



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 20H SHL
Area	Lea County, NM	Well	No. 20H
Field	(Snoody) Sec 26, T2E, R32E	Wellbore	No. 20H PWB
Facility	Snoody Federal No.20H		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Calphik
Scale	0.999949	Report Generated	11/15/2011 at 9:44:46 AM
Convergence at slot	0.32° East	Database/Source file	WA_Midland/No. 20H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W
Facility Reference Pt			727115.80	564039.60	32°32'56.962"N	103°43'49.472"W
Field Reference Pt			727115.80	564039.60	32°32'56.962"N	103°43'49.472"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 20H SHL (KB) to GL	3555.00ft
Horizontal Reference Pt	Slot	Rig on No. 20H SHL (KB) to Mean Sea Level	3555.00ft
Vertical Reference Pt	Rig on No. 20H SHL (KB)	Rig on No. 20H SHL (KB) to Mud Line at Slot (No. 20H SHL)	3555.00ft
MD Reference Pt	Rig on No. 20H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	271.94°



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Area	Lea County, NM	Well	No. 20H
Field	(Snooddy) Sec 26, T2E, R32E	Wellbore	No. 20H PWB
Facility	Snooddy Federal No.20H		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	271.939	0.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	Tie On
100.00†	0.000	271.939	100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
200.00†	0.000	271.939	200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
300.00†	0.000	271.939	300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
400.00†	0.000	271.939	400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
500.00†	0.000	271.939	500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
600.00†	0.000	271.939	600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
700.00†	0.000	271.939	700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
800.00†	0.000	271.939	800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
900.00†	0.000	271.939	900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1000.00†	0.000	271.939	1000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1100.00†	0.000	271.939	1100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1200.00†	0.000	271.939	1200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1300.00†	0.000	271.939	1300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1400.00†	0.000	271.939	1400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1500.00†	0.000	271.939	1500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1600.00†	0.000	271.939	1600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1700.00†	0.000	271.939	1700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1800.00†	0.000	271.939	1800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
1900.00†	0.000	271.939	1900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2000.00†	0.000	271.939	2000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2100.00†	0.000	271.939	2100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2200.00†	0.000	271.939	2200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2300.00†	0.000	271.939	2300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2400.00†	0.000	271.939	2400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2500.00†	0.000	271.939	2500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2600.00†	0.000	271.939	2600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2700.00†	0.000	271.939	2700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2800.00†	0.000	271.939	2800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
2900.00†	0.000	271.939	2900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3000.00†	0.000	271.939	3000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3100.00†	0.000	271.939	3100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3200.00†	0.000	271.939	3200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3300.00†	0.000	271.939	3300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3400.00†	0.000	271.939	3400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3500.00†	0.000	271.939	3500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3600.00†	0.000	271.939	3600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3700.00†	0.000	271.939	3700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3800.00†	0.000	271.939	3800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
3900.00†	0.000	271.939	3900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4000.00†	0.000	271.939	4000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4100.00†	0.000	271.939	4100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4200.00†	0.000	271.939	4200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4300.00†	0.000	271.939	4300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4400.00†	0.000	271.939	4400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	



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WELLPATH DATA (147 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4500.00†	0.000	271.939	4500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4600.00†	0.000	271.939	4600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4700.00†	0.000	271.939	4700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4800.00†	0.000	271.939	4800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
4900.00†	0.000	271.939	4900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5000.00†	0.000	271.939	5000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5100.00†	0.000	271.939	5100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5200.00†	0.000	271.939	5200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5300.00†	0.000	271.939	5300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5400.00†	0.000	271.939	5400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5500.00†	0.000	271.939	5500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5600.00†	0.000	271.939	5600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5700.00†	0.000	271.939	5700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5800.00†	0.000	271.939	5800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
5900.00†	0.000	271.939	5900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6000.00†	0.000	271.939	6000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6100.00†	0.000	271.939	6100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6200.00†	0.000	271.939	6200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6300.00†	0.000	271.939	6300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6400.00†	0.000	271.939	6400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6500.00†	0.000	271.939	6500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6600.00†	0.000	271.939	6600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6700.00†	0.000	271.939	6700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6800.00†	0.000	271.939	6800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
6900.00†	0.000	271.939	6900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7000.00†	0.000	271.939	7000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7100.00†	0.000	271.939	7100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7200.00†	0.000	271.939	7200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7300.00†	0.000	271.939	7300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7400.00†	0.000	271.939	7400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7500.00†	0.000	271.939	7500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7600.00†	0.000	271.939	7600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7700.00†	0.000	271.939	7700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7800.00†	0.000	271.939	7800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
7900.00†	0.000	271.939	7900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	Bone Spring
8000.00†	0.000	271.939	8000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8100.00†	0.000	271.939	8100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8200.00†	0.000	271.939	8200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8215.00†	0.000	271.939	8215.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	Upper Bone Spring Shale
8300.00†	0.000	271.939	8300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8400.00†	0.000	271.939	8400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8500.00†	0.000	271.939	8500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8600.00†	0.000	271.939	8600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8700.00†	0.000	271.939	8700.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8800.00†	0.000	271.939	8800.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	



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Area	Lea County, NM	Well	No. 20H
Field	(Snoody) Sec 26, T2E, R32E	Wellbore	No. 20H PWB
Facility	Snoody Federal No.20H		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8900.00†	0.000	271.939	8900.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
8965.00†	0.000	271.939	8965.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	1st Bone Spring Shale
9000.00†	0.000	271.939	9000.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
9100.00†	0.000	271.939	9100.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
9200.00†	0.000	271.939	9200.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
9300.00†	0.000	271.939	9300.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
9400.00†	0.000	271.939	9400.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
9500.00†	0.000	271.939	9500.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
9520.00†	0.000	271.939	9520.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	2nd Bone Spring Shale
9600.00†	0.000	271.939	9600.00	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	
9613.52	0.000	271.939	9613.52	0.00	0.00	0.00	727115.80	564039.60	32°32'56.962"N	103°43'49.472"W	0.00	Est KOP
9700.00†	17.296	271.939	9698.69	12.95	0.44	-12.95	727102.85	564040.04	32°32'56.967"N	103°43'49.623"W	20.00	
9800.00†	37.296	271.939	9787.11	58.58	1.98	-58.55	727057.26	564041.58	32°32'56.985"N	103°43'50.156"W	20.00	
9900.00†	57.296	271.939	9854.58	131.69	4.46	-131.62	726984.19	564044.06	32°32'57.014"N	103°43'51.009"W	20.00	
10000.00†	77.296	271.939	9892.99	223.48	7.56	-223.35	726892.46	564047.16	32°32'57.049"N	103°43'52.081"W	20.00	
10063.52	90.000	271.939	9900.00	286.48	9.69	-286.31	726829.50	564049.29	32°32'57.074"N	103°43'52.816"W	20.00	EOC
10100.00†	90.000	271.939	9900.00	322.96	10.93	-322.77	726793.04	564050.53	32°32'57.088"N	103°43'53.242"W	0.00	
10200.00†	90.000	271.939	9900.00	422.96	14.31	-422.72	726693.11	564053.91	32°32'57.127"N	103°43'54.409"W	0.00	
10300.00†	90.000	271.939	9900.00	522.96	17.69	-522.66	726593.17	564057.29	32°32'57.166"N	103°43'55.577"W	0.00	
10400.00†	90.000	271.939	9900.00	622.96	21.08	-622.60	726493.23	564060.67	32°32'57.205"N	103°43'56.744"W	0.00	
10500.00†	90.000	271.939	9900.00	722.96	24.46	-722.54	726393.29	564064.06	32°32'57.245"N	103°43'57.911"W	0.00	
10600.00†	90.000	271.939	9900.00	822.96	27.84	-822.49	726293.36	564067.44	32°32'57.284"N	103°43'59.079"W	0.00	
10700.00†	90.000	271.939	9900.00	922.96	31.22	-922.43	726193.42	564070.82	32°32'57.323"N	103°44'00.246"W	0.00	
10800.00†	90.000	271.939	9900.00	1022.96	34.61	-1022.37	726093.48	564074.21	32°32'57.362"N	103°44'01.413"W	0.00	
10900.00†	90.000	271.939	9900.00	1122.96	37.99	-1122.31	725993.54	564077.59	32°32'57.401"N	103°44'02.581"W	0.00	
11000.00†	90.000	271.939	9900.00	1222.96	41.37	-1222.26	725893.61	564080.97	32°32'57.440"N	103°44'03.748"W	0.00	
11100.00†	90.000	271.939	9900.00	1322.96	44.76	-1322.20	725793.67	564084.36	32°32'57.479"N	103°44'04.915"W	0.00	
11200.00†	90.000	271.939	9900.00	1422.96	48.14	-1422.14	725693.73	564087.74	32°32'57.518"N	103°44'06.083"W	0.00	
11300.00†	90.000	271.939	9900.00	1522.96	51.52	-1522.09	725593.80	564091.12	32°32'57.557"N	103°44'07.250"W	0.00	
11400.00†	90.000	271.939	9900.00	1622.96	54.91	-1622.03	725493.86	564094.50	32°32'57.596"N	103°44'08.417"W	0.00	
11500.00†	90.000	271.939	9900.00	1722.96	58.29	-1721.97	725393.92	564097.89	32°32'57.635"N	103°44'09.585"W	0.00	
11600.00†	90.000	271.939	9900.00	1822.96	61.67	-1821.91	725293.98	564101.27	32°32'57.674"N	103°44'10.752"W	0.00	
11700.00†	90.000	271.939	9900.00	1922.96	65.06	-1921.86	725194.05	564104.65	32°32'57.713"N	103°44'11.919"W	0.00	
11800.00†	90.000	271.939	9900.00	2022.96	68.44	-2021.80	725094.11	564108.04	32°32'57.752"N	103°44'13.087"W	0.00	
11900.00†	90.000	271.939	9900.00	2122.96	71.82	-2121.74	724994.17	564111.42	32°32'57.791"N	103°44'14.254"W	0.00	
12000.00†	90.000	271.939	9900.00	2222.96	75.21	-2221.69	724894.23	564114.80	32°32'57.830"N	103°44'15.421"W	0.00	
12100.00†	90.000	271.939	9900.00	2322.96	78.59	-2321.63	724794.30	564118.18	32°32'57.869"N	103°44'16.589"W	0.00	
12200.00†	90.000	271.939	9900.00	2422.96	81.97	-2421.57	724694.36	564121.57	32°32'57.908"N	103°44'17.756"W	0.00	
12300.00†	90.000	271.939	9900.00	2522.96	85.36	-2521.51	724594.42	564124.95	32°32'57.947"N	103°44'18.923"W	0.00	
12400.00†	90.000	271.939	9900.00	2622.96	88.74	-2621.46	724494.48	564128.33	32°32'57.986"N	103°44'20.091"W	0.00	
12500.00†	90.000	271.939	9900.00	2722.96	92.12	-2721.40	724394.55	564131.72	32°32'58.025"N	103°44'21.258"W	0.00	
12600.00†	90.000	271.939	9900.00	2822.96	95.50	-2821.34	724294.61	564135.10	32°32'58.064"N	103°44'22.425"W	0.00	
12700.00†	90.000	271.939	9900.00	2922.96	98.89	-2921.28	724194.67	564138.48	32°32'58.103"N	103°44'23.593"W	0.00	
12800.00†	90.000	271.939	9900.00	3022.96	102.27	-3021.23	724094.73	564141.87	32°32'58.142"N	103°44'24.760"W	0.00	
12900.00†	90.000	271.939	9900.00	3122.96	105.65	-3121.17	723994.80	564145.25	32°32'58.181"N	103°44'25.927"W	0.00	



Planned Wellpath Report

Prelim_2
Page 5 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 20H SHL
Area	Lea County, NM	Well	No. 20H
Field	(Snoody) Sec 26, T2E, R32E	Wellbore	No. 20H PWB
Facility	Snoody Federal No.20H		

WELLPATH DATA (147 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13000.00†	90.000	271.939	9900.00	3222.96	109.04	-3221.11	723894.86	564148.63	32°32'58.220"N	103°44'27.095"W	0.00	
13100.00†	90.000	271.939	9900.00	3322.96	112.42	-3321.06	723794.92	564152.01	32°32'58.259"N	103°44'28.262"W	0.00	
13200.00†	90.000	271.939	9900.00	3422.96	115.80	-3421.00	723694.98	564155.40	32°32'58.298"N	103°44'29.430"W	0.00	
13300.00†	90.000	271.939	9900.00	3522.96	119.19	-3520.94	723595.05	564158.78	32°32'58.337"N	103°44'30.597"W	0.00	
13400.00†	90.000	271.939	9900.00	3622.96	122.57	-3620.88	723495.11	564162.16	32°32'58.376"N	103°44'31.764"W	0.00	
13500.00†	90.000	271.939	9900.00	3722.96	125.95	-3720.83	723395.17	564165.55	32°32'58.415"N	103°44'32.932"W	0.00	
13600.00†	90.000	271.939	9900.00	3822.96	129.34	-3820.77	723295.23	564168.93	32°32'58.454"N	103°44'34.099"W	0.00	
13700.00†	90.000	271.939	9900.00	3922.96	132.72	-3920.71	723195.30	564172.31	32°32'58.493"N	103°44'35.266"W	0.00	
13800.00†	90.000	271.939	9900.00	4022.96	136.10	-4020.65	723095.36	564175.70	32°32'58.532"N	103°44'36.434"W	0.00	
13900.00†	90.000	271.939	9900.00	4122.96	139.49	-4120.60	722995.42	564179.08	32°32'58.571"N	103°44'37.601"W	0.00	
14000.00†	90.000	271.939	9900.00	4222.96	142.87	-4220.54	722895.48	564182.46	32°32'58.609"N	103°44'38.768"W	0.00	
14095.74	90.000	271.939	9900.00†	4318.70	146.11	-4316.23	722799.80	564185.70	32°32'58.647"N	103°44'39.886"W	0.00	No. 20H PBHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No. 20H PBHL	14095.74	9900.00	146.11	-4316.23	722799.80	564185.70	32°32'58.647"N	103°44'39.886"W	point

SURVEY PROGRAM - Ref Wellbore: No. 20H PWB Ref Wellpath: Prelim_2

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
3555.00	14095.74	NaviTrak (Standard)		No. 20H PWB

SR & A

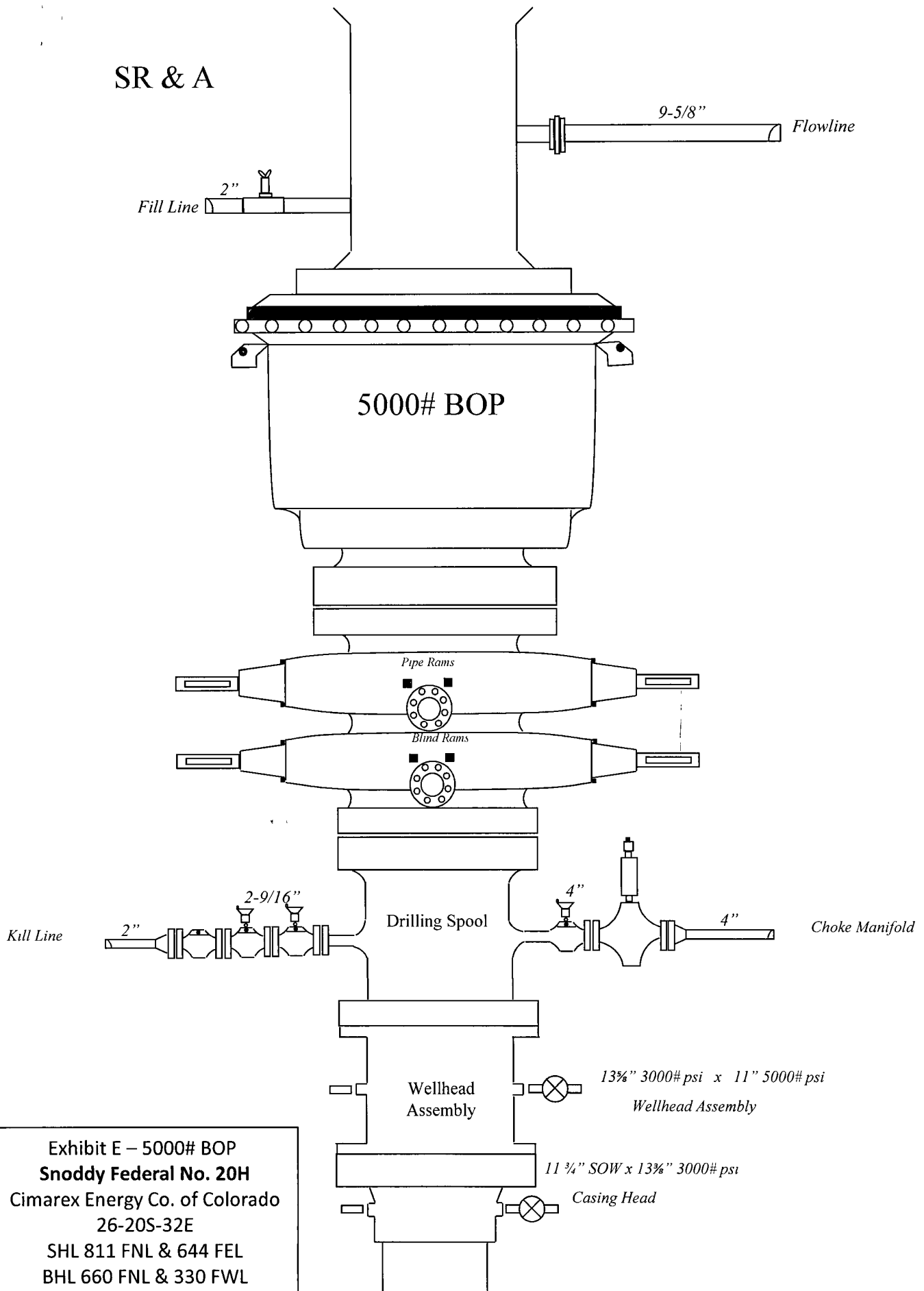


Exhibit E – 5000# BOP
Snoddy Federal No. 20H
Cimarex Energy Co. of Colorado
26-20S-32E
SHL 811 FNL & 644 FEL
BHL 660 FNL & 330 FWL
Lea County, NM

20" Diverter System

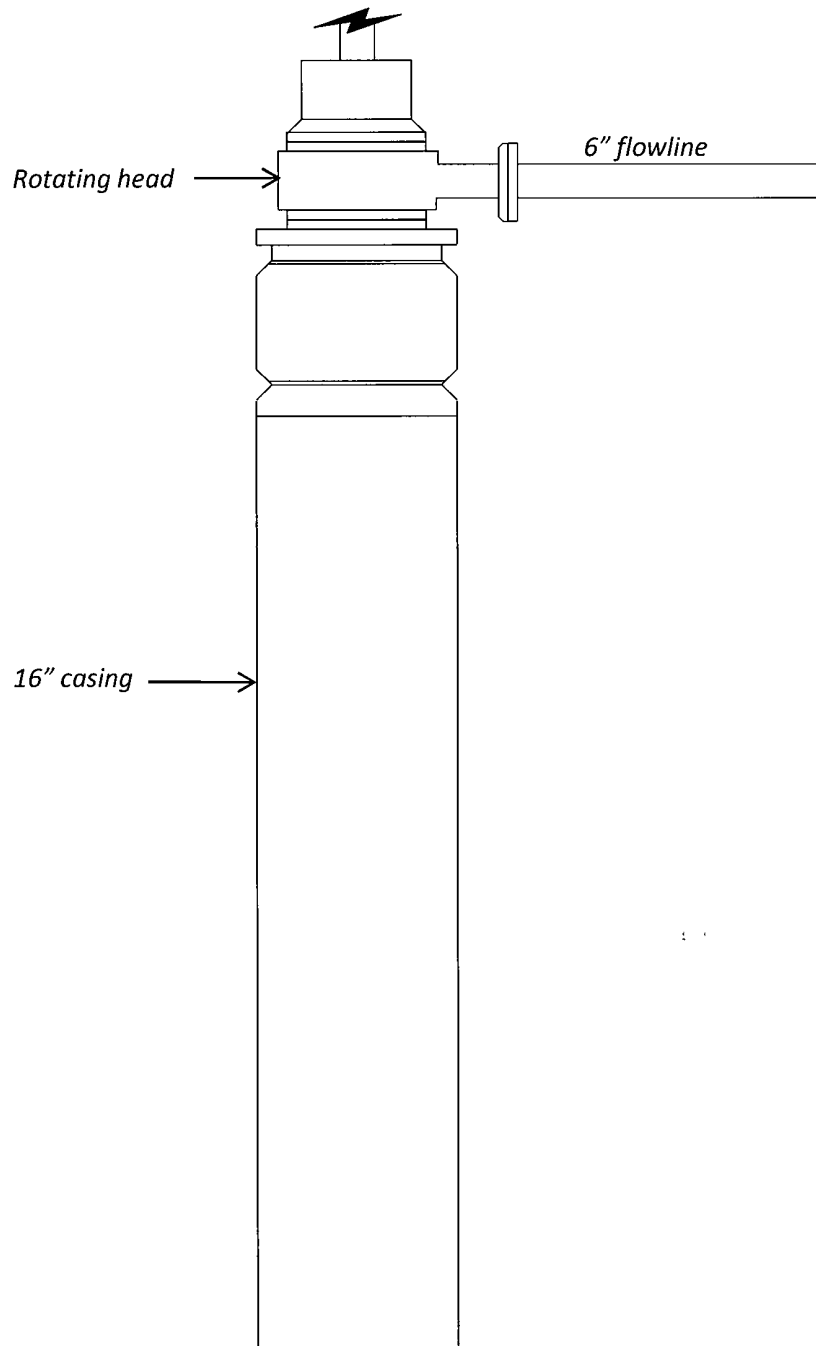


Exhibit E-1 – 20" Diverter System

Snoddy Federal No. 20H

~~Strata Production Co.~~

26-20S-32E

SHL 811 FNL & 644 FEL

BHL 660 FNL & 330 FWL

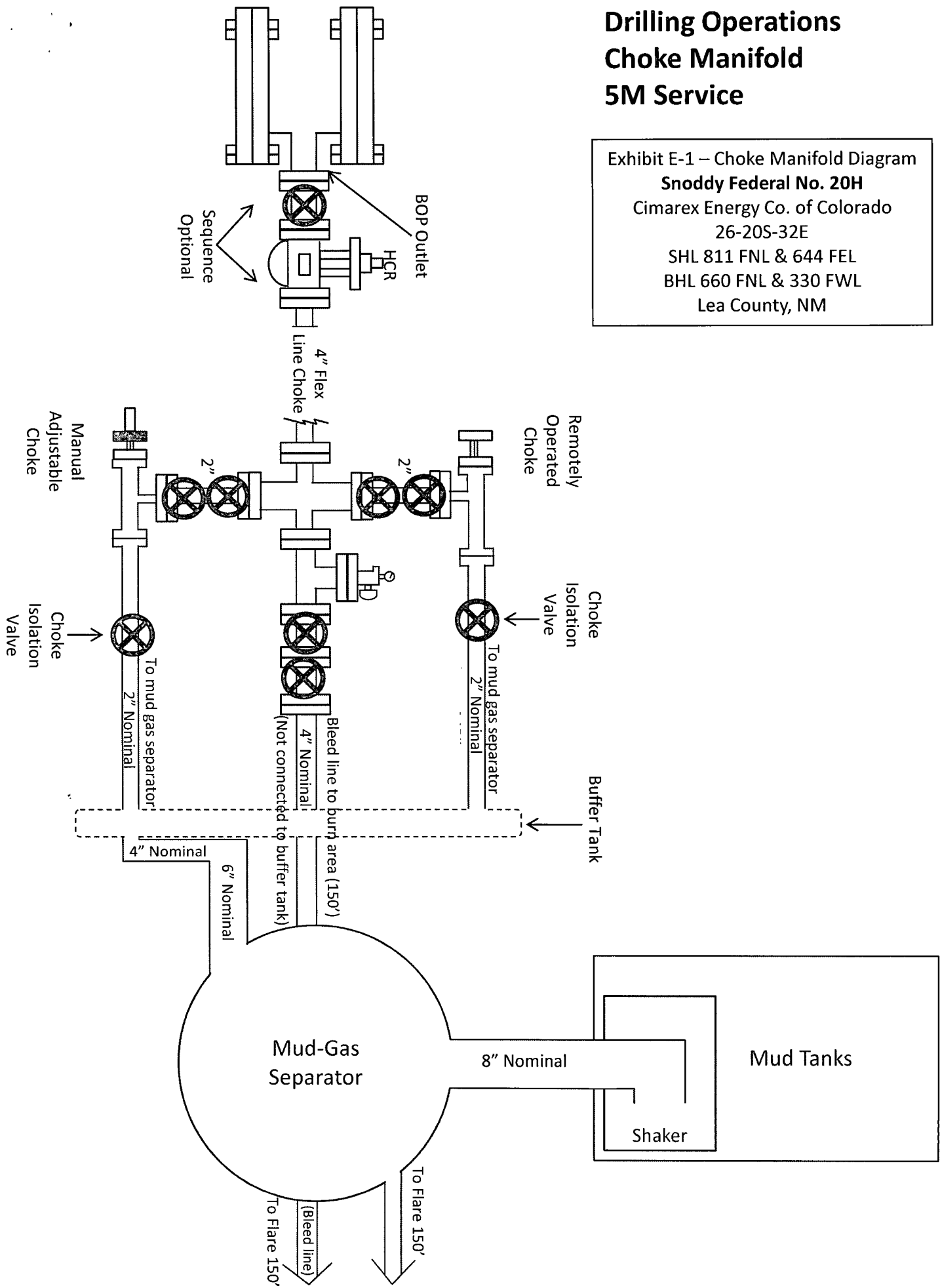
Lea County, NM

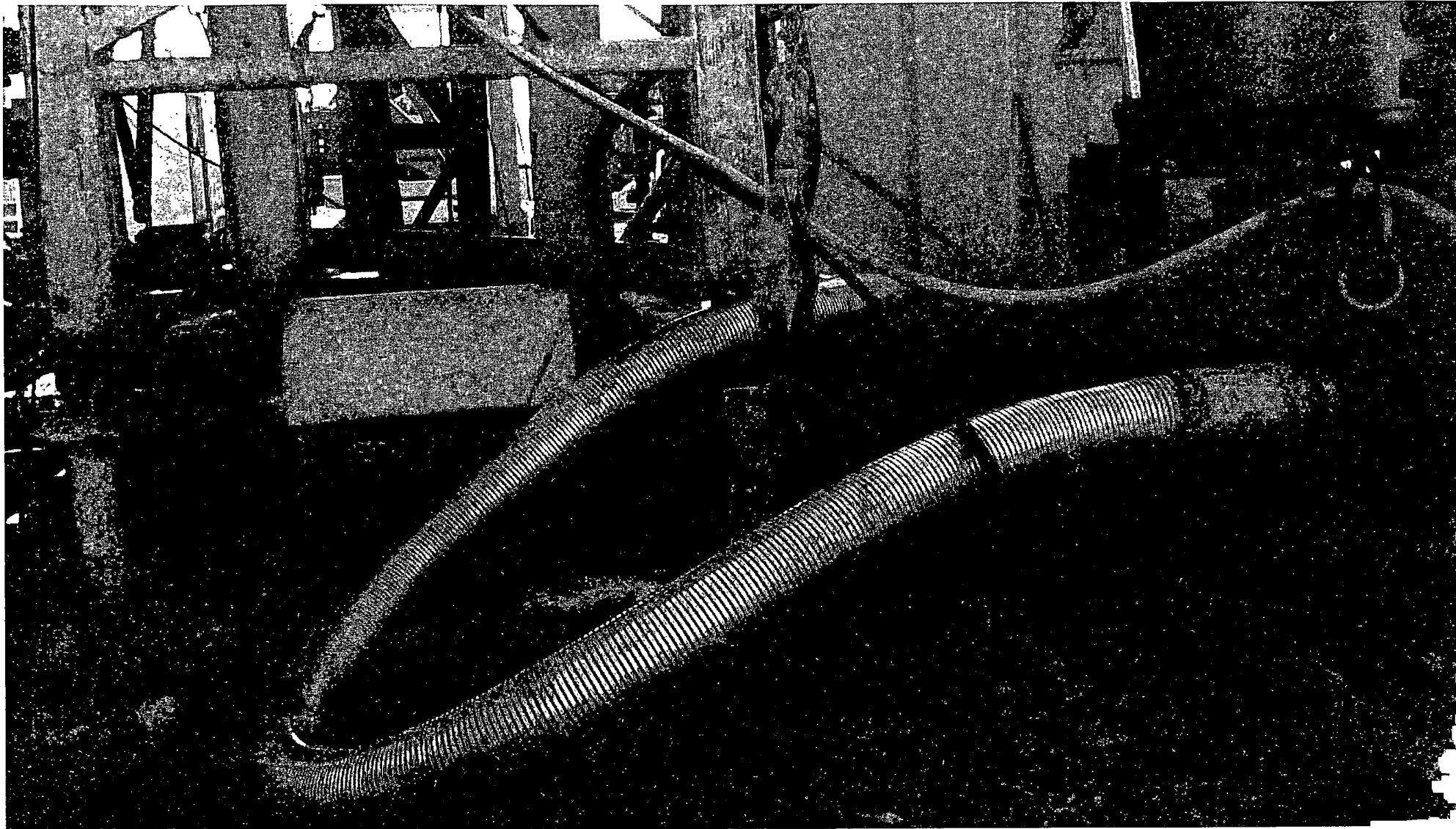
LIMAREX ENERGY CO OF COLORADO

AS

Drilling Operations
Choke Manifold
5M Service

Exhibit E-1 – Choke Manifold Diagram
Snoddy Federal No. 20H
Cimarex Energy Co. of Colorado
26-20S-32E
SHL 811 FNL & 644 FEL
BHL 660 FNL & 330 FWL
Lea County, NM





Cactus Rig 115
Serial # 63270

MIDWEST
HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS DRILLING		P.O. Number: RIG#147
HOSE SPECIFICATIONS		
Type: CHOKE & KILL		Length: 35'
I.D. 4" INCHES		O.D. 8"
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000	BURST PRESSURE
COUPLINGS		
Stem Part No. E4.0X64WB		Ferrule No. FERRULE-128
Type of Coupling: 4-1/16 10K FLANGE(BX-155)		Die Size:
PROCEDURE		
<i><u>Hose assembly pressure tested with water at ambient temperature.</u></i>		
TIME HELD AT TEST PRESSURE 15 MIN.		ACTUAL BURST PRESSURE: 0 PSI
COMMENTS: SERIAL#63270		
Date: 7/14/2010	Tested By: BOBBY FINK	Approved: BRENT BURNETT



Midwest Hose
& Specialty, Inc.

Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2", 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

Cactus 115

