

HOBBS OCD
NOV 14 2018
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WCDSC Permian NM

Lea County (NAD83 New Mexico East)

Sec 28-T21S-R34E

Chiles 28-21 State Com 3H

Wellbore #1

Plan: Permit Plan 1

Standard Planning Report - Geographic

07 November, 2018

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Chiles 28-21 State Com 3H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3737.00ft
Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3737.00ft
Site:	Sec 28-T21S-R34E	North Reference:	Grid
Well:	Chiles 28-21 State Com 3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

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 28-T21S-R34E			
Site Position:		Northing:	530,722.90 usft	Latitude: 32.456145
From:	Map	Easting:	803,837.30 usft	Longitude: -103.482301
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.46 °

Well	Chiles 28-21 State Com 3H			
Well Position	+N/-S	0.00 ft	Northing:	526,107.97 usft
	+E/-W	0.00 ft	Easting:	806,437.68 usft
Position Uncertainty	0.50 ft		Wellhead Elevation:	Ground Level: 3,712.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/7/2018	6.77	60.26	47,932.85236300

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	353.84

Plan Survey Tool Program	Date 11/7/2018			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,197.36 Permit Plan 1 (Wellbore #1)	MWD+HDGM	OWSG MWD + HDGM

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	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,796.81	9.96	252.07	4,792.81	-21.27	-65.73	1.25	1.25	0.00	252.07	
10,262.72	9.96	252.07	10,176.33	-312.28	-965.23	0.00	0.00	0.00	0.00	
10,926.73	0.00	0.00	10,837.00	-330.00	-1,020.00	1.50	-1.50	0.00	180.00	
11,276.77	0.00	0.00	11,187.04	-330.00	-1,020.00	0.00	0.00	0.00	0.00	
12,176.77	90.00	359.52	11,760.00	242.94	-1,024.77	10.00	10.00	0.00	359.52	PBHL - Chiles 28-21 S
22,197.36	90.00	359.52	11,760.00	10,263.18	-1,108.24	0.00	0.00	0.00	0.00	PBHL - Chiles 28-21 S

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Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3737.00ft
Site:	Sec 28-T21S-R34E	North Reference:	Grid
Well:	Chiles 28-21 State Com 3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

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	526,107.97	806,437.68	32.443404	-103.473991
100.00	0.00	0.00	100.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
200.00	0.00	0.00	200.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
300.00	0.00	0.00	300.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
400.00	0.00	0.00	400.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
500.00	0.00	0.00	500.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
600.00	0.00	0.00	600.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
700.00	0.00	0.00	700.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
800.00	0.00	0.00	800.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
900.00	0.00	0.00	900.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,000.00	0.00	0.00	1,000.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,100.00	0.00	0.00	1,100.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,200.00	0.00	0.00	1,200.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,300.00	0.00	0.00	1,300.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,400.00	0.00	0.00	1,400.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,500.00	0.00	0.00	1,500.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,600.00	0.00	0.00	1,600.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,700.00	0.00	0.00	1,700.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,800.00	0.00	0.00	1,800.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
1,900.00	0.00	0.00	1,900.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,000.00	0.00	0.00	2,000.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,100.00	0.00	0.00	2,100.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,200.00	0.00	0.00	2,200.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,300.00	0.00	0.00	2,300.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,400.00	0.00	0.00	2,400.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,500.00	0.00	0.00	2,500.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,600.00	0.00	0.00	2,600.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,700.00	0.00	0.00	2,700.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,800.00	0.00	0.00	2,800.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
2,900.00	0.00	0.00	2,900.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,000.00	0.00	0.00	3,000.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,100.00	0.00	0.00	3,100.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,200.00	0.00	0.00	3,200.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,300.00	0.00	0.00	3,300.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,400.00	0.00	0.00	3,400.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,500.00	0.00	0.00	3,500.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,600.00	0.00	0.00	3,600.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,700.00	0.00	0.00	3,700.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,800.00	0.00	0.00	3,800.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
3,900.00	0.00	0.00	3,900.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
4,000.00	0.00	0.00	4,000.00	0.00	0.00	526,107.97	806,437.68	32.443404	-103.473991
4,100.00	1.25	252.07	4,099.99	-0.34	-1.04	526,107.63	806,436.64	32.443403	-103.473995
4,200.00	2.50	252.07	4,199.94	-1.34	-4.15	526,106.63	806,433.53	32.443400	-103.474005
4,300.00	3.75	252.07	4,299.79	-3.02	-9.34	526,104.95	806,428.34	32.443396	-103.474022
4,400.00	5.00	252.07	4,399.49	-5.37	-16.60	526,102.60	806,421.08	32.443390	-103.474045
4,500.00	6.25	252.07	4,499.01	-8.39	-25.92	526,099.58	806,411.76	32.443382	-103.474075
4,600.00	7.50	252.07	4,598.29	-12.07	-37.31	526,095.90	806,400.37	32.443372	-103.474113
4,700.00	8.75	252.07	4,697.28	-16.42	-50.76	526,091.55	806,386.92	32.443360	-103.474156
4,796.81	9.96	252.07	4,792.81	-21.27	-65.73	526,086.70	806,371.95	32.443347	-103.474205
4,800.00	9.96	252.07	4,795.94	-21.44	-66.25	526,086.53	806,371.42	32.443347	-103.474207
4,900.00	9.96	252.07	4,894.44	-26.76	-82.71	526,081.21	806,354.97	32.443332	-103.474260
5,000.00	9.96	252.07	4,992.93	-32.08	-99.17	526,075.89	806,338.51	32.443318	-103.474314
5,100.00	9.96	252.07	5,091.42	-37.41	-115.62	526,070.56	806,322.06	32.443304	-103.474367
5,200.00	9.96	252.07	5,189.92	-42.73	-132.08	526,065.24	806,305.60	32.443290	-103.474420
5,300.00	9.96	252.07	5,288.41	-48.06	-148.54	526,059.91	806,289.14	32.443275	-103.474474

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Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

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	9.96	252.07	5,386.90	-53.38	-164.99	526,054.59	806,272.69	32.443261	-103.474527
5,500.00	9.96	252.07	5,485.39	-58.70	-181.45	526,049.26	806,256.23	32.443247	-103.474581
5,600.00	9.96	252.07	5,583.89	-64.03	-197.91	526,043.94	806,239.77	32.443232	-103.474634
5,700.00	9.96	252.07	5,682.38	-69.35	-214.36	526,038.62	806,223.32	32.443218	-103.474688
5,800.00	9.96	252.07	5,780.87	-74.68	-230.82	526,033.29	806,206.86	32.443204	-103.474741
5,900.00	9.96	252.07	5,879.37	-80.00	-247.28	526,027.97	806,190.40	32.443190	-103.474795
6,000.00	9.96	252.07	5,977.86	-85.32	-263.73	526,022.64	806,173.95	32.443175	-103.474848
6,100.00	9.96	252.07	6,076.35	-90.65	-280.19	526,017.32	806,157.49	32.443161	-103.474902
6,200.00	9.96	252.07	6,174.84	-95.97	-296.64	526,012.00	806,141.03	32.443147	-103.474955
6,300.00	9.96	252.07	6,273.34	-101.30	-313.10	526,006.67	806,124.58	32.443133	-103.475009
6,400.00	9.96	252.07	6,371.83	-106.62	-329.56	526,001.35	806,108.12	32.443118	-103.475062
6,500.00	9.96	252.07	6,470.32	-111.95	-346.01	525,996.02	806,091.66	32.443104	-103.475116
6,600.00	9.96	252.07	6,568.82	-117.27	-362.47	525,990.70	806,075.21	32.443090	-103.475169
6,700.00	9.96	252.07	6,667.31	-122.59	-378.93	525,985.38	806,058.75	32.443076	-103.475223
6,800.00	9.96	252.07	6,765.80	-127.92	-395.38	525,980.05	806,042.30	32.443061	-103.475276
6,900.00	9.96	252.07	6,864.29	-133.24	-411.84	525,974.73	806,025.84	32.443047	-103.475330
7,000.00	9.96	252.07	6,962.79	-138.57	-428.30	525,969.40	806,009.38	32.443033	-103.475383
7,100.00	9.96	252.07	7,061.28	-143.89	-444.75	525,964.08	805,992.93	32.443018	-103.475437
7,200.00	9.96	252.07	7,159.77	-149.21	-461.21	525,958.75	805,976.47	32.443004	-103.475490
7,300.00	9.96	252.07	7,258.27	-154.54	-477.67	525,953.43	805,960.01	32.442990	-103.475544
7,400.00	9.96	252.07	7,356.76	-159.86	-494.12	525,948.11	805,943.56	32.442976	-103.475597
7,500.00	9.96	252.07	7,455.25	-165.19	-510.58	525,942.78	805,927.10	32.442961	-103.475650
7,600.00	9.96	252.07	7,553.74	-170.51	-527.04	525,937.46	805,910.64	32.442947	-103.475704
7,700.00	9.96	252.07	7,652.24	-175.84	-543.49	525,932.13	805,894.19	32.442933	-103.475757
7,800.00	9.96	252.07	7,750.73	-181.16	-559.95	525,926.81	805,877.73	32.442919	-103.475811
7,900.00	9.96	252.07	7,849.22	-186.48	-576.41	525,921.49	805,861.27	32.442904	-103.475864
8,000.00	9.96	252.07	7,947.72	-191.81	-592.86	525,916.16	805,844.82	32.442890	-103.475918
8,100.00	9.96	252.07	8,046.21	-197.13	-609.32	525,910.84	805,828.36	32.442876	-103.475971
8,200.00	9.96	252.07	8,144.70	-202.46	-625.77	525,905.51	805,811.90	32.442861	-103.476025
8,300.00	9.96	252.07	8,243.19	-207.78	-642.23	525,900.19	805,795.45	32.442847	-103.476078
8,400.00	9.96	252.07	8,341.69	-213.10	-658.69	525,894.86	805,778.99	32.442833	-103.476132
8,500.00	9.96	252.07	8,440.18	-218.43	-675.14	525,889.54	805,762.54	32.442819	-103.476185
8,600.00	9.96	252.07	8,538.67	-223.75	-691.60	525,884.22	805,746.08	32.442804	-103.476239
8,700.00	9.96	252.07	8,637.17	-229.08	-708.06	525,878.89	805,729.62	32.442790	-103.476292
8,800.00	9.96	252.07	8,735.66	-234.40	-724.51	525,873.57	805,713.17	32.442776	-103.476346
8,900.00	9.96	252.07	8,834.15	-239.73	-740.97	525,868.24	805,696.71	32.442762	-103.476399
9,000.00	9.96	252.07	8,932.64	-245.05	-757.43	525,862.92	805,680.25	32.442747	-103.476453
9,100.00	9.96	252.07	9,031.14	-250.37	-773.88	525,857.60	805,663.80	32.442733	-103.476506
9,200.00	9.96	252.07	9,129.63	-255.70	-790.34	525,852.27	805,647.34	32.442719	-103.476560
9,300.00	9.96	252.07	9,228.12	-261.02	-806.80	525,846.95	805,630.88	32.442704	-103.476613
9,400.00	9.96	252.07	9,326.62	-266.35	-823.25	525,841.62	805,614.43	32.442690	-103.476667
9,500.00	9.96	252.07	9,425.11	-271.67	-839.71	525,836.30	805,597.97	32.442676	-103.476720
9,600.00	9.96	252.07	9,523.60	-276.99	-856.17	525,830.97	805,581.51	32.442662	-103.476774
9,700.00	9.96	252.07	9,622.09	-282.32	-872.62	525,825.65	805,565.06	32.442647	-103.476827
9,800.00	9.96	252.07	9,720.59	-287.64	-889.08	525,820.33	805,548.60	32.442633	-103.476880
9,900.00	9.96	252.07	9,819.08	-292.97	-905.54	525,815.00	805,532.14	32.442619	-103.476934
10,000.00	9.96	252.07	9,917.57	-298.29	-921.99	525,809.68	805,515.69	32.442605	-103.476987
10,100.00	9.96	252.07	10,016.06	-303.62	-938.45	525,804.35	805,499.23	32.442590	-103.477041
10,200.00	9.96	252.07	10,114.56	-308.94	-954.90	525,799.03	805,482.78	32.442576	-103.477094
10,262.72	9.96	252.07	10,176.33	-312.28	-965.23	525,795.69	805,472.45	32.442567	-103.477128
10,300.00	9.40	252.07	10,213.08	-314.21	-971.19	525,793.76	805,466.49	32.442562	-103.477147
10,400.00	7.90	252.07	10,311.94	-318.84	-985.50	525,789.13	805,452.18	32.442550	-103.477194
10,500.00	6.40	252.07	10,411.16	-322.67	-997.34	525,785.30	805,440.34	32.442539	-103.477232
10,600.00	4.90	252.07	10,510.67	-325.70	-1,006.71	525,782.27	805,430.97	32.442531	-103.477263
10,700.00	3.40	252.07	10,610.41	-327.93	-1,013.60	525,780.04	805,424.08	32.442525	-103.477285

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Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Chiles 28-21 State Com 3H
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Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3737.00ft
Site:	Sec 28-T21S-R34E	North Reference:	Grid
Well:	Chiles 28-21 State Com 3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,800.00	1.90	252.07	10,710.30	-329.35	-1,018.00	525,778.62	805,419.68	32.442521	-103.477299
10,900.00	0.40	252.07	10,810.27	-329.97	-1,019.91	525,778.00	805,417.77	32.442520	-103.477306
10,926.73	0.00	0.00	10,837.00	-330.00	-1,020.00	525,777.97	805,417.68	32.442520	-103.477306
11,000.00	0.00	0.00	10,910.27	-330.00	-1,020.00	525,777.97	805,417.68	32.442520	-103.477306
11,100.00	0.00	0.00	11,010.27	-330.00	-1,020.00	525,777.97	805,417.68	32.442520	-103.477306
11,200.00	0.00	0.00	11,110.27	-330.00	-1,020.00	525,777.97	805,417.68	32.442520	-103.477306
11,276.77	0.00	0.00	11,187.04	-330.00	-1,020.00	525,777.97	805,417.68	32.442520	-103.477306
KOP @ 11277' MD, 50' FSL, 1890' FWL									
11,300.00	2.32	359.52	11,210.27	-329.53	-1,020.00	525,778.44	805,417.68	32.442521	-103.477306
11,400.00	12.32	359.52	11,309.33	-316.80	-1,020.11	525,791.17	805,417.57	32.442556	-103.477306
11,500.00	22.32	359.52	11,404.67	-287.06	-1,020.36	525,820.91	805,417.32	32.442638	-103.477306
11,517.91	24.11	359.52	11,421.13	-280.00	-1,020.42	525,827.97	805,417.26	32.442657	-103.477306
FTP @ 11518' MD, 100' FSL, 1890' FWL									
11,600.00	32.32	359.52	11,493.40	-241.22	-1,020.74	525,866.75	805,416.94	32.442764	-103.477306
11,700.00	42.32	359.52	11,572.82	-180.67	-1,021.24	525,927.30	805,416.44	32.442930	-103.477306
11,800.00	52.32	359.52	11,640.52	-107.25	-1,021.86	526,000.72	805,415.82	32.443132	-103.477306
11,900.00	62.32	359.52	11,694.44	-23.18	-1,022.56	526,084.79	805,415.12	32.443363	-103.477306
12,000.00	72.32	359.52	11,732.95	68.97	-1,023.32	526,176.94	805,414.36	32.443616	-103.477306
12,100.00	82.32	359.52	11,754.86	166.40	-1,024.14	526,274.37	805,413.55	32.443884	-103.477306
12,176.77	90.00	359.52	11,760.00	242.94	-1,024.77	526,350.91	805,412.91	32.444094	-103.477307
12,200.00	90.00	359.52	11,760.00	266.17	-1,024.97	526,374.14	805,412.71	32.444158	-103.477307
12,300.00	90.00	359.52	11,760.00	366.17	-1,025.80	526,474.13	805,411.88	32.444433	-103.477307
12,400.00	90.00	359.52	11,760.00	466.16	-1,026.63	526,574.13	805,411.05	32.444708	-103.477307
12,500.00	90.00	359.52	11,760.00	566.16	-1,027.47	526,674.13	805,410.22	32.444983	-103.477307
12,600.00	90.00	359.52	11,760.00	666.16	-1,028.30	526,774.12	805,409.38	32.445258	-103.477307
12,700.00	90.00	359.52	11,760.00	766.15	-1,029.13	526,874.12	805,408.55	32.445533	-103.477307
12,800.00	90.00	359.52	11,760.00	866.15	-1,029.96	526,974.12	805,407.72	32.445807	-103.477307
12,900.00	90.00	359.52	11,760.00	966.15	-1,030.80	527,074.11	805,406.88	32.446082	-103.477307
13,000.00	90.00	359.52	11,760.00	1,066.14	-1,031.63	527,174.11	805,406.05	32.446357	-103.477307
13,100.00	90.00	359.52	11,760.00	1,166.14	-1,032.46	527,274.10	805,405.22	32.446632	-103.477307
13,200.00	90.00	359.52	11,760.00	1,266.13	-1,033.30	527,374.10	805,404.38	32.446907	-103.477308
13,300.00	90.00	359.52	11,760.00	1,366.13	-1,034.13	527,474.10	805,403.55	32.447182	-103.477308
13,400.00	90.00	359.52	11,760.00	1,466.13	-1,034.96	527,574.09	805,402.72	32.447457	-103.477308
13,500.00	90.00	359.52	11,760.00	1,566.12	-1,035.80	527,674.09	805,401.89	32.447731	-103.477308
13,600.00	90.00	359.52	11,760.00	1,666.12	-1,036.63	527,774.09	805,401.05	32.448006	-103.477308
13,700.00	90.00	359.52	11,760.00	1,766.12	-1,037.46	527,874.08	805,400.22	32.448281	-103.477308
13,800.00	90.00	359.52	11,760.00	1,866.11	-1,038.29	527,974.08	805,399.39	32.448556	-103.477308
13,900.00	90.00	359.52	11,760.00	1,966.11	-1,039.13	528,074.08	805,398.55	32.448831	-103.477308
14,000.00	90.00	359.52	11,760.00	2,066.11	-1,039.96	528,174.07	805,397.72	32.449106	-103.477308
14,100.00	90.00	359.52	11,760.00	2,166.10	-1,040.79	528,274.07	805,396.89	32.449381	-103.477308
14,200.00	90.00	359.52	11,760.00	2,266.10	-1,041.63	528,374.06	805,396.05	32.449655	-103.477309
14,300.00	90.00	359.52	11,760.00	2,366.10	-1,042.46	528,474.06	805,395.22	32.449930	-103.477309
14,400.00	90.00	359.52	11,760.00	2,466.09	-1,043.29	528,574.06	805,394.39	32.450205	-103.477309
14,500.00	90.00	359.52	11,760.00	2,566.09	-1,044.13	528,674.05	805,393.56	32.450480	-103.477309
14,600.00	90.00	359.52	11,760.00	2,666.09	-1,044.96	528,774.05	805,392.72	32.450755	-103.477309
14,700.00	90.00	359.52	11,760.00	2,766.08	-1,045.79	528,874.05	805,391.89	32.451030	-103.477309
14,800.00	90.00	359.52	11,760.00	2,866.08	-1,046.62	528,974.04	805,391.06	32.451305	-103.477309
14,900.00	90.00	359.52	11,760.00	2,966.08	-1,047.46	529,074.04	805,390.22	32.451579	-103.477309
15,000.00	90.00	359.52	11,760.00	3,066.07	-1,048.29	529,174.04	805,389.39	32.451854	-103.477309
15,100.00	90.00	359.52	11,760.00	3,166.07	-1,049.12	529,274.03	805,388.56	32.452129	-103.477309
15,200.00	90.00	359.52	11,760.00	3,266.07	-1,049.96	529,374.03	805,387.72	32.452404	-103.477310
15,300.00	90.00	359.52	11,760.00	3,366.06	-1,050.79	529,474.02	805,386.89	32.452679	-103.477310
15,400.00	90.00	359.52	11,760.00	3,466.06	-1,051.62	529,574.02	805,386.06	32.452954	-103.477310
15,500.00	90.00	359.52	11,760.00	3,566.05	-1,052.46	529,674.02	805,385.23	32.453229	-103.477310

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Chiles 28-21 State Com 3H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3737.00ft
Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3737.00ft
Site:	Sec 28-T21S-R34E	North Reference:	Grid
Well:	Chiles 28-21 State Com 3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

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	359.52	11,760.00	3,666.05	-1,053.29	529,774.01	805,384.39	32.453503	-103.477310
15,700.00	90.00	359.52	11,760.00	3,766.05	-1,054.12	529,874.01	805,383.56	32.453778	-103.477310
15,800.00	90.00	359.52	11,760.00	3,866.04	-1,054.95	529,974.01	805,382.73	32.454053	-103.477310
15,900.00	90.00	359.52	11,760.00	3,966.04	-1,055.79	530,074.00	805,381.89	32.454328	-103.477310
16,000.00	90.00	359.52	11,760.00	4,066.04	-1,056.62	530,174.00	805,381.06	32.454603	-103.477310
16,100.00	90.00	359.52	11,760.00	4,166.03	-1,057.45	530,273.99	805,380.23	32.454878	-103.477310
16,200.00	90.00	359.52	11,760.00	4,266.03	-1,058.29	530,373.99	805,379.39	32.455153	-103.477311
16,300.00	90.00	359.52	11,760.00	4,366.03	-1,059.12	530,473.99	805,378.56	32.455427	-103.477311
16,400.00	90.00	359.52	11,760.00	4,466.02	-1,059.95	530,573.98	805,377.73	32.455702	-103.477311
16,500.00	90.00	359.52	11,760.00	4,566.02	-1,060.79	530,673.98	805,376.90	32.455977	-103.477311
16,600.00	90.00	359.52	11,760.00	4,666.02	-1,061.62	530,773.98	805,376.06	32.456252	-103.477311
16,700.00	90.00	359.52	11,760.00	4,766.01	-1,062.45	530,873.97	805,375.23	32.456527	-103.477311
16,800.00	90.00	359.52	11,760.00	4,866.01	-1,063.28	530,973.97	805,374.40	32.456802	-103.477311
16,833.99	90.00	359.52	11,760.00	4,900.00	-1,063.57	531,007.96	805,374.11	32.456895	-103.477311
Cross Section @ 16834' MD, 0' FSL, 1890' FWL									
16,900.00	90.00	359.52	11,760.00	4,966.01	-1,064.12	531,073.97	805,373.56	32.457077	-103.477311
17,000.00	90.00	359.52	11,760.00	5,066.00	-1,064.95	531,173.96	805,372.73	32.457351	-103.477311
17,100.00	90.00	359.52	11,760.00	5,166.00	-1,065.78	531,273.96	805,371.90	32.457626	-103.477311
17,200.00	90.00	359.52	11,760.00	5,266.00	-1,066.62	531,373.95	805,371.06	32.457901	-103.477312
17,300.00	90.00	359.52	11,760.00	5,365.99	-1,067.45	531,473.95	805,370.23	32.458176	-103.477312
17,400.00	90.00	359.52	11,760.00	5,465.99	-1,068.28	531,573.95	805,369.40	32.458451	-103.477312
17,500.00	90.00	359.52	11,760.00	5,565.99	-1,069.12	531,673.94	805,368.57	32.458726	-103.477312
17,600.00	90.00	359.52	11,760.00	5,665.98	-1,069.95	531,773.94	805,367.73	32.459001	-103.477312
17,700.00	90.00	359.52	11,760.00	5,765.98	-1,070.78	531,873.94	805,366.90	32.459275	-103.477312
17,800.00	90.00	359.52	11,760.00	5,865.98	-1,071.61	531,973.93	805,366.07	32.459550	-103.477312
17,900.00	90.00	359.52	11,760.00	5,965.97	-1,072.45	532,073.93	805,365.23	32.459825	-103.477312
18,000.00	90.00	359.52	11,760.00	6,065.97	-1,073.28	532,173.93	805,364.40	32.460100	-103.477312
18,100.00	90.00	359.52	11,760.00	6,165.96	-1,074.11	532,273.92	805,363.57	32.460375	-103.477313
18,200.00	90.00	359.52	11,760.00	6,265.96	-1,074.95	532,373.92	805,362.73	32.460650	-103.477313
18,300.00	90.00	359.52	11,760.00	6,365.96	-1,075.78	532,473.91	805,361.90	32.460925	-103.477313
18,400.00	90.00	359.52	11,760.00	6,465.95	-1,076.61	532,573.91	805,361.07	32.461199	-103.477313
18,500.00	90.00	359.52	11,760.00	6,565.95	-1,077.45	532,673.91	805,360.24	32.461474	-103.477313
18,600.00	90.00	359.52	11,760.00	6,665.95	-1,078.28	532,773.90	805,359.40	32.461749	-103.477313
18,700.00	90.00	359.52	11,760.00	6,765.94	-1,079.11	532,873.90	805,358.57	32.462024	-103.477313
18,800.00	90.00	359.52	11,760.00	6,865.94	-1,079.94	532,973.90	805,357.74	32.462299	-103.477313
18,900.00	90.00	359.52	11,760.00	6,965.94	-1,080.78	533,073.89	805,356.90	32.462574	-103.477313
19,000.00	90.00	359.52	11,760.00	7,065.93	-1,081.61	533,173.89	805,356.07	32.462849	-103.477313
19,100.00	90.00	359.52	11,760.00	7,165.93	-1,082.44	533,273.88	805,355.24	32.463123	-103.477314
19,200.00	90.00	359.52	11,760.00	7,265.93	-1,083.28	533,373.88	805,354.40	32.463398	-103.477314
19,300.00	90.00	359.52	11,760.00	7,365.92	-1,084.11	533,473.88	805,353.57	32.463673	-103.477314
19,400.00	90.00	359.52	11,760.00	7,465.92	-1,084.94	533,573.87	805,352.74	32.463948	-103.477314
19,500.00	90.00	359.52	11,760.00	7,565.92	-1,085.78	533,673.87	805,351.91	32.464223	-103.477314
19,600.00	90.00	359.52	11,760.00	7,665.91	-1,086.61	533,773.87	805,351.07	32.464498	-103.477314
19,700.00	90.00	359.52	11,760.00	7,765.91	-1,087.44	533,873.86	805,350.24	32.464773	-103.477314
19,800.00	90.00	359.52	11,760.00	7,865.91	-1,088.27	533,973.86	805,349.41	32.465047	-103.477314
19,900.00	90.00	359.52	11,760.00	7,965.90	-1,089.11	534,073.86	805,348.57	32.465322	-103.477314
20,000.00	90.00	359.52	11,760.00	8,065.90	-1,089.94	534,173.85	805,347.74	32.465597	-103.477314
20,100.00	90.00	359.52	11,760.00	8,165.90	-1,090.77	534,273.85	805,346.91	32.465872	-103.477315
20,200.00	90.00	359.52	11,760.00	8,265.89	-1,091.61	534,373.84	805,346.07	32.466147	-103.477315
20,300.00	90.00	359.52	11,760.00	8,365.89	-1,092.44	534,473.84	805,345.24	32.466422	-103.477315
20,400.00	90.00	359.52	11,760.00	8,465.89	-1,093.27	534,573.84	805,344.41	32.466697	-103.477315
20,500.00	90.00	359.52	11,760.00	8,565.88	-1,094.11	534,673.83	805,343.57	32.466971	-103.477315
20,600.00	90.00	359.52	11,760.00	8,665.88	-1,094.94	534,773.83	805,342.74	32.467246	-103.477315
20,700.00	90.00	359.52	11,760.00	8,765.87	-1,095.77	534,873.83	805,341.91	32.467521	-103.477315

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Chiles 28-21 State Com 3H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3737.00ft
Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3737.00ft
Site:	Sec 28-T21S-R34E	North Reference:	Grid
Well:	Chiles 28-21 State Com 3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
20,800.00	90.00	359.52	11,760.00	8,865.87	-1,096.60	534,973.82	805,341.08	32.467796	-103.477315
20,900.00	90.00	359.52	11,760.00	8,865.87	-1,097.44	535,073.82	805,340.24	32.468071	-103.477315
21,000.00	90.00	359.52	11,760.00	9,065.86	-1,098.27	535,173.82	805,339.41	32.468346	-103.477315
21,100.00	90.00	359.52	11,760.00	9,165.86	-1,099.10	535,273.81	805,338.58	32.468621	-103.477316
21,200.00	90.00	359.52	11,760.00	9,265.86	-1,099.94	535,373.81	805,337.74	32.468895	-103.477316
21,300.00	90.00	359.52	11,760.00	9,365.85	-1,100.77	535,473.80	805,336.91	32.469170	-103.477316
21,400.00	90.00	359.52	11,760.00	9,465.85	-1,101.60	535,573.80	805,336.08	32.469445	-103.477316
21,500.00	90.00	359.52	11,760.00	9,565.85	-1,102.44	535,673.80	805,335.24	32.469720	-103.477316
21,600.00	90.00	359.52	11,760.00	9,665.84	-1,103.27	535,773.79	805,334.41	32.469995	-103.477316
21,700.00	90.00	359.52	11,760.00	9,765.84	-1,104.10	535,873.79	805,333.58	32.470270	-103.477316
21,800.00	90.00	359.52	11,760.00	9,865.84	-1,104.93	535,973.79	805,332.75	32.470545	-103.477316
21,900.00	90.00	359.52	11,760.00	9,965.83	-1,105.77	536,073.78	805,331.91	32.470819	-103.477316
22,000.00	90.00	359.52	11,760.00	10,065.83	-1,106.60	536,173.78	805,331.08	32.471094	-103.477316
22,100.00	90.00	359.52	11,760.00	10,165.83	-1,107.43	536,273.77	805,330.25	32.471369	-103.477317
22,117.35	90.00	359.52	11,760.00	10,183.18	-1,107.58	536,291.12	805,330.10	32.471417	-103.477317
LTP @ 22117' MD, 100' FNL, 1890' FWL									
22,197.35	90.00	359.52	11,760.00	10,263.17	-1,108.24	536,371.12	805,329.44	32.471637	-103.477317
PBHL; 20' FNL, 1890' FWL									
22,197.36	90.00	359.52	11,760.00	10,263.18	-1,108.24	536,371.13	805,329.44	32.471637	-103.477317

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 - Chiles 28-21 Sta	0.00	0.00	0.00	10,263.18	-1,108.24	536,371.13	805,329.44	32.471637	-103.477317
- plan misses target center by 10322.84ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
11,276.77	11,187.04	-330.00	-1,020.00	KOP @ 11277' MD, 50' FSL, 1890' FWL
11,517.91	11,421.13	-280.00	-1,020.42	FTP @ 11518' MD, 100' FSL, 1890' FWL
16,833.99	11,760.00	4,900.00	-1,063.57	Cross Section @ 16834' MD, 0' FSL, 1890' FWL
22,117.35	11,760.00	10,183.18	-1,107.58	LTP @ 22117' MD, 100' FNL, 1890' FWL
22,197.35	11,760.00	10,263.17	-1,108.24	PBHL; 20' FNL, 1890' FWL

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WCDSC Permian NM

WELL DETAILS: Chiles 28-21 State Com 3H

RKB @ 3737.00ft
3712.00

Northings 526107.97 Eastings 808437.88 Latitude 32.443404 Longitude -103.473991

SECTION DETAILS Permit Plan 1

	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	VSect	Annotation
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	
	4796.81	9.96	252.07	4792.81	-21.27	-65.73	1.25	-14.09	
	10262.72	9.96	252.07	10176.33	-312.28	-965.23	0.00	-206.85	
5	10926.73	0.00	0.00	10837.00	-330.00	-1020.00	1.50	-218.59	
6	11276.77	0.00	0.00	11187.04	-330.00	-1020.00	0.00	-218.59	KOP @ 11277' MD, 50' FSL, 1890' FWL
7	12176.77	90.00	359.52	11760.00	242.94	-1024.77	10.00	351.55	
8	22197.36	90.00	359.52	11760.00	10263.18	-1108.24	0.00	10322.84	PBHL: 20' FNL, 1890' FWL

