



30-015-38442

INTEQ

End of Well Report

Cimarex Energy Co.

Eddy County, NM

Seldom Seen 15 Fed No. 3H

Cactus 122

Well Specifications

Well Name: Seldom Seen 15 No. 3H
Start Date: 3/26/2011
Client: Cimarex Energy Co.
Rig Name: Cactus 122
County: Eddy County, NM
Field: (Seldom Seen) Sec 15, T25S, R26E

Well Location:

NAD83 / TM New Mexico State Planes, Eastern Zone (3001)

Grid Coordinates

Easting: 559908.69'
Northing: 411753.02'

Geographical Coordinates

Latitude: 32°07'55.105"N
Longitude: 104°16'24.016"W

RT: 3,392' above M.S.L.

Date TD Reached: 4/12/2011

Final Depth MD: 13,847'

Final Depth TVD: 9,590.65'

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1 Introduction

'Seldom Seen 15 Fed No. 3H' was a horizontal well drilled in Eddy County, New Mexico. Baker Hughes INTEQ provided the directional drilling and gamma services for the 6 1/8" hole sections. This report summarizes the drilling operations that took place March through April of 2011.

2 6 1/8" Curve Hole Section –

For this hole section a 4 3/4" Ultra X-treme LS motor was used in combination with an INTEQ MWD to build the curve.

2.1 Primary objectives

Drill 6 1/8" curve hole section; KOP at 9,456' MD, build the curve using 28.0%/100 to about 91.0° INC landing in target zone at an estimated 9,658.34' TVD.

2.2 Results

BHA # 1 Curve assembly was picked up at surface with motor AKO set to 3.2°. After a good surface test the BHA was tripped in and drilled 9,435' - 9,718' successfully building inclination to 74.7°, POOH to pick up lateral assembly to soft land curve and drill lateral.

Section Summary

Total # of BHAs	1
Depth In	9,435'
Depth Out	9,718'
Distance Drilled	283'
Drilling Time	47.0 hrs
Average ROP	6.0'/ hr
Slide Requirements(hrs)	47.0
Average Slide ROP	6.0'/hr
Average Rotary ROP	N/A

2.3 BHA's Setup

The detailed BHA setup can be found in the appendix

2.4 Operating Parameters

The detailed Parameters can be found in the appendix

3 6 1/8" Lateral Hole Section –

For this hole section a 4 3/4" Ultra X-treme LS motor with an INTEQ MWD was used to drill the lateral.

3.1 Primary objectives

Soft land curve and drill lateral hole section while maintaining the target formation dip to TD.

3.2 Results

BHA # 2 Lateral BHA was picked up at surface with the motor AKO set to 1.8°, the BHA tested well. The BHA was ran in hole and drilled 9,718' – 11,471' MD; a total of 1,753'. The BHA successfully landed the curve and continued to drill forty percent of the lateral before no differential was seen and it was decided to POOH for a new motor.

BHA # 3 A new motor, MWD, and insert bit was picked up at surface and tripped in hole after a good surface test. The BHA drilled 11,471' – 12,007' MD; a total of 536'. The BHA performed well and pulled out of hole for high bit hours.

BHA # 4 A PDC bit was picked up at surface and the BHA tested well before tripping in. The BHA drilled 12,007' – 13,849' MD, a total of 1,842'. The BHA successfully completed the lateral hole section but was unable to hold angle at the end of the run, POOH for TD.

Section Summary

Total # of drilling BHAs	3
Depth In	9,718'
Depth Out	13,849'
Distance Drilled	4,131'
Drilling Time	271.5 hrs
Average ROP	15.2' / hr
Slide Requirements(hrs)	66.75
Average Slide ROP	9.3' / hr
Average Rotary ROP	25.9' / hr

3.3 BHA's Setup

The detailed BHA setup can be found in the appendix

3.4 Operating Parameters

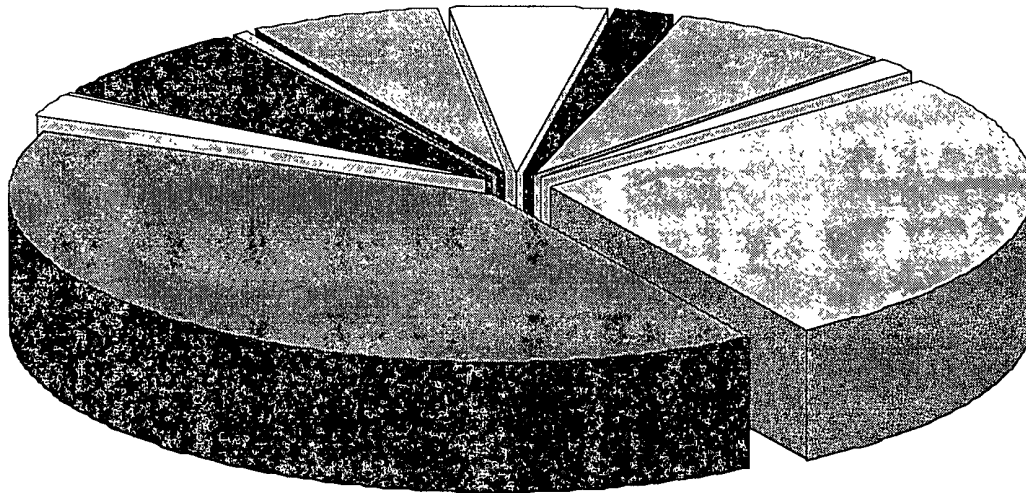
The detailed Parameters can be found in the appendix

4 Appendix

- 4.1 Analysis and Time Breakdown**
- 4.2 Survey Listings**
- 4.3 Bottom Hole Assembly**
- 4.4 Daily Drilling Reports**
- 4.5 Drilling Parameter Records**

Baker Hughes INTEQ

Activity Totals for Job

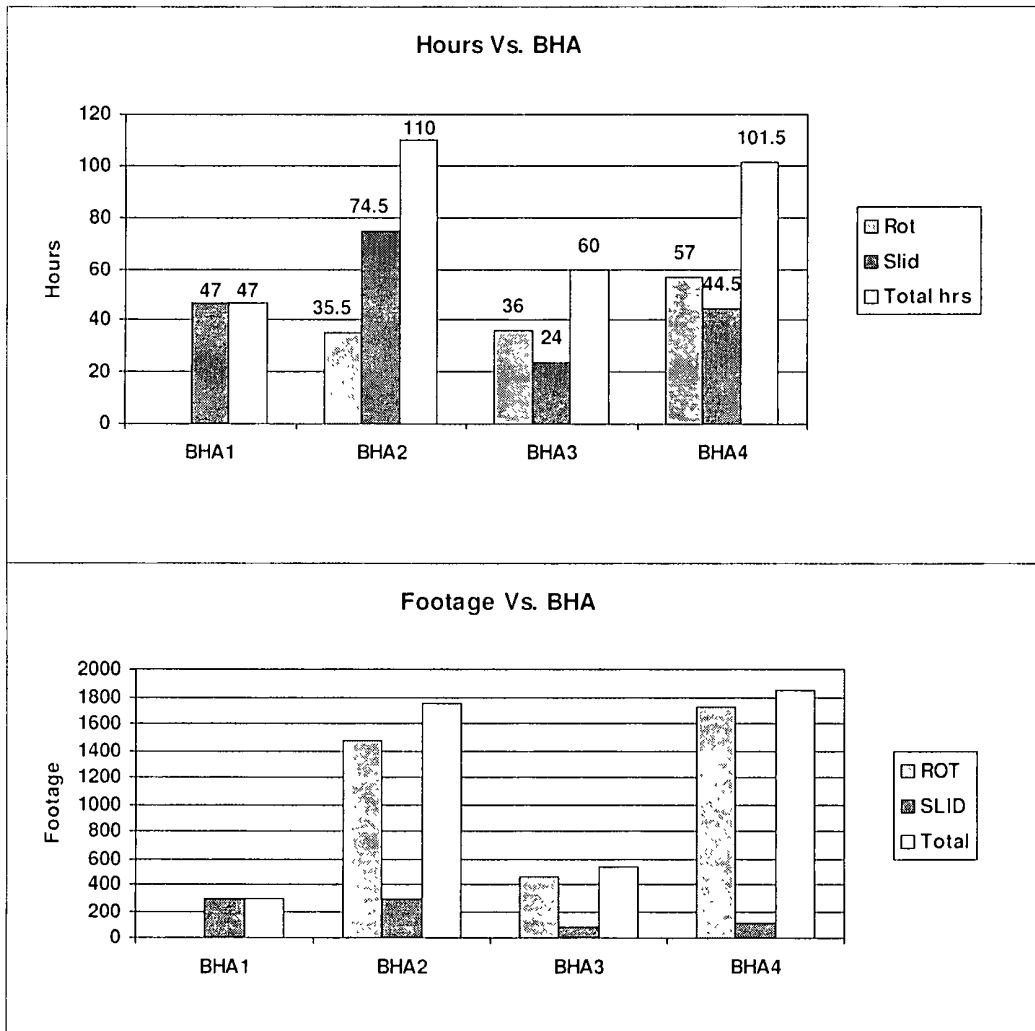


- ☐ Rotary Drill
- ☒ Slide Drill
- ☐ Circulate
- ☐ Reaming
- ☒ Survey Circulating
- ☒ Survey Non-Circulating
- ☒ Tripping In (From Surface)
- ☐ Tripping Out (To Surface)
- ☒ Other Circulating
- ☐ Other Non-circulating
- ☐ Rig Service

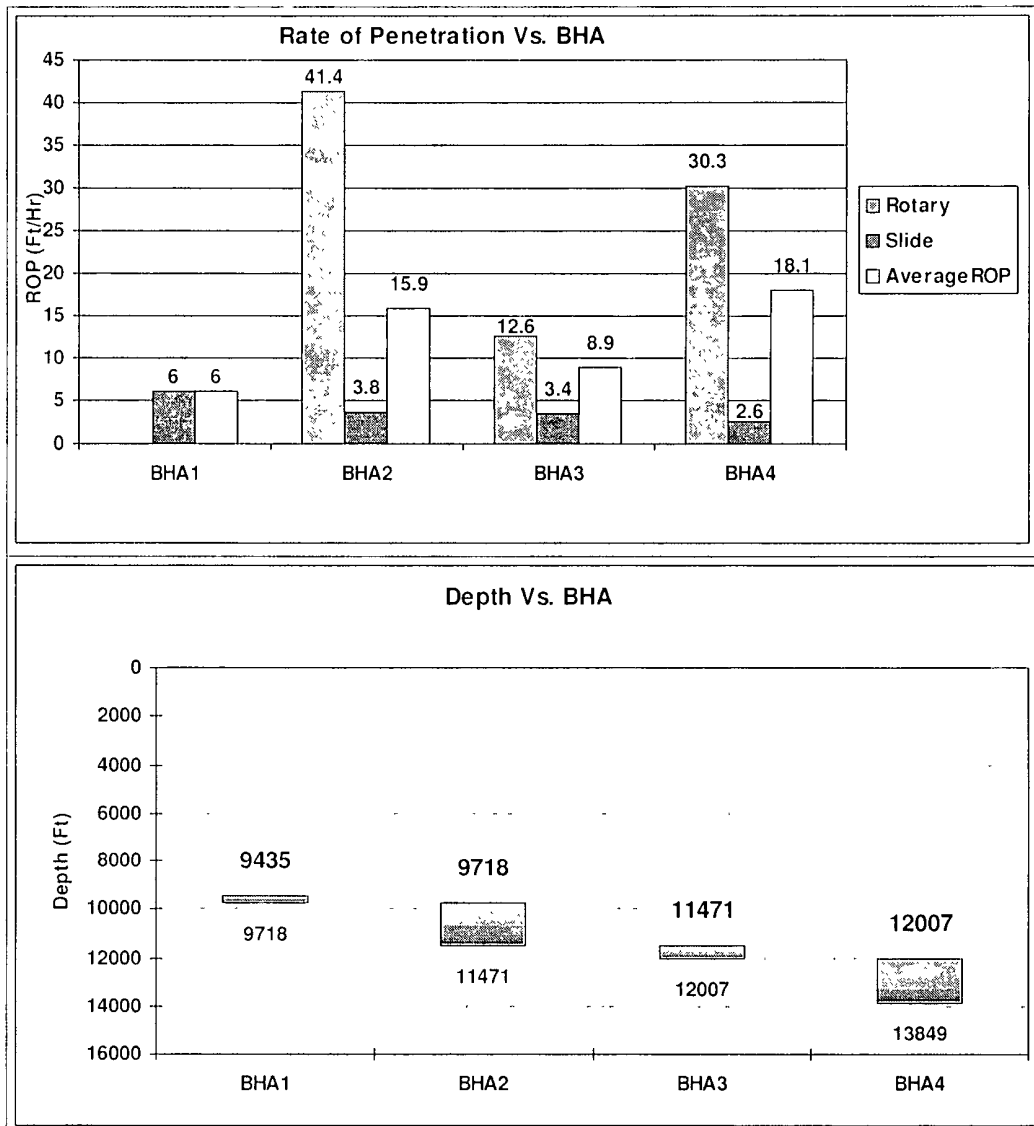
Description of Activity	Hours	%
Circulate	10.50	2%
Other Circulating	8.25	2%
Other Non-circulating	35.50	7%
Reaming	1.00	0%
Rig Service	7.00	1%
Rotary Drill	128.50	27%
Slide Drill	190.00	40%
Survey Circulating	34.50	7%
Survey Non-Circulating	2.50	1%
Tripping In (From Surface)	30.25	6%
Tripping Out (To Surface)	26.00	5%
Total	474	

Baker Hughes INTEQ

BHA analysis for CIMAREX SELDOM SEEN 15 FED#3H



BHA analysis for CIMAREX SELDOM SEEN 15 FED#3H





INTEQ

Baker Hughes INTEQ

BHA analysis for CIMAREX SELDOM SEEN 15 FED#3H

BHA #	1
Rotary Footage	
%Rot Ft	
Slide Footage	283
%Slid Ft	100
Tt Ft	283
Rotary Hours	
%Rot Hrs	
Slide Hours	47 00
%Slid Hrs	100
Total Hours	47
Rotary ROP	
Slide ROP	6 02
Average ROP	6 02

BHA #	2
Rotary Footage	1469
%Rot Ft	84
Slide Footage	284
%Slid Ft	16
Tt Ft	1753
Rotary Hours	35 50
%Rot Hrs	32
Slide Hours	74 50
%Slid Hrs	68
Total Hours	110
Rotary ROP	41 38
Slide ROP	3.81
Average ROP	15 94

BHA analysis for CIMAREX SELDOM SEEN 15 FED#3H

BHA #	3
Rotary Footage	454
%Rot Ft	85
Slide Footage	82
%Slid Ft	15
Tt Ft	536
Rotary Hours	36 00
%Rot Hrs	60
Slide Hours	24 00
%Slid Hrs	40
Total Hours	60
Rotary ROP	12 61
Slide ROP	3 42
Average ROP	8 93

BHA #	4
Rotary Footage	1727
%Rot Ft	94
Slide Footage	115
%Slid Ft	6
Tt Ft	1842
Rotary Hours	57 00
%Rot Hrs	56
Slide Hours	44 50
%Slid Hrs	44
Total Hours	101 5
Rotary ROP	30 30
Slide ROP	2 58
Average ROP	18.15

BHA analysis for CIMAREX SELDOM SEEN 15 FED#3H

Job Summary

<i>Total Rotary Ft:</i>	3650	<i>Total Rotary Hrs:</i>	128.50	<i>Total Rot ROP:</i>	28.40
<i>Total Slide Ft:</i>	764	<i>Total Slide Hrs:</i>	190 00	<i>Total Slid ROP:</i>	4.02
<i>Total Footage:</i>	4414	<i>Total Hours:</i>	318 50	<i>Total Avg ROP:</i>	13.86



Cimarex Energy Co.

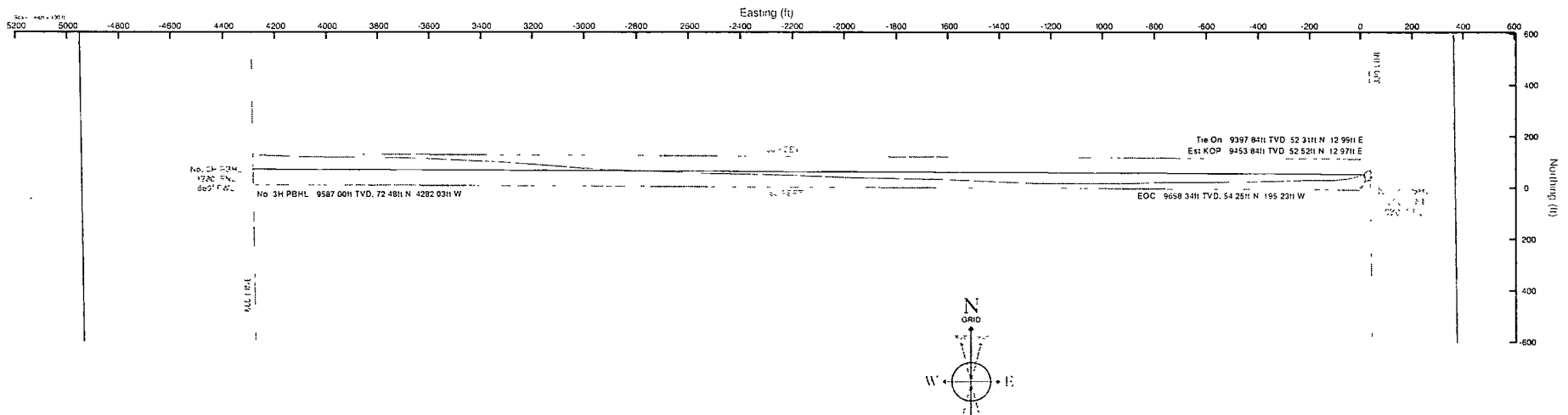
Location Eddy County, NM
Field (Seldom Seen) Sec 15, T25S, R26E
Facility Seldom Seen 15 Fed

Slot No 3H SHL
Well No. 3H
Wellbore No 3H PWB



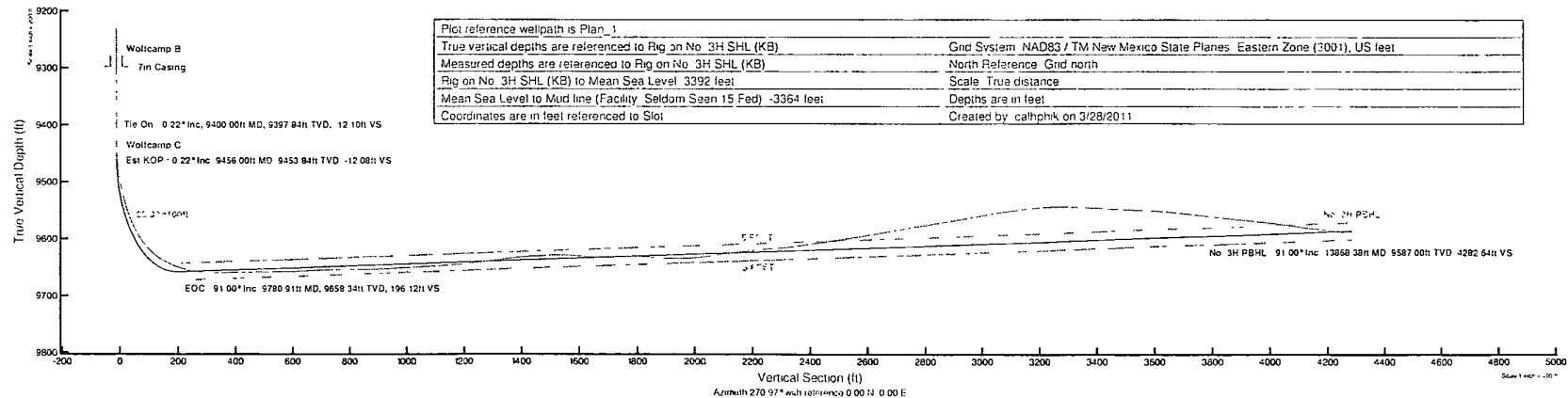
Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	9400.00	0.220	353.830	9397.84	52.31	12.99	0.00	-12.10
Est KOP	9456.00	0.220	353.830	9453.84	52.52	12.97	0.00	-12.08
EOC	9780.91	91.000	270.256	9658.34	54.25	-195.23	28.00	196.12
No 3H PBHL	13868.38	91.000	270.256	9587.00	72.48	-4282.03	0.00	4282.64



BGG1 (1945.0 to 2012.0) Dip 59.95° Field +8536 nT
Magnetic North is 7.99 degrees East of True North (at 3/1/2011)
Grid North is 0.03 degrees East of True North
To correct azimuth from True to Grid subtract 0.03 degrees
To correct azimuth from Magnetic to Grid add 7.99 degrees

For example if the Magnetic North Azimuth = 90 degs then the Grid North Azimuth = 90 - 7.99 = 97.99





Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Seldom Seen) Sec 15, T25S, R26E	Wellbore	No. 3H AWB
Facility	Seldom Seen 15 Fed		

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Calhphik
Scale	0.999909	Report Generated	4/13/2011 at 7:07:55 AM
Convergence at slot	0.03° East	Database/Source file	WA Midland/No._3H_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	559908.69	411753.02	32°07'55.105"N	104°16'24.016"W
Facility Reference Pt			559908.69	411753.02	32°07'55.105"N	104°16'24.016"W
Field Reference Pt			559908.69	411753.02	32°07'55.105"N	104°16'24.016"W

WELLPATH DATA			
Calculation method	Minimum curvature	Rig on No. 3H SHL (KB) to GL	28.00ft
Horizontal Reference Pt	Slot	Rig on No. 3H SHL (KB) to Mean Sea Level	3392.00ft
Vertical Reference Pt	Rig on No. 3H SHL (KB)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	270.97°



Actual Wellpath Report

No. 3H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Seldom Seen) Sec 15, T25S, R26E	Wellbore	No. 3H AWP
Facility	Seldom Seen 15 Fed		

WELLPATH DATA (178 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0 00	0.000	87.860	0 00	0 00	0.00	0.00	559908.69	411753.02	32°07'55.105"N	104°16'24.016"W	0.00	
100 00	0.230	87.860	100 00	-0.20	0.01	0.20	559908.89	411753.03	32°07'55.105"N	104°16'24.014"W	0.23	
200 00	0.140	44.470	200 00	-0.48	0.10	0.49	559909.18	411753.12	32°07'55.106"N	104°16'24.011"W	0.16	
300 00	0.370	272.370	300 00	-0.25	0.20	0.25	559908.94	411753.22	32°07'55.107"N	104°16'24.013"W	0.48	
400 00	0.400	281.680	400 00	0.42	0.29	-0.41	559908.28	411753.31	32°07'55.108"N	104°16'24.021"W	-0.07	
500 00	0.280	289.220	499.99	0.99	0.44	-0.99	559907.70	411753.46	32°07'55.110"N	104°16'24.028"W	0.13	
600 00	0.210	273.380	599.99	1.41	0.53	-1.40	559907.29	411753.55	32°07'55.111"N	104°16'24.033"W	0.10	
700 00	0.090	63.050	699.99	1.52	0.58	-1.51	559907.18	411753.60	32°07'55.111"N	104°16'24.034"W	0.29	
800 00	0.430	39.820	799.99	1.22	0.90	-1.20	559907.49	411753.92	32°07'55.114"N	104°16'24.030"W	0.35	
900 00	0.570	35.650	899.99	0.70	1.59	-0.67	559908.02	411754.61	32°07'55.121"N	104°16'24.024"W	-0.14	
1000 00	0.700	48.020	999.98	-0.03	2.40	0.07	559908.76	411755.42	32°07'55.129"N	104°16'24.016"W	0.19	
1100 00	0.670	69.210	1099.98	-1.02	3.02	1.07	559909.76	411756.04	32°07'55.135"N	104°16'24.004"W	0.25	
1200 00	1.040	78.300	1199.96	-2.45	3.41	2.51	559911.20	411756.43	32°07'55.139"N	104°16'23.987"W	0.39	
1300 00	1.370	66.670	1299.94	-4.42	4.07	4.49	559913.18	411757.09	32°07'55.146"N	104°16'23.964"W	0.41	
1400 00	1.730	50.030	1399.91	-6.65	5.51	6.75	559915.44	411758.53	32°07'55.160"N	104°16'23.938"W	0.57	
1500 00	2.080	32.920	1499.85	-8.75	8.01	8.89	559917.58	411761.02	32°07'55.184"N	104°16'23.913"W	0.66	
1600 00	2.670	31.240	1599.76	-10.89	11.52	11.08	559919.77	411764.54	32°07'55.219"N	104°16'23.887"W	0.59	
1700 00	2.810	30.760	1699.65	-13.28	15.62	13.55	559922.24	411768.64	32°07'55.260"N	104°16'23.859"W	0.14	
1800 00	2.710	22.170	1799.53	-15.35	19.91	15.69	559924.38	411772.93	32°07'55.302"N	104°16'23.834"W	0.43	
1900 00	1.850	18.610	1899.45	-16.70	23.63	17.10	559925.79	411776.65	32°07'55.339"N	104°16'23.817"W	0.87	
2000 00	1.450	14.660	1999.41	-17.49	26.39	17.93	559926.62	411779.40	32°07'55.366"N	104°16'23.808"W	0.42	
2100 00	1.220	9.250	2099.39	-17.94	28.66	18.43	559927.11	411781.68	32°07'55.389"N	104°16'23.802"W	0.26	
2200 00	1.110	7.590	2199.37	-18.20	30.67	18.73	559927.41	411783.69	32°07'55.409"N	104°16'23.798"W	0.12	
2300 00	0.970	359.040	2299.35	-18.29	32.48	18.84	559927.53	411785.50	32°07'55.427"N	104°16'23.797"W	0.21	
2400 00	0.880	357.010	2399.34	-18.20	34.09	18.78	559927.47	411787.11	32°07'55.443"N	104°16'23.798"W	0.10	
2500 00	0.840	358.290	2499.32	-18.12	35.59	18.72	559927.41	411788.61	32°07'55.457"N	104°16'23.798"W	0.04	
2600 00	0.780	5.100	2599.31	-18.13	37.00	18.76	559927.45	411790.02	32°07'55.471"N	104°16'23.798"W	0.11	
2700 00	0.670	357.680	2699.31	-18.15	38.26	18.80	559927.49	411791.28	32°07'55.484"N	104°16'23.797"W	0.14	
2800 00	0.500	5.370	2799.30	-18.15	39.28	18.82	559927.50	411792.30	32°07'55.494"N	104°16'23.797"W	0.19	
2900 00	0.450	5.680	2899.30	-18.21	40.11	18.90	559927.58	411793.12	32°07'55.502"N	104°16'23.796"W	0.05	
3000 00	0.370	349.190	2999.30	-18.18	40.82	18.87	559927.56	411793.83	32°07'55.509"N	104°16'23.797"W	0.14	
3100 00	0.270	355.150	3099.29	-18.09	41.37	18.79	559927.48	411794.38	32°07'55.515"N	104°16'23.798"W	0.11	
3200 00	0.300	352.830	3199.29	-18.03	41.86	18.74	559927.43	411794.88	32°07'55.519"N	104°16'23.798"W	0.03	
3300 00	0.260	0.930	3299.29	-17.99	42.35	18.71	559927.40	411795.37	32°07'55.524"N	104°16'23.798"W	0.06	
3400 00	0.280	2.320	3399.29	-18.00	42.82	18.72	559927.41	411795.84	32°07'55.529"N	104°16'23.798"W	0.02	
3500 00	0.280	7.960	3499.29	-18.03	43.31	18.77	559927.46	411796.32	32°07'55.534"N	104°16'23.798"W	0.03	
3600 00	0.280	20.660	3599.29	-18.15	43.78	18.89	559927.58	411796.79	32°07'55.538"N	104°16'23.796"W	0.06	
3700 00	0.290	24.310	3699.29	-18.33	44.24	19.08	559927.77	411797.25	32°07'55.543"N	104°16'23.794"W	0.02	
3800 00	0.290	6.730	3799.29	-18.45	44.72	19.21	559927.90	411797.73	32°07'55.548"N	104°16'23.793"W	0.09	
3900 00	0.240	18.340	3899.28	-18.54	45.17	19.31	559928.00	411798.18	32°07'55.552"N	104°16'23.792"W	0.07	
4000 00	0.300	4.060	3999.28	-18.62	45.63	19.39	559928.08	411798.64	32°07'55.557"N	104°16'23.791"W	0.09	
4100 00	0.330	339.780	4099.28	-18.53	46.16	19.31	559928.00	411799.18	32°07'55.562"N	104°16'23.791"W	0.14	
4200 00	0.380	328.630	4199.28	-18.25	46.71	19.04	559927.73	411799.73	32°07'55.567"N	104°16'23.795"W	0.09	
4300 00	0.470	305.970	4299.28	-17.73	47.24	18.54	559927.22	411800.25	32°07'55.573"N	104°16'23.800"W	0.19	
4400 00	0.460	288.320	4399.27	-17.01	47.60	17.82	559926.51	411800.62	32°07'55.576"N	104°16'23.809"W	0.44	



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Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Seldom Seen) Sec 15, T25S, R26E	Wellbore	No. 3H AWP
Facility	Seldom Seen 15 Fed		

WELLPATH DATA (178 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4500.00	0.480	257.420	4499.27	-16.22	47.64	17.03	559925.72	411800.65	32°07'55.577"N	104°16'23.818"W	0.25	
4600.00	0.520	216.810	4599.27	-15.55	47.18	16.35	559925.04	411800.20	32°07'55.572"N	104°16'23.826"W	0.35	
4700.00	0.570	195.670	4699.26	-15.16	46.34	15.95	559924.63	411799.36	32°07'55.564"N	104°16'23.831"W	0.21	
4800.00	0.580	182.560	4799.26	-15.02	45.36	15.79	559924.48	411798.37	32°07'55.554"N	104°16'23.832"W	0.13	
4900.00	0.700	175.880	4899.25	-15.06	44.24	15.81	559924.50	411797.26	32°07'55.543"N	104°16'23.832"W	0.14	
5000.00	0.760	172.910	4999.24	-15.21	42.98	15.94	559924.62	411795.99	32°07'55.530"N	104°16'23.831"W	0.07	
5100.00	0.800	161.710	5099.23	-15.53	41.65	16.24	559924.92	411794.67	32°07'55.517"N	104°16'23.827"W	0.16	
5200.00	0.810	162.380	5199.22	-15.98	40.32	16.67	559925.36	411793.33	32°07'55.504"N	104°16'23.822"W	0.01	
5300.00	0.890	169.200	5299.21	-16.37	38.88	17.03	559925.72	411791.90	32°07'55.490"N	104°16'23.818"W	0.13	
5400.00	0.980	186.500	5399.20	-16.44	37.27	17.08	559925.77	411790.29	32°07'55.474"N	104°16'23.818"W	0.29	
5500.00	0.990	177.240	5499.19	-16.42	35.56	17.02	559925.71	411788.57	32°07'55.457"N	104°16'23.818"W	0.16	
5600.00	0.990	167.950	5599.17	-16.67	33.85	17.24	559925.93	411786.87	32°07'55.440"N	104°16'23.816"W	0.16	
5700.00	0.950	152.950	5699.16	-17.25	32.27	17.80	559926.49	411785.28	32°07'55.424"N	104°16'23.809"W	0.26	
5800.00	0.920	140.650	5799.14	-18.16	30.91	18.69	559927.38	411783.92	32°07'55.411"N	104°16'23.799"W	0.20	
5900.00	0.940	131.010	5899.13	-19.31	29.75	19.82	559928.50	411782.76	32°07'55.400"N	104°16'23.786"W	0.16	
6000.00	0.930	117.120	5999.12	-20.67	28.84	21.16	559929.85	411781.86	32°07'55.391"N	104°16'23.770"W	0.23	
6100.00	1.040	105.350	6099.10	-22.27	28.23	22.75	559931.44	411781.25	32°07'55.385"N	104°16'23.752"W	0.23	
6200.00	1.040	87.970	6199.09	-24.06	28.02	24.54	559933.22	411781.04	32°07'55.382"N	104°16'23.731"W	0.31	
6300.00	1.110	80.380	6299.07	-25.92	28.21	26.40	559935.09	411781.23	32°07'55.384"N	104°16'23.709"W	0.16	
6400.00	1.280	69.640	6399.05	-27.91	28.77	28.40	559937.09	411781.78	32°07'55.390"N	104°16'23.686"W	0.28	
6500.00	1.840	72.640	6499.01	-30.47	29.63	30.98	559939.67	411782.65	32°07'55.398"N	104°16'23.656"W	0.57	
6600.00	1.940	60.430	6598.96	-33.46	30.95	33.98	559942.67	411783.96	32°07'55.411"N	104°16'23.621"W	0.41	
6700.00	1.910	52.390	6698.90	-36.22	32.80	36.78	559945.46	411785.82	32°07'55.430"N	104°16'23.588"W	0.27	
6800.00	1.810	41.110	6798.85	-38.54	35.01	39.14	559947.82	411788.02	32°07'55.451"N	104°16'23.561"W	0.38	
6900.00	2.480	33.770	6898.78	-40.73	37.99	41.38	559950.06	411791.01	32°07'55.481"N	104°16'23.535"W	0.72	
7000.00	2.670	25.660	6998.68	-42.87	41.89	43.59	559952.27	411794.91	32°07'55.520"N	104°16'23.509"W	0.41	
7100.00	2.640	13.800	7098.57	-44.36	46.23	45.15	559953.83	411799.24	32°07'55.563"N	104°16'23.491"W	0.55	
7200.00	1.880	9.720	7198.49	-45.12	50.08	45.97	559954.66	411803.10	32°07'55.601"N	104°16'23.481"W	0.78	
7300.00	1.750	2.690	7298.44	-45.41	53.22	46.32	559955.01	411806.24	32°07'55.632"N	104°16'23.477"W	0.26	
7400.00	1.660	345.480	7398.40	-45.07	56.15	46.03	559954.71	411809.17	32°07'55.661"N	104°16'23.481"W	0.52	
7500.00	1.790	327.930	7498.35	-43.83	58.88	44.84	559953.52	411811.89	32°07'55.688"N	104°16'23.495"W	0.54	
7600.00	1.810	317.440	7598.30	-41.89	61.36	42.94	559951.63	411814.38	32°07'55.712"N	104°16'23.517"W	0.33	
7700.00	1.640	319.930	7698.26	-39.87	63.62	40.95	559949.64	411816.64	32°07'55.735"N	104°16'23.540"W	0.19	
7800.00	1.420	318.610	7798.22	-38.09	65.65	39.21	559947.90	411818.66	32°07'55.755"N	104°16'23.560"W	0.22	
7900.00	1.280	293.920	7898.20	-36.23	67.03	37.37	559946.06	411820.04	32°07'55.768"N	104°16'23.581"W	0.59	
8000.00	1.440	264.130	7998.17	-33.95	67.35	35.10	559943.79	411820.37	32°07'55.772"N	104°16'23.608"W	0.72	
8100.00	1.430	256.840	8098.14	-31.50	66.94	32.63	559941.32	411819.96	32°07'55.768"N	104°16'23.636"W	0.18	
8200.00	1.460	252.550	8198.11	-29.08	66.28	30.20	559938.89	411819.29	32°07'55.761"N	104°16'23.665"W	0.11	
8300.00	1.380	243.700	8298.07	-26.80	65.36	27.91	559936.60	411818.37	32°07'55.752"N	104°16'23.691"W	0.23	
8400.00	1.420	237.410	8398.04	-24.70	64.16	25.78	559934.47	411817.17	32°07'55.740"N	104°16'23.716"W	0.16	
8500.00	1.330	228.370	8498.02	-22.81	62.72	23.87	559932.56	411815.73	32°07'55.726"N	104°16'23.738"W	0.23	
8600.00	1.440	220.770	8597.99	-21.15	61.00	22.19	559930.87	411814.01	32°07'55.709"N	104°16'23.758"W	0.21	
8700.00	1.610	218.720	8697.95	-19.49	58.95	20.49	559929.17	411811.96	32°07'55.689"N	104°16'23.778"W	0.18	
8800.00	1.420	210.720	8797.92	-18.01	56.79	18.97	559927.66	411809.80	32°07'55.667"N	104°16'23.795"W	0.28	
8900.00	1.300	204.950	8897.89	-16.93	54.70	17.86	559926.55	411807.71	32°07'55.646"N	104°16'23.808"W	0.18	



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Seldom Seen) Sec 15, T25S, R26E	Wellbore	No. 3H AWB
Facility	Seldom Seen 15 Fed		

WELLPATH DATA (178 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
9000.00	0.890	207.050	8997.87	-16.13	52.97	17.03	559925.72	411805.99	32°07'55.629"N	104°16'23.818"W	0.41	
9100.00	0.690	225.720	9097.86	-15.37	51.86	16.25	559924.94	411804.88	32°07'55.618"N	104°16'23.827"W	0.32	
9200.00	0.810	266.500	9197.85	-14.24	51.40	15.11	559923.80	411804.41	32°07'55.614"N	104°16'23.840"W	0.53	
9300.00	0.910	298.730	9297.84	-12.83	51.74	13.71	559922.40	411804.75	32°07'55.617"N	104°16'23.857"W	0.49	
9400.00	0.220	353.830	9397.84	-12.10	52.31	12.99	559921.68	411805.33	32°07'55.623"N	104°16'23.865"W	0.80	
9427.00	0.300	53.400	9424.84	-12.15	52.40	13.04	559921.73	411805.42	32°07'55.624"N	104°16'23.864"W	0.99	
9459.00	7.600	255.100	9456.75	-10.18	51.91	11.06	559919.75	411804.92	32°07'55.619"N	104°16'23.887"W	24.62	
9490.00	17.100	249.300	9487.00	-3.96	49.77	4.80	559913.49	411802.78	32°07'55.598"N	104°16'23.960"W	30.87	
9522.00	24.800	251.900	9516.86	6.77	46.01	-5.99	559902.70	411799.03	32°07'55.561"N	104°16'24.086"W	24.23	
9554.00	32.900	254.800	9544.86	21.49	41.64	-20.78	559887.91	411794.66	32°07'55.517"N	104°16'24.258"W	25.68	
9585.00	40.300	259.200	9569.74	39.42	37.55	-38.79	559869.91	411790.57	32°07'55.477"N	104°16'24.467"W	25.31	
9617.00	48.800	263.000	9592.53	61.51	34.14	-60.94	559847.75	411787.15	32°07'55.443"N	104°16'24.725"W	27.83	
9648.00	57.700	264.200	9611.06	86.12	31.38	-85.60	559823.09	411784.40	32°07'55.416"N	104°16'25.012"W	28.88	
9680.00	65.800	267.100	9626.19	114.17	29.28	-113.69	559795.01	411782.29	32°07'55.396"N	104°16'25.338"W	26.54	
9712.00	74.100	271.300	9637.16	144.18	28.89	-143.71	559764.99	411781.90	32°07'55.392"N	104°16'25.687"W	28.71	
9744.00	77.100	270.100	9645.12	175.17	29.26	-174.70	559734.01	411782.28	32°07'55.396"N	104°16'26.048"W	10.05	
9775.00	80.600	269.600	9651.11	205.57	29.18	-205.11	559703.60	411782.20	32°07'55.395"N	104°16'26.401"W	11.40	
9807.00	83.200	268.600	9655.62	237.23	28.68	-236.78	559671.93	411781.70	32°07'55.390"N	104°16'26.770"W	8.69	
9839.00	85.700	268.300	9658.71	269.05	27.82	-268.62	559640.10	411780.84	32°07'55.382"N	104°16'27.140"W	7.87	
9870.00	89.600	268.400	9659.98	299.99	26.93	-299.57	559609.15	411779.95	32°07'55.373"N	104°16'27.500"W	12.58	
9902.00	90.100	268.300	9660.07	331.95	26.01	-331.56	559577.16	411779.03	32°07'55.364"N	104°16'27.872"W	1.59	
9933.00	90.700	268.900	9659.85	362.92	25.25	-362.55	559546.18	411778.27	32°07'55.357"N	104°16'28.232"W	2.74	
9965.00	90.700	268.800	9659.46	394.90	24.61	-394.54	559514.19	411777.63	32°07'55.351"N	104°16'28.604"W	0.31	
9997.00	90.900	269.100	9659.01	426.88	24.02	-426.53	559482.20	411777.04	32°07'55.345"N	104°16'28.976"W	1.13	
10028.00	90.300	269.200	9658.69	457.86	23.56	-457.53	559451.21	411776.58	32°07'55.341"N	104°16'29.337"W	1.96	
10092.00	90.700	269.000	9658.13	521.82	22.56	-521.52	559387.22	411775.58	32°07'55.331"N	104°16'30.081"W	0.70	
10155.00	90.600	269.500	9657.42	584.79	21.73	-584.51	559324.24	411774.75	32°07'55.324"N	104°16'30.813"W	0.81	
10219.00	91.700	270.600	9656.13	648.77	21.79	-648.49	559260.26	411774.81	32°07'55.324"N	104°16'31.557"W	2.43	
10282.00	90.700	269.700	9654.81	711.74	21.95	-711.48	559197.28	411774.97	32°07'55.326"N	104°16'32.290"W	2.14	
10345.00	89.800	267.900	9654.54	774.70	20.63	-774.46	559134.30	411773.65	32°07'55.314"N	104°16'33.022"W	3.19	
10377.00	89.900	268.200	9654.62	806.65	19.55	-806.44	559102.33	411772.56	32°07'55.303"N	104°16'33.394"W	0.99	
10408.00	90.700	268.300	9654.46	837.62	18.60	-837.42	559071.34	411771.62	32°07'55.294"N	104°16'33.755"W	2.60	
10440.00	90.900	268.600	9654.01	869.58	17.73	-869.41	559039.36	411770.75	32°07'55.285"N	104°16'34.127"W	1.13	
10472.00	90.900	268.700	9653.51	901.55	16.98	-901.40	559007.38	411770.00	32°07'55.278"N	104°16'34.499"W	0.31	
10503.00	92.000	269.200	9652.72	932.52	16.41	-932.38	558976.40	411769.43	32°07'55.273"N	104°16'34.859"W	3.90	
10566.00	91.200	270.100	9650.96	995.48	16.03	-995.35	558913.43	411769.05	32°07'55.269"N	104°16'35.591"W	1.91	
10630.00	91.900	270.300	9649.23	1059.45	16.25	-1059.33	558849.46	411769.27	32°07'55.272"N	104°16'36.335"W	1.14	
10693.00	92.000	270.600	9647.09	1122.41	16.74	-1122.29	558786.50	411769.76	32°07'55.277"N	104°16'37.067"W	0.50	
10756.00	92.300	269.600	9644.73	1185.36	16.85	-1185.25	558723.55	411769.87	32°07'55.278"N	104°16'37.799"W	1.66	
10819.00	93.400	271.000	9641.59	1248.28	17.18	-1248.16	558660.64	411770.20	32°07'55.282"N	104°16'38.531"W	2.82	
10882.00	94.200	272.300	9637.42	1311.13	18.99	-1311.00	558597.81	411772.01	32°07'55.300"N	104°16'39.262"W	2.42	
10945.00	93.000	272.700	9633.46	1373.98	21.74	-1373.81	558535.00	411774.75	32°07'55.328"N	104°16'39.992"W	2.01	
11009.00	91.700	272.300	9630.84	1437.91	24.53	-1437.70	558471.13	411777.54	32°07'55.356"N	104°16'40.735"W	2.13	
11072.00	91.200	272.500	9629.24	1500.87	27.16	-1500.62	558408.21	411780.18	32°07'55.382"N	104°16'41.467"W	0.85	
11135.00	88.900	272.600	9629.19	1563.84	29.97	-1563.55	558345.28	411782.98	32°07'55.410"N	104°16'42.199"W	3.65	



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Seldom Seen) Sec 15, T25S, R26E	Wellbore	No. 3H AWB
Facility	Seldom Seen 15 Fed		

WELLPATH DATA (178 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11199.00	88.200	271.700	9630.81	1627.80	32.37	-1627.49	558281.35	411785.38	32°07'55.434"N	104°16'42.942"W	1.78	
11262.00	90.500	270.900	9631.52	1690.79	33.79	-1690.46	558218.38	411786.81	32°07'55.449"N	104°16'43.674"W	3.87	
11325.00	90.600	271.500	9630.92	1753.79	35.11	-1753.45	558155.41	411788.13	32°07'55.462"N	104°16'44.407"W	0.97	
11389.00	88.100	270.600	9631.64	1817.78	36.29	-1817.42	558091.43	411789.30	32°07'55.474"N	104°16'45.151"W	4.15	
11448.00	88.300	271.100	9633.50	1876.75	37.16	-1876.39	558032.47	411790.18	32°07'55.483"N	104°16'45.837"W	0.91	
11511.00	89.800	271.200	9634.54	1939.74	38.43	-1939.37	557969.50	411791.44	32°07'55.496"N	104°16'46.569"W	2.39	
11574.00	92.800	272.600	9633.11	2002.70	40.51	-2002.31	557906.57	411793.53	32°07'55.517"N	104°16'47.301"W	5.25	
11637.00	94.200	272.300	9629.27	2065.56	43.20	-2065.13	557843.75	411796.22	32°07'55.544"N	104°16'48.031"W	2.27	
11701.00	94.300	272.500	9624.52	2129.37	45.87	-2128.90	557779.99	411798.89	32°07'55.570"N	104°16'48.773"W	0.35	
11764.00	93.100	272.200	9620.46	2192.22	48.45	-2191.71	557717.18	411801.47	32°07'55.596"N	104°16'49.503"W	1.96	
11827.00	91.700	271.300	9617.82	2255.15	50.37	-2254.63	557654.27	411803.39	32°07'55.615"N	104°16'50.235"W	2.64	
11890.00	93.500	271.400	9614.96	2318.09	51.86	-2317.54	557591.36	411804.87	32°07'55.630"N	104°16'50.967"W	2.86	
11953.00	94.400	271.500	9610.62	2380.93	53.45	-2380.37	557528.54	411806.46	32°07'55.646"N	104°16'51.697"W	1.44	
12016.00	94.000	271.000	9606.01	2443.76	54.82	-2443.19	557465.73	411807.83	32°07'55.660"N	104°16'52.428"W	1.01	
12080.00	94.400	270.900	9601.32	2507.59	55.88	-2507.00	557401.92	411808.89	32°07'55.671"N	104°16'53.170"W	0.64	
12143.00	94.700	272.000	9596.32	2570.39	57.46	-2569.78	557339.14	411810.48	32°07'55.687"N	104°16'53.900"W	1.80	
12206.00	95.200	271.900	9590.89	2633.14	59.60	-2632.51	557276.42	411812.61	32°07'55.709"N	104°16'54.629"W	0.81	
12269.00	95.300	272.600	9585.12	2695.86	62.06	-2695.20	557213.74	411815.08	32°07'55.733"N	104°16'55.358"W	1.12	
12332.00	94.800	272.600	9579.58	2758.59	64.91	-2757.89	557151.05	411817.92	32°07'55.762"N	104°16'56.087"W	0.79	
12395.00	94.700	272.700	9574.36	2821.35	67.81	-2820.61	557088.34	411820.83	32°07'55.791"N	104°16'56.817"W	0.22	
12459.00	94.800	272.000	9569.06	2885.11	70.43	-2884.33	557024.62	411823.44	32°07'55.817"N	104°16'57.558"W	1.10	
12522.00	94.800	272.500	9563.79	2947.88	72.89	-2947.06	556961.90	411825.91	32°07'55.842"N	104°16'58.287"W	0.79	
12585.00	95.300	274.100	9558.24	3010.58	76.50	-3009.71	556899.26	411829.52	32°07'55.878"N	104°16'59.016"W	2.65	
12649.00	94.400	275.000	9552.83	3074.22	81.56	-3073.28	556835.69	411834.58	32°07'55.928"N	104°16'59.755"W	1.99	
12712.00	93.700	274.500	9548.38	3136.93	86.77	-3135.91	556773.07	411839.78	32°07'55.980"N	104°17'00.483"W	1.36	
12775.00	92.600	274.400	9544.92	3199.72	91.65	-3198.62	556710.36	411844.66	32°07'56.028"N	104°17'01.212"W	1.75	
12839.00	89.800	274.100	9543.58	3263.59	96.39	-3262.43	556646.57	411849.40	32°07'56.076"N	104°17'01.954"W	4.40	
12902.00	88.800	272.800	9544.35	3326.52	100.18	-3325.30	556583.69	411853.19	32°07'56.113"N	104°17'02.686"W	2.60	
12965.00	88.600	272.600	9545.78	3389.48	103.15	-3388.22	556520.79	411856.16	32°07'56.143"N	104°17'03.417"W	0.45	
13028.00	88.000	272.600	9547.65	3452.43	106.00	-3451.13	556457.88	411859.01	32°07'56.171"N	104°17'04.149"W	0.95	
13091.00	88.600	273.200	9549.52	3515.36	109.19	-3514.02	556395.00	411862.20	32°07'56.203"N	104°17'04.880"W	1.35	
13155.00	88.600	272.800	9551.08	3579.30	112.54	-3577.91	556331.11	411865.55	32°07'56.237"N	104°17'05.623"W	0.62	
13218.00	87.700	271.600	9553.12	3642.25	114.96	-3640.83	556268.20	411867.96	32°07'56.261"N	104°17'06.355"W	2.38	
13282.00	87.000	271.400	9556.07	3706.18	116.63	-3704.74	556204.29	411869.64	32°07'56.278"N	104°17'07.098"W	1.14	
13345.00	86.800	271.000	9559.48	3769.09	117.95	-3767.63	556141.41	411870.96	32°07'56.291"N	104°17'07.829"W	0.71	
13408.00	86.700	270.100	9563.05	3831.98	118.55	-3830.53	556078.52	411871.56	32°07'56.297"N	104°17'08.561"W	1.44	
13471.00	87.400	270.400	9566.30	3894.90	118.82	-3893.44	556015.61	411871.83	32°07'56.300"N	104°17'09.292"W	1.21	
13535.00	86.600	270.800	9569.64	3958.81	119.49	-3957.35	555951.71	411872.50	32°07'56.307"N	104°17'10.036"W	1.40	
13598.00	86.300	270.700	9573.55	4021.68	120.32	-4020.22	555888.84	411873.33	32°07'56.316"N	104°17'10.767"W	0.50	
13661.00	85.400	271.200	9578.11	4084.52	121.36	-4083.05	555826.02	411874.37	32°07'56.326"N	104°17'11.497"W	1.63	
13725.00	86.900	272.200	9582.40	4148.37	123.25	-4146.87	555762.20	411876.26	32°07'56.345"N	104°17'12.240"W	2.81	
13797.00	85.800	272.000	9586.99	4220.21	125.89	-4218.68	555690.40	411878.89	32°07'56.372"N	104°17'13.075"W	1.55	
13847.00	85.800	272.000	9590.65	4270.06	127.63	-4268.51	555640.57	411880.64	32°07'56.389"N	104°17'13.654"W	0.00	Project to Bit

TARGETS									
Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape

	[ft]	[ft]	[ft]	[ft]	[srv ft]	[srv ft]			
No. 3H PBHL		9587.00	72.48	-4282.03	555627.06	411825.50	32°07'55.843"N	104°17'13.811"W	point

WELLPATH COMPOSITION					Ref Wellbore: No. 3H AWB		Ref Wellpath: No. 3H AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment		Wellbore	
0.00	9400.00	Generic gyro - northseeking (Standard)			Gyro		No. 3H AWB	
9400.00	13847.00	NaviTrak (Standard)			MWD		No. 3H AWB	

BOTTOM HOLE ASSEMBLY

INTEQ

BHA # 1

Company	<u>CIMAREX</u>	Well Name & No.	<u>SELDOM SEEN 15 FED#3H</u>	Date Run	<u>3/26/2011</u>
Field	<u>CARLSBAD SOUTH</u>	Rig Contractor & No	<u>CACTUS 122</u>	Depth In	<u>9435</u>
County/Block/Par	<u>EDDY</u>			Depth Out	<u>9718</u>

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz. or TFA	Gauge Length	Cum Footage	Cum Hours	Depth Out	DULL CONDITION								Comp. Lngth
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD	
1	6 1/8	JZ	HA35-TL	H25219	3-18s		283	47	9718	2	3	WT	A	1	I	BT	PP	0 70

BHA DESCRIPTION

[illegible]

STABILIZER DATA

[illegible]

DRILL PIPE DATA

Drillpipe	Grade	OD	ID	Wt /ft	Conn	Lgth
Upper				0.0		*****
Lower				0.0		0.00

BHA WEIGHT DATA

BHA Weight	In Air	In Mud
Total	0	0
Lower	0	0

RUN SUMMARY

Mode	Footage	Drlg Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	283	47 00	*****	6 0	32			246	136	1914
Rotating		0 00	*****							
Total	283	47 00	5 50	6 0	32		0	246	136	1914

Survey Sensor to Bit	49	Gamma Sensor to Bit.	Motor Bit to Bend: 5 4	Motor Bit to Stabilizer
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Center of Clamp-on to Center of UBHS	Mud Type	brine	Mud Weight	10	Hrs in Hole	64
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Objective For Running BHA	Avg Temp	142	Max Temp:	142
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DRILL CURVE

BHA Results.

DLS 23-30 degrees

Reason for POOH

Lost 100 PSI PP Backed off tool joint in string

BHI Directional Drillers Calvin Jones Randy Dietrich

BHI Job # 3682277

BOTTOM HOLE ASSEMBLY

INTEO

BHA # 2

Company	CIMAREX	Well Name & No.:	SELDOM SEEN 15 FED#3H	Date Run.	3/29/2011
Field	CARLSBAD SOUTH	Rig Contractor & No..	CACTUS 122	Depth In:	9718
County/Block/Par :	EDDY			Depth Out	11471

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz. or TFA	Gauge Length	Cum Footage	Cum. Hours	Depth Out	DULL CONDITION								Comp. Lngth
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD	
2	6 125	DC Log	6 1/8 PDC	SO7399		2.5	1753	110	11471	1	1	NO	A	X	I	NO	DTF	0.75

BHA DESCRIPTION

[illegible]

STABILIZER DATA

[illegible]

DRILL PIPE DATA

Drillpipe	Grade	OD	ID	Wt /ft	Conn	Lgth
Upper				0.0		
Lower				0.0		0 00

BHA WEIGHT DATA

BHA Weight	In Air	In Mud
Total	0	0
Lower	0	0

RUN SUMMARY

Mode	Footage.	Drlg Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	284	74 50	*****	3.8	12			245	150	3083
Rotating	1469	35 50	*****	41.4	9	48	4845	242	247	3145
Total	1753	110 00	17.50	15.9	10	48	4845	243	207	3120

Survey Sensor to Bit: <u>49</u>	Gamma Sensor to Bit: <u> </u>	Motor Bit to Bend <u>5.4</u>	Motor Bit to Stabilizer <u> </u>
Center of Clamp-on to Center of UBHS <u> </u>	Mud Type: <u>OBM</u>	Mud Weight <u>11.7</u>	Hrs in Hole: <u>153</u>
Objective For Running BHA		Avg Temp: <u>158 0282</u>	Max Temp. <u>166</u>
Complete Curve drill lateral			

BHA Results

Sliding frequently to control inclination Azimuth is consistent

Reason for POOH:

DTF Motor stalled while rotating. Tried to slide. No differential with 20K on motor.

BHI Directional Drillers: Pacer White Randy Dietrich

BHI Job # 3682277

BOTTOM HOLE ASSEMBLY

INTEO

BHA # 3

Company	CIMAREX	Well Name & No.:	SELDOM SEEN 15 FED#3H	Date Run	4/4/2011
Field	CARLSBAD SOUTH	Rig Contractor & No.:	CACTUS 122	Depth In	11471
County/Block/Par.:	EDDY			Depth Out	12007

BIT DATA

No.	Bit Size	Mfr	Type	Serial No.	Noz. or TFA	Gauge Length	Cum. Footage	Cum. Hours	Depth Out	DULL CONDITION								Comp. Lngth
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD	
	6 1/8	PDC	HF 43-SB	H29546			536	60	12007	1	1	NO	A	1	I	NO	HR	1 00

BHA DESCRIPTION

[illegible]

STABILIZER DATA

[illegible]

DRILL PIPE DATA

Drillpipe	Grade	OD	ID	Wt /ft	Conn	Lgth
Upper				0.0		*****
Lower				0.0		0.00

BHA WEIGHT DATA

BHA Weight	In Air	In Mud
Total	0	0
Lower	0	0

RUN SUMMARY

Mode	Footage	Drlg Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	82	24.00	*****	3 4	41			225	50	3000
Rotating	454	36.00	*****	12 6	32	50	7083	225	50	3050
Total	536	60 00	5 50	8.9	35	50	7083	225	50	3033

Survey Sensor to Bit	49	Gamma Sensor to Bit	Motor Bit to Bend	5.4	Motor Bit to Stabilizer:
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Center of Clamp-on to Center of UBHS	Mud Type	OBM	Mud Weight	11.7	Hrs in Hole:	77
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Objective For Running BHA	Avg Temp	164 7778	Max Temp	169
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Complete Curve drill lateral

BHA Results

Good Run Sliding frequently to control inclination. Azimuth is consistent

Reason for POOH

Bit Hrs Good Run Good BUR's

BHI Directional Drillers · Pacer White · Randy Dietrich

BHI Job #: 3682277

BOTTOM HOLE ASSEMBLY

INTEO

BHA # 4

Company	CIMAREX	Well Name & No	SELDOM SEEN 15 FED#3H	Date Run	4/7/2011
Field	CARLSBAD SOUTH	Rig Contractor & No	CACTUS 122	Depth In.	12007
County/Block/Par	EDDY			Depth Out	13849

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz. or TFA	Gauge Length	Cum Footage	Cum Hours	Depth Out	DULL CONDITION								Comp Lngth
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD	
7RR	6 1/8	C Loc	PL 809S4	S07455	4-14's		1842	101.5	13849	2	2	WT	A	X	I	CT	TD	1.00

BHA DESCRIPTION

[illegible]

STABILIZER DATA

[illegible]

DRILL PIPE DATA

Drillpipe	Grade	OD	ID	Wt./ft	Conn	Lgth
Upper				0.0		*****
Lower				0.0		0.00

BHA WEIGHT DATA

BHA Weight	In Air	In Mud
Total	0	0
Lower	0	0

RUN SUMMARY

Mode	Footage	Drig Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	115	44 50	*****	2 6	25			210	145	3100
Rotating	1727	57.00	*****	30 3	15	50	5663	210	300	3350
Total	1842	101 50	18 00	18.1	18	50	5663	210	257	3280

Survey Sensor to Bit	49	Gamma Sensor to Bit	Motor Bit to Bend	5 4	Motor Bit to Stabilizer
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Center of Clamp-on to Center of UBHS. Mud Type OBM Mud Weight 11.7 Hrs in Hole: 135

Objective For Running BHA	Avg Temp.	169	Max Temp.	169
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Complete Curve drill lateral

BHA Results

FORMATION DROPPING

Reason for POOH.

TD TO RUN CASING

BHI Directional Drillers Pacer White Randy Dietrich

BHI Job # 3682277