

HOBBS OCD
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WCDSC Permian NM

Lea County (NAD83 New Mexico East)

Sec 28-T21S-R34E

Chiles 28-21 State Com 2H

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 2H
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 2H	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 2H			
Well Position	+N-S	0.00 ft	Northing:	526,108.26 usft
	+E-W	0.00 ft	Easting:	806,474.08 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	47,932.86460038

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	2.48

Plan Survey Tool Program	Date 11/7/2018			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,080.33 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	
2,750.00	0.00	0.00	2,750.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,106.09	3.56	133.32	3,105.86	-7.59	8.05	1.00	1.00	0.00	133.32	
10,554.37	3.56	133.32	10,539.76	-324.94	344.63	0.00	0.00	0.00	0.00	
10,791.76	0.00	0.00	10,777.00	-330.00	350.00	1.50	-1.50	0.00	180.00	
11,141.80	0.00	0.00	11,127.04	-330.00	350.00	0.00	0.00	0.00	0.00	
12,041.80	90.00	0.51	11,700.00	242.94	355.15	10.00	10.00	0.00	0.51	PBHL - Chiles 28-21
22,080.33	90.00	0.51	11,700.00	10,281.06	445.38	0.00	0.00	0.00	0.00	

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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 2H	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	526,108.26	806,474.08	32.443404	-103.473873	
100.00	0.00	0.00	100.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
200.00	0.00	0.00	200.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
300.00	0.00	0.00	300.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
400.00	0.00	0.00	400.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
500.00	0.00	0.00	500.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
600.00	0.00	0.00	600.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
700.00	0.00	0.00	700.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
800.00	0.00	0.00	800.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
900.00	0.00	0.00	900.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,750.00	0.00	0.00	2,750.00	0.00	0.00	526,108.26	806,474.08	32.443404	-103.473873	
2,800.00	0.50	133.32	2,800.00	-0.15	0.16	526,108.11	806,474.24	32.443404	-103.473873	
2,900.00	1.50	133.32	2,899.98	-1.35	1.43	526,106.91	806,475.51	32.443400	-103.473869	
3,000.00	2.50	133.32	2,999.92	-3.74	3.97	526,104.52	806,478.05	32.443394	-103.473860	
3,100.00	3.50	133.32	3,099.78	-7.33	7.78	526,100.93	806,481.86	32.443384	-103.473848	
3,106.09	3.56	133.32	3,105.86	-7.59	8.05	526,100.67	806,482.13	32.443383	-103.473847	
3,200.00	3.56	133.32	3,199.59	-11.59	12.29	526,096.67	806,486.37	32.443372	-103.473834	
3,300.00	3.56	133.32	3,299.40	-15.85	16.81	526,092.41	806,490.89	32.443360	-103.473819	
3,400.00	3.56	133.32	3,399.20	-20.11	21.33	526,088.15	806,495.41	32.443348	-103.473805	
3,500.00	3.56	133.32	3,499.01	-24.37	25.85	526,083.89	806,499.93	32.443337	-103.473790	
3,600.00	3.56	133.32	3,598.82	-28.63	30.37	526,079.63	806,504.45	32.443325	-103.473776	
3,700.00	3.56	133.32	3,698.62	-32.89	34.89	526,075.37	806,508.97	32.443313	-103.473761	
3,800.00	3.56	133.32	3,798.43	-37.15	39.41	526,071.11	806,513.49	32.443301	-103.473747	
3,900.00	3.56	133.32	3,898.24	-41.42	43.93	526,066.85	806,518.01	32.443289	-103.473732	
4,000.00	3.56	133.32	3,998.05	-45.68	48.44	526,062.59	806,522.53	32.443277	-103.473717	
4,100.00	3.56	133.32	4,097.85	-49.94	52.96	526,058.33	806,527.04	32.443266	-103.473703	
4,200.00	3.56	133.32	4,197.66	-54.20	57.48	526,054.06	806,531.56	32.443254	-103.473688	
4,300.00	3.56	133.32	4,297.47	-58.46	62.00	526,049.80	806,536.08	32.443242	-103.473674	
4,400.00	3.56	133.32	4,397.27	-62.72	66.52	526,045.54	806,540.60	32.443230	-103.473659	
4,500.00	3.56	133.32	4,497.08	-66.98	71.04	526,041.28	806,545.12	32.443218	-103.473645	
4,600.00	3.56	133.32	4,596.89	-71.24	75.56	526,037.02	806,549.64	32.443207	-103.473630	
4,700.00	3.56	133.32	4,696.69	-75.50	80.08	526,032.76	806,554.16	32.443195	-103.473616	
4,800.00	3.56	133.32	4,796.50	-79.76	84.60	526,028.50	806,558.68	32.443183	-103.473601	
4,900.00	3.56	133.32	4,896.31	-84.02	89.11	526,024.24	806,563.20	32.443171	-103.473587	
5,000.00	3.56	133.32	4,996.11	-88.28	93.63	526,019.98	806,567.72	32.443159	-103.473572	
5,100.00	3.56	133.32	5,095.92	-92.54	98.15	526,015.72	806,572.23	32.443148	-103.473558	
5,200.00	3.56	133.32	5,195.73	-96.80	102.67	526,011.46	806,576.75	32.443136	-103.473543	

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Well:	Chiles 28-21 State Com 2H	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	
5,300.00	3.56	133.32	5,295.54	-101.07	107.19	526,007.20	806,581.27	32.443124	-103.473528	
5,400.00	3.56	133.32	5,395.34	-105.33	111.71	526,002.94	806,585.79	32.443112	-103.473514	
5,500.00	3.56	133.32	5,495.15	-109.59	116.23	525,998.68	806,590.31	32.443100	-103.473499	
5,600.00	3.56	133.32	5,594.96	-113.85	120.75	525,994.41	806,594.83	32.443089	-103.473485	
5,700.00	3.56	133.32	5,694.76	-118.11	125.27	525,990.15	806,599.35	32.443077	-103.473470	
5,800.00	3.56	133.32	5,794.57	-122.37	129.79	525,985.89	806,603.87	32.443065	-103.473456	
5,900.00	3.56	133.32	5,894.38	-126.63	134.30	525,981.63	806,608.39	32.443053	-103.473441	
6,000.00	3.56	133.32	5,994.18	-130.89	138.82	525,977.37	806,612.90	32.443041	-103.473427	
6,100.00	3.56	133.32	6,093.99	-135.15	143.34	525,973.11	806,617.42	32.443029	-103.473412	
6,200.00	3.56	133.32	6,193.80	-139.41	147.86	525,968.85	806,621.94	32.443018	-103.473398	
6,300.00	3.56	133.32	6,293.60	-143.67	152.38	525,964.59	806,626.46	32.443006	-103.473383	
6,400.00	3.56	133.32	6,393.41	-147.93	156.90	525,960.33	806,630.98	32.442994	-103.473369	
6,500.00	3.56	133.32	6,493.22	-152.19	161.42	525,956.07	806,635.50	32.442982	-103.473354	
6,600.00	3.56	133.32	6,593.03	-156.46	165.94	525,951.81	806,640.02	32.442970	-103.473339	
6,700.00	3.56	133.32	6,692.83	-160.72	170.46	525,947.55	806,644.54	32.442959	-103.473325	
6,800.00	3.56	133.32	6,792.64	-164.98	174.98	525,943.29	806,649.06	32.442947	-103.473310	
6,900.00	3.56	133.32	6,892.45	-169.24	179.49	525,939.02	806,653.58	32.442935	-103.473296	
7,000.00	3.56	133.32	6,992.25	-173.50	184.01	525,934.76	806,658.09	32.442923	-103.473281	
7,100.00	3.56	133.32	7,092.06	-177.76	188.53	525,930.50	806,662.61	32.442911	-103.473267	
7,200.00	3.56	133.32	7,191.87	-182.02	193.05	525,926.24	806,667.13	32.442900	-103.473252	
7,300.00	3.56	133.32	7,291.67	-186.28	197.57	525,921.98	806,671.65	32.442888	-103.473238	
7,400.00	3.56	133.32	7,391.48	-190.54	202.09	525,917.72	806,676.17	32.442876	-103.473223	
7,500.00	3.56	133.32	7,491.29	-194.80	206.61	525,913.46	806,680.69	32.442864	-103.473209	
7,600.00	3.56	133.32	7,591.09	-199.06	211.13	525,909.20	806,685.21	32.442852	-103.473194	
7,700.00	3.56	133.32	7,690.90	-203.32	215.65	525,904.94	806,689.73	32.442840	-103.473180	
7,800.00	3.56	133.32	7,790.71	-207.58	220.17	525,900.68	806,694.25	32.442829	-103.473165	
7,900.00	3.56	133.32	7,890.52	-211.85	224.68	525,896.42	806,698.77	32.442817	-103.473151	
8,000.00	3.56	133.32	7,990.32	-216.11	229.20	525,892.16	806,703.28	32.442805	-103.473136	
8,100.00	3.56	133.32	8,090.13	-220.37	233.72	525,887.90	806,707.80	32.442793	-103.473121	
8,200.00	3.56	133.32	8,189.94	-224.63	238.24	525,883.64	806,712.32	32.442781	-103.473107	
8,300.00	3.56	133.32	8,289.74	-228.89	242.76	525,879.37	806,716.84	32.442770	-103.473092	
8,400.00	3.56	133.32	8,389.55	-233.15	247.28	525,875.11	806,721.36	32.442758	-103.473078	
8,500.00	3.56	133.32	8,489.36	-237.41	251.80	525,870.85	806,725.88	32.442746	-103.473063	
8,600.00	3.56	133.32	8,589.16	-241.67	256.32	525,866.59	806,730.40	32.442734	-103.473049	
8,700.00	3.56	133.32	8,688.97	-245.93	260.84	525,862.33	806,734.92	32.442722	-103.473034	
8,800.00	3.56	133.32	8,788.78	-250.19	265.35	525,858.07	806,739.44	32.442711	-103.473020	
8,900.00	3.56	133.32	8,888.59	-254.45	269.87	525,853.81	806,743.95	32.442699	-103.473005	
9,000.00	3.56	133.32	8,988.39	-258.71	274.39	525,849.55	806,748.47	32.442687	-103.472991	
9,100.00	3.56	133.32	9,088.20	-262.97	278.91	525,845.29	806,752.99	32.442675	-103.472976	
9,200.00	3.56	133.32	9,188.01	-267.23	283.43	525,841.03	806,757.51	32.442663	-103.472962	
9,300.00	3.56	133.32	9,287.81	-271.50	287.95	525,836.77	806,762.03	32.442652	-103.472947	
9,400.00	3.56	133.32	9,387.62	-275.76	292.47	525,832.51	806,766.55	32.442640	-103.472932	
9,500.00	3.56	133.32	9,487.43	-280.02	296.99	525,828.25	806,771.07	32.442628	-103.472918	
9,600.00	3.56	133.32	9,587.23	-284.28	301.51	525,823.98	806,775.59	32.442616	-103.472903	
9,700.00	3.56	133.32	9,687.04	-288.54	306.03	525,819.72	806,780.11	32.442604	-103.472889	
9,800.00	3.56	133.32	9,786.85	-292.80	310.54	525,815.46	806,784.63	32.442592	-103.472874	
9,900.00	3.56	133.32	9,886.65	-297.06	315.06	525,811.20	806,789.14	32.442581	-103.472860	
10,000.00	3.56	133.32	9,986.46	-301.32	319.58	525,806.94	806,793.66	32.442569	-103.472845	
10,100.00	3.56	133.32	10,086.27	-305.58	324.10	525,802.68	806,798.18	32.442557	-103.472831	
10,200.00	3.56	133.32	10,186.08	-309.84	328.62	525,798.42	806,802.70	32.442545	-103.472816	
10,300.00	3.56	133.32	10,285.88	-314.10	333.14	525,794.16	806,807.22	32.442533	-103.472802	
10,400.00	3.56	133.32	10,385.69	-318.36	337.66	525,789.90	806,811.74	32.442522	-103.472787	
10,500.00	3.56	133.32	10,485.50	-322.62	342.18	525,785.64	806,816.26	32.442510	-103.472773	
10,554.37	3.56	133.32	10,539.76	-324.94	344.63	525,783.32	806,818.72	32.442503	-103.472765	
10,600.00	2.88	133.32	10,585.32	-326.70	346.50	525,781.56	806,820.58	32.442498	-103.472759	

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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 2H	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
10,700.00	1.38	133.32	10,685.25	-329.24	349.20	525,779.02	806,823.28	32.442491	-103.472750
10,791.76	0.00	0.00	10,777.00	-330.00	350.00	525,778.26	806,824.08	32.442489	-103.472747
10,800.00	0.00	0.00	10,785.24	-330.00	350.00	525,778.26	806,824.08	32.442489	-103.472747
10,900.00	0.00	0.00	10,885.24	-330.00	350.00	525,778.26	806,824.08	32.442489	-103.472747
11,000.00	0.00	0.00	10,985.24	-330.00	350.00	525,778.26	806,824.08	32.442489	-103.472747
11,100.00	0.00	0.00	11,085.24	-330.00	350.00	525,778.26	806,824.08	32.442489	-103.472747
11,141.80	0.00	0.00	11,127.04	-330.00	350.00	525,778.26	806,824.08	32.442489	-103.472747
KOP @ 11142' MD, 50' FSL, 1890' FEL									
11,200.00	5.82	0.51	11,185.14	-327.05	350.03	525,781.22	806,824.11	32.442497	-103.472747
11,300.00	15.82	0.51	11,283.24	-308.30	350.20	525,799.96	806,824.28	32.442549	-103.472746
11,382.95	24.11	0.51	11,361.13	-280.00	350.45	525,828.26	806,824.53	32.442627	-103.472745
FTP @ 11383' MD, 100' FSL, 1890' FEL									
11,400.00	25.82	0.51	11,376.59	-272.80	350.51	525,835.46	806,824.60	32.442647	-103.472744
11,500.00	35.82	0.51	11,462.36	-221.64	350.97	525,886.63	806,825.05	32.442787	-103.472741
11,600.00	45.82	0.51	11,537.94	-156.35	351.56	525,951.91	806,825.64	32.442967	-103.472738
11,700.00	55.82	0.51	11,601.03	-78.94	352.26	526,029.32	806,826.34	32.443179	-103.472734
11,800.00	65.82	0.51	11,649.73	8.26	353.04	526,116.52	806,827.12	32.443419	-103.472729
11,900.00	75.82	0.51	11,682.54	102.58	353.89	526,210.84	806,827.97	32.443678	-103.472724
12,000.00	85.82	0.51	11,698.47	201.17	354.77	526,309.43	806,828.86	32.443949	-103.472718
12,041.80	90.00	0.51	11,700.00	242.94	355.15	526,351.20	806,829.23	32.444064	-103.472716
12,100.00	90.00	0.51	11,700.00	301.13	355.67	526,409.39	806,829.75	32.444224	-103.472713
12,200.00	90.00	0.51	11,700.00	401.13	356.57	526,509.39	806,830.65	32.444499	-103.472707
12,300.00	90.00	0.51	11,700.00	501.12	357.47	526,609.38	806,831.55	32.444773	-103.472702
12,400.00	90.00	0.51	11,700.00	601.12	358.37	526,709.38	806,832.45	32.445048	-103.472696
12,500.00	90.00	0.51	11,700.00	701.11	359.27	526,809.37	806,833.35	32.445323	-103.472690
12,600.00	90.00	0.51	11,700.00	801.11	360.17	526,909.37	806,834.25	32.445598	-103.472685
12,700.00	90.00	0.51	11,700.00	901.11	361.07	527,009.37	806,835.15	32.445873	-103.472679
12,800.00	90.00	0.51	11,700.00	1,001.10	361.96	527,109.36	806,836.05	32.446148	-103.472674
12,900.00	90.00	0.51	11,700.00	1,101.10	362.86	527,209.36	806,836.94	32.446422	-103.472668
13,000.00	90.00	0.51	11,700.00	1,201.09	363.76	527,309.35	806,837.84	32.446697	-103.472663
13,100.00	90.00	0.51	11,700.00	1,301.09	364.66	527,409.35	806,838.74	32.446972	-103.472657
13,200.00	90.00	0.51	11,700.00	1,401.09	365.56	527,509.34	806,839.64	32.447247	-103.472652
13,300.00	90.00	0.51	11,700.00	1,501.08	366.46	527,609.34	806,840.54	32.447522	-103.472646
13,400.00	90.00	0.51	11,700.00	1,601.08	367.36	527,709.34	806,841.44	32.447797	-103.472641
13,500.00	90.00	0.51	11,700.00	1,701.07	368.26	527,809.33	806,842.34	32.448071	-103.472635
13,600.00	90.00	0.51	11,700.00	1,801.07	369.16	527,909.33	806,843.24	32.448346	-103.472630
13,700.00	90.00	0.51	11,700.00	1,901.07	370.05	528,009.32	806,844.14	32.448621	-103.472624
13,800.00	90.00	0.51	11,700.00	2,001.06	370.95	528,109.32	806,845.03	32.448896	-103.472619
13,900.00	90.00	0.51	11,700.00	2,101.06	371.85	528,209.31	806,845.93	32.449171	-103.472613
14,000.00	90.00	0.51	11,700.00	2,201.05	372.75	528,309.31	806,846.83	32.449445	-103.472608
14,100.00	90.00	0.51	11,700.00	2,301.05	373.65	528,409.31	806,847.73	32.449720	-103.472602
14,200.00	90.00	0.51	11,700.00	2,401.05	374.55	528,509.30	806,848.63	32.449995	-103.472597
14,300.00	90.00	0.51	11,700.00	2,501.04	375.45	528,609.30	806,849.53	32.450270	-103.472591
14,400.00	90.00	0.51	11,700.00	2,601.04	376.35	528,709.29	806,850.43	32.450545	-103.472585
14,500.00	90.00	0.51	11,700.00	2,701.03	377.24	528,809.29	806,851.33	32.450820	-103.472580
14,600.00	90.00	0.51	11,700.00	2,801.03	378.14	528,909.29	806,852.22	32.451094	-103.472574
14,700.00	90.00	0.51	11,700.00	2,901.02	379.04	529,009.28	806,853.12	32.451369	-103.472569
14,800.00	90.00	0.51	11,700.00	3,001.02	379.94	529,109.28	806,854.02	32.451644	-103.472563
14,900.00	90.00	0.51	11,700.00	3,101.02	380.84	529,209.27	806,854.92	32.451919	-103.472558
15,000.00	90.00	0.51	11,700.00	3,201.01	381.74	529,309.27	806,855.82	32.452194	-103.472552
15,100.00	90.00	0.51	11,700.00	3,301.01	382.64	529,409.26	806,856.72	32.452468	-103.472547
15,200.00	90.00	0.51	11,700.00	3,401.00	383.54	529,509.26	806,857.62	32.452743	-103.472541
15,300.00	90.00	0.51	11,700.00	3,501.00	384.44	529,609.26	806,858.52	32.453018	-103.472536
15,400.00	90.00	0.51	11,700.00	3,601.00	385.33	529,709.25	806,859.42	32.453293	-103.472530

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Chiles 28-21 State Com 2H
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 2H	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
15,500.00	90.00	0.51	11,700.00	3,700.99	386.23	529,809.25	806,860.31	32.453568	-103.472525
15,600.00	90.00	0.51	11,700.00	3,800.99	387.13	529,909.24	806,861.21	32.453842	-103.472519
15,700.00	90.00	0.51	11,700.00	3,900.98	388.03	530,009.24	806,862.11	32.454117	-103.472514
15,800.00	90.00	0.51	11,700.00	4,000.98	388.93	530,109.23	806,863.01	32.454392	-103.472508
15,900.00	90.00	0.51	11,700.00	4,100.98	389.83	530,209.23	806,863.91	32.454667	-103.472503
16,000.00	90.00	0.51	11,700.00	4,200.97	390.73	530,309.23	806,864.81	32.454942	-103.472497
16,100.00	90.00	0.51	11,700.00	4,300.97	391.63	530,409.22	806,865.71	32.455217	-103.472492
16,200.00	90.00	0.51	11,700.00	4,400.96	392.53	530,509.22	806,866.61	32.455491	-103.472486
16,300.00	90.00	0.51	11,700.00	4,500.96	393.42	530,609.21	806,867.50	32.455766	-103.472480
16,400.00	90.00	0.51	11,700.00	4,600.96	394.32	530,709.21	806,868.40	32.456041	-103.472475
16,500.00	90.00	0.51	11,700.00	4,700.95	395.22	530,809.20	806,869.30	32.456316	-103.472469
16,600.00	90.00	0.51	11,700.00	4,800.95	396.12	530,909.20	806,870.20	32.456591	-103.472464
16,699.06	90.00	0.51	11,700.00	4,900.00	397.01	531,008.26	806,871.09	32.456863	-103.472458
Cross Section @ 16699' MD, 0' FSL, 1890' FEL									
16,700.00	90.00	0.51	11,700.00	4,900.94	397.02	531,009.20	806,871.10	32.456865	-103.472458
16,800.00	90.00	0.51	11,700.00	5,000.94	397.92	531,109.19	806,872.00	32.457140	-103.472453
16,900.00	90.00	0.51	11,700.00	5,100.94	398.82	531,209.19	806,872.90	32.457415	-103.472447
17,000.00	90.00	0.51	11,700.00	5,200.93	399.72	531,309.18	806,873.80	32.457690	-103.472442
17,100.00	90.00	0.51	11,700.00	5,300.93	400.61	531,409.18	806,874.70	32.457965	-103.472436
17,200.00	90.00	0.51	11,700.00	5,400.92	401.51	531,509.18	806,875.59	32.458240	-103.472431
17,300.00	90.00	0.51	11,700.00	5,500.92	402.41	531,609.17	806,876.49	32.458514	-103.472425
17,400.00	90.00	0.51	11,700.00	5,600.92	403.31	531,709.17	806,877.39	32.458789	-103.472420
17,500.00	90.00	0.51	11,700.00	5,700.91	404.21	531,809.16	806,878.29	32.459064	-103.472414
17,600.00	90.00	0.51	11,700.00	5,800.91	405.11	531,909.16	806,879.19	32.459339	-103.472409
17,700.00	90.00	0.51	11,700.00	5,900.90	406.01	532,009.15	806,880.09	32.459614	-103.472403
17,800.00	90.00	0.51	11,700.00	6,000.90	406.91	532,109.15	806,880.99	32.459888	-103.472398
17,900.00	90.00	0.51	11,700.00	6,100.90	407.81	532,209.15	806,881.89	32.460163	-103.472392
18,000.00	90.00	0.51	11,700.00	6,200.89	408.70	532,309.14	806,882.78	32.460438	-103.472386
18,100.00	90.00	0.51	11,700.00	6,300.89	409.60	532,409.14	806,883.68	32.460713	-103.472381
18,200.00	90.00	0.51	11,700.00	6,400.88	410.50	532,509.13	806,884.58	32.460988	-103.472375
18,300.00	90.00	0.51	11,700.00	6,500.88	411.40	532,609.13	806,885.48	32.461263	-103.472370
18,400.00	90.00	0.51	11,700.00	6,600.88	412.30	532,709.12	806,886.38	32.461537	-103.472364
18,500.00	90.00	0.51	11,700.00	6,700.87	413.20	532,809.12	806,887.28	32.461812	-103.472359
18,600.00	90.00	0.51	11,700.00	6,800.87	414.10	532,909.12	806,888.18	32.462087	-103.472353
18,700.00	90.00	0.51	11,700.00	6,900.86	415.00	533,009.11	806,889.08	32.462362	-103.472348
18,800.00	90.00	0.51	11,700.00	7,000.86	415.89	533,109.11	806,889.98	32.462637	-103.472342
18,900.00	90.00	0.51	11,700.00	7,100.86	416.79	533,209.10	806,890.87	32.462911	-103.472337
19,000.00	90.00	0.51	11,700.00	7,200.85	417.69	533,309.10	806,891.77	32.463186	-103.472331
19,100.00	90.00	0.51	11,700.00	7,300.85	418.59	533,409.09	806,892.67	32.463461	-103.472326
19,200.00	90.00	0.51	11,700.00	7,400.84	419.49	533,509.09	806,893.57	32.463736	-103.472320
19,300.00	90.00	0.51	11,700.00	7,500.84	420.39	533,609.09	806,894.47	32.464011	-103.472315
19,400.00	90.00	0.51	11,700.00	7,600.84	421.29	533,709.08	806,895.37	32.464286	-103.472309
19,500.00	90.00	0.51	11,700.00	7,700.83	422.19	533,809.08	806,896.27	32.464560	-103.472304
19,600.00	90.00	0.51	11,700.00	7,800.83	423.09	533,909.07	806,897.17	32.464835	-103.472298
19,700.00	90.00	0.51	11,700.00	7,900.82	423.98	534,009.07	806,898.06	32.465110	-103.472292
19,800.00	90.00	0.51	11,700.00	8,000.82	424.88	534,109.06	806,898.96	32.465385	-103.472287
19,900.00	90.00	0.51	11,700.00	8,100.81	425.78	534,209.06	806,899.86	32.465660	-103.472281
20,000.00	90.00	0.51	11,700.00	8,200.81	426.68	534,309.06	806,900.76	32.465934	-103.472276
20,100.00	90.00	0.51	11,700.00	8,300.81	427.58	534,409.05	806,901.66	32.466209	-103.472270
20,200.00	90.00	0.51	11,700.00	8,400.80	428.48	534,509.05	806,902.56	32.466484	-103.472265
20,300.00	90.00	0.51	11,700.00	8,500.80	429.38	534,609.04	806,903.46	32.466759	-103.472259
20,400.00	90.00	0.51	11,700.00	8,600.79	430.28	534,709.04	806,904.36	32.467034	-103.472254
20,500.00	90.00	0.51	11,700.00	8,700.79	431.17	534,809.04	806,905.26	32.467309	-103.472248
20,600.00	90.00	0.51	11,700.00	8,800.79	432.07	534,909.03	806,906.15	32.467583	-103.472243

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Chiles 28-21 State Com 2H
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 2H	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
20,700.00	90.00	0.51	11,700.00	8,900.78	432.97	535,009.03	806,907.05	32.467858	-103.472237
20,800.00	90.00	0.51	11,700.00	9,000.78	433.87	535,109.02	806,907.95	32.468133	-103.472232
20,900.00	90.00	0.51	11,700.00	9,100.77	434.77	535,209.02	806,908.85	32.468408	-103.472226
21,000.00	90.00	0.51	11,700.00	9,200.77	435.67	535,309.01	806,909.75	32.468683	-103.472221
21,100.00	90.00	0.51	11,700.00	9,300.77	436.57	535,409.01	806,910.65	32.468957	-103.472215
21,200.00	90.00	0.51	11,700.00	9,400.76	437.47	535,509.01	806,911.55	32.469232	-103.472210
21,300.00	90.00	0.51	11,700.00	9,500.76	438.37	535,609.00	806,912.45	32.469507	-103.472204
21,400.00	90.00	0.51	11,700.00	9,600.75	439.26	535,709.00	806,913.35	32.469782	-103.472198
21,500.00	90.00	0.51	11,700.00	9,700.75	440.16	535,808.99	806,914.24	32.470057	-103.472193
21,600.00	90.00	0.51	11,700.00	9,800.75	441.06	535,908.99	806,915.14	32.470332	-103.472187
21,700.00	90.00	0.51	11,700.00	9,900.74	441.96	536,008.98	806,916.04	32.470606	-103.472182
21,800.00	90.00	0.51	11,700.00	10,000.74	442.86	536,108.98	806,916.94	32.470881	-103.472176
21,900.00	90.00	0.51	11,700.00	10,100.73	443.76	536,208.98	806,917.84	32.471156	-103.472171
22,000.00	90.00	0.51	11,700.00	10,200.73	444.66	536,308.97	806,918.74	32.471431	-103.472165
22,000.33	90.00	0.51	11,700.00	10,201.06	444.66	536,309.30	806,918.74	32.471432	-103.472165
LTP @ 22000' MD, 100' FNL, 1890' FEL									
22,080.32	90.00	0.51	11,700.00	10,281.05	445.38	536,389.29	806,919.46	32.471652	-103.472161
PBHL; 20' FNL, 1890' FEL									
22,080.33	90.00	0.51	11,700.00	10,281.06	445.38	536,389.30	806,919.46	32.471652	-103.472161

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	10,261.07	445.20	536,369.31	806,919.28	32.471597	-103.472162
- plan misses target center by 10270.72ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
11,141.80	11,127.04	-330.00	350.00	KOP @ 11142' MD, 50' FSL, 1890' FEL
11,382.95	11,361.13	-280.00	350.45	FTP @ 11383' MD, 100' FSL, 1890' FEL
16,699.06	11,700.00	4,900.00	397.01	Cross Section @ 16699' MD, 0' FSL, 1890' FEL
22,000.33	11,700.00	10,201.06	444.66	LTP @ 22000' MD, 100' FNL, 1890' FEL
22,080.32	11,700.00	10,281.05	445.38	PBHL; 20' FNL, 1890' FEL

WCDSC Permian NM

WELL DETAILS: Chiles 28-21 State Com 2H

RKB @ 3737.00ft
3712.00
Northing 526108.26 Easting 806474.08 Latitude 32.443404 Longitude -103.473873

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	
2750.00	0.00	0.00	2750.00	0.00	0.00	0.00	0.00	
3106.09	3.56	133.32	3105.86	-7.59	8.05	1.00	-7.23	
10554.37	3.56	133.32	10539.76	-324.94	344.63	0.00	-309.72	
5 10781.76	0.00	0.00	10777.00	-330.00	350.00	1.50	-314.54	
6 11141.80	0.00	0.00	11127.04	-330.00	350.00	0.00	-314.54	KOP @ 11142' MD, 50' FSL, 1890' FEL
7 12041.80	90.00	0.51	11700.00	242.94	355.15	10.00	258.08	
8 22080.33	90.00	0.51	11700.00	10281.06	445.38	0.00	10290.70	PBHL: 20' FNL, 1890' FEL

devon

