

WCDSC Permian NM

Lea County (NAD83 New Mexico East)

Sec 03-T23-R33E

North Thistle 3-34 State 6H

Wellbore #1

Plan: Permit Plan 4

Standard Planning Report - Geographic

02 August, 2018

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well North Thistle 3-34 State 6H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3596.10ft
Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3596.10ft
Site:	Sec 03-T23-R33E	North Reference:	Grid
Well:	North Thistle 3-34 State 6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 4		

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

Site	Sec 03-T23-R33E		
Site Position:		Northing:	488,963.77 usft
From:	Map	Easting:	777,934.07 usft
Position Uncertainty:	5.00 ft	Slot Radius:	13-3/16 "
		Latitude:	32.341907
		Longitude:	-103.567243
		Grid Convergence:	0.41 °

Well	North Thistle 3-34 State 6H		
Well Position	+N-S	0.00 ft	Northing:
	+E-W	0.00 ft	Easting:
Position Uncertainty	0.50 ft	Wellhead Elevation:	
		Latitude:	32.327401
		Longitude:	-103.554458
		Ground Level:	3,569.80 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	5/2/2018	6.86
			Dip Angle
			(°)
			60.15
			Field Strength
			(nT)
			47,910.28698691

Design	Permit Plan 4		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			2.16

Plan Survey Tool Program	Date 8/2/2018		
Depth From	Depth To	Survey (Wellbore)	Tool Name
(ft)	(ft)		
1	0.00	19,735.86 Permit Plan 4 (Wellbore #1)	MWD+HDGM
			OWSG MWD + HDGM

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,625.35	7.82	120.25	4,623.41	-21.46	36.79	1.25	1.25	0.00	120.25	
8,102.74	7.82	120.25	8,068.49	-259.72	445.34	0.00	0.00	0.00	0.00	
8,623.87	0.00	0.00	8,588.00	-277.60	476.00	1.50	-1.50	0.00	180.00	VP - North Thistle 3-3
8,929.91	0.00	0.00	8,894.04	-277.60	476.00	0.00	0.00	0.00	0.00	
9,829.91	90.00	359.50	9,467.00	295.34	471.01	10.00	10.00	0.00	359.50	PBHL - North Thistle 3
19,735.86	90.00	359.50	9,467.00	10,200.92	384.70	0.00	0.00	0.00	0.00	PBHL - North Thistle 3

Planning Report - Geographic

Database: EDM r5000.141_Prod US
 Company: WCDSC Permian NM
 Project: Lea County (NAD83 New Mexico East)
 Site: Sec 03-T23-R33E
 Well: North Thistle 3-34 State 6H
 Wellbore: Wellbore #1
 Design: Permit Plan 4

Local Co-ordinate Reference: Well North Thistle 3-34 State 6H
 TVD Reference: RKB @ 3596.10ft
 MD Reference: RKB @ 3596.10ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
100.00	0.00	0.00	100.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
200.00	0.00	0.00	200.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
300.00	0.00	0.00	300.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
400.00	0.00	0.00	400.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
500.00	0.00	0.00	500.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
600.00	0.00	0.00	600.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
700.00	0.00	0.00	700.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
800.00	0.00	0.00	800.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
900.00	0.00	0.00	900.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,000.00	0.00	0.00	1,000.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,100.00	0.00	0.00	1,100.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,200.00	0.00	0.00	1,200.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,300.00	0.00	0.00	1,300.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,400.00	0.00	0.00	1,400.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,500.00	0.00	0.00	1,500.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,600.00	0.00	0.00	1,600.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,700.00	0.00	0.00	1,700.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,800.00	0.00	0.00	1,800.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
1,900.00	0.00	0.00	1,900.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,000.00	0.00	0.00	2,000.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,100.00	0.00	0.00	2,100.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,200.00	0.00	0.00	2,200.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,300.00	0.00	0.00	2,300.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,400.00	0.00	0.00	2,400.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,500.00	0.00	0.00	2,500.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,600.00	0.00	0.00	2,600.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,700.00	0.00	0.00	2,700.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,800.00	0.00	0.00	2,800.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
2,900.00	0.00	0.00	2,900.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,000.00	0.00	0.00	3,000.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,100.00	0.00	0.00	3,100.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,200.00	0.00	0.00	3,200.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,300.00	0.00	0.00	3,300.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,400.00	0.00	0.00	3,400.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,500.00	0.00	0.00	3,500.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,600.00	0.00	0.00	3,600.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,700.00	0.00	0.00	3,700.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,800.00	0.00	0.00	3,800.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
3,900.00	0.00	0.00	3,900.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
4,000.00	0.00	0.00	4,000.00	0.00	0.00	483,715.00	781,921.10	32.327401	-103.554458
4,100.00	1.25	120.25	4,099.99	-0.55	0.94	483,714.45	781,922.04	32.327399	-103.554454
4,200.00	2.50	120.25	4,199.94	-2.20	3.77	483,712.80	781,924.87	32.327395	-103.554445
4,300.00	3.75	120.25	4,299.79	-4.94	8.48	483,710.06	781,929.58	32.327387	-103.554430
4,400.00	5.00	120.25	4,399.49	-8.79	15.07	483,706.21	781,936.16	32.327376	-103.554409
4,500.00	6.25	120.25	4,499.01	-13.72	23.53	483,701.28	781,944.63	32.327363	-103.554382
4,600.00	7.50	120.25	4,598.29	-19.75	33.87	483,695.25	781,954.97	32.327346	-103.554348
4,625.35	7.82	120.25	4,623.41	-21.46	36.79	483,693.54	781,957.89	32.327341	-103.554339
4,700.00	7.82	120.25	4,697.37	-26.57	45.56	483,688.43	781,966.66	32.327327	-103.554311
4,800.00	7.82	120.25	4,796.44	-33.42	57.31	483,681.58	781,978.41	32.327308	-103.554273
4,900.00	7.82	120.25	4,895.51	-40.28	69.06	483,674.73	781,990.16	32.327289	-103.554235
5,000.00	7.82	120.25	4,994.58	-47.13	80.81	483,667.87	782,001.91	32.327270	-103.554197
5,100.00	7.82	120.25	5,093.65	-53.98	92.56	483,661.02	782,013.65	32.327251	-103.554159
5,200.00	7.82	120.25	5,192.72	-60.83	104.31	483,654.17	782,025.40	32.327231	-103.554121
5,300.00	7.82	120.25	5,291.79	-67.68	116.05	483,647.32	782,037.15	32.327212	-103.554083

Planning Report - Geographic

Database: EDM r5000.141_Prod US
 Company: WCDSC Permian NM
 Project: Lea County (NAD83 New Mexico East)
 Site: Sec 03-T23-R33E
 Well: North Thistle 3-34 State 6H
 Wellbore: Wellbore #1
 Design: Permit Plan 4

Local Co-ordinate Reference: Well North Thistle 3-34 State 6H
 TVD Reference: RKB @ 3596.10ft
 MD Reference: RKB @ 3596.10ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,400.00	7.82	120.25	5,390.86	-74.53	127.80	483,640.47	782,048.90	32.327193	-103.554046
5,500.00	7.82	120.25	5,489.93	-81.39	139.55	483,633.62	782,060.65	32.327174	-103.554008
5,600.00	7.82	120.25	5,589.01	-88.24	151.30	483,626.76	782,072.40	32.327155	-103.553970
5,700.00	7.82	120.25	5,688.08	-95.09	163.05	483,619.91	782,084.15	32.327136	-103.553932
5,800.00	7.82	120.25	5,787.15	-101.94	174.80	483,613.06	782,095.90	32.327117	-103.553894
5,900.00	7.82	120.25	5,886.22	-108.79	186.55	483,606.21	782,107.64	32.327098	-103.553856
6,000.00	7.82	120.25	5,985.29	-115.64	198.30	483,599.36	782,119.39	32.327079	-103.553818
6,100.00	7.82	120.25	6,084.36	-122.50	210.04	483,592.51	782,131.14	32.327060	-103.553780
6,200.00	7.82	120.25	6,183.43	-129.35	221.79	483,585.65	782,142.89	32.327041	-103.553743
6,300.00	7.82	120.25	6,282.50	-136.20	233.54	483,578.80	782,154.64	32.327022	-103.553705
6,400.00	7.82	120.25	6,381.57	-143.05	245.29	483,571.95	782,166.39	32.327003	-103.553667
6,500.00	7.82	120.25	6,480.64	-149.90	257.04	483,565.10	782,178.14	32.326984	-103.553629
6,600.00	7.82	120.25	6,579.71	-156.75	268.79	483,558.25	782,189.88	32.326964	-103.553591
6,700.00	7.82	120.25	6,678.78	-163.61	280.54	483,551.40	782,201.63	32.326945	-103.553553
6,800.00	7.82	120.25	6,777.86	-170.46	292.28	483,544.54	782,213.38	32.326926	-103.553515
6,900.00	7.82	120.25	6,876.93	-177.31	304.03	483,537.69	782,225.13	32.326907	-103.553477
7,000.00	7.82	120.25	6,976.00	-184.16	315.78	483,530.84	782,236.88	32.326888	-103.553440
7,100.00	7.82	120.25	7,075.07	-191.01	327.53	483,523.99	782,248.63	32.326869	-103.553402
7,200.00	7.82	120.25	7,174.14	-197.86	339.28	483,517.14	782,260.38	32.326850	-103.553364
7,300.00	7.82	120.25	7,273.21	-204.72	351.03	483,510.29	782,272.13	32.326831	-103.553326
7,400.00	7.82	120.25	7,372.28	-211.57	362.78	483,503.43	782,283.87	32.326812	-103.553288
7,500.00	7.82	120.25	7,471.35	-218.42	374.53	483,496.58	782,295.62	32.326793	-103.553250
7,600.00	7.82	120.25	7,570.42	-225.27	386.27	483,489.73	782,307.37	32.326774	-103.553212
7,700.00	7.82	120.25	7,669.49	-232.12	398.02	483,482.88	782,319.12	32.326755	-103.553175
7,800.00	7.82	120.25	7,768.56	-238.97	409.77	483,476.03	782,330.87	32.326736	-103.553137
7,900.00	7.82	120.25	7,867.63	-245.83	421.52	483,469.18	782,342.62	32.326717	-103.553099
8,000.00	7.82	120.25	7,966.70	-252.68	433.27	483,462.32	782,354.37	32.326698	-103.553061
8,100.00	7.82	120.25	8,065.78	-259.53	445.02	483,455.47	782,366.11	32.326678	-103.553023
8,102.74	7.82	120.25	8,068.49	-259.72	445.34	483,455.28	782,366.44	32.326678	-103.553022
8,200.00	6.36	120.25	8,165.00	-265.76	455.71	483,449.24	782,376.80	32.326661	-103.552989
8,300.00	4.86	120.25	8,264.52	-270.68	464.15	483,444.32	782,385.24	32.326647	-103.552961
8,400.00	3.36	120.25	8,364.26	-274.29	470.33	483,440.71	782,391.43	32.326637	-103.552941
8,500.00	1.86	120.25	8,464.16	-276.59	474.27	483,438.42	782,395.36	32.326631	-103.552929
8,600.00	0.36	120.25	8,564.14	-277.56	475.94	483,437.44	782,397.03	32.326628	-103.552923
8,623.87	0.00	0.00	8,588.00	-277.60	476.00	483,437.40	782,397.10	32.326628	-103.552923
8,700.00	0.00	0.00	8,664.13	-277.60	476.00	483,437.40	782,397.10	32.326628	-103.552923
8,800.00	0.00	0.00	8,764.13	-277.60	476.00	483,437.40	782,397.10	32.326628	-103.552923
8,900.00	0.00	0.00	8,864.13	-277.60	476.00	483,437.40	782,397.10	32.326628	-103.552923
8,929.91	0.00	0.00	8,894.04	-277.60	476.00	483,437.40	782,397.10	32.326628	-103.552923
KOP @ 8930' MD, 50' FSL, 380' FEL									
9,000.00	7.01	359.50	8,963.96	-273.31	475.96	483,441.69	782,397.06	32.326640	-103.552923
9,100.00	17.01	359.50	9,061.65	-252.53	475.78	483,462.47	782,396.88	32.326697	-103.552923
9,174.93	24.50	359.50	9,131.66	-226.00	475.55	483,489.00	782,396.65	32.326770	-103.552923
First Take Point @ 9175' MD, 100' FSL, 380' FEL									
9,200.00	27.01	359.50	9,154.24	-215.11	475.46	483,499.89	782,396.55	32.326800	-103.552923
9,300.00	37.01	359.50	9,238.93	-162.17	474.99	483,552.83	782,396.09	32.326945	-103.552924
9,400.00	47.01	359.50	9,313.14	-95.33	474.41	483,619.67	782,395.51	32.327129	-103.552924
9,500.00	57.01	359.50	9,374.61	-16.63	473.73	483,698.38	782,394.82	32.327346	-103.552924
9,600.00	67.01	359.50	9,421.49	71.56	472.96	483,786.56	782,394.05	32.327588	-103.552925
9,700.00	77.01	359.50	9,452.34	166.55	472.13	483,881.55	782,393.23	32.327849	-103.552925
9,800.00	87.01	359.50	9,466.22	265.45	471.27	483,980.45	782,392.37	32.328121	-103.552926
9,829.91	90.00	359.50	9,467.00	295.34	471.01	484,010.34	782,392.10	32.328203	-103.552926
9,900.00	90.00	359.50	9,467.00	365.43	470.40	484,080.43	782,391.49	32.328396	-103.552926
10,000.00	90.00	359.50	9,467.00	465.43	469.53	484,180.43	782,390.62	32.328671	-103.552927

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well North Thistle 3-34 State 6H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3596.10ft
Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3596.10ft
Site:	Sec 03-T23-R33E	North Reference:	Grid
Well:	North Thistle 3-34 State 6H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 4		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,100.00	90.00	359.50	9,467.00	565.42	468.65	484,280.42	782,389.75	32.328945	-103.552927
10,200.00	90.00	359.50	9,467.00	665.42	467.78	484,380.42	782,388.88	32.329220	-103.552928
10,300.00	90.00	359.50	9,467.00	765.42	466.91	484,480.41	782,388.01	32.329495	-103.552928
10,400.00	90.00	359.50	9,467.00	865.41	466.04	484,580.41	782,387.14	32.329770	-103.552928
10,500.00	90.00	359.50	9,467.00	965.41	465.17	484,680.41	782,386.27	32.330045	-103.552929
10,600.00	90.00	359.50	9,467.00	1,065.40	464.30	484,780.40	782,385.40	32.330320	-103.552929
10,700.00	90.00	359.50	9,467.00	1,165.40	463.43	484,880.40	782,384.52	32.330595	-103.552930
10,800.00	90.00	359.50	9,467.00	1,265.40	462.56	484,980.39	782,383.65	32.330870	-103.552930
10,900.00	90.00	359.50	9,467.00	1,365.39	461.68	485,080.39	782,382.78	32.331144	-103.552931
11,000.00	90.00	359.50	9,467.00	1,465.39	460.81	485,180.39	782,381.91	32.331419	-103.552931
11,100.00	90.00	359.50	9,467.00	1,565.38	459.94	485,280.38	782,381.04	32.331694	-103.552932
11,200.00	90.00	359.50	9,467.00	1,665.38	459.07	485,380.38	782,380.17	32.331969	-103.552932
11,300.00	90.00	359.50	9,467.00	1,765.38	458.20	485,480.37	782,379.30	32.332244	-103.552933
11,400.00	90.00	359.50	9,467.00	1,865.37	457.33	485,580.37	782,378.42	32.332519	-103.552933
11,500.00	90.00	359.50	9,467.00	1,965.37	456.46	485,680.37	782,377.55	32.332794	-103.552934
11,600.00	90.00	359.50	9,467.00	2,065.37	455.59	485,780.36	782,376.68	32.333068	-103.552934
11,700.00	90.00	359.50	9,467.00	2,165.36	454.71	485,880.36	782,375.81	32.333343	-103.552934
11,800.00	90.00	359.50	9,467.00	2,265.36	453.84	485,980.35	782,374.94	32.333618	-103.552935
11,900.00	90.00	359.50	9,467.00	2,365.35	452.97	486,080.35	782,374.07	32.333893	-103.552935
12,000.00	90.00	359.50	9,467.00	2,465.35	452.10	486,180.35	782,373.20	32.334168	-103.552936
12,100.00	90.00	359.50	9,467.00	2,565.35	451.23	486,280.34	782,372.33	32.334443	-103.552936
12,200.00	90.00	359.50	9,467.00	2,665.34	450.36	486,380.34	782,371.45	32.334718	-103.552937
12,300.00	90.00	359.50	9,467.00	2,765.34	449.49	486,480.33	782,370.58	32.334993	-103.552937
12,400.00	90.00	359.50	9,467.00	2,865.34	448.62	486,580.33	782,369.71	32.335267	-103.552938
12,500.00	90.00	359.50	9,467.00	2,965.33	447.74	486,680.33	782,368.84	32.335542	-103.552938
12,600.00	90.00	359.50	9,467.00	3,065.33	446.87	486,780.32	782,367.97	32.335817	-103.552939
12,700.00	90.00	359.50	9,467.00	3,165.32	446.00	486,880.32	782,367.10	32.336092	-103.552939
12,800.00	90.00	359.50	9,467.00	3,265.32	445.13	486,980.31	782,366.23	32.336367	-103.552940
12,900.00	90.00	359.50	9,467.00	3,365.32	444.26	487,080.31	782,365.36	32.336642	-103.552940
13,000.00	90.00	359.50	9,467.00	3,465.31	443.39	487,180.31	782,364.48	32.336917	-103.552940
13,100.00	90.00	359.50	9,467.00	3,565.31	442.52	487,280.30	782,363.61	32.337191	-103.552941
13,200.00	90.00	359.50	9,467.00	3,665.31	441.65	487,380.30	782,362.74	32.337466	-103.552941
13,300.00	90.00	359.50	9,467.00	3,765.30	440.77	487,480.29	782,361.87	32.337741	-103.552942
13,400.00	90.00	359.50	9,467.00	3,865.30	439.90	487,580.29	782,361.00	32.338016	-103.552942
13,500.00	90.00	359.50	9,467.00	3,965.29	439.03	487,680.29	782,360.13	32.338291	-103.552943
13,600.00	90.00	359.50	9,467.00	4,065.29	438.16	487,780.28	782,359.26	32.338566	-103.552943
13,700.00	90.00	359.50	9,467.00	4,165.29	437.29	487,880.28	782,358.39	32.338841	-103.552944
13,800.00	90.00	359.50	9,467.00	4,265.28	436.42	487,980.27	782,357.51	32.339116	-103.552944
13,900.00	90.00	359.50	9,467.00	4,365.28	435.55	488,080.27	782,356.64	32.339390	-103.552945
14,000.00	90.00	359.50	9,467.00	4,465.27	434.68	488,180.27	782,355.77	32.339665	-103.552945
14,100.00	90.00	359.50	9,467.00	4,565.27	433.80	488,280.26	782,354.90	32.339940	-103.552946
14,200.00	90.00	359.50	9,467.00	4,665.27	432.93	488,380.26	782,354.03	32.340215	-103.552946
14,300.00	90.00	359.50	9,467.00	4,765.26	432.06	488,480.25	782,353.16	32.340490	-103.552946
14,400.00	90.00	359.50	9,467.00	4,865.26	431.19	488,580.25	782,352.29	32.340765	-103.552947
14,500.00	90.00	359.50	9,467.00	4,965.26	430.32	488,680.25	782,351.42	32.341040	-103.552947
14,600.00	90.00	359.50	9,467.00	5,065.25	429.45	488,780.24	782,350.54	32.341314	-103.552948
14,700.00	90.00	359.50	9,467.00	5,165.25	428.58	488,880.24	782,349.67	32.341589	-103.552948
14,800.00	90.00	359.50	9,467.00	5,265.24	427.71	488,980.23	782,348.80	32.341864	-103.552949
14,900.00	90.00	359.50	9,467.00	5,365.24	426.83	489,080.23	782,347.93	32.342139	-103.552949
15,000.00	90.00	359.50	9,467.00	5,465.24	425.96	489,180.23	782,347.06	32.342414	-103.552950
15,100.00	90.00	359.50	9,467.00	5,565.23	425.09	489,280.22	782,346.19	32.342689	-103.552950
15,200.00	90.00	359.50	9,467.00	5,665.23	424.22	489,380.22	782,345.32	32.342964	-103.552951
15,300.00	90.00	359.50	9,467.00	5,765.23	423.35	489,480.21	782,344.45	32.343239	-103.552951
15,400.00	90.00	359.50	9,467.00	5,865.22	422.48	489,580.21	782,343.57	32.343513	-103.552952
15,500.00	90.00	359.50	9,467.00	5,965.22	421.61	489,680.21	782,342.70	32.343788	-103.552952

Planning Report - Geographic

Database: EDM r5000.141_Prod US
 Company: WCDSC Permian NM
 Project: Lea County (NAD83 New Mexico East)
 Site: Sec 03-T23-R33E
 Well: North Thistle 3-34 State 6H
 Wellbore: Wellbore #1
 Design: Permit Plan 4

Local Co-ordinate Reference: Well North Thistle 3-34 State 6H
 TVD Reference: RKB @ 3596.10ft
 MD Reference: RKB @ 3596.10ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,600.00	90.00	359.50	9,467.00	6,065.21	420.74	489,780.20	782,341.83	32.344063	-103.552952
15,700.00	90.00	359.50	9,467.00	6,165.21	419.86	489,880.20	782,340.96	32.344338	-103.552953
15,800.00	90.00	359.50	9,467.00	6,265.21	418.99	489,980.19	782,340.09	32.344613	-103.552953
15,900.00	90.00	359.50	9,467.00	6,365.20	418.12	490,080.19	782,339.22	32.344888	-103.552954
16,000.00	90.00	359.50	9,467.00	6,465.20	417.25	490,180.19	782,338.35	32.345163	-103.552954
16,100.00	90.00	359.50	9,467.00	6,565.20	416.38	490,280.18	782,337.48	32.345437	-103.552955
16,200.00	90.00	359.50	9,467.00	6,665.19	415.51	490,380.18	782,336.60	32.345712	-103.552955
16,300.00	90.00	359.50	9,467.00	6,765.19	414.64	490,480.17	782,335.73	32.345987	-103.552956
16,400.00	90.00	359.50	9,467.00	6,865.18	413.77	490,580.17	782,334.86	32.346262	-103.552956
16,500.00	90.00	359.50	9,467.00	6,965.18	412.89	490,680.17	782,333.99	32.346537	-103.552957
16,600.00	90.00	359.50	9,467.00	7,065.18	412.02	490,780.16	782,333.12	32.346812	-103.552957
16,700.00	90.00	359.50	9,467.00	7,165.17	411.15	490,880.16	782,332.25	32.347087	-103.552958
16,800.00	90.00	359.50	9,467.00	7,265.17	410.28	490,980.15	782,331.38	32.347362	-103.552958
16,900.00	90.00	359.50	9,467.00	7,365.16	409.41	491,080.15	782,330.51	32.347636	-103.552958
17,000.00	90.00	359.50	9,467.00	7,465.16	408.54	491,180.15	782,329.63	32.347911	-103.552959
17,100.00	90.00	359.50	9,467.00	7,565.16	407.67	491,280.14	782,328.76	32.348186	-103.552959
17,200.00	90.00	359.50	9,467.00	7,665.15	406.79	491,380.14	782,327.89	32.348461	-103.552960
17,300.00	90.00	359.50	9,467.00	7,765.15	405.92	491,480.13	782,327.02	32.348736	-103.552960
17,400.00	90.00	359.50	9,467.00	7,865.15	405.05	491,580.13	782,326.15	32.349011	-103.552961
17,500.00	90.00	359.50	9,467.00	7,965.14	404.18	491,680.13	782,325.28	32.349286	-103.552961
17,600.00	90.00	359.50	9,467.00	8,065.14	403.31	491,780.12	782,324.41	32.349560	-103.552962
17,700.00	90.00	359.50	9,467.00	8,165.13	402.44	491,880.12	782,323.54	32.349835	-103.552962
17,800.00	90.00	359.50	9,467.00	8,265.13	401.57	491,980.12	782,322.66	32.350110	-103.552963
17,900.00	90.00	359.50	9,467.00	8,365.13	400.70	492,080.11	782,321.79	32.350385	-103.552963
18,000.00	90.00	359.50	9,467.00	8,465.12	399.82	492,180.11	782,320.92	32.350660	-103.552964
18,100.00	90.00	359.50	9,467.00	8,565.12	398.95	492,280.10	782,320.05	32.350935	-103.552964
18,200.00	90.00	359.50	9,467.00	8,665.12	398.08	492,380.10	782,319.18	32.351210	-103.552964
18,300.00	90.00	359.50	9,467.00	8,765.11	397.21	492,480.10	782,318.31	32.351485	-103.552965
18,400.00	90.00	359.50	9,467.00	8,865.11	396.34	492,580.09	782,317.44	32.351759	-103.552965
18,500.00	90.00	359.50	9,467.00	8,965.10	395.47	492,680.09	782,316.57	32.352034	-103.552966
18,600.00	90.00	359.50	9,467.00	9,065.10	394.60	492,780.08	782,315.69	32.352309	-103.552966
18,700.00	90.00	359.50	9,467.00	9,165.10	393.73	492,880.08	782,314.82	32.352584	-103.552967
18,800.00	90.00	359.50	9,467.00	9,265.09	392.85	492,980.08	782,313.95	32.352859	-103.552967
18,900.00	90.00	359.50	9,467.00	9,365.09	391.98	493,080.07	782,313.08	32.353134	-103.552968
19,000.00	90.00	359.50	9,467.00	9,465.09	391.11	493,180.07	782,312.21	32.353409	-103.552968
19,100.00	90.00	359.50	9,467.00	9,565.08	390.24	493,280.06	782,311.34	32.353683	-103.552969
19,200.00	90.00	359.50	9,467.00	9,665.08	389.37	493,380.06	782,310.47	32.353958	-103.552969
19,300.00	90.00	359.50	9,467.00	9,765.07	388.50	493,480.06	782,309.60	32.354233	-103.552970
19,400.00	90.00	359.50	9,467.00	9,865.07	387.63	493,580.05	782,308.72	32.354508	-103.552970
19,500.00	90.00	359.50	9,467.00	9,965.07	386.76	493,680.05	782,307.85	32.354783	-103.552970
19,600.00	90.00	359.50	9,467.00	10,065.06	385.88	493,780.04	782,306.98	32.355058	-103.552971
19,655.86	90.00	359.50	9,467.00	10,120.92	385.40	493,835.90	782,306.49	32.355211	-103.552971
Last Take Point @ 19656' MD, 100' FNL, 380' FEL									
19,700.00	90.00	359.50	9,467.00	10,165.06	385.01	493,880.04	782,306.11	32.355333	-103.552971
19,735.86	90.00	359.50	9,467.00	10,200.92	384.70	493,915.90	782,305.80	32.355431	-103.552972

PBHL; 20' FNL, 380' FEL

Planning Report - Geographic

Database: EDM r5000.141_Prod US
Company: WCDSC Permian NM
Project: Lea County (NAD83 New Mexico East)
Site: Sec 03-T23-R33E
Well: North Thistle 3-34 State 6H
Wellbore: Wellbore #1
Design: Permit Plan 4

Local Co-ordinate Reference: Well North Thistle 3-34 State 6H
TVD Reference: RKB @ 3596.10ft
MD Reference: RKB @ 3596.10ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
PBHL - North Thistle 3-3	0.00	0.00	0.00	10,200.92	384.70	493,915.90	782,305.80	32.355431	-103.552972
- plan misses target center by 9467.00ft at 19735.86ft MD (9467.00 TVD, 10200.92 N, 384.70 E)									
- Point									
VP - North Thistle 3-34	0.00	0.00	8,588.00	-277.60	476.00	483,437.40	782,397.10	32.326628	-103.552923
- plan hits target center									
- Point									

Plan Annotations

Measured	Vertical	Local Coordinates		Comment
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	
8,929.91	8,894.04	-277.60	476.00	KOP @ 8930' MD, 50' FSL, 380' FEL
9,174.93	9,131.66	-226.00	475.55	First Take Point @ 9175' MD, 100' FSL, 380' FEL
19,655.86	9,467.00	10,120.92	385.40	Last Take Point @ 19656' MD, 100' FNL, 380' FEL
19,735.86	9,467.00	10,200.92	384.70	PBHL; 20' FNL, 380' FEL