



Devon Energy Production Co, LP

Lea Co., New Mexico (Nad 83)

Playa 2 State 1H

Playa 2 State 1H

Lateral #1

Plan: Design #1

Standard Planning Report

20 October, 2011



CUDD Drilling and Measurement Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Playa 2 State 1H
Company:	Devon Energy Production Co., LP	TVD Reference:	WELL @ 3995.00ft (Original Well Elev)
Project:	Lea Co., New Mexico (Nad 83)	MD Reference:	WELL @ 3995 00ft (Original Well Elev)
Site:	Playa 2 State 1H	North Reference:	Grid
Well:	Playa 2 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Project	Lea Co., New Mexico (Nad 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Playa 2 State 1H, Sec 2, T-19S, R-34E		
Site Position:		Northing:	613,134.44 usft
From:	Map	Easting:	787,742.77 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16"
		Latitude:	32° 40' 58.779 N
		Longitude:	103° 31' 56.872 W
		Grid Convergence:	0.43 °

Well	Playa 2 State 1H		
Well Position	+N/-S	0.00 ft	Northing: 613,134.44 usft
	+E/-W	0.00 ft	Easting: 787,742.77 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	3,995.00 ft
		Latitude:	32° 40' 58.779 N
		Longitude:	103° 31' 56.872 W
		Ground Level:	3,975.00 ft

Wellbore	Lateral #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	10/20/2011	7.56
			Dip Angle (°)
			60.61
			Field Strength (nT)
			48,859

Design	Design #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)
	0.00	0.00	0.00
			Direction (°)
			359.70

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,153.48	0.00	0.00	10,153.48	0.00	0.00	0.00	0.00	0.00	0.00	
11,078.48	92.50	359.70	10,725.89	597.94	-3.18	10.00	10.00	0.00	359.70	
15,235.58	92.50	359.70	10,544.56	4,751.03	-25.26	0.00	0.00	0.00	0.00	PBHL - TD (P2S1H)



CUDD Drilling and Measurement Planning Report

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Project:	Lea Co., New Mexico (Nad 83)	MD Reference:	WELL @ 3995.00ft (Original Well Elev)
Site:	Playa 2 State 1H	North Reference:	Grid
Well:	Playa 2 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,153.48	0.00	0.00	10,153.48	0.00	0.00	0.00	0.00	0.00	0.00
KOP: Build 10°/100'									
10,200.00	4.65	359.70	10,199.95	1.89	-0.01	1.89	10.00	10.00	0.00
10,250.00	9.65	359.70	10,249.54	8.11	-0.04	8.11	10.00	10.00	0.00
10,300.00	14.65	359.70	10,298.41	18.63	-0.10	18.63	10.00	10.00	0.00
10,350.00	19.65	359.70	10,346.17	33.37	-0.18	33.37	10.00	10.00	0.00
10,400.00	24.65	359.70	10,392.46	52.22	-0.28	52.22	10.00	10.00	0.00
10,450.00	29.65	359.70	10,436.94	75.03	-0.40	75.03	10.00	10.00	0.00
10,455.39	30.19	359.70	10,441.61	77.72	-0.41	77.72	10.00	10.00	0.00
3rd Bone Spring Lime									
10,500.00	34.65	359.70	10,479.26	101.63	-0.54	101.63	10.00	10.00	0.00
10,550.00	39.65	359.70	10,519.10	131.82	-0.70	131.82	10.00	10.00	0.00
10,600.00	44.65	359.70	10,556.15	165.36	-0.88	165.36	10.00	10.00	0.00
10,644.21	49.07	359.70	10,586.37	197.61	-1.05	197.61	10.00	10.00	0.00
3rd Bone Spring Sand									
10,650.00	49.65	359.70	10,590.15	202.01	-1.07	202.01	10.00	10.00	0.00
10,700.00	54.65	359.70	10,620.81	241.48	-1.28	241.48	10.00	10.00	0.00
10,750.00	59.65	359.70	10,647.93	283.47	-1.51	283.47	10.00	10.00	0.00
10,800.00	64.65	359.70	10,671.27	327.66	-1.74	327.67	10.00	10.00	0.00
10,850.00	69.65	359.70	10,690.68	373.73	-1.99	373.73	10.00	10.00	0.00
10,900.00	74.65	359.70	10,706.00	421.30	-2.24	421.31	10.00	10.00	0.00
10,950.00	79.65	359.70	10,717.12	470.04	-2.50	470.04	10.00	10.00	0.00
11,000.00	84.65	359.70	10,723.94	519.55	-2.76	519.56	10.00	10.00	0.00
11,050.00	89.65	359.70	10,726.43	569.47	-3.03	569.48	10.00	10.00	0.00
11,078.48	92.50	359.70	10,725.89	597.94	-3.18	597.95	10.00	10.00	0.00
EOC: Hold I: 92.5° @ A: 359.7°									
11,100.00	92.50	359.70	10,724.95	619.44	-3.29	619.45	0.00	0.00	0.00
11,200.00	92.50	359.70	10,720.59	719.35	-3.82	719.36	0.00	0.00	0.00
11,300.00	92.50	359.70	10,716.23	819.25	-4.36	819.26	0.00	0.00	0.00
11,400.00	92.50	359.70	10,711.87	919.15	-4.89	919.17	0.00	0.00	0.00
11,500.00	92.50	359.70	10,707.50	1,019.06	-5.42	1,019.07	0.00	0.00	0.00
11,600.00	92.50	359.70	10,703.14	1,118.96	-5.95	1,118.98	0.00	0.00	0.00
11,700.00	92.50	359.70	10,698.78	1,218.86	-6.48	1,218.88	0.00	0.00	0.00
11,800.00	92.50	359.70	10,694.42	1,318.77	-7.01	1,318.79	0.00	0.00	0.00
11,900.00	92.50	359.70	10,690.06	1,418.67	-7.54	1,418.69	0.00	0.00	0.00
12,000.00	92.50	359.70	10,685.69	1,518.57	-8.07	1,518.60	0.00	0.00	0.00
12,100.00	92.50	359.70	10,681.33	1,618.48	-8.61	1,618.50	0.00	0.00	0.00
12,200.00	92.50	359.70	10,676.97	1,718.38	-9.14	1,718.41	0.00	0.00	0.00
12,300.00	92.50	359.70	10,672.61	1,818.28	-9.67	1,818.31	0.00	0.00	0.00
12,400.00	92.50	359.70	10,668.25	1,918.19	-10.20	1,918.21	0.00	0.00	0.00
12,500.00	92.50	359.70	10,663.88	2,018.09	-10.73	2,018.12	0.00	0.00	0.00
12,600.00	92.50	359.70	10,659.52	2,117.99	-11.26	2,118.02	0.00	0.00	0.00
12,700.00	92.50	359.70	10,655.16	2,217.90	-11.79	2,217.93	0.00	0.00	0.00
12,800.00	92.50	359.70	10,650.80	2,317.80	-12.32	2,317.83	0.00	0.00	0.00
12,900.00	92.50	359.70	10,646.44	2,417.70	-12.85	2,417.74	0.00	0.00	0.00
13,000.00	92.50	359.70	10,642.07	2,517.61	-13.39	2,517.64	0.00	0.00	0.00
13,100.00	92.50	359.70	10,637.71	2,617.51	-13.92	2,617.55	0.00	0.00	0.00
13,200.00	92.50	359.70	10,633.35	2,717.42	-14.45	2,717.45	0.00	0.00	0.00
13,300.00	92.50	359.70	10,628.99	2,817.32	-14.98	2,817.36	0.00	0.00	0.00
13,400.00	92.50	359.70	10,624.63	2,917.22	-15.51	2,917.26	0.00	0.00	0.00
13,500.00	92.50	359.70	10,620.27	3,017.13	-16.04	3,017.17	0.00	0.00	0.00
13,600.00	92.50	359.70	10,615.90	3,117.03	-16.57	3,117.07	0.00	0.00	0.00
13,700.00	92.50	359.70	10,611.54	3,216.93	-17.10	3,216.98	0.00	0.00	0.00



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Site:	Playa 2 State 1H	North Reference:	Grid
Well:	Playa 2 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,800.00	92.50	359.70	10,607.18	3,316.84	-17.63	3,316.88	0.00	0.00	0.00
13,900.00	92.50	359.70	10,602.82	3,416.74	-18.17	3,416.79	0.00	0.00	0.00
14,000.00	92.50	359.70	10,598.46	3,516.64	-18.70	3,516.69	0.00	0.00	0.00
14,100.00	92.50	359.70	10,594.09	3,616.55	-19.23	3,616.60	0.00	0.00	0.00
14,200.00	92.50	359.70	10,589.73	3,716.45	-19.76	3,716.50	0.00	0.00	0.00
14,300.00	92.50	359.70	10,585.37	3,816.35	-20.29	3,816.41	0.00	0.00	0.00
14,400.00	92.50	359.70	10,581.01	3,916.26	-20.82	3,916.31	0.00	0.00	0.00
14,500.00	92.50	359.70	10,576.65	4,016.16	-21.35	4,016.22	0.00	0.00	0.00
14,600.00	92.50	359.70	10,572.28	4,116.06	-21.88	4,116.12	0.00	0.00	0.00
14,700.00	92.50	359.70	10,567.92	4,215.97	-22.42	4,216.03	0.00	0.00	0.00
14,800.00	92.50	359.70	10,563.56	4,315.87	-22.95	4,315.93	0.00	0.00	0.00
14,900.00	92.50	359.70	10,559.20	4,415.77	-23.48	4,415.84	0.00	0.00	0.00
15,000.00	92.50	359.70	10,554.84	4,515.68	-24.01	4,515.74	0.00	0.00	0.00
15,100.00	92.50	359.70	10,550.47	4,615.58	-24.54	4,615.65	0.00	0.00	0.00
15,200.00	92.50	359.70	10,546.11	4,715.48	-25.07	4,715.55	0.00	0.00	0.00
15,235.58	92.50	359.70	10,544.56	4,751.03	-25.26	4,751.10	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL - TD (P2S1H)	0.00	0.00	10,544.56	4,751.03	-25.26	617,885.46	787,717.51	32° 41' 45.790 N	103° 31' 56.748 W
- plan hits target center									
- Point									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
20.00	20.00	QUATERNARY		-2.50	359.70	
1,960.00	1,960.00	RUSTLER DOL.		-2.50	359.70	
2,270.00	2,270.00	SALADO SALT		-2.50	359.70	
3,550.00	3,550.00	YATES SS		-2.50	359.70	
4,820.00	4,820.00	QUEEN SS.		-2.50	359.70	
5,400.00	5,400.00	GRAYBURG		-2.50	359.70	
6,951.00	6,951.00	CHERRY CANYON		-2.50	359.70	
7,670.00	7,670.00	BRYSHY CANYON		-2.50	359.70	
8,075.00	8,075.00	1ST BONE SPRING LM		-2.50	359.70	
9,415.00	9,415.00	1ST BONE SPRING SS		-2.50	359.70	
9,620.00	9,620.00	2ND BONE SPRING LM		-2.50	359.70	
9,955.00	9,955.00	2ND BONE SPRING SS		-2.50	359.70	
10,455.39	10,441.61	3rd Bone Spring Lime		-2.50	359.70	
10,644.21	10,586.37	3rd Bone Spring Sand		-2.50	359.70	



CUDD Drilling and Measurement Planning Report

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Playa 2 State 1H
Company:	Devon Energy Production Co, LP	TVD Reference:	WELL @ 3995.00ft (Original Well Elev)
Project:	Lea Co., New Mexico (Nad 83)	MD Reference:	WELL @ 3995.00ft (Original Well Elev)
Site:	Playa 2 State 1H	North Reference:	Grid
Well:	Playa 2 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
10,153.48	10,153.48	0.00	0.00	KOP Build 10*/100'
11,078.48	10,725.89	597.94	-3.18	EOC: Hold 1.92.5* @ A 359.7*



Project Lea Co., New Mexico (Nad 83)
Site Playa 2 State 1H
Well Playa 2 State 1H
Wellbore Lateral #1
Design Design #1



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSect	Target
1	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2	10153 48	0 00	0 00	10153 48	0 00	0 00	0 00	0 00	0 00	
3	11078 48	92 50	359 70	10725 89	597 94	-3 18	10 00	359 70	597 95	
4	15235 58	92 50	359 70	10544 56	4751 03	-25 26	0 00	0 00	4751 10	PBHL - TD (P2S1H)

ANNOTATIONS

TVD MD Annotation
10153 48 10153 48 KOP Build 10°/100'
10725 89 11078 48 EOC Hold 1 92.5° @ A 359.7°

PROJECT DETAILS Lea Co., New Mexico (Nad 83)

Geodetic System US State Plane 1983
Datum North American Datum 1983
Ellipsoid GRS 1980
Zone New Mexico Eastern Zone
System Datum Mean Sea Level

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

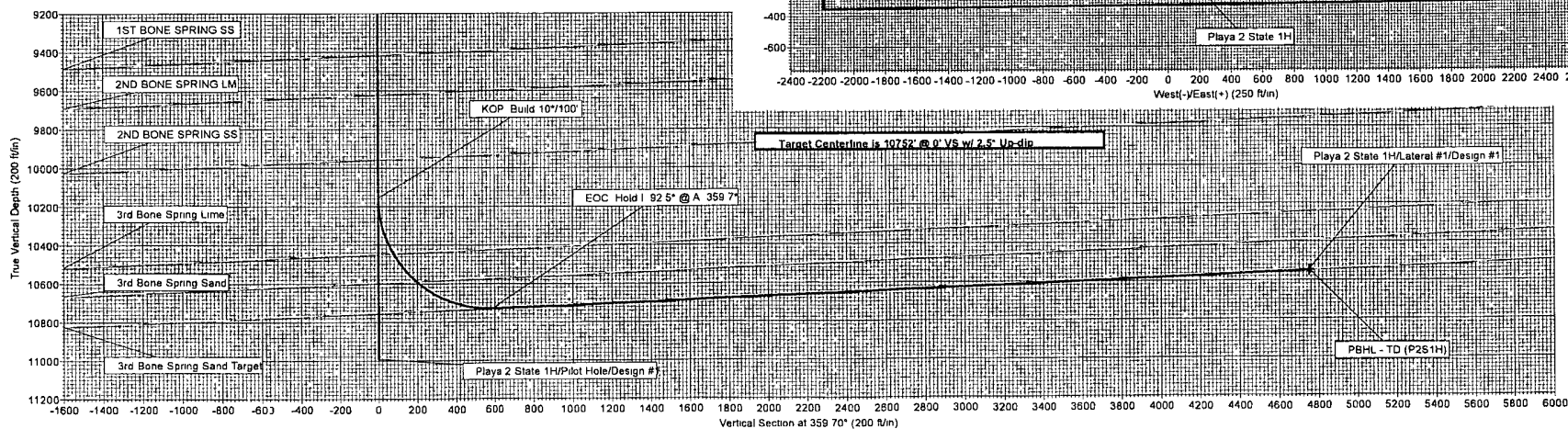
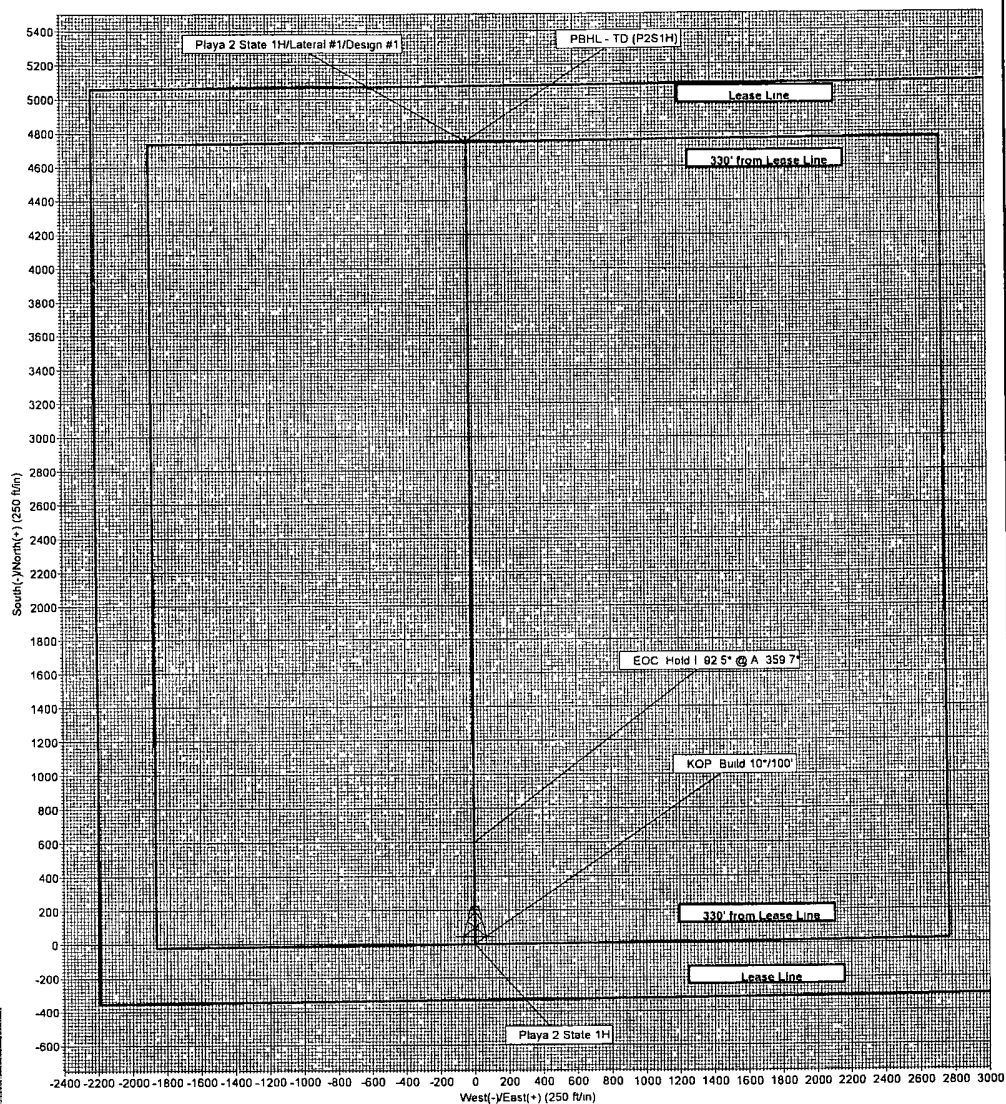
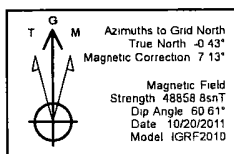
Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude	Shape
PBHL - TD (P2S1H)	10544 56	4751 03	-25 26	617885 45	787717 51	32° 41' 45 790 N	103° 31' 56 748 W	Point

WELL DETAILS Playa 2 State 1H

Ground Level 3975 00							
WELL @ 3995 00ft (Original Well Elev)							
+N/S	+E/W	Northing	Easting	Latitude	Longitude	Slot	
0 00	0 00	613134 44	787742 77	32° 40' 58 779 N	103° 31' 56 872 W		

Plan Design #1 (Playa 2 State 1H/Lateral #1)

Created By Eric Minchew Date 12 16, October 20 2011
Checked _____ Date _____
Reviewed _____ Date _____
Approved _____ Date _____



Playa 2 State 1H_Plan 1 Report_10-20-11.txt
Devon Energy Production Co, LP
Playa 2 State 1H - Design #1

Lea Co., New Mexico (Nad 83)
Playa 2 State 1H

Measured Dogleg Depth Rate (ft) (°/100ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00
0.00	10153.48	0.000	10153.48	0.00 N	0.00 E	0.00
0.00	10200.00	4.652	10199.95	1.89 N	0.01 W	1.89
10.00	10250.00	9.652	10249.54	8.11 N	0.04 W	8.11
10.00	10300.00	14.652	10298.41	18.63 N	0.10 W	18.63
10.00	10350.00	19.652	10346.17	33.37 N	0.18 W	33.37
10.00	10400.00	24.652	10392.46	52.22 N	0.28 W	52.22
10.00	10450.00	29.652	10436.94	75.03 N	0.40 W	75.03
10.00	10500.00	34.652	10479.26	101.63 N	0.54 W	101.63
10.00	10550.00	39.652	10519.10	131.82 N	0.70 W	131.82
10.00	10600.00	44.652	10556.15	165.36 N	0.88 W	165.36
10.00	10650.00	49.652	10590.15	202.01 N	1.07 W	202.01
10.00	10700.00	54.652	10620.81	241.48 N	1.28 W	241.48
10.00	10750.00	59.652	10647.93	283.47 N	1.51 W	283.47
10.00	10800.00	64.652	10671.27	327.66 N	1.74 W	327.67
10.00	10850.00	69.652	10690.68	373.73 N	1.99 W	373.73
10.00	10900.00	74.652	10706.00	421.30 N	2.24 W	421.31
10.00	10950.00	79.652	10717.12	470.04 N	2.50 W	470.04
10.00	11000.00	84.652	10723.94	519.55 N	2.76 W	519.56
10.00	11050.00	89.652	10726.43	569.47 N	3.03 W	569.48
10.00	11078.48	92.500	10725.89	597.94 N	3.18 W	597.95
10.00	11100.00	92.500	10724.95	619.44 N	3.29 W	619.45
0.00	11200.00	92.500	10720.59	719.35 N	3.82 W	719.36
0.00	11300.00	92.500	10716.23	819.25 N	4.36 W	819.26
0.00	11400.00	92.500	10711.87	919.15 N	4.89 W	919.17
0.00						

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11500.00	92.500	359.695	10707.50	1019.06 N	5.42 W	1019.07
0.00						
11600.00	92.500	359.695	10703.14	1118.96 N	5.95 W	1118.98
0.00						
11700.00	92.500	359.695	10698.78	1218.86 N	6.48 W	1218.88
0.00						
11800.00	92.500	359.695	10694.42	1318.77 N	7.01 W	1318.79
0.00						
11900.00	92.500	359.695	10690.06	1418.67 N	7.54 W	1418.69
0.00						
12000.00	92.500	359.695	10685.69	1518.57 N	8.07 W	1518.60
0.00						
12100.00	92.500	359.695	10681.33	1618.48 N	8.61 W	1618.50
0.00						
12200.00	92.500	359.695	10676.97	1718.38 N	9.14 W	1718.41
0.00						
12300.00	92.500	359.695	10672.61	1818.28 N	9.67 W	1818.31
0.00						
12400.00	92.500	359.695	10668.25	1918.19 N	10.20 W	1918.21
0.00						
12500.00	92.500	359.695	10663.88	2018.09 N	10.73 W	2018.12
0.00						
12600.00	92.500	359.695	10659.52	2117.99 N	11.26 W	2118.02
0.00						
12700.00	92.500	359.695	10655.16	2217.90 N	11.79 W	2217.93
0.00						
12800.00	92.500	359.695	10650.80	2317.80 N	12.32 W	2317.83
0.00						
12900.00	92.500	359.695	10646.44	2417.70 N	12.85 W	2417.74
0.00						
13000.00	92.500	359.695	10642.07	2517.61 N	13.39 W	2517.64
0.00						
13100.00	92.500	359.695	10637.71	2617.51 N	13.92 W	2617.55
0.00						
13200.00	92.500	359.695	10633.35	2717.41 N	14.45 W	2717.45
0.00						
13300.00	92.500	359.695	10628.99	2817.32 N	14.98 W	2817.36
0.00						
13400.00	92.500	359.695	10624.63	2917.22 N	15.51 W	2917.26
0.00						
13500.00	92.500	359.695	10620.26	3017.13 N	16.04 W	3017.17
0.00						
13600.00	92.500	359.695	10615.90	3117.03 N	16.57 W	3117.07
0.00						
13700.00	92.500	359.695	10611.54	3216.93 N	17.10 W	3216.98
0.00						
13800.00	92.500	359.695	10607.18	3316.84 N	17.63 W	3316.88
0.00						
13900.00	92.500	359.695	10602.82	3416.74 N	18.17 W	3416.79
0.00						
14000.00	92.500	359.695	10598.46	3516.64 N	18.70 W	3516.69
0.00						
14100.00	92.500	359.695	10594.09	3616.55 N	19.23 W	3616.60
0.00						
14200.00	92.500	359.695	10589.73	3716.45 N	19.76 W	3716.50
0.00						
14300.00	92.500	359.695	10585.37	3816.35 N	20.29 W	3816.41
0.00						
14400.00	92.500	359.695	10581.01	3916.26 N	20.82 W	3916.31
0.00						
14500.00	92.500	359.695	10576.65	4016.16 N	21.35 W	4016.22
0.00						
14600.00	92.500	359.695	10572.28	4116.06 N	21.88 W	4116.12

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0.00	14700.00	92.500	359.695	10567.92	4215.97 N	22.42 W	4216.03
0.00	14800.00	92.500	359.695	10563.56	4315.87 N	22.95 W	4315.93
0.00	14900.00	92.500	359.695	10559.20	4415.77 N	23.48 W	4415.84
0.00	15000.00	92.500	359.695	10554.84	4515.68 N	24.01 W	4515.74
0.00	15100.00	92.500	359.695	10550.47	4615.58 N	24.54 W	4615.64
0.00	15200.00	92.500	359.695	10546.11	4715.48 N	25.07 W	4715.55
0.00	15235.58	92.500	359.695	10544.56	4751.03 N	25.26 W	4751.10
0.00							

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to WELL. Northings and Eastings are relative to Site.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Slot and calculated along an Azimuth of 359.700° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.
Central meridian is -104.333°.
Grid Convergence at Surface is 0.433°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 15235.58ft., the Bottom Hole Displacement is 4751.10ft., in the Direction of 359.700° (Grid).