148.57	2,358.99	-1,033.12	2,455.07	2.10	-2.01	-0.60
12,936.86	90.11	1.06	10,148.55	2,372.42	-1,032.87	2,468.40	0.11	-0.07	0.07
12,950.29	90.19	1.12	10,148.51	2,385.85	-1,032.61	2,481.72	0.74	0.60	0.45
12,963.71	90.20	1.03	10,148.47	2,399.27	-1,032.36	2,495.04	0.67	0.07	-0.67
12,977.14	90.14	0.96	10,148.43	2,412.69	-1,032.13	2,508.37	0.69	-0.45	-0.52
12,990.57	90.05	0.90	10,148.41	2,426.12	-1,031.91	2,521.70	0.81	-0.67	-0.45
13,004.00	89.98	0.85	10,148.40	2,439.55	-1,031.71	2,535.03	0.64	-0.52	-0.37
13,017.57	90.05	0.85	10,148.40	2,453.12	-1,031.50	2,548.50	0.52	0.52	0.00
13,031.14	90.14	0.93	10,148.38	2,466.69	-1,031.29	2,561.97	0.89	0.66	0.59
13,044.71	90.24	1.02	10,148.33	2,480.25	-1,031.06	2,575.44	0.99	0.74	0.66
13,058.29	90.29	1.14	10,148.27	2,493.83	-1,030.81	2,588.91	0.96	0.37	0.88
13,071.86	90.31	1.29	10,148.20	2,507.40	-1,030.52	2,602.37	1.12	0.15	1.11
13,085.43	90.33	1.43	10,148.12	2,520.96	-1,030.20	2,615.83	1.04	0.15	1.03
13,099.00	90.36	1.48	10,148.04	2,534.53	-1,029.85	2,629.28	0.43	0.22	0.37
13,112.43	90.40	1.60	10,147.95	2,547.95	-1,029.49	2,642.59	0.94	0.30	0.89
13,125.86	90.42	1.70	10,147.85	2,561.38	-1,029.10	2,655.90	0.76	0.15	0.74
13,139.29	90.44	1.78	10,147.75	2,574.80	-1,028.70	2,669.20	0.61	0.15	0.60
13,152.71	90.51	1.85	10,147.64	2,588.22	-1,028.27	2,682.49	0.74	0.52	0.52
13,166.14	90.51	1.90	10,147.52	2,601.64	-1,027.83	2,695.79	0.37	0.00	0.37
13,179.57	90.47	1.91	10,147.41	2,615.06	-1,027.39	2,709.09	0.31	-0.30	0.07
13,193.00	90.44	1.92	10,147.30	2,628.48	-1,026.94	2,722.39	0.24	-0.22	0.07
13,206.57	90.47	1.95	10,147.19	2,642.04	-1,026.48	2,735.83	0.31	0.22	0.22
13,220.14	90.59	2.02	10,147.07	2,655.60	-1,026.01	2,749.27	1.02	0.88	0.52
13,233.71	90.77	2.12	10,146.91	2,669.16	-1,025.52	2,762.70	1.52	1.33	0.74
13,247.29	90.93	2.19	10,146.71	2,682.73	-1,025.01	2,776.14	1.29	1.18	0.52
13,260.86	90.97	2.18	10,146.48	2,696.29	-1,024.49	2,789.56	0.30	0.29	-0.07
13,274.43	91.08	2.17	10,146.24	2,709.85	-1,023.98	2,802.99	0.81	0.81	-0.07
13,288.00	91.17	2.17	10,145.97	2,723.41	-1,023.46	2,816.42	0.66	0.66	0.00
13,301.43	91.08	2.18	10,145.71	2,736.83	-1,022.95	2,829.71	0.67	-0.67	0.07
13,314.86	90.99	2.18	10,145.46	2,750.24	-1,022.44	2,843.00	0.67	-0.67	0.00
13,328.29	90.85	2.18	10,145.25	2,763.66	-1,021.93	2,856.29	1.04	-1.04	0.00
13,341.71	90.73	2.18	10,145.06	2,777.07	-1,021.42	2,869.57	0.89	-0.89	0.00
13,355.14	90.62	2.16	10,144.91	2,790.49	-1,020.91	2,882.86	0.83	-0.82	-0.15
13,368.57	90.63	2.11	10,144.76	2,803.91	-1,020.41	2,896.15	0.38	0.07	-0.37
13,382.00	90.58	2.10	10,144.62	2,817.33	-1,019.92	2,909.44	0.38	-0.37	-0.07
13,395.57	90.54	2.04	10,144.48	2,830.89	-1,019.43	2,922.87	0.53	-0.29	-0.44



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
13,409.14	90.51	1.97	10,144.36	2,844.45	-1,018.95	2,936.31	0.56	-0.22	-0.52
13,422.71	90.46	1.99	10,144.25	2,858.01	-1,018.48	2,949.74	0.40	-0.37	0.15
13,436.29	90.42	1.93	10,144.14	2,871.59	-1,018.02	2,963.19	0.53	-0.29	-0.44
13,449.86	90.51	1.89	10,144.03	2,885.15	-1,017.57	2,976.63	0.73	0.66	-0.29
13,463.43	90.56	1.74	10,143.90	2,898.71	-1,017.14	2,990.07	1.17	0.37	-1.11
13,477.00	90.54	1.64	10,143.77	2,912.27	-1,016.74	3,003.51	0.75	-0.15	-0.74
13,490.43	90.49	1.57	10,143.65	2,925.70	-1,016.36	3,016.82	0.64	-0.37	-0.52
13,503.86	90.50	1.58	10,143.54	2,939.12	-1,015.99	3,030.13	0.11	0.07	0.07
13,517.29	90.53	1.61	10,143.42	2,952.55	-1,015.62	3,043.44	0.32	0.22	0.22
13,530.71	90.56	1.64	10,143.29	2,965.96	-1,015.24	3,056.74	0.32	0.22	0.22
13,544.14	90.59	1.60	10,143.15	2,979.38	-1,014.86	3,070.05	0.37	0.22	-0.30
13,557.57	90.61	1.57	10,143.01	2,992.81	-1,014.49	3,083.36	0.27	0.15	-0.22
13,571.00	90.71	1.48	10,142.86	3,006.23	-1,014.13	3,096.67	1.00	0.74	-0.67
13,584.71	90.72	1.45	10,142.69	3,019.94	-1,013.78	3,110.26	0.23	0.07	-0.22
13,598.43	90.71	1.35	10,142.52	3,033.65	-1,013.44	3,123.86	0.73	-0.07	-0.73
13,612.14	90.79	1.25	10,142.34	3,047.36	-1,013.13	3,137.46	0.93	0.58	-0.73
13,625.86	90.79	1.15	10,142.15	3,061.07	-1,012.85	3,151.07	0.73	0.00	-0.73
13,639.57	90.75	0.97	10,141.96	3,074.78	-1,012.59	3,164.67	1.34	-0.29	-1.31
13,653.29	90.76	0.79	10,141.78	3,088.50	-1,012.38	3,178.29	1.31	0.07	-1.31
13,667.00	90.68	0.70	10,141.61	3,102.20	-1,012.20	3,191.90	0.88	-0.58	-0.66
13,680.43	90.48	0.75	10,141.47	3,115.63	-1,012.03	3,205.23	1.54	-1.49	0.37
13,693.86	90.28	0.79	10,141.39	3,129.06	-1,011.85	3,218.57	1.52	-1.49	0.30
13,707.29	90.19	0.82	10,141.33	3,142.49	-1,011.66	3,231.90	0.71	-0.67	0.22
13,720.71	90.09	0.96	10,141.30	3,155.91	-1,011.46	3,245.22	1.28	-0.75	1.04
13,734.14	89.92	1.06	10,141.30	3,169.34	-1,011.22	3,258.55	1.47	-1.27	0.74
13,747.57	89.64	1.07	10,141.35	3,182.76	-1,010.97	3,271.87	2.09	-2.08	0.07
13,761.00	89.28	1.08	10,141.47	3,196.19	-1,010.72	3,285.20	2.68	-2.68	0.07
13,774.43	89.01	0.98	10,141.68	3,209.62	-1,010.48	3,298.52	2.14	-2.01	-0.74
13,787.86	89.03	0.82	10,141.90	3,223.04	-1,010.27	3,311.85	1.20	0.15	-1.19
13,801.29	89.07	0.66	10,142.13	3,236.47	-1,010.09	3,325.19	1.23	0.30	-1.19
13,814.71	89.13	0.47	10,142.34	3,249.89	-1,009.96	3,338.51	1.48	0.45	-1.42
13,828.14	89.18	0.27	10,142.54	3,263.32	-1,009.87	3,351.86	1.53	0.37	-1.49
13,841.57	89.20	0.10	10,142.73	3,276.74	-1,009.83	3,365.21	1.27	0.15	-1.27
13,855.00	89.29	359.95	10,142.90	3,290.17	-1,009.82	3,378.56	1.30	0.67	-1.12
13,868.57	89.41	359.92	10,143.06	3,303.74	-1,009.84	3,392.05	0.91	0.88	-0.22
13,882.14	89.38	359.94	10,143.20	3,317.31	-1,009.86	3,405.55	0.27	-0.22	0.15
13,895.71	89.37	0.00	10,143.35	3,330.88	-1,009.86	3,419.04	0.45	-0.07	0.44
13,909.29	89.39	359.93	10,143.50	3,344.46	-1,009.87	3,432.55	0.54	0.15	-0.52
13,922.86	89.40	359.87	10,143.64	3,358.03	-1,009.89	3,446.04	0.45	0.07	-0.44
13,936.43	89.40	359.97	10,143.78	3,371.60	-1,009.91	3,459.54	0.74	0.00	0.74
13,950.00	89.48	0.02	10,143.91	3,385.17	-1,009.91	3,473.03	0.70	0.59	0.37
13,963.43	89.55	0.13	10,144.03	3,398.60	-1,009.90	3,486.38	0.97	0.52	0.82
13,976.86	89.59	0.24	10,144.13	3,412.03	-1,009.85	3,499.73	0.87	0.30	0.82



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
13,990.29	89.57	0.29	10,144.23	3,425.46	-1,009.79	3,513.08	0.40	-0.15	0.37
14,003.71	89.54	0.32	10,144.33	3,438.88	-1,009.72	3,526.42	0.32	-0.22	0.22
14,017.14	89.44	0.30	10,144.45	3,452.31	-1,009.65	3,539.76	0.76	-0.74	-0.15
14,030.57	89.41	0.29	10,144.58	3,465.73	-1,009.58	3,553.11	0.24	-0.22	-0.07
14,044.00	89.44	0.25	10,144.72	3,479.16	-1,009.52	3,566.46	0.37	0.22	-0.30
14,057.57	89.37	359.99	10,144.86	3,492.73	-1,009.49	3,579.95	1.98	-0.52	-1.92
14,071.14	89.26	359.87	10,145.02	3,506.30	-1,009.50	3,593.44	1.20	-0.81	-0.88
14,084.71	89.15	359.76	10,145.21	3,519.87	-1,009.55	3,606.94	1.15	-0.81	-0.81
14,098.29	89.08	359.59	10,145.42	3,533.45	-1,009.62	3,620.45	1.35	-0.52	-1.25
14,111.86	89.09	359.43	10,145.64	3,547.02	-1,009.74	3,633.95	1.18	0.07	-1.18
14,125.43	89.14	359.41	10,145.85	3,560.58	-1,009.88	3,647.46	0.40	0.37	-0.15
14,139.00	89.08	359.23	10,146.06	3,574.15	-1,010.04	3,660.97	1.40	-0.44	-1.33
14,152.57	89.07	359.21	10,146.28	3,587.72	-1,010.22	3,674.48	0.16	-0.07	-0.15
14,166.14	89.08	359.27	10,146.50	3,601.29	-1,010.40	3,687.99	0.45	0.07	0.44
14,179.71	89.12	359.41	10,146.71	3,614.85	-1,010.56	3,701.49	1.07	0.29	1.03
14,193.29	89.11	359.47	10,146.92	3,628.43	-1,010.69	3,715.01	0.45	-0.07	0.44
14,206.86	89.11	359.51	10,147.13	3,642.00	-1,010.81	3,728.51	0.29	0.00	0.29
14,220.43	89.14	359.57	10,147.34	3,655.57	-1,010.92	3,742.02	0.49	0.22	0.44
14,234.00	89.15	359.60	10,147.54	3,669.13	-1,011.02	3,755.52	0.23	0.07	0.22
14,247.43	89.24	359.60	10,147.73	3,682.56	-1,011.11	3,768.88	0.67	0.67	0.00
14,260.86	89.31	359.75	10,147.90	3,695.99	-1,011.19	3,782.24	1.23	0.52	1.12
14,274.29	89.38	359.96	10,148.05	3,709.42	-1,011.22	3,795.60	1.65	0.52	1.56
14,287.71	89.43	0.13	10,148.19	3,722.84	-1,011.21	3,808.94	1.32	0.37	1.27
14,301.14	89.35	0.08	10,148.33	3,736.27	-1,011.19	3,822.29	0.70	-0.60	-0.37
14,314.57	89.27	359.97	10,148.50	3,749.70	-1,011.18	3,835.65	1.01	-0.60	-0.82
14,328.00	89.21	359.89	10,148.67	3,763.13	-1,011.20	3,849.00	0.74	-0.45	-0.60
14,341.57	89.22	359.79	10,148.86	3,776.70	-1,011.24	3,862.50	0.74	0.07	-0.74
14,355.14	89.47	359.86	10,149.01	3,790.26	-1,011.28	3,876.00	1.91	1.84	0.52
14,368.71	89.75	359.93	10,149.11	3,803.83	-1,011.30	3,889.49	2.13	2.06	0.52
14,382.29	90.08	0.05	10,149.13	3,817.41	-1,011.31	3,903.00	2.59	2.43	0.88
14,395.86	90.42	0.18	10,149.07	3,830.98	-1,011.28	3,916.49	2.68	2.51	0.96
14,409.43	90.46	0.25	10,148.96	3,844.55	-1,011.23	3,929.98	0.59	0.29	0.52
14,423.00	90.60	0.15	10,148.84	3,858.12	-1,011.18	3,943.46	1.27	1.03	-0.74
14,436.43	90.50	359.88	10,148.71	3,871.55	-1,011.18	3,956.82	2.14	-0.74	-2.01
14,449.86	90.19	359.45	10,148.63	3,884.98	-1,011.26	3,970.18	3.95	-2.31	-3.20
14,463.29	89.84	359.04	10,148.63	3,898.41	-1,011.43	3,983.55	4.01	-2.61	-3.05
14,476.71	89.48	358.62	10,148.70	3,911.83	-1,011.71	3,996.92	4.12	-2.68	-3.13
14,490.14	89.39	358.27	10,148.84	3,925.25	-1,012.07	4,010.31	2.69	-0.67	-2.61
14,503.57	89.30	357.91	10,148.99	3,938.67	-1,012.52	4,023.70	2.76	-0.67	-2.68
14,517.00	89.08	357.74	10,149.18	3,952.09	-1,013.03	4,037.10	2.07	-1.64	-1.27
14,530.57	88.87	357.62	10,149.42	3,965.65	-1,013.58	4,050.64	1.78	-1.55	-0.88
14,544.14	88.80	357.57	10,149.70	3,979.20	-1,014.15	4,064.18	0.63	-0.52	-0.37
14,557.71	88.98	357.69	10,149.96	3,992.76	-1,014.71	4,077.72	1.59	1.33	0.88



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
14,571.29	89.04	357.80	10,150.20	4,006.33	-1,015.24	4,091.27	0.92	0.44	0.81
14,584.86	88.79	357.77	10,150.45	4,019.89	-1,015.77	4,104.80	1.86	-1.84	-0.22
14,598.43	88.59	357.73	10,150.76	4,033.44	-1,016.30	4,118.34	1.50	-1.47	-0.29
14,612.00	88.83	357.87	10,151.07	4,047.00	-1,016.82	4,131.87	2.05	1.77	1.03
14,625.43	89.00	358.22	10,151.32	4,060.42	-1,017.28	4,145.27	2.90	1.27	2.61
14,638.86	89.13	358.60	10,151.54	4,073.84	-1,017.65	4,158.65	2.99	0.97	2.83
14,652.29	89.24	358.98	10,151.73	4,087.27	-1,017.93	4,172.03	2.95	0.82	2.83
14,665.71	89.34	359.35	10,151.90	4,100.68	-1,018.13	4,185.40	2.86	0.75	2.76
14,679.14	89.42	359.74	10,152.05	4,114.11	-1,018.24	4,198.76	2.96	0.60	2.90
14,692.57	89.55	0.04	10,152.17	4,127.54	-1,018.26	4,212.12	2.43	0.97	2.23
14,706.00	89.68	0.30	10,152.26	4,140.97	-1,018.22	4,225.47	2.16	0.97	1.94
14,719.57	89.83	0.47	10,152.31	4,154.54	-1,018.13	4,238.95	1.67	1.11	1.25
14,733.14	89.89	0.34	10,152.35	4,168.11	-1,018.04	4,252.44	1.06	0.44	-0.96
14,746.71	89.94	0.18	10,152.37	4,181.68	-1,017.97	4,265.92	1.24	0.37	-1.18
14,760.29	90.03	0.17	10,152.37	4,195.26	-1,017.93	4,279.42	0.67	0.66	-0.07
14,773.86	90.00	359.99	10,152.37	4,208.83	-1,017.91	4,292.91	1.34	-0.22	-1.33
14,787.43	89.96	359.82	10,152.37	4,222.40	-1,017.94	4,306.41	1.29	-0.29	-1.25
14,801.00	90.00	359.63	10,152.38	4,235.97	-1,018.00	4,319.91	1.43	0.29	-1.40
14,814.43	90.02	359.53	10,152.38	4,249.40	-1,018.10	4,333.28	0.76	0.15	-0.74
14,827.86	90.05	359.43	10,152.37	4,262.83	-1,018.22	4,346.64	0.78	0.22	-0.74
14,841.29	90.15	359.36	10,152.34	4,276.26	-1,018.36	4,360.01	0.91	0.74	-0.52
14,854.71	90.25	359.27	10,152.30	4,289.68	-1,018.52	4,373.37	1.00	0.75	-0.67
14,868.14	90.25	359.15	10,152.24	4,303.11	-1,018.71	4,386.74	0.89	0.00	-0.89
14,881.57	90.14	358.92	10,152.19	4,316.53	-1,018.93	4,400.12	1.90	-0.82	-1.71
14,895.00	90.04	358.71	10,152.17	4,329.96	-1,019.21	4,413.50	1.73	-0.74	-1.56
14,908.57	89.93	358.58	10,152.17	4,343.53	-1,019.53	4,427.03	1.25	-0.81	-0.96
14,922.14	89.87	358.49	10,152.20	4,357.09	-1,019.88	4,440.55	0.80	-0.44	-0.66
14,935.71	89.83	358.44	10,152.23	4,370.66	-1,020.24	4,454.08	0.47	-0.29	-0.37
14,949.29	89.84	358.41	10,152.27	4,384.23	-1,020.62	4,467.62	0.23	0.07	-0.22
14,962.86	89.81	358.48	10,152.31	4,397.80	-1,020.99	4,481.15	0.56	-0.22	0.52
14,976.43	89.81	358.50	10,152.36	4,411.36	-1,021.34	4,494.67	0.15	0.00	0.15
14,990.00	89.87	358.59	10,152.40	4,424.93	-1,021.69	4,508.20	0.80	0.44	0.66
15,003.57	89.97	358.76	10,152.42	4,438.49	-1,022.00	4,521.72	1.45	0.74	1.25
15,017.14	90.07	358.96	10,152.41	4,452.06	-1,022.27	4,535.24	1.65	0.74	1.47
15,030.71	90.16	359.17	10,152.38	4,465.63	-1,022.49	4,548.76	1.68	0.66	1.55
15,044.29	90.26	359.35	10,152.33	4,479.21	-1,022.67	4,562.28	1.52	0.74	1.33
15,057.86	90.33	359.47	10,152.26	4,492.78	-1,022.81	4,575.79	1.02	0.52	0.88
15,071.43	90.29	359.56	10,152.19	4,506.35	-1,022.92	4,589.29	0.73	-0.29	0.66
15,085.00	90.27	359.67	10,152.12	4,519.92	-1,023.01	4,602.79	0.82	-0.15	0.81
15,098.43	90.25	359.69	10,152.06	4,533.35	-1,023.09	4,616.16	0.21	-0.15	0.15
15,111.86	90.24	359.65	10,152.01	4,546.78	-1,023.17	4,629.52	0.31	-0.07	-0.30
15,125.29	90.20	359.57	10,151.95	4,560.21	-1,023.26	4,642.88	0.67	-0.30	-0.60
15,138.71	90.15	359.49	10,151.91	4,573.63	-1,023.37	4,656.24	0.70	-0.37	-0.60
15,152.14	90.08	359.38	10,151.89	4,587.05	-1,023.50	4,669.61	0.97	-0.52	-0.82



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
15,165.57	90.02	359.25	10,151.88	4,600.48	-1,023.66	4,682.98	1.07	-0.45	-0.97
15,179.00	89.98	359.10	10,151.88	4,613.91	-1,023.85	4,696.35	1.16	-0.30	-1.12
15,192.57	89.88	359.07	10,151.89	4,627.48	-1,024.07	4,709.87	0.77	-0.74	-0.22
15,206.14	89.88	359.08	10,151.92	4,641.05	-1,024.29	4,723.38	0.07	0.00	0.07
15,219.71	89.97	358.97	10,151.94	4,654.62	-1,024.52	4,736.90	1.05	0.66	-0.81
15,233.29	90.06	358.83	10,151.93	4,668.19	-1,024.78	4,750.43	1.23	0.66	-1.03
15,246.86	90.03	358.63	10,151.92	4,681.76	-1,025.08	4,763.95	1.49	-0.22	-1.47
15,260.43	89.94	358.42	10,151.93	4,695.33	-1,025.43	4,777.47	1.68	-0.66	-1.55
15,274.00	89.90	358.25	10,151.95	4,708.89	-1,025.83	4,791.00	1.29	-0.29	-1.25
15,287.57	89.93	358.13	10,151.97	4,722.45	-1,026.25	4,804.54	0.91	0.22	-0.88
15,301.14	89.97	358.18	10,151.98	4,736.02	-1,026.69	4,818.07	0.47	0.29	0.37
15,310.22	90.02	358.25	10,151.98	4,745.09	-1,026.97	4,827.12	1.00	0.59	0.81
SL: 15310.22' MD									
15,314.71	90.05	358.29	10,151.98	4,749.58	-1,027.11	4,831.60	1.00	0.59	0.81
15,328.29	90.13	358.27	10,151.95	4,763.15	-1,027.52	4,845.14	0.61	0.59	-0.15
15,341.86	90.28	358.29	10,151.91	4,776.72	-1,027.92	4,858.67	1.12	1.11	0.15
15,355.43	90.41	358.34	10,151.82	4,790.28	-1,028.32	4,872.20	1.03	0.96	0.37
15,369.00	90.39	358.38	10,151.73	4,803.85	-1,028.71	4,885.73	0.33	-0.15	0.29
15,382.43	90.26	358.43	10,151.65	4,817.27	-1,029.09	4,899.12	1.04	-0.97	0.37
15,395.86	90.27	358.50	10,151.59	4,830.70	-1,029.45	4,912.51	0.53	0.07	0.52
15,409.29	90.42	358.62	10,151.51	4,844.12	-1,029.78	4,925.89	1.43	1.12	0.89
15,422.71	90.55	358.77	10,151.40	4,857.54	-1,030.09	4,939.27	1.48	0.97	1.12
15,436.14	90.70	358.92	10,151.25	4,870.96	-1,030.36	4,952.65	1.58	1.12	1.12
15,449.57	90.82	359.04	10,151.07	4,884.39	-1,030.60	4,966.02	1.26	0.89	0.89
15,463.00	90.86	359.08	10,150.88	4,897.82	-1,030.82	4,979.40	0.42	0.30	0.30
15,476.57	90.84	359.09	10,150.67	4,911.38	-1,031.04	4,992.91	0.16	-0.15	0.07
15,490.14	90.92	359.15	10,150.47	4,924.95	-1,031.24	5,006.42	0.74	0.59	0.44
15,503.71	91.00	359.11	10,150.24	4,938.52	-1,031.45	5,019.94	0.66	0.59	-0.29
15,517.29	91.06	359.09	10,149.99	4,952.09	-1,031.66	5,033.46	0.47	0.44	-0.15
15,530.86	91.08	359.07	10,149.74	4,965.66	-1,031.88	5,046.97	0.21	0.15	-0.15
15,544.43	90.87	358.99	10,149.51	4,979.23	-1,032.11	5,060.49	1.66	-1.55	-0.59
15,558.00	90.81	358.92	10,149.31	4,992.79	-1,032.36	5,074.00	0.68	-0.44	-0.52
15,571.57	90.76	358.91	10,149.13	5,006.36	-1,032.61	5,087.52	0.38	-0.37	-0.07
15,585.14	90.51	359.18	10,148.97	5,019.93	-1,032.84	5,101.03	2.71	-1.84	1.99
15,598.71	90.20	359.52	10,148.89	5,033.49	-1,032.99	5,114.54	3.39	-2.28	2.51
15,612.29	89.88	359.83	10,148.88	5,047.07	-1,033.07	5,128.06	3.28	-2.36	2.28
15,625.86	89.59	0.03	10,148.94	5,060.64	-1,033.09	5,141.55	2.60	-2.14	1.47
15,639.43	89.37	0.21	10,149.07	5,074.21	-1,033.06	5,155.04	2.09	-1.62	1.33
15,653.00	89.10	0.25	10,149.25	5,087.78	-1,033.01	5,168.53	2.01	-1.99	0.29
15,666.43	88.91	0.12	10,149.48	5,101.21	-1,032.96	5,181.88	1.71	-1.41	-0.97
15,679.86	88.86	0.02	10,149.74	5,114.64	-1,032.95	5,195.23	0.83	-0.37	-0.74
15,693.29	88.93	359.93	10,150.00	5,128.06	-1,032.95	5,208.58	0.85	0.52	-0.67
15,706.71	89.02	359.81	10,150.24	5,141.48	-1,032.98	5,221.92	1.12	0.67	-0.89



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
15,720.14	89.13	359.69	10,150.46	5,154.91	-1,033.04	5,235.28	1.21	0.82	-0.89
15,733.57	89.19	359.52	10,150.66	5,168.34	-1,033.13	5,248.65	1.34	0.45	-1.27
15,747.00	89.22	359.44	10,150.84	5,181.77	-1,033.26	5,262.01	0.64	0.22	-0.60
15,760.57	89.22	359.34	10,151.03	5,195.33	-1,033.40	5,275.52	0.74	0.00	-0.74
15,774.14	89.19	359.25	10,151.21	5,208.90	-1,033.57	5,289.03	0.70	-0.22	-0.66
15,787.71	89.14	359.18	10,151.41	5,222.47	-1,033.75	5,302.54	0.63	-0.37	-0.52
15,801.29	89.20	359.07	10,151.61	5,236.05	-1,033.96	5,316.06	0.92	0.44	-0.81
15,814.86	89.45	358.90	10,151.77	5,249.61	-1,034.20	5,329.58	2.23	1.84	-1.25
15,828.43	89.39	358.89	10,151.91	5,263.18	-1,034.46	5,343.10	0.45	-0.44	-0.07
15,842.00	89.34	358.91	10,152.06	5,276.75	-1,034.72	5,356.61	0.40	-0.37	0.15
15,855.57	89.31	358.99	10,152.22	5,290.31	-1,034.97	5,370.13	0.63	-0.22	0.59
15,869.14	89.33	359.09	10,152.38	5,303.88	-1,035.20	5,383.65	0.75	0.15	0.74
15,882.71	89.43	359.18	10,152.52	5,317.45	-1,035.40	5,397.16	0.99	0.74	0.66
15,896.29	89.39	359.17	10,152.66	5,331.03	-1,035.60	5,410.68	0.30	-0.29	-0.07
15,909.86	89.52	359.29	10,152.79	5,344.59	-1,035.78	5,424.19	1.30	0.96	0.88
15,923.43	89.96	359.25	10,152.86	5,358.16	-1,035.95	5,437.70	3.26	3.24	-0.29
15,937.00	90.29	359.23	10,152.83	5,371.73	-1,036.13	5,451.22	2.44	2.43	-0.15
15,950.43	90.39	359.33	10,152.75	5,385.16	-1,036.30	5,464.59	1.05	0.74	0.74
15,963.86	90.65	359.46	10,152.62	5,398.59	-1,036.44	5,477.95	2.16	1.94	0.97
15,977.29	91.02	359.47	10,152.43	5,412.02	-1,036.57	5,491.32	2.76	2.76	0.07
15,990.71	91.08	359.46	10,152.18	5,425.43	-1,036.70	5,504.68	0.45	0.45	-0.07
16,004.14	91.03	359.60	10,151.94	5,438.86	-1,036.81	5,518.04	1.11	-0.37	1.04
16,017.57	91.22	359.71	10,151.67	5,452.29	-1,036.89	5,531.40	1.63	1.41	0.82
16,031.00	91.23	359.77	10,151.38	5,465.72	-1,036.95	5,544.76	0.45	0.07	0.45
16,044.57	91.01	359.72	10,151.12	5,479.28	-1,037.01	5,558.25	1.66	-1.62	-0.37
16,058.14	90.65	359.66	10,150.92	5,492.85	-1,037.08	5,571.75	2.69	-2.65	-0.44
16,071.71	90.33	359.68	10,150.81	5,506.42	-1,037.16	5,585.26	2.36	-2.36	0.15
16,085.29	90.56	359.57	10,150.70	5,520.00	-1,037.25	5,598.77	1.88	1.69	-0.81
16,098.86	90.75	359.47	10,150.55	5,533.57	-1,037.36	5,612.27	1.58	1.40	-0.74
16,112.43	90.73	359.45	10,150.37	5,547.14	-1,037.49	5,625.78	0.21	-0.15	-0.15
16,126.00	90.59	359.40	10,150.21	5,560.71	-1,037.63	5,639.29	1.10	-1.03	-0.37
16,139.43	90.34	359.47	10,150.11	5,574.13	-1,037.76	5,652.65	1.93	-1.86	0.52
16,152.86	90.10	359.52	10,150.05	5,587.56	-1,037.88	5,666.02	1.83	-1.79	0.37
16,166.29	89.93	359.54	10,150.05	5,600.99	-1,037.99	5,679.38	1.27	-1.27	0.15
16,179.71	89.93	359.63	10,150.07	5,614.41	-1,038.08	5,692.74	0.67	0.00	0.67
16,193.14	89.95	359.65	10,150.08	5,627.84	-1,038.17	5,706.10	0.21	0.15	0.15
16,206.57	90.09	359.70	10,150.08	5,641.27	-1,038.24	5,719.47	1.11	1.04	0.37
16,220.00	90.33	359.62	10,150.03	5,654.70	-1,038.32	5,732.83	1.88	1.79	-0.60
16,233.57	90.24	359.66	10,149.96	5,668.27	-1,038.41	5,746.33	0.73	-0.66	0.29
16,247.14	90.18	359.70	10,149.91	5,681.84	-1,038.49	5,759.83	0.53	-0.44	0.29
16,260.71	90.11	359.73	10,149.88	5,695.41	-1,038.55	5,773.33	0.56	-0.52	0.22
16,274.29	90.06	359.75	10,149.85	5,708.99	-1,038.61	5,786.84	0.40	-0.37	0.15
16,287.86	90.16	359.76	10,149.83	5,722.56	-1,038.67	5,800.34	0.74	0.74	0.07
16,301.43	90.35	359.76	10,149.77	5,736.13	-1,038.73	5,813.84	1.40	1.40	0.00



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
16,315.00	90.40	359.67	10,149.68	5,749.70	-1,038.80	5,827.34	0.76	0.37	-0.66
16,328.43	90.50	359.56	10,149.57	5,763.13	-1,038.89	5,840.71	1.11	0.74	-0.82
16,341.86	90.64	359.47	10,149.44	5,776.56	-1,039.00	5,854.07	1.24	1.04	-0.67
16,355.29	90.75	359.25	10,149.28	5,789.99	-1,039.15	5,867.44	1.83	0.82	-1.64
16,368.71	90.51	359.13	10,149.13	5,803.40	-1,039.34	5,880.80	2.00	-1.79	-0.89
16,382.14	90.68	359.11	10,148.99	5,816.83	-1,039.55	5,894.18	1.27	1.27	-0.15
16,395.57	90.98	359.08	10,148.80	5,830.26	-1,039.76	5,907.55	2.24	2.23	-0.22
16,409.00	91.46	358.96	10,148.51	5,843.68	-1,039.99	5,920.92	3.68	3.57	-0.89
16,422.57	91.82	358.89	10,148.12	5,857.25	-1,040.24	5,934.44	2.70	2.65	-0.52
16,436.14	91.98	359.09	10,147.67	5,870.81	-1,040.48	5,947.95	1.89	1.18	1.47
16,449.71	92.12	359.35	10,147.19	5,884.37	-1,040.67	5,961.45	2.18	1.03	1.92
16,463.29	92.24	359.58	10,146.67	5,897.94	-1,040.79	5,974.96	1.91	0.88	1.69
16,476.86	92.33	359.79	10,146.13	5,911.49	-1,040.87	5,988.45	1.68	0.66	1.55
16,490.43	92.38	359.95	10,145.57	5,925.05	-1,040.90	6,001.93	1.23	0.37	1.18
16,504.00	92.38	0.02	10,145.01	5,938.61	-1,040.90	6,015.42	0.52	0.00	0.52
16,517.43	92.27	0.02	10,144.46	5,952.03	-1,040.90	6,028.76	0.82	-0.82	0.00
16,530.86	92.13	359.92	10,143.95	5,965.45	-1,040.90	6,042.10	1.28	-1.04	-0.74
16,544.29	91.99	359.65	10,143.46	5,978.87	-1,040.95	6,055.46	2.26	-1.04	-2.01
16,557.71	91.84	359.36	10,143.02	5,992.28	-1,041.07	6,068.80	2.43	-1.12	-2.16
16,571.14	91.67	359.10	10,142.60	6,005.71	-1,041.25	6,082.17	2.31	-1.27	-1.94
16,584.57	91.51	358.90	10,142.23	6,019.13	-1,041.49	6,095.54	1.91	-1.19	-1.49
16,598.00	91.41	358.78	10,141.89	6,032.55	-1,041.76	6,108.92	1.16	-0.74	-0.89
16,611.57	91.34	358.80	10,141.56	6,046.12	-1,042.04	6,122.44	0.54	-0.52	0.15
16,625.14	91.15	358.81	10,141.27	6,059.68	-1,042.33	6,135.95	1.40	-1.40	0.07
16,638.71	91.24	359.01	10,140.99	6,073.24	-1,042.58	6,149.47	1.62	0.66	1.47
16,652.29	91.08	359.07	10,140.71	6,086.82	-1,042.81	6,162.99	1.26	-1.18	0.44
16,665.86	91.11	359.24	10,140.45	6,100.38	-1,043.01	6,176.50	1.27	0.22	1.25
16,679.43	91.23	359.36	10,140.18	6,113.95	-1,043.18	6,190.01	1.25	0.88	0.88
16,693.00	91.25	359.43	10,139.88	6,127.52	-1,043.32	6,203.52	0.54	0.15	0.52
16,706.43	91.10	359.46	10,139.61	6,140.94	-1,043.45	6,216.88	1.14	-1.12	0.22
16,719.86	91.11	359.48	10,139.35	6,154.37	-1,043.58	6,230.25	0.17	0.07	0.15
16,733.29	91.11	359.49	10,139.09	6,167.80	-1,043.70	6,243.61	0.07	0.00	0.07
16,746.71	91.04	359.48	10,138.84	6,181.21	-1,043.82	6,256.97	0.53	-0.52	-0.07
16,760.14	90.89	359.32	10,138.61	6,194.64	-1,043.96	6,270.33	1.63	-1.12	-1.19
16,773.57	90.69	359.19	10,138.42	6,208.07	-1,044.13	6,283.70	1.78	-1.49	-0.97
16,787.00	90.39	359.08	10,138.30	6,221.50	-1,044.33	6,297.08	2.38	-2.23	-0.82
16,800.57	90.47	359.01	10,138.20	6,235.07	-1,044.56	6,310.59	0.78	0.59	-0.52
16,814.14	90.56	358.95	10,138.07	6,248.63	-1,044.80	6,324.11	0.80	0.66	-0.44
16,827.71	90.67	358.90	10,137.93	6,262.20	-1,045.06	6,337.63	0.89	0.81	-0.37
16,841.29	90.76	358.87	10,137.76	6,275.78	-1,045.32	6,351.15	0.70	0.66	-0.22
16,854.86	90.95	358.78	10,137.56	6,289.34	-1,045.60	6,364.67	1.55	1.40	-0.66
16,868.43	90.99	358.69	10,137.33	6,302.91	-1,045.90	6,378.19	0.73	0.29	-0.66
16,882.00	90.84	358.56	10,137.11	6,316.47	-1,046.22	6,391.72	1.46	-1.11	-0.96



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
16,895.43	90.77	358.49	10,136.92	6,329.89	-1,046.57	6,405.10	0.74	-0.52	-0.52
16,908.86	90.87	358.50	10,136.73	6,343.32	-1,046.92	6,418.49	0.75	0.74	0.07
16,922.29	90.91	358.42	10,136.52	6,356.74	-1,047.28	6,431.87	0.67	0.30	-0.60
16,935.71	90.88	358.40	10,136.31	6,370.16	-1,047.66	6,445.25	0.27	-0.22	-0.15
16,949.14	90.76	358.48	10,136.12	6,383.58	-1,048.02	6,458.64	1.07	-0.89	0.60
16,962.57	90.74	358.56	10,135.94	6,397.00	-1,048.37	6,472.02	0.61	-0.15	0.60
16,976.00	90.65	358.57	10,135.78	6,410.43	-1,048.70	6,485.41	0.67	-0.67	0.07
16,989.57	90.54	358.68	10,135.64	6,423.99	-1,049.03	6,498.93	1.15	-0.81	0.81
17,003.14	90.39	358.73	10,135.53	6,437.56	-1,049.34	6,512.46	1.17	-1.11	0.37
17,016.71	90.28	358.77	10,135.45	6,451.13	-1,049.63	6,525.98	0.86	-0.81	0.29
17,030.29	90.27	358.76	10,135.38	6,464.70	-1,049.93	6,539.51	0.10	-0.07	-0.07
17,043.86	90.09	358.76	10,135.34	6,478.27	-1,050.22	6,553.03	1.33	-1.33	0.00
17,057.43	89.92	358.76	10,135.34	6,491.84	-1,050.51	6,566.55	1.25	-1.25	0.00
17,071.00	89.80	358.75	10,135.37	6,505.40	-1,050.81	6,580.07	0.89	-0.88	-0.07
17,084.57	89.64	358.79	10,135.44	6,518.97	-1,051.10	6,593.59	1.22	-1.18	0.29
17,098.14	89.50	358.86	10,135.54	6,532.54	-1,051.38	6,607.11	1.15	-1.03	0.52
17,111.71	89.36	358.83	10,135.68	6,546.10	-1,051.65	6,620.63	1.06	-1.03	-0.22
17,125.29	89.25	358.81	10,135.84	6,559.68	-1,051.93	6,634.16	0.82	-0.81	-0.15
17,138.86	89.15	358.81	10,136.03	6,573.24	-1,052.21	6,647.68	0.74	-0.74	0.00
17,152.43	89.01	358.76	10,136.25	6,586.81	-1,052.50	6,661.20	1.10	-1.03	-0.37
17,166.00	88.87	358.70	10,136.50	6,600.37	-1,052.80	6,674.72	1.12	-1.03	-0.44
17,179.43	88.72	358.63	10,136.78	6,613.80	-1,053.11	6,688.10	1.23	-1.12	-0.52
17,192.86	88.71	358.58	10,137.08	6,627.22	-1,053.44	6,701.49	0.38	-0.07	-0.37
17,206.29	88.90	358.57	10,137.36	6,640.64	-1,053.77	6,714.87	1.42	1.41	-0.07
17,219.71	88.79	358.49	10,137.63	6,654.06	-1,054.12	6,728.24	1.01	-0.82	-0.60
17,233.14	88.66	358.43	10,137.93	6,667.48	-1,054.48	6,741.63	1.07	-0.97	-0.45
17,246.57	88.56	358.38	10,138.26	6,680.90	-1,054.85	6,755.01	0.83	-0.74	-0.37
17,260.00	88.45	358.38	10,138.61	6,694.32	-1,055.23	6,768.40	0.82	-0.82	0.00
17,273.57	88.36	358.44	10,138.99	6,707.88	-1,055.61	6,781.92	0.80	-0.66	0.44
17,287.14	88.41	358.44	10,139.37	6,721.44	-1,055.98	6,795.44	0.37	0.37	0.00
17,300.71	88.48	358.47	10,139.74	6,735.00	-1,056.34	6,808.97	0.56	0.52	0.22
17,314.29	88.53	358.47	10,140.09	6,748.57	-1,056.71	6,822.50	0.37	0.37	0.00
17,327.86	88.55	358.43	10,140.44	6,762.13	-1,057.07	6,836.02	0.33	0.15	-0.29
17,341.43	88.63	358.39	10,140.77	6,775.69	-1,057.45	6,849.55	0.66	0.59	-0.29
17,355.00	88.69	358.42	10,141.09	6,789.25	-1,057.83	6,863.07	0.49	0.44	0.22
17,368.43	88.65	358.40	10,141.40	6,802.67	-1,058.20	6,876.46	0.33	-0.30	-0.15
17,381.86	88.57	358.46	10,141.73	6,816.09	-1,058.57	6,889.84	0.74	-0.60	0.45
17,395.29	88.49	358.57	10,142.07	6,829.51	-1,058.92	6,903.22	1.01	-0.60	0.82
17,408.71	88.42	358.68	10,142.43	6,842.93	-1,059.24	6,916.59	0.97	-0.52	0.82
17,422.14	88.42	358.83	10,142.80	6,856.35	-1,059.53	6,929.97	1.12	0.00	1.12
17,435.57	88.49	358.99	10,143.16	6,869.77	-1,059.78	6,943.34	1.30	0.52	1.19
17,449.00	88.62	359.17	10,143.50	6,883.19	-1,060.00	6,956.72	1.65	0.97	1.34
17,462.43	88.80	359.36	10,143.81	6,896.62	-1,060.17	6,970.08	1.95	1.34	1.41



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
17,475.86	89.17	359.68	10,144.04	6,910.05	-1,060.29	6,983.45	3.64	2.76	2.38
17,489.29	89.60	0.02	10,144.19	6,923.48	-1,060.32	6,996.81	4.08	3.20	2.53
17,502.71	90.01	0.37	10,144.23	6,936.90	-1,060.27	7,010.15	4.02	3.06	2.61
17,516.14	90.21	0.60	10,144.21	6,950.33	-1,060.16	7,023.49	2.27	1.49	1.71
17,529.57	90.54	0.86	10,144.12	6,963.75	-1,059.99	7,036.82	3.13	2.46	1.94
17,543.00	90.70	0.92	10,143.97	6,977.18	-1,059.78	7,050.15	1.27	1.19	0.45
17,556.57	90.82	0.96	10,143.79	6,990.75	-1,059.56	7,063.62	0.93	0.88	0.29
17,570.14	90.99	1.07	10,143.58	7,004.31	-1,059.32	7,077.08	1.49	1.25	0.81
17,583.71	91.22	1.19	10,143.32	7,017.88	-1,059.05	7,090.54	1.91	1.69	0.88
17,597.29	91.42	1.30	10,143.01	7,031.45	-1,058.76	7,104.01	1.68	1.47	0.81
17,610.86	91.57	1.41	10,142.65	7,045.01	-1,058.43	7,117.46	1.37	1.11	0.81
17,624.43	91.67	1.55	10,142.27	7,058.57	-1,058.08	7,130.91	1.27	0.74	1.03
17,638.00	91.69	1.72	10,141.87	7,072.13	-1,057.70	7,144.35	1.26	0.15	1.25
17,651.43	91.59	1.96	10,141.49	7,085.55	-1,057.27	7,157.65	1.94	-0.74	1.79
17,664.86	91.44	2.21	10,141.13	7,098.97	-1,056.78	7,170.94	2.17	-1.12	1.86
17,678.29	91.30	2.40	10,140.81	7,112.38	-1,056.24	7,184.22	1.76	-1.04	1.41
17,691.71	91.15	2.56	10,140.52	7,125.79	-1,055.66	7,197.49	1.63	-1.12	1.19
17,705.14	90.97	2.71	10,140.27	7,139.20	-1,055.04	7,210.76	1.74	-1.34	1.12
17,718.57	90.81	2.80	10,140.07	7,152.61	-1,054.39	7,224.03	1.37	-1.19	0.67
17,732.00	90.65	2.78	10,139.89	7,166.03	-1,053.74	7,237.30	1.20	-1.19	-0.15
17,745.43	90.61	2.70	10,139.75	7,179.44	-1,053.10	7,250.57	0.67	-0.30	-0.60
17,758.86	90.64	2.58	10,139.60	7,192.85	-1,052.48	7,263.84	0.92	0.22	-0.89
17,772.29	90.64	2.46	10,139.45	7,206.27	-1,051.89	7,277.12	0.89	0.00	-0.89
17,785.71	90.60	2.27	10,139.31	7,219.68	-1,051.34	7,290.39	1.45	-0.30	-1.42
17,799.14	90.57	2.09	10,139.17	7,233.10	-1,050.83	7,303.68	1.36	-0.22	-1.34
17,812.57	90.51	1.73	10,139.04	7,246.52	-1,050.38	7,316.98	2.72	-0.45	-2.68
17,826.00	90.47	1.47	10,138.93	7,259.94	-1,050.00	7,330.29	1.96	-0.30	-1.94
17,839.57	90.40	1.36	10,138.82	7,273.51	-1,049.67	7,343.75	0.96	-0.52	-0.81
17,853.14	90.41	1.32	10,138.73	7,287.08	-1,049.35	7,357.20	0.30	0.07	-0.29
17,866.71	90.35	1.30	10,138.64	7,300.64	-1,049.04	7,370.66	0.47	-0.44	-0.15
17,880.29	90.31	1.36	10,138.56	7,314.22	-1,048.73	7,384.13	0.53	-0.29	0.44
17,893.86	90.25	1.36	10,138.49	7,327.78	-1,048.40	7,397.58	0.44	-0.44	0.00
17,907.43	90.28	1.36	10,138.43	7,341.35	-1,048.08	7,411.04	0.22	0.22	0.00
17,921.00	90.32	1.30	10,138.36	7,354.92	-1,047.77	7,424.50	0.53	0.29	-0.44
17,934.57	90.39	1.03	10,138.28	7,368.48	-1,047.49	7,437.96	2.06	0.52	-1.99
17,948.14	90.51	0.65	10,138.17	7,382.05	-1,047.29	7,451.43	2.94	0.88	-2.80
17,961.71	90.71	0.06	10,138.02	7,395.62	-1,047.21	7,464.91	4.59	1.47	-4.35
17,975.29	90.84	359.82	10,137.84	7,409.20	-1,047.22	7,478.42	2.01	0.96	-1.77
17,988.86	90.94	359.83	10,137.63	7,422.77	-1,047.26	7,491.91	0.74	0.74	0.07
18,002.43	91.13	359.66	10,137.38	7,436.33	-1,047.32	7,505.41	1.88	1.40	-1.25
18,016.00	91.38	359.58	10,137.09	7,449.90	-1,047.41	7,518.91	1.93	1.84	-0.59
18,029.57	91.69	359.61	10,136.72	7,463.47	-1,047.51	7,532.41	2.30	2.28	0.22
18,043.14	92.01	359.82	10,136.29	7,477.03	-1,047.58	7,545.90	2.82	2.36	1.55
18,056.71	92.30	0.04	10,135.78	7,490.59	-1,047.59	7,559.39	2.68	2.14	1.62



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
18,070.29	92.53	0.24	10,135.20	7,504.16	-1,047.56	7,572.88	2.24	1.69	1.47
18,083.86	92.71	0.44	10,134.58	7,517.71	-1,047.48	7,586.35	1.98	1.33	1.47
18,097.43	92.81	0.60	10,133.93	7,531.27	-1,047.36	7,599.81	1.39	0.74	1.18
18,111.00	92.81	0.69	10,133.26	7,544.82	-1,047.20	7,613.27	0.66	0.00	0.66
18,124.43	92.73	0.54	10,132.62	7,558.23	-1,047.06	7,626.60	1.26	-0.60	-1.12
18,137.86	92.55	0.38	10,132.00	7,571.65	-1,046.95	7,639.92	1.79	-1.34	-1.19
18,151.29	92.24	0.57	10,131.44	7,585.07	-1,046.84	7,653.25	2.71	-2.31	1.41
18,164.71	91.87	0.64	10,130.95	7,598.48	-1,046.70	7,666.57	2.81	-2.76	0.52
18,178.14	91.49	0.29	10,130.56	7,611.90	-1,046.59	7,679.91	3.85	-2.83	-2.61
18,191.57	91.07	359.90	10,130.26	7,625.33	-1,046.57	7,693.26	4.27	-3.13	-2.90
18,205.00	90.64	359.57	10,130.06	7,638.75	-1,046.63	7,706.62	4.04	-3.20	-2.46
18,218.57	90.35	359.24	10,129.94	7,652.32	-1,046.77	7,720.13	3.24	-2.14	-2.43
18,232.14	90.18	358.94	10,129.88	7,665.89	-1,046.99	7,733.64	2.54	-1.25	-2.21
18,245.71	89.90	358.83	10,129.87	7,679.46	-1,047.25	7,747.16	2.22	-2.06	-0.81
18,259.29	89.63	358.88	10,129.93	7,693.04	-1,047.52	7,760.69	2.02	-1.99	0.37
18,272.86	89.38	359.15	10,130.04	7,706.60	-1,047.76	7,774.21	2.71	-1.84	1.99
18,286.43	89.61	359.25	10,130.16	7,720.17	-1,047.94	7,787.72	1.85	1.69	0.74
18,300.00	89.96	359.48	10,130.21	7,733.74	-1,048.10	7,801.23	3.09	2.58	1.69
18,313.57	90.29	359.50	10,130.18	7,747.31	-1,048.22	7,814.73	2.44	2.43	0.15
18,327.14	90.38	359.45	10,130.11	7,760.88	-1,048.34	7,828.24	0.76	0.66	-0.37
18,340.71	90.21	359.47	10,130.04	7,774.45	-1,048.47	7,841.75	1.26	-1.25	0.15
18,354.29	90.41	359.37	10,129.96	7,788.03	-1,048.61	7,855.26	1.65	1.47	-0.74
18,367.86	90.55	359.16	10,129.85	7,801.60	-1,048.78	7,868.77	1.86	1.03	-1.55
18,381.43	90.39	359.04	10,129.74	7,815.16	-1,048.99	7,882.29	1.47	-1.18	-0.88
18,395.00	90.19	358.86	10,129.67	7,828.73	-1,049.24	7,895.81	1.98	-1.47	-1.33
18,408.43	90.02	358.75	10,129.64	7,842.16	-1,049.52	7,909.19	1.51	-1.27	-0.82
18,421.86	89.70	358.83	10,129.68	7,855.59	-1,049.81	7,922.57	2.46	-2.38	0.60
18,435.29	89.33	358.98	10,129.79	7,869.01	-1,050.06	7,935.95	2.97	-2.76	1.12
18,448.71	89.11	359.11	10,129.97	7,882.43	-1,050.29	7,949.31	1.90	-1.64	0.97
18,462.14	89.00	359.27	10,130.19	7,895.86	-1,050.48	7,962.68	1.45	-0.82	1.19
18,475.57	88.89	359.47	10,130.44	7,909.28	-1,050.62	7,976.05	1.70	-0.82	1.49
18,489.00	88.84	359.56	10,130.71	7,922.71	-1,050.74	7,989.42	0.77	-0.37	0.67
18,502.57	88.87	359.53	10,130.98	7,936.28	-1,050.84	8,002.92	0.31	0.22	-0.22
18,516.14	88.97	359.47	10,131.23	7,949.84	-1,050.96	8,016.42	0.86	0.74	-0.44
18,529.71	89.08	359.38	10,131.47	7,963.41	-1,051.10	8,029.93	1.05	0.81	-0.66
18,543.29	89.03	359.25	10,131.69	7,976.99	-1,051.26	8,043.44	1.03	-0.37	-0.96
18,556.86	89.09	359.13	10,131.91	7,990.56	-1,051.45	8,056.96	0.99	0.44	-0.88
18,570.43	89.27	359.02	10,132.11	8,004.12	-1,051.67	8,070.47	1.55	1.33	-0.81
18,584.00	89.39	358.91	10,132.26	8,017.69	-1,051.92	8,083.99	1.20	0.88	-0.81
18,597.57	89.22	358.69	10,132.43	8,031.26	-1,052.20	8,097.51	2.05	-1.25	-1.62
18,611.14	88.98	358.63	10,132.64	8,044.82	-1,052.52	8,111.03	1.82	-1.77	-0.44
18,624.71	88.74	358.57	10,132.91	8,058.38	-1,052.85	8,124.55	1.82	-1.77	-0.44
18,638.29	88.69	358.49	10,133.22	8,071.96	-1,053.20	8,138.08	0.69	-0.37	-0.59



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
18,651.86	88.93	358.44	10,133.50	8,085.52	-1,053.56	8,151.61	1.81	1.77	-0.37
18,665.43	89.17	358.45	10,133.72	8,099.08	-1,053.93	8,165.13	1.77	1.77	0.07
18,679.00	89.40	358.46	10,133.89	8,112.64	-1,054.30	8,178.66	1.70	1.69	0.07
18,692.57	89.60	358.49	10,134.01	8,126.21	-1,054.66	8,192.19	1.49	1.47	0.22
18,706.14	89.76	358.58	10,134.09	8,139.77	-1,055.00	8,205.71	1.35	1.18	0.66
18,719.71	89.95	358.64	10,134.12	8,153.34	-1,055.33	8,219.24	1.47	1.40	0.44
18,733.29	90.01	358.68	10,134.13	8,166.92	-1,055.65	8,232.77	0.53	0.44	0.29
18,746.86	89.84	358.65	10,134.14	8,180.48	-1,055.97	8,246.29	1.27	-1.25	-0.22
18,760.43	89.62	358.60	10,134.21	8,194.05	-1,056.29	8,259.82	1.66	-1.62	-0.37
18,774.00	89.44	358.50	10,134.32	8,207.61	-1,056.64	8,273.34	1.52	-1.33	-0.74
18,787.43	89.22	358.42	10,134.48	8,221.04	-1,057.00	8,286.73	1.74	-1.64	-0.60
18,800.86	89.33	358.52	10,134.65	8,234.46	-1,057.36	8,300.12	1.11	0.82	0.74
18,814.29	89.50	358.68	10,134.78	8,247.89	-1,057.68	8,313.50	1.74	1.27	1.19
18,827.71	89.65	358.81	10,134.88	8,261.30	-1,057.98	8,326.87	1.48	1.12	0.97
18,841.14	89.74	358.86	10,134.95	8,274.73	-1,058.25	8,340.26	0.77	0.67	0.37
18,854.57	89.76	358.96	10,135.01	8,288.16	-1,058.51	8,353.63	0.76	0.15	0.74
18,868.00	89.95	358.96	10,135.05	8,301.59	-1,058.75	8,367.01	1.41	1.41	0.00
18,881.57	90.18	358.98	10,135.03	8,315.15	-1,058.99	8,380.53	1.70	1.69	0.15
18,895.14	90.14	358.93	10,134.99	8,328.72	-1,059.24	8,394.05	0.47	-0.29	-0.37
18,908.71	89.93	358.85	10,134.99	8,342.29	-1,059.50	8,407.57	1.66	-1.55	-0.59
18,922.29	89.85	358.79	10,135.01	8,355.87	-1,059.78	8,421.10	0.74	-0.59	-0.44
18,935.86	89.91	358.81	10,135.04	8,369.43	-1,060.07	8,434.62	0.47	0.44	0.15
18,949.43	89.89	358.94	10,135.06	8,383.00	-1,060.33	8,448.14	0.97	-0.15	0.96
18,963.00	89.68	358.92	10,135.11	8,396.57	-1,060.59	8,461.66	1.55	-1.55	-0.15
18,976.57	89.70	359.17	10,135.19	8,410.14	-1,060.81	8,475.17	1.85	0.15	1.84
18,990.14	89.67	359.30	10,135.26	8,423.70	-1,061.00	8,488.68	0.98	-0.22	0.96
19,003.71	89.61	359.42	10,135.35	8,437.27	-1,061.15	8,502.19	0.99	-0.44	0.88
19,017.29	89.62	359.54	10,135.44	8,450.85	-1,061.27	8,515.71	0.89	0.07	0.88
19,030.86	89.68	359.66	10,135.52	8,464.42	-1,061.36	8,529.21	0.99	0.44	0.88
19,044.43	89.74	359.70	10,135.59	8,477.99	-1,061.44	8,542.71	0.53	0.44	0.29
19,058.00	89.81	359.64	10,135.64	8,491.56	-1,061.52	8,556.21	0.68	0.52	-0.44
19,071.43	89.82	359.62	10,135.69	8,504.99	-1,061.61	8,569.58	0.17	0.07	-0.15
19,084.86	89.82	359.55	10,135.73	8,518.42	-1,061.70	8,582.94	0.52	0.00	-0.52
19,098.29	89.86	359.48	10,135.77	8,531.85	-1,061.82	8,596.31	0.60	0.30	-0.52
19,111.71	89.87	359.37	10,135.80	8,545.27	-1,061.95	8,609.67	0.82	0.07	-0.82
19,125.14	89.80	359.20	10,135.84	8,558.70	-1,062.12	8,623.04	1.37	-0.52	-1.27
19,138.57	89.78	359.05	10,135.89	8,572.13	-1,062.32	8,636.41	1.13	-0.15	-1.12
19,152.00	89.94	359.01	10,135.92	8,585.55	-1,062.55	8,649.79	1.23	1.19	-0.30
19,165.57	90.08	359.04	10,135.92	8,599.12	-1,062.78	8,663.30	1.06	1.03	0.22
19,179.14	90.02	359.02	10,135.91	8,612.69	-1,063.01	8,676.82	0.47	-0.44	-0.15
19,192.71	89.93	358.99	10,135.91	8,626.26	-1,063.25	8,690.34	0.70	-0.66	-0.22
19,206.29	89.90	358.91	10,135.93	8,639.84	-1,063.50	8,703.87	0.63	-0.22	-0.59
19,219.86	89.93	358.84	10,135.95	8,653.40	-1,063.76	8,717.38	0.56	0.22	-0.52



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
19,233.43	89.93	358.85	10,135.97	8,666.97	-1,064.04	8,730.90	0.07	0.00	0.07
19,247.00	89.85	358.79	10,135.99	8,680.54	-1,064.32	8,744.43	0.74	-0.59	-0.44
19,260.43	89.80	358.69	10,136.04	8,693.96	-1,064.61	8,757.81	0.83	-0.37	-0.74
19,273.86	89.78	358.60	10,136.08	8,707.39	-1,064.93	8,771.19	0.69	-0.15	-0.67
19,287.29	89.67	358.52	10,136.15	8,720.82	-1,065.27	8,784.58	1.01	-0.82	-0.60
19,300.71	89.65	358.47	10,136.23	8,734.23	-1,065.62	8,797.96	0.40	-0.15	-0.37
19,314.14	89.67	358.45	10,136.31	8,747.66	-1,065.98	8,811.34	0.21	0.15	-0.15
19,327.57	89.80	358.46	10,136.37	8,761.08	-1,066.34	8,824.73	0.97	0.97	0.07
19,341.00	89.80	358.49	10,136.42	8,774.51	-1,066.70	8,838.12	0.22	0.00	0.22
19,354.57	89.82	358.45	10,136.46	8,788.07	-1,067.06	8,851.65	0.33	0.15	-0.29
19,368.14	89.89	358.45	10,136.50	8,801.64	-1,067.43	8,865.17	0.52	0.52	0.00
19,381.71	89.91	358.58	10,136.52	8,815.20	-1,067.78	8,878.70	0.97	0.15	0.96
19,395.29	89.94	358.75	10,136.54	8,828.78	-1,068.10	8,892.23	1.27	0.22	1.25
19,408.86	90.04	358.89	10,136.54	8,842.35	-1,068.38	8,905.75	1.27	0.74	1.03
19,422.43	90.03	358.79	10,136.53	8,855.91	-1,068.65	8,919.27	0.74	-0.07	-0.74
19,436.00	89.80	358.80	10,136.55	8,869.48	-1,068.94	8,932.80	1.70	-1.69	0.07
19,449.57	89.54	358.74	10,136.63	8,883.05	-1,069.23	8,946.32	1.97	-1.92	-0.44
19,463.14	89.65	358.62	10,136.73	8,896.61	-1,069.54	8,959.84	1.20	0.81	-0.88
19,476.71	89.76	358.45	10,136.80	8,910.18	-1,069.89	8,973.37	1.49	0.81	-1.25
19,490.29	89.95	358.48	10,136.83	8,923.75	-1,070.25	8,986.90	1.42	1.40	0.22
19,503.86	90.30	358.79	10,136.80	8,937.32	-1,070.57	9,000.43	3.45	2.58	2.28
19,517.43	90.66	359.01	10,136.69	8,950.89	-1,070.83	9,013.95	3.11	2.65	1.62
19,531.00	91.18	359.11	10,136.47	8,964.45	-1,071.06	9,027.46	3.90	3.83	0.74
19,544.43	91.46	359.31	10,136.16	8,977.88	-1,071.24	9,040.83	2.56	2.08	1.49
19,557.86	91.58	359.48	10,135.80	8,991.30	-1,071.38	9,054.19	1.55	0.89	1.27
19,571.29	91.44	359.50	10,135.45	9,004.73	-1,071.50	9,067.55	1.05	-1.04	0.15
19,584.71	91.11	359.41	10,135.15	9,018.14	-1,071.63	9,080.91	2.55	-2.46	-0.67
19,598.14	90.73	359.24	10,134.94	9,031.57	-1,071.79	9,094.28	3.10	-2.83	-1.27
19,611.57	90.65	359.26	10,134.77	9,045.00	-1,071.96	9,107.65	0.61	-0.60	0.15
19,625.00	91.02	359.37	10,134.58	9,058.43	-1,072.13	9,121.02	2.87	2.76	0.82
19,638.57	91.02	359.54	10,134.34	9,071.99	-1,072.25	9,134.52	1.25	0.00	1.25
19,652.14	90.98	359.72	10,134.10	9,085.56	-1,072.34	9,148.02	1.36	-0.29	1.33
19,665.71	90.77	359.86	10,133.89	9,099.13	-1,072.39	9,161.52	1.86	-1.55	1.03
19,679.29	90.45	0.14	10,133.75	9,112.71	-1,072.39	9,175.02	3.13	-2.36	2.06
19,692.86	90.64	0.25	10,133.62	9,126.28	-1,072.35	9,188.51	1.62	1.40	0.81
19,706.43	91.06	0.32	10,133.42	9,139.85	-1,072.28	9,202.00	3.14	3.10	0.52
19,720.00	91.37	0.29	10,133.13	9,153.41	-1,072.21	9,215.48	2.30	2.28	-0.22
19,734.33	91.37	0.26	10,132.79	9,167.74	-1,072.14	9,229.72	0.21	0.00	-0.21
19,748.67	91.17	0.14	10,132.47	9,182.07	-1,072.09	9,243.97	1.63	-1.39	-0.84
19,763.00	91.22	359.95	10,132.17	9,196.40	-1,072.08	9,258.21	1.37	0.35	-1.33
19,777.33	91.59	359.65	10,131.82	9,210.73	-1,072.13	9,272.46	3.32	2.58	-2.09
19,791.67	91.59	359.13	10,131.42	9,225.06	-1,072.28	9,286.73	3.62	0.00	-3.63
19,806.00	91.04	358.94	10,131.09	9,239.38	-1,072.52	9,301.00	4.06	-3.84	-1.33
19,819.43	90.10	358.67	10,130.96	9,252.81	-1,072.80	9,314.38	7.28	-7.00	-2.01



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)
19,832.86	89.13	358.47	10,131.05	9,266.24	-1,073.13	9,327.77	7.37	-7.22	-1.49
19,846.29	88.72	358.34	10,131.30	9,279.66	-1,073.51	9,341.16	3.20	-3.05	-0.97
19,859.71	88.22	358.29	10,131.66	9,293.07	-1,073.90	9,354.53	3.74	-3.73	-0.37
19,873.14	87.74	358.31	10,132.13	9,306.48	-1,074.30	9,367.91	3.58	-3.57	0.15
19,886.57	87.60	358.41	10,132.68	9,319.90	-1,074.69	9,381.29	1.28	-1.04	0.74
19,900.00	87.45	358.41	10,133.26	9,333.31	-1,075.06	9,394.67	1.12	-1.12	0.00
19,913.57	87.41	358.50	10,133.87	9,346.86	-1,075.42	9,408.18	0.73	-0.29	0.66
19,927.14	87.31	358.56	10,134.49	9,360.41	-1,075.77	9,421.69	0.86	-0.74	0.44
19,940.71	87.47	358.69	10,135.11	9,373.96	-1,076.10	9,435.20	1.52	1.18	0.96
19,954.29	87.61	358.82	10,135.69	9,387.53	-1,076.39	9,448.72	1.41	1.03	0.96
19,967.86	87.65	358.93	10,136.25	9,401.08	-1,076.66	9,462.23	0.86	0.29	0.81
19,981.43	87.60	359.03	10,136.82	9,414.64	-1,076.90	9,475.74	0.82	-0.37	0.74
19,995.00	87.62	359.14	10,137.38	9,428.20	-1,077.11	9,489.24	0.82	0.15	0.81
20,008.57	87.80	359.24	10,137.92	9,441.75	-1,077.31	9,502.74	1.52	1.33	0.74
20,022.14	88.07	359.34	10,138.41	9,455.31	-1,077.47	9,516.24	2.12	1.99	0.74
20,035.71	88.39	359.44	10,138.83	9,468.88	-1,077.62	9,529.75	2.47	2.36	0.74
20,049.29	88.73	359.56	10,139.17	9,482.45	-1,077.74	9,543.26	2.65	2.50	0.88
20,062.86	88.89	359.60	10,139.46	9,496.02	-1,077.84	9,556.76	1.22	1.18	0.29
20,076.43	89.11	359.72	10,139.69	9,509.59	-1,077.92	9,570.26	1.85	1.62	0.88
20,090.00	89.33	359.86	10,139.88	9,523.16	-1,077.97	9,583.76	1.92	1.62	1.03
20,103.43	89.54	0.06	10,140.01	9,536.59	-1,077.98	9,597.11	2.16	1.56	1.49
20,116.86	89.62	0.14	10,140.11	9,550.01	-1,077.95	9,610.46	0.84	0.60	0.60
20,130.29	89.69	0.23	10,140.19	9,563.44	-1,077.91	9,623.81	0.85	0.52	0.67
20,143.71	89.75	0.31	10,140.25	9,576.86	-1,077.85	9,637.15	0.75	0.45	0.60
20,157.14	89.77	0.39	10,140.31	9,590.29	-1,077.76	9,650.50	0.61	0.15	0.60
20,170.57	89.72	0.47	10,140.37	9,603.72	-1,077.66	9,663.84	0.70	-0.37	0.60
20,184.00	89.62	0.54	10,140.45	9,617.15	-1,077.55	9,677.18	0.91	-0.74	0.52
20,197.57	89.61	0.61	10,140.54	9,630.72	-1,077.41	9,690.66	0.52	-0.07	0.52
20,211.14	89.67	0.73	10,140.62	9,644.29	-1,077.25	9,704.14	0.99	0.44	0.88
20,224.71	89.43	0.77	10,140.73	9,657.86	-1,077.07	9,717.61	1.79	-1.77	0.29
20,238.29	89.16	0.83	10,140.90	9,671.44	-1,076.88	9,731.09	2.04	-1.99	0.44
20,251.86	88.87	0.87	10,141.13	9,685.00	-1,076.68	9,744.56	2.16	-2.14	0.29
20,265.43	88.57	0.91	10,141.43	9,698.57	-1,076.47	9,758.03	2.23	-2.21	0.29
20,279.00	88.31	0.99	10,141.80	9,712.13	-1,076.25	9,771.49	2.00	-1.92	0.59
20,292.43	88.12	1.05	10,142.22	9,725.55	-1,076.01	9,784.81	1.48	-1.41	0.45
20,305.86	88.05	0.87	10,142.67	9,738.97	-1,075.78	9,798.13	1.44	-0.52	-1.34
20,319.29	88.07	0.87	10,143.13	9,752.39	-1,075.58	9,811.45	0.15	0.15	0.00
20,332.71	88.07	0.89	10,143.58	9,765.80	-1,075.37	9,824.77	0.15	0.00	0.15
20,346.14	88.05	1.00	10,144.03	9,779.22	-1,075.15	9,838.09	0.83	-0.15	0.82
20,359.57	87.95	1.31	10,144.50	9,792.64	-1,074.88	9,851.41	2.42	-0.74	2.31
20,373.00	87.84	1.78	10,144.99	9,806.06	-1,074.52	9,864.71	3.59	-0.82	3.50
20,384.33	87.74	2.12	10,145.43	9,817.38	-1,074.13	9,875.92	3.13	-0.88	3.00
20,395.67	87.64	2.40	10,145.89	9,828.70	-1,073.69	9,887.13	2.62	-0.88	2.47



Phoenix Survey Report



Company:	OXY USA INC.	Local Co-ordinate Reference:	Well Dr Pi Fed Unit 17_8 DA 71H
Project:	Lea County, NM (NAD83-NME)	TVD Reference:	RKB @ 3721.30usft (H&P 620)
Site:	Dr Pi Fed Unit 17_8 DA	MD Reference:	RKB @ 3721.30usft (H&P 620)
Well:	Dr Pi Fed Unit 17_8 DA 71H	North Reference:	Grid
Wellbore:	OH / 74553	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 620)	Database:	USAEDMDB

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)	
20,407.00	87.55	2.64	10,146.36	9,840.01	-1,073.19	9,898.32	2.26	-0.79	2.12	
Final Phoenix MWD Survey										
20,421.75	87.50	2.85	10,147.00	9,854.73	-1,072.48	9,912.88	1.46	-0.34	1.42	
20,436.50	87.47	3.05	10,147.65	9,869.44	-1,071.73	9,927.44	1.37	-0.20	1.36	
20,451.25	87.46	3.24	10,148.30	9,884.15	-1,070.92	9,941.98	1.29	-0.07	1.29	
20,466.00	87.46	3.43	10,148.95	9,898.87	-1,070.06	9,956.52	1.29	0.00	1.29	
20,480.75	87.45	3.61	10,149.61	9,913.57	-1,069.15	9,971.05	1.22	-0.07	1.22	
20,489.08	87.44	3.71	10,149.98	9,921.88	-1,068.62	9,979.25	1.15	-0.07	1.15	
LTP: 20489.08' MD										
20,495.50	87.44	3.78	10,150.27	9,928.28	-1,068.21	9,985.57	1.15	-0.07	1.15	
20,510.25	87.43	3.96	10,150.93	9,942.98	-1,067.21	10,000.08	1.22	-0.07	1.22	
20,525.00	87.42	4.12	10,151.59	9,957.68	-1,066.17	10,014.59	1.09	-0.07	1.08	
Projection to TD										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,065.50	1,065.48	-2.78	-2.04	Tie In	
1,166.00	1,165.98	-3.01	-2.50	First Phoenix MWD Survey	
10,002.49	9,860.21	-436.92	-1,044.15	FTP: 10002.49' MD, 24.13° Inc	
15,310.22	10,151.98	4,745.09	-1,026.97	SL: 15310.22' MD	
20,407.00	10,146.36	9,840.01	-1,073.19	Final Phoenix MWD Survey	
20,489.08	10,149.98	9,921.88	-1,068.62	LTP: 20489.08' MD	
20,525.00	10,151.59	9,957.68	-1,066.17	Projection to TD	

C-105 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
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WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Section 1 - Operator and Well Information

Submittal Type: ☒ New Well ☐ Workover ☐ Deepening ☐ Plugback ☐ Different Reservoir ☐ C-144 Closure Attachment ☐ Other	
Operator Name: OXY USA INC	OGRID: 16696
Property Name and Well Number: DR PI UNIT 171H	Property Code:
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal	API Number: 30-0 25-49150
Pool Name: Bilbrey Basin; Bone Spring, South	Pool Code: 97366

Section 2 – Well Location

	UI or lot no.	Section	Township	Range	Lot Id	Feet from	N/S Line	Feet from	E/W Line	County
SHL:	N	17	22S	32E		526	S	1924	W	LEA
BHL	D	8	22S	32E		64	N	928	W	LEA

Section 3 – Completion Information

Date T.D. Reached 05/21/24	Total Measured Depth of Well 20525'MD	Acid Volume (bbls)	☒ Directional Survey Submitted ☐ Deviation Survey Submitted
Date Rig Released 05/23/24	Plug-Back Measured Depth 20490'MD	Completion Fluid Used (bbls) 368966	Were Logs Ran (Y/N) Y
Completion Date 07/08/24	Perforations (MD and TVD) 10260'-20412'MD/10065'-10147'TVD	Completion Proppant Used (lbs) 25447128#	List Type of Logs Ran if applicable: CBL

Section 4 – Action IDs for Submissions and Order Numbers

Surface Casing Action ID: 336278	UIC Permit/Order (UIC wells only) ☐ Yes ☒ No, Order No.
Intermediate 1 Casing Action ID: 389209	NOI Recomplete Action ID (if applicable):
Intermediate 2 Casing Action ID: NA	NOI Plugback Action ID (if applicable):
Production Casing Action ID: 361219	Cement Squeeze Action ID (if applicable):
Tubing Action ID: 382998	All casing was pressure tested in accordance with NMAC ☒ Yes ☐ No
Liner 1 Action ID: NA	Casing was installed prior to Action ID system (Y/N): N

Section 5 – Test Data

Date First Production 07/14/24	Production Method Gas lift	Well Status Producing	Gas – Oil Ratio 844
Date of Test 08/11/24	Choke Size	Flowing Tubing Pressure	Casing Pressure 247
24 hr Oil (bbls) 2198	24 hr Gas (MCF) 1855	24 hr Water (bbls) 3762	Oil Gravity - API
Disposition of Gas: sold			

Section 6 – Pits

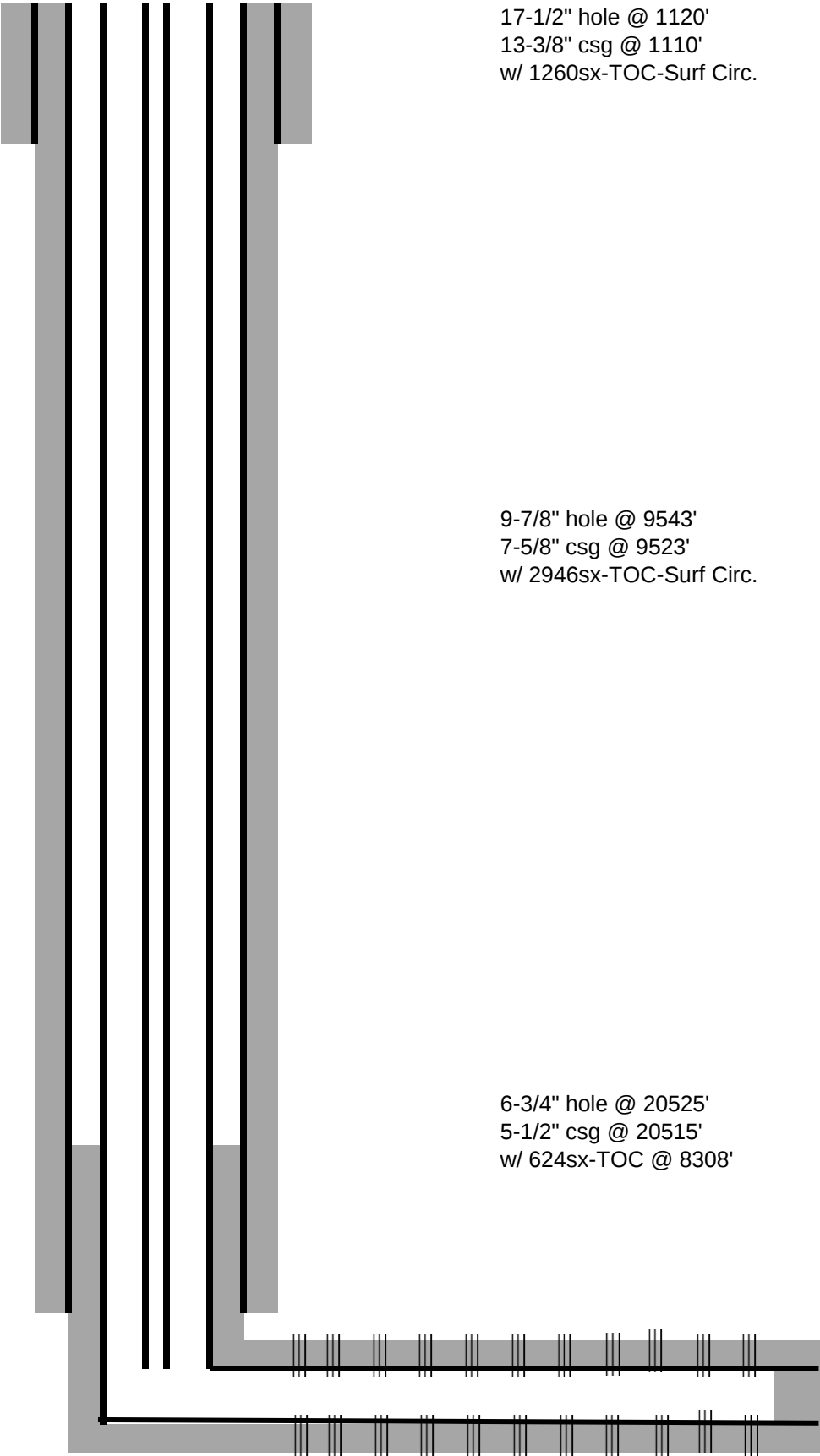
☐ A temporary pit was used at the well. If so, attach a plat with the location of the temporary pit.
☒ A Closed Loop System was used.
☐ If an on-site burial was used at the well, report the exact location of the on-site burial: LAT: _____ LONG: _____

Section 7 - Operator Signature and Certification

☒ I hereby certify that the required Water Use Report has been, or will be, submitted for this well’s completion.	
☒ I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well’s completion.	
☒ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name Jana Mendiola	
Title Regulatory Advisor	Date 09/25/24

South Formations				North Formations			
Formation/Zone	MD	TVD	W/O/G	Formation/Zone	MD	TVD	W/O/G
T. Anhy	903	903	W	T. San Jose			
T. Salt	1232	1232		T. Nacimiento			
B. Salt	3357	3357		T. Ojo Alamo			
T. Yates				T. Kirtland			
T. 7 Rivers				T. Fruitland			
T. Queen				T. Pictured Cliffs			
T. Grayburg				T. Lewis Shale			
T. San Andres				T. Chacra			
T. Glorieta				T. Cliff House			
T. Yeso				T. Menefee			
T. Paddock				T. Point Lookout			
T. Blinebry				T. Mancos			
T.Tubb				T. Gallup			
T. Drinkard				T. Greenhorn			
T. Abo				T. Graneros			
T. Wolfcamp				T. Dakota			
T. Penn				T. Morrison			
T. Cisco				T. Bluff			
T. Canyon				T.Todilto			
T. Strawn				T. Entrada			
T. Atoka				T. Wingate			
T. Morrow				T. Chinle			
T. Barnett Shale				T. Permian			
T. Miss				T. Penn A"			
T. Woodford Shale				T. Penn. "B"			
T. Devonian				T. Penn. "C"			
T. Silurian				T. Penn. "D"			
T. Fusselman				T. Leadville			
T. Montoya				T. Madison			
T. Simpson				T. Elbert			
T. McKee				T. McCracken			
T. Waddell				T. Ignacio Otzte			
T. Connel				T. Granite			
T. Ellenburger				T. Hermosa			
T. Gr. Wash				T. De Chelly			
T. Delaware Sand				T. Pinkerton			
T. Lamar Lime	4748	4727	o/g				
T. Bell Canyon	4776	4755	o/g				
T. Cherry Canyon	5721	5657	o/g				
T. Brushy Canyon	7043	6928	o/g				
T. Bone Springs	8730	8599	o/g				
T. 1st BS Sand	9777	9644	o/g				
T. 2nd BS Carbonate							
T. 2nd BS Sand							
T. 3rd BS Carbonate							
T. 3rd BS Sand							

OXY USA Inc.
DR PI UNIT 171H
API No. 30-025-49150



17-1/2" hole @ 1120'
13-3/8" csg @ 1110'
w/ 1260sx-TOC-Surf Circ.

9-7/8" hole @ 9543'
7-5/8" csg @ 9523'
w/ 2946sx-TOC-Surf Circ.

6-3/4" hole @ 20525'
5-1/2" csg @ 20515'
w/ 624sx-TOC @ 8308'

2-3/8" tbg & gas lift @ 10185'

Perfs @ 10260-20412' TD- 20525'M 10152'V

Well Name: DR PI UNIT	Well Location: T22S / R32E / SEC 17 / SESW / 32.3857892 / -103.6991054	County or Parish/State: LEA / NM
Well Number: 171H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM128362	Unit or CA Name:	Unit or CA Number: NMNM105825907
US Well Number: 300254915000S1	Operator: OXY USA INCORPORATED	

Subsequent Report

Sundry ID: 2802021

Type of Submission: Subsequent Report	Type of Action: Hydraulic Fracturing
Date Sundry Submitted: 07/22/2024	Time Sundry Submitted: 06:46
Date Operation Actually Began: 06/21/2024	

Actual Procedure: RUPU 06/21/24, RIH & clean out to PBTD @ 20490'M/10150'. Ran CBL. Pressure tested casing to 5950# for 30 min, good test. RIH & perf @ 10260'-20412'. Total 1221 holes. Frac in 37 stages w/ 365106 bbls Produced Water + 3860 bbls Brackish Water (> 1,000 mg/l TDS and 10,000 mg/l TDS) w/ 25447128# sand. RD Frac 07/05/24. RD CT and well ready to produce 07/08/24. OXY USA Inc. requests a tubing exception while continuing to flow back this well. The estimated date of tubing install is 09/15/2024.

Well Name: DR PT UNIT	Well Location: T22S / R32E / SEC 17 / SESW / 32.3857892 / -103.6991054	County or Parish/State: LEA / NM
Well Number: 171H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM128362	Unit or CA Name:	Unit or CA Number: NMNM105825907
US Well Number: 300254915000S1	Operator: OXY USA INCORPORATED	

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: LESLIE REEVES	Signed on: JUL 22, 2024 06:46 AM
Name: OXY USA INCORPORATED	
Title: Advisor Regulatory	
Street Address: 5 GREENWAY PLAZA, SUITE 110	
City: HOUSTON	State: TX
Phone: (713) 497-2492	
Email address: LESLIE_REEVES@OXY.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: JONATHON W SHEPARD	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752345972	BLM POC Email Address: jshepard@blm.gov
Disposition: Accepted	Disposition Date: 07/24/2024
Signature: Jonathon Shepard	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

ACKNOWLEDGMENTS

Action 422118

ACKNOWLEDGMENTS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 422118
	Action Type: [C-104] Completion Packet - New Well (C-104NW)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.
☒	I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 422118

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 422118
	Action Type: [C-104] Completion Packet - New Well (C-104NW)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 within 10 days of BLM Approval.	8/12/2025