

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 18 2019

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WCDSC Permian NM

Eddy County (NAD 83 NM Eastern)

Sec 14-T21S-R27E

Lone Tree Draw 14-13 State Com 336H

Wellbore #1

Plan: Permit Plan 1

30.015-45644

Standard Planning Report - Geographic

17 December, 2018

Planning Report - Geographic

Database: EDM r5000.141_Prod US
Company: WCDCS Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Site: Sec 14-T21S-R27E
Well: Lone Tree Draw 14-13 State Com 336H
Wellbore: Wellbore #1
Design: Permit Plan 1

Local Co-ordinate Reference: Well Lone Tree Draw 14-13 State Com 336H
TVD Reference: RKB @ 3284.10ft
MD Reference: RKB @ 3284.10ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County (NAD 83 NM Eastern)		
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 14-T21S-R27E			
Site Position:		Northing:	541,119.08 usft	Latitude: 32.487491
From: Map		Easting:	591,975.56 usft	Longitude: -104.169104
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.09 °

Well	Lone Tree Draw 14-13 State Com 336H			
Well Position	+N/-S	0.00 ft	Northing:	536,184.04 usft
	+E/-W	0.00 ft	Easting:	592,157.40 usft
Position Uncertainty	0.50 ft	Wellhead Elevation:		Ground Level: 3,259.10 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/13/2018	7.09	60.18	47,870.29608056

Design	Permit Plan 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	89.61

Plan Survey Tool Program	Date	12/17/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,310.65 Permit Plan 1 (Wellbore #1)	MWD+IFR1+MS OWSG MWD + IFR1 + Multi-S	

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	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,638.92	1.39	248.93	2,638.90	-0.61	-1.57	1.00	1.00	0.00	248.93	
7,915.96	1.39	248.93	7,914.40	-46.60	-120.95	0.00	0.00	0.00	0.00	
8,008.57	0.00	0.00	8,007.00	-47.00	-122.00	1.50	-1.50	0.00	180.00	
8,358.61	0.00	0.00	8,357.04	-47.00	-122.00	0.00	0.00	0.00	0.00	
9,258.62	90.00	89.37	8,930.00	-40.65	450.92	10.00	10.00	0.00	89.37	PBHL - Lone Tree Dr
19,310.65	90.00	89.37	8,930.00	70.67	10,502.34	0.00	0.00	0.00	0.00	PBHL - Lone Tree Dr

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 MD Reference: RKB @ 3284.10ft
 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	536,184.04	592,157.40	32.473925	-104.168539
100.00	0.00	0.00	100.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
200.00	0.00	0.00	200.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
300.00	0.00	0.00	300.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
400.00	0.00	0.00	400.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
500.00	0.00	0.00	500.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
600.00	0.00	0.00	600.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
700.00	0.00	0.00	700.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
800.00	0.00	0.00	800.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
900.00	0.00	0.00	900.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,000.00	0.00	0.00	1,000.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,100.00	0.00	0.00	1,100.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,200.00	0.00	0.00	1,200.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,300.00	0.00	0.00	1,300.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,400.00	0.00	0.00	1,400.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,500.00	0.00	0.00	1,500.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,600.00	0.00	0.00	1,600.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,700.00	0.00	0.00	1,700.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,800.00	0.00	0.00	1,800.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
1,900.00	0.00	0.00	1,900.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
2,000.00	0.00	0.00	2,000.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
2,100.00	0.00	0.00	2,100.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
2,200.00	0.00	0.00	2,200.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
2,300.00	0.00	0.00	2,300.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
2,400.00	0.00	0.00	2,400.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
2,500.00	0.00	0.00	2,500.00	0.00	0.00	536,184.04	592,157.40	32.473925	-104.168539
2,600.00	1.00	248.93	2,599.99	-0.31	-0.81	536,183.73	592,156.59	32.473924	-104.168542
2,638.92	1.39	248.93	2,638.90	-0.61	-1.57	536,183.44	592,155.83	32.473923	-104.168544
2,700.00	1.39	248.93	2,699.97	-1.14	-2.95	536,182.90	592,154.45	32.473922	-104.168549
2,800.00	1.39	248.93	2,799.94	-2.01	-5.22	536,182.03	592,152.19	32.473920	-104.168556
2,900.00	1.39	248.93	2,899.91	-2.88	-7.48	536,181.16	592,149.93	32.473917	-104.168563
3,000.00	1.39	248.93	2,999.88	-3.75	-9.74	536,180.29	592,147.66	32.473915	-104.168571
3,100.00	1.39	248.93	3,099.85	-4.62	-12.00	536,179.42	592,145.40	32.473912	-104.168578
3,200.00	1.39	248.93	3,199.82	-5.50	-14.26	536,178.55	592,143.14	32.473910	-104.168585
3,300.00	1.39	248.93	3,299.79	-6.37	-16.53	536,177.68	592,140.88	32.473908	-104.168593
3,400.00	1.39	248.93	3,399.76	-7.24	-18.79	536,176.80	592,138.61	32.473905	-104.168600
3,500.00	1.39	248.93	3,499.73	-8.11	-21.05	536,175.93	592,136.35	32.473903	-104.168607
3,600.00	1.39	248.93	3,599.70	-8.98	-23.31	536,175.06	592,134.09	32.473901	-104.168615
3,700.00	1.39	248.93	3,699.67	-9.85	-25.58	536,174.19	592,131.83	32.473898	-104.168622
3,800.00	1.39	248.93	3,799.65	-10.72	-27.84	536,173.32	592,129.57	32.473896	-104.168629
3,900.00	1.39	248.93	3,899.62	-11.60	-30.10	536,172.45	592,127.30	32.473893	-104.168637
4,000.00	1.39	248.93	3,999.59	-12.47	-32.36	536,171.57	592,125.04	32.473891	-104.168644
4,100.00	1.39	248.93	4,099.56	-13.34	-34.63	536,170.70	592,122.78	32.473889	-104.168651
4,200.00	1.39	248.93	4,199.53	-14.21	-36.89	536,169.83	592,120.52	32.473886	-104.168659
4,300.00	1.39	248.93	4,299.50	-15.08	-39.15	536,168.96	592,118.25	32.473884	-104.168666
4,400.00	1.39	248.93	4,399.47	-15.95	-41.41	536,168.09	592,115.99	32.473881	-104.168673
4,500.00	1.39	248.93	4,499.44	-16.83	-43.67	536,167.22	592,113.73	32.473879	-104.168681
4,600.00	1.39	248.93	4,599.41	-17.70	-45.94	536,166.35	592,111.47	32.473877	-104.168688
4,700.00	1.39	248.93	4,699.38	-18.57	-48.20	536,165.47	592,109.20	32.473874	-104.168695
4,800.00	1.39	248.93	4,799.35	-19.44	-50.46	536,164.60	592,106.94	32.473872	-104.168703
4,900.00	1.39	248.93	4,899.32	-20.31	-52.72	536,163.73	592,104.68	32.473870	-104.168710
5,000.00	1.39	248.93	4,999.29	-21.18	-54.99	536,162.86	592,102.42	32.473867	-104.168717
5,100.00	1.39	248.93	5,099.26	-22.05	-57.25	536,161.99	592,100.16	32.473865	-104.168725
5,200.00	1.39	248.93	5,199.23	-22.93	-59.51	536,161.12	592,097.89	32.473862	-104.168732
5,300.00	1.39	248.93	5,299.20	-23.80	-61.77	536,160.24	592,095.63	32.473860	-104.168739

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5,400.00	1.39	248.93	5,399.17	-24.67	-64.03	536,159.37	592,093.37	32.473858	-104.168747
5,500.00	1.39	248.93	5,499.15	-25.54	-66.30	536,158.50	592,091.11	32.473855	-104.168754
5,600.00	1.39	248.93	5,599.12	-26.41	-68.56	536,157.63	592,088.84	32.473853	-104.168761
5,700.00	1.39	248.93	5,699.09	-27.28	-70.82	536,156.76	592,086.58	32.473850	-104.168769
5,800.00	1.39	248.93	5,799.06	-28.16	-73.08	536,155.89	592,084.32	32.473848	-104.168776
5,900.00	1.39	248.93	5,899.03	-29.03	-75.35	536,155.02	592,082.06	32.473846	-104.168783
6,000.00	1.39	248.93	5,999.00	-29.90	-77.61	536,154.14	592,079.80	32.473843	-104.168791
6,100.00	1.39	248.93	6,098.97	-30.77	-79.87	536,153.27	592,077.53	32.473841	-104.168798
6,200.00	1.39	248.93	6,198.94	-31.64	-82.13	536,152.40	592,075.27	32.473839	-104.168805
6,300.00	1.39	248.93	6,298.91	-32.51	-84.39	536,151.53	592,073.01	32.473836	-104.168813
6,400.00	1.39	248.93	6,398.88	-33.38	-86.66	536,150.66	592,070.75	32.473834	-104.168820
6,500.00	1.39	248.93	6,498.85	-34.26	-88.92	536,149.79	592,068.48	32.473831	-104.168827
6,600.00	1.39	248.93	6,598.82	-35.13	-91.18	536,148.91	592,066.22	32.473829	-104.168835
6,700.00	1.39	248.93	6,698.79	-36.00	-93.44	536,148.04	592,063.96	32.473827	-104.168842
6,800.00	1.39	248.93	6,798.76	-36.87	-95.71	536,147.17	592,061.70	32.473824	-104.168849
6,900.00	1.39	248.93	6,898.73	-37.74	-97.97	536,146.30	592,059.43	32.473822	-104.168857
7,000.00	1.39	248.93	6,998.70	-38.61	-100.23	536,145.43	592,057.17	32.473819	-104.168864
7,100.00	1.39	248.93	7,098.68	-39.49	-102.49	536,144.56	592,054.91	32.473817	-104.168871
7,200.00	1.39	248.93	7,198.65	-40.36	-104.76	536,143.69	592,052.65	32.473815	-104.168879
7,300.00	1.39	248.93	7,298.62	-41.23	-107.02	536,142.81	592,050.39	32.473812	-104.168886
7,400.00	1.39	248.93	7,398.59	-42.10	-109.28	536,141.94	592,048.12	32.473810	-104.168894
7,500.00	1.39	248.93	7,498.56	-42.97	-111.54	536,141.07	592,045.86	32.473807	-104.168901
7,600.00	1.39	248.93	7,598.53	-43.84	-113.80	536,140.20	592,043.60	32.473805	-104.168908
7,700.00	1.39	248.93	7,698.50	-44.71	-116.07	536,139.33	592,041.34	32.473803	-104.168916
7,800.00	1.39	248.93	7,798.47	-45.59	-118.33	536,138.46	592,039.07	32.473800	-104.168923
7,900.00	1.39	248.93	7,898.44	-46.46	-120.59	536,137.58	592,036.81	32.473798	-104.168930
7,915.96	1.39	248.93	7,914.40	-46.60	-120.95	536,137.45	592,036.45	32.473798	-104.168931
8,000.00	0.13	248.93	7,998.43	-47.00	-121.99	536,137.05	592,035.41	32.473796	-104.168935
8,008.57	0.00	0.00	8,007.00	-47.00	-122.00	536,137.04	592,035.40	32.473796	-104.168935
8,100.00	0.00	0.00	8,098.43	-47.00	-122.00	536,137.04	592,035.40	32.473796	-104.168935
8,200.00	0.00	0.00	8,198.43	-47.00	-122.00	536,137.04	592,035.40	32.473796	-104.168935
8,300.00	0.00	0.00	8,298.43	-47.00	-122.00	536,137.04	592,035.40	32.473796	-104.168935
8,358.61	0.00	0.00	8,357.04	-47.00	-122.00	536,137.04	592,035.40	32.473796	-104.168935
KOP @ 8359' MD, 330' FSL, 50' FWL									
8,400.00	4.14	89.37	8,398.39	-46.98	-120.51	536,137.06	592,036.90	32.473797	-104.168930
8,500.00	14.14	89.37	8,497.00	-46.81	-104.64	536,137.23	592,052.76	32.473797	-104.168878
8,599.76	24.11	89.37	8,591.13	-46.45	-72.00	536,137.60	592,085.40	32.473798	-104.168773
FTP @ 8800' MD, 330' FSL, 100' FWL									
8,600.00	24.14	89.37	8,591.35	-46.45	-71.90	536,137.60	592,085.50	32.473798	-104.168772
8,700.00	34.14	89.37	8,678.58	-45.91	-23.28	536,138.14	592,134.13	32.473799	-104.168615
8,800.00	44.14	89.37	8,756.05	-45.21	39.76	536,138.83	592,197.16	32.473801	-104.168410
8,900.00	54.14	89.37	8,821.39	-44.37	115.29	536,139.67	592,272.69	32.473803	-104.168165
9,000.00	64.14	89.37	8,872.62	-43.42	201.02	536,140.62	592,358.42	32.473805	-104.167887
9,100.00	74.14	89.37	8,908.18	-42.39	294.34	536,141.65	592,451.74	32.473807	-104.167585
9,200.00	84.14	89.37	8,927.00	-41.30	392.41	536,142.74	592,549.82	32.473810	-104.167267
9,258.62	90.00	89.37	8,930.00	-40.65	450.92	536,143.39	592,608.33	32.473811	-104.167077
9,300.00	90.00	89.37	8,930.00	-40.20	492.31	536,143.85	592,649.71	32.473813	-104.166943
9,400.00	90.00	89.37	8,930.00	-39.09	592.30	536,144.95	592,749.70	32.473815	-104.166618
9,500.00	90.00	89.37	8,930.00	-37.98	692.29	536,146.06	592,849.70	32.473818	-104.166294
9,600.00	90.00	89.37	8,930.00	-36.87	792.29	536,147.17	592,949.69	32.473820	-104.165970
9,700.00	90.00	89.37	8,930.00	-35.77	892.28	536,148.28	593,049.68	32.473823	-104.165646
9,800.00	90.00	89.37	8,930.00	-34.66	992.28	536,149.38	593,149.68	32.473826	-104.165321
9,900.00	90.00	89.37	8,930.00	-33.55	1,092.27	536,150.49	593,249.67	32.473828	-104.164997
10,000.00	90.00	89.37	8,930.00	-32.44	1,192.26	536,151.60	593,349.66	32.473831	-104.164673

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10,100.00	90.00	89.37	8,930.00	-31.34	1,292.26	536,152.71	593,449.66	32.473833	-104.164349	
10,200.00	90.00	89.37	8,930.00	-30.23	1,392.25	536,153.81	593,549.65	32.473836	-104.164024	
10,300.00	90.00	89.37	8,930.00	-29.12	1,492.24	536,154.92	593,649.64	32.473839	-104.163700	
10,400.00	90.00	89.37	8,930.00	-28.01	1,592.24	536,156.03	593,749.64	32.473841	-104.163376	
10,500.00	90.00	89.37	8,930.00	-26.91	1,692.23	536,157.14	593,849.63	32.473844	-104.163052	
10,600.00	90.00	89.37	8,930.00	-25.80	1,792.23	536,158.24	593,949.63	32.473846	-104.162727	
10,700.00	90.00	89.37	8,930.00	-24.69	1,892.22	536,159.35	594,049.62	32.473849	-104.162403	
10,800.00	90.00	89.37	8,930.00	-23.58	1,992.21	536,160.46	594,149.61	32.473852	-104.162079	
10,900.00	90.00	89.37	8,930.00	-22.48	2,092.21	536,161.57	594,249.61	32.473854	-104.161755	
11,000.00	90.00	89.37	8,930.00	-21.37	2,192.20	536,162.67	594,349.60	32.473857	-104.161430	
11,100.00	90.00	89.37	8,930.00	-20.26	2,292.20	536,163.78	594,449.59	32.473859	-104.161106	
11,200.00	90.00	89.37	8,930.00	-19.15	2,392.19	536,164.89	594,549.59	32.473862	-104.160782	
11,300.00	90.00	89.37	8,930.00	-18.05	2,492.18	536,166.00	594,649.58	32.473865	-104.160458	
11,400.00	90.00	89.37	8,930.00	-16.94	2,592.18	536,167.10	594,749.58	32.473867	-104.160133	
11,500.00	90.00	89.37	8,930.00	-15.83	2,692.17	536,168.21	594,849.57	32.473870	-104.159809	
11,600.00	90.00	89.37	8,930.00	-14.72	2,792.16	536,169.32	594,949.56	32.473872	-104.159485	
11,700.00	90.00	89.37	8,930.00	-13.62	2,892.16	536,170.43	595,049.56	32.473875	-104.159161	
11,800.00	90.00	89.37	8,930.00	-12.51	2,992.15	536,171.53	595,149.55	32.473878	-104.158836	
11,900.00	90.00	89.37	8,930.00	-11.40	3,092.15	536,172.64	595,249.54	32.473880	-104.158512	
12,000.00	90.00	89.37	8,930.00	-10.29	3,192.14	536,173.75	595,349.54	32.473883	-104.158188	
12,100.00	90.00	89.37	8,930.00	-9.19	3,292.13	536,174.86	595,449.53	32.473885	-104.157864	
12,200.00	90.00	89.37	8,930.00	-8.08	3,392.13	536,175.96	595,549.52	32.473888	-104.157539	
12,300.00	90.00	89.37	8,930.00	-6.97	3,492.12	536,177.07	595,649.52	32.473891	-104.157215	
12,400.00	90.00	89.37	8,930.00	-5.86	3,592.12	536,178.18	595,749.51	32.473893	-104.156891	
12,500.00	90.00	89.37	8,930.00	-4.76	3,692.11	536,179.29	595,849.51	32.473896	-104.156567	
12,600.00	90.00	89.37	8,930.00	-3.65	3,792.10	536,180.39	595,949.50	32.473898	-104.156242	
12,700.00	90.00	89.37	8,930.00	-2.54	3,892.10	536,181.50	596,049.49	32.473901	-104.155918	
12,800.00	90.00	89.37	8,930.00	-1.43	3,992.09	536,182.61	596,149.49	32.473904	-104.155594	
12,900.00	90.00	89.37	8,930.00	-0.33	4,092.09	536,183.72	596,249.48	32.473906	-104.155270	
13,000.00	90.00	89.37	8,930.00	0.78	4,192.08	536,184.82	596,349.47	32.473909	-104.154945	
13,100.00	90.00	89.37	8,930.00	1.89	4,292.07	536,185.93	596,449.47	32.473911	-104.154621	
13,200.00	90.00	89.37	8,930.00	3.00	4,392.07	536,187.04	596,549.46	32.473914	-104.154297	
13,300.00	90.00	89.37	8,930.00	4.10	4,492.06	536,188.15	596,649.45	32.473917	-104.153973	
13,400.00	90.00	89.37	8,930.00	5.21	4,592.05	536,189.25	596,749.45	32.473919	-104.153648	
13,500.00	90.00	89.37	8,930.00	6.32	4,692.05	536,190.36	596,849.44	32.473922	-104.153324	
13,600.00	90.00	89.37	8,930.00	7.43	4,792.04	536,191.47	596,949.44	32.473924	-104.153000	
13,700.00	90.00	89.37	8,930.00	8.53	4,892.04	536,192.58	597,049.43	32.473927	-104.152675	
13,800.00	90.00	89.37	8,930.00	9.64	4,992.03	536,193.68	597,149.42	32.473929	-104.152351	
13,900.00	90.00	89.37	8,930.00	10.75	5,092.02	536,194.79	597,249.42	32.473932	-104.152027	
13,916.00	90.00	89.37	8,930.00	10.93	5,108.02	536,194.97	597,265.42	32.473932	-104.151975	
Cross Section @ 13916' MD, 330' FSL, 0' FWL										
14,000.00	90.00	89.37	8,930.00	11.86	5,192.02	536,195.90	597,349.41	32.473935	-104.151703	
14,100.00	90.00	89.37	8,930.00	12.96	5,292.01	536,197.00	597,449.40	32.473937	-104.151378	
14,200.00	90.00	89.37	8,930.00	14.07	5,392.01	536,198.11	597,549.40	32.473940	-104.151054	
14,300.00	90.00	89.37	8,930.00	15.18	5,492.00	536,199.22	597,649.39	32.473942	-104.150730	
14,400.00	90.00	89.37	8,930.00	16.29	5,591.99	536,200.33	597,749.39	32.473945	-104.150406	
14,500.00	90.00	89.37	8,930.00	17.39	5,691.99	536,201.43	597,849.38	32.473947	-104.150081	
14,600.00	90.00	89.37	8,930.00	18.50	5,791.98	536,202.54	597,949.37	32.473950	-104.149757	
14,700.00	90.00	89.37	8,930.00	19.61	5,891.97	536,203.65	598,049.37	32.473953	-104.149433	
14,800.00	90.00	89.37	8,930.00	20.72	5,991.97	536,204.76	598,149.36	32.473955	-104.149109	
14,900.00	90.00	89.37	8,930.00	21.82	6,091.96	536,205.86	598,249.35	32.473958	-104.148784	
15,000.00	90.00	89.37	8,930.00	22.93	6,191.96	536,206.97	598,349.35	32.473960	-104.148460	
15,100.00	90.00	89.37	8,930.00	24.04	6,291.95	536,208.08	598,449.34	32.473963	-104.148136	
15,200.00	90.00	89.37	8,930.00	25.15	6,391.94	536,209.19	598,549.33	32.473965	-104.147812	

Planning Report - Geographic

Database: EDM r5000.141_Prod US
 Company: WCDSC Permian NM
 Project: Eddy County (NAD 83 NM Eastern)
 Site: Sec 14-T21S-R27E
 Well: Lone Tree Draw 14-13 State Com 336H
 Wellbore: Wellbore #1
 Design: Permit Plan 1

Local Co-ordinate Reference: Well Lone Tree Draw 14-13 State Com 336H
 TVD Reference: RKB @ 3284.10ft
 MD Reference: RKB @ 3284.10ft
 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
15,300.00	90.00	89.37	8,930.00	26.25	6,491.94	536,210.29	598,649.33	32.473968	-104.147487
15,400.00	90.00	89.37	8,930.00	27.36	6,591.93	536,211.40	598,749.32	32.473971	-104.147163
15,500.00	90.00	89.37	8,930.00	28.47	6,691.93	536,212.51	598,849.32	32.473973	-104.146839
15,600.00	90.00	89.37	8,930.00	29.58	6,791.92	536,213.62	598,949.31	32.473976	-104.146515
15,700.00	90.00	89.37	8,930.00	30.68	6,891.91	536,214.72	599,049.30	32.473978	-104.146190
15,800.00	90.00	89.37	8,930.00	31.79	6,991.91	536,215.83	599,149.30	32.473981	-104.145866
15,900.00	90.00	89.37	8,930.00	32.90	7,091.90	536,216.94	599,249.29	32.473983	-104.145542
16,000.00	90.00	89.37	8,930.00	34.01	7,191.90	536,218.05	599,349.28	32.473986	-104.145218
16,100.00	90.00	89.37	8,930.00	35.11	7,291.89	536,219.15	599,449.28	32.473988	-104.144893
16,200.00	90.00	89.37	8,930.00	36.22	7,391.88	536,220.26	599,549.27	32.473991	-104.144569
16,300.00	90.00	89.37	8,930.00	37.33	7,491.88	536,221.37	599,649.26	32.473994	-104.144245
16,400.00	90.00	89.37	8,930.00	38.44	7,591.87	536,222.48	599,749.26	32.473996	-104.143921
16,500.00	90.00	89.37	8,930.00	39.54	7,691.86	536,223.58	599,849.25	32.473999	-104.143596
16,600.00	90.00	89.37	8,930.00	40.65	7,791.86	536,224.69	599,949.25	32.474001	-104.143272
16,700.00	90.00	89.37	8,930.00	41.76	7,891.85	536,225.80	600,049.24	32.474004	-104.142948
16,800.00	90.00	89.37	8,930.00	42.87	7,991.85	536,226.91	600,149.23	32.474006	-104.142624
16,900.00	90.00	89.37	8,930.00	43.97	8,091.84	536,228.01	600,249.23	32.474009	-104.142299
17,000.00	90.00	89.37	8,930.00	45.08	8,191.83	536,229.12	600,349.22	32.474011	-104.141975
17,100.00	90.00	89.37	8,930.00	46.19	8,291.83	536,230.23	600,449.21	32.474014	-104.141651
17,200.00	90.00	89.37	8,930.00	47.30	8,391.82	536,231.34	600,549.21	32.474017	-104.141327
17,300.00	90.00	89.37	8,930.00	48.40	8,491.82	536,232.44	600,649.20	32.474019	-104.141002
17,400.00	90.00	89.37	8,930.00	49.51	8,591.81	536,233.55	600,749.20	32.474022	-104.140678
17,500.00	90.00	89.37	8,930.00	50.62	8,691.80	536,234.66	600,849.19	32.474024	-104.140354
17,600.00	90.00	89.37	8,930.00	51.72	8,791.80	536,235.77	600,949.18	32.474027	-104.140029
17,700.00	90.00	89.37	8,930.00	52.83	8,891.79	536,236.87	601,049.18	32.474029	-104.139705
17,800.00	90.00	89.37	8,930.00	53.94	8,991.78	536,237.98	601,149.17	32.474032	-104.139381
17,900.00	90.00	89.37	8,930.00	55.05	9,091.78	536,239.09	601,249.16	32.474034	-104.139057
18,000.00	90.00	89.37	8,930.00	56.15	9,191.77	536,240.20	601,349.16	32.474037	-104.138732
18,100.00	90.00	89.37	8,930.00	57.26	9,291.77	536,241.30	601,449.15	32.474039	-104.138408
18,200.00	90.00	89.37	8,930.00	58.37	9,391.76	536,242.41	601,549.14	32.474042	-104.138084
18,300.00	90.00	89.37	8,930.00	59.48	9,491.75	536,243.52	601,649.14	32.474045	-104.137760
18,400.00	90.00	89.37	8,930.00	60.58	9,591.75	536,244.63	601,749.13	32.474047	-104.137435
18,500.00	90.00	89.37	8,930.00	61.69	9,691.74	536,245.73	601,849.13	32.474050	-104.137111
18,600.00	90.00	89.37	8,930.00	62.80	9,791.74	536,246.84	601,949.12	32.474052	-104.136787
18,700.00	90.00	89.37	8,930.00	63.91	9,891.73	536,247.95	602,049.11	32.474055	-104.136463
18,800.00	90.00	89.37	8,930.00	65.01	9,991.72	536,249.06	602,149.11	32.474057	-104.136138
18,900.00	90.00	89.37	8,930.00	66.12	10,091.72	536,250.16	602,249.10	32.474060	-104.135814
19,000.00	90.00	89.37	8,930.00	67.23	10,191.71	536,251.27	602,349.09	32.474062	-104.135490
19,100.00	90.00	89.37	8,930.00	68.34	10,291.70	536,252.38	602,449.09	32.474065	-104.135166
19,200.00	90.00	89.37	8,930.00	69.44	10,391.70	536,253.49	602,549.08	32.474067	-104.134841
19,230.65	90.00	89.37	8,930.00	69.78	10,422.35	536,253.83	602,579.73	32.474068	-104.134742
LTP @ 19230' MD, 330' FSL, 100' FEL									
19,300.00	90.00	89.37	8,930.00	70.55	10,491.69	536,254.59	602,649.07	32.474070	-104.134517
19,310.64	90.00	89.37	8,930.00	70.67	10,502.33	536,254.71	602,659.71	32.474070	-104.134483
PBHL; 330' FSL, 20' FEL									
19,310.65	90.00	89.37	8,930.00	70.67	10,502.34	536,254.71	602,659.72	32.474070	-104.134483

Planning Report - Geographic

Database: EDM r5000.141_Prod US
Company: WCDSC Permian NM
Project: Eddy County (NAD 83 NM Eastern)
Site: Sec 14-T21S-R27E
Well: Lone Tree Draw 14-13 State Com 336H
Wellbore: Wellbore #1
Design: Permit Plan 1

Local Co-ordinate Reference: Well Lone Tree Draw 14-13 State Com 336H
TVD Reference: RKB @ 3284.10ft
MD Reference: RKB @ 3284.10ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
PBHL - Lone Tree Draw	0.00	0.00	0.00	70.67	10,502.34	536,254.71	602,659.72	32.474070	-104.134483
- plan misses target center by 8930.00ft at 19310.65ft MD (8930.00 TVD, 70.67 N, 10502.34 E)									
- Point									

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
8,358.61	8,357.04	-47.00	-122.00	KOP @ 8359' MD, 330' FSL, 50' FWL
8,599.76	8,591.13	-46.45	-72.00	FTP @ 8600' MD, 330' FSL, 100' FWL
13,916.00	8,930.00	10.93	5,108.02	Cross Section @ 13916' MD, 330' FSL, 0' FWL
19,230.65	8,930.00	69.78	10,422.35	LTP @ 19230' MD, 330' FSL, 100' FEL
19,310.64	8,930.00	70.67	10,502.33	PBHL; 330' FSL, 20' FEL

WCDSC Permian NM

WELL DETAILS: Lone Tree Draw 14-13 State Com 336H

RKB @ 3284.10R

3259.10

Northing 536184.04 Easting 562157.40 Latitude 32.473925 Longitude -104.168539

SECTION DETAILS Permit Plan 1

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	
2638.92	1.39	248.93	2638.90	-0.61	-1.57	1.00	-1.58	
7915.96	1.39	248.93	7914.40	-46.60	-120.95	0.00	-121.26	
8008.57	0.00	0.00	8007.00	-47.00	-122.00	1.50	-122.31	
8358.61	0.00	0.00	8357.04	-47.00	-122.00	0.00	-122.31	KOP @ 8359' MD, 330' FSL, 50' FWL
9258.62	90.00	89.37	8930.00	-40.65	450.92	10.00	450.84	
19310.65	90.00	89.37	8930.00	70.67	10502.34	0.00	10502.58	PBHL: 330' FSL, 20' FEL

