

PATRIOT DRILLING, LLC

HOBBS OCD

NOV 28 2011

RECEIVED

OPERATOR:
WELL/LEASE:
COUNTY:

30-005-29045
Cimarex Energy Co
Hancock 19 State # 1-H Unit L
Chaves Co., New Mexico
Sec. 19, T15S, R31E

1980/S & 330/W

**STATE OF NEW MEXICO
DEVIATION REPORT**

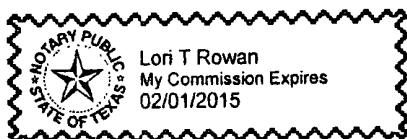
<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
245	1/2	4,143	6
364	1/2	4,238	5
588	1	4,479	3
814	1	4,619	3
1,099	1	4,810	2
1,478	1	5,095	2
1,954	1	5,381	2
2,454	1	5,667	1
2,810	1	5,953	1
3,381	2	6,428	1
3,572	2	6,903	1
3,857	7 3/4	7,379	1
3,953	7	7,855	1
4,048	6	8,302	1

Patriot Drilling, LLC

M. Leroy Peterson, Executive Vice-President

The foregoing instrument was acknowledged before me on this 3rd day of June, 2011 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 02/01/2015



Lori T. Rowan
Notary Public for Ector Co., Texas

Results of Directional Survey

API number:	30-005-29045			
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO	
		Property:	HANCOCK 19 STATE	# 1H

surface	ULSTR:	L	19	T	15S	R	31E
				1980	FSL	330	FWL

BH Loc	ULSTR:	I	19	T	15S	R	31E
12981	MD	8762.0	TVD	1989	FSL	4915	FWL
						365	FEL

Top Perf/OH	ULSTR:	L	19	T	15S	R	31E
8820	MD	8663.8	TVD	1868	FSL	760	FWL

Bot Perf/OH	ULSTR:	I	19	T	15S	R	31E
12981	MD	8762.0	TVD	1989	FSL	4915	FWL
						365	FEL

	MD	N/S	E/W	VD
	8818	-112.56	428.25	8663.44
TOP PERFS/OH	8820	-112.49	430.21	8663.83
	8850	-111.41	459.60	8669.74
	12931	7.53	4534.63	8758.74
BOT PERFS/OH	12981	8.84	4584.51	8761.97
	12981	8.84	4584.51	8761.97

NEXT TO LAST	12931	7.53	4534.63	8758.74
LAST READING	12981	8.84	4584.51	8761.97
TD	12981	8.84	4584.51	8761.97

Surface Location	1980	FS	330	FW
Projected BHL	1989	FS	4915	FW
Location of				
Top Perfs/OH	1868	FS	760	FW
Bottom Perfs/OH	1989	FS	4915	FW

SUMMARY of Subsurface Locations

Surface Location	L-19-15S-31E	1980	FS	330	FW	Vert. Depth
Top Perfs/OH	L-19-15S-31E	1868	FS	760	FW	8663.83
Bottom Perfs/OH	I-19-15S-31E	1989	FS	4915	FW	8761.97
Projected TD	I-19-15S-31E	1989	FS	4915	FW	8761.97



INTEQ

L-19-15s-31e, 1980/S & 330/W
I-19-15s-31e, 1989/S & 4915/W
API # 30-005-29045

SUR
BHL

End of Well Report

Cimarex Energy Co.

Chaves County, NM

Hancock 19 St Com No. 1H

Patriot 4

Well Specifications

Well Name: Hancock 19 St Com No. 1H
Start Date: 5/13/2011
Client: Cimarex Energy Co.
Rig Name: Patriot 4
County: Chaves County, NM
Field: (Hancock) Sec 19, T15S, R31E

Well Location:

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

Grid Coordinates

Easting: 683769.40'
Northing: 727691.90'

Geographical Coordinates

Latitude: 32°59'58.426"N
Longitude: 103°52'07.498"W

RT: 4,478' above M.S.L.

Date TD Reached: 5/24/2011

Final Depth MD: 12,981'

Final Depth TVD: 8,761.97'

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1 Introduction

'Hancock 19 St Com No. 1H' was a horizontal well drilled in Chaves 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 May 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 8,486' MD, build the curve using 28.0°/100 to about 88.2° INC landing in target zone at an estimated 8,679' TVD.

2.2 Results

BHA # 1 Curve assembly was picked up with motor AKO set to 3.2°; at surface the BHA tested well. After tripping to bottom the BHA drilled 8,460' – 8,710' MD. The BHA performed well and successfully built inclination to 71.3°, POOH to pick up lateral assembly to soft land curve and drill lateral.

Section Summary

Total # of BHAs	1
Depth In	8,460'
Depth Out	8,710'
Distance Drilled	250'
Drilling Time	19.0 hrs
Average ROP	13.2'/ hr
Slide Requirements(hrs)	19.0
Average Slide ROP	13.2'/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 out the lateral hole section while maintaining the target formation dip to TD.

3.2 Results

BHA # 2 Lateral BHA was picked up with the motor AKO set to 1.8°, after a successful surface test the BHA was ran in hole. The BHA drilled 8,710' – 9,213' MD and successfully landed the curve and continued drilling the lateral, POOH to for low ROP.

BHA # 3 A new bit and motor was picked up at surface and the BHA tested well. The BHA was ran in hole and drilled 9,213' – 10,644' MD; a total of 1,413'. The BHA performed well until the end of the run when the motor stalled out with low weight on bit applied, POOH to inspect the BHA.

BHA # 4 A new bit and motor was picked up at surface and the BHA tested well before tripping to bottom. The BHA drilled 10,644' – 12,981' MD; a total of 2,337'. The BHA performed well and successfully completed the lateral.

Section Summary

Total # of drilling BHAs	3
Depth In	8,710'
Depth Out	12,981'
Distance Drilled	4,271'
Drilling Time	166.75 hrs
Average ROP	25.6' / hr
Slide Requirements(hrs)	40.25
Average Slide ROP	8.8' / hr
Average Rotary ROP	31.0' / 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

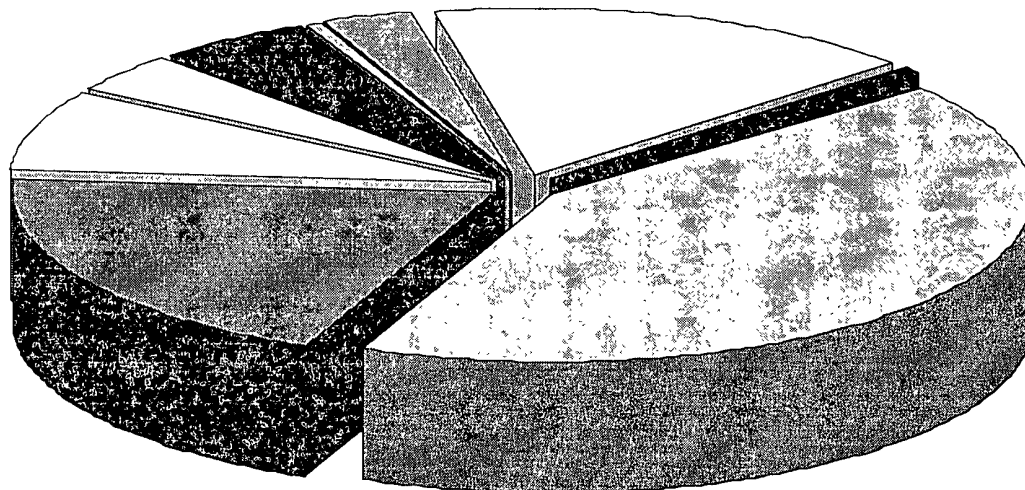
4 Appendix

- 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

4.1 Analysis and Time Breakdown

Baker Hughes INTEQ

Activity Totals for Job

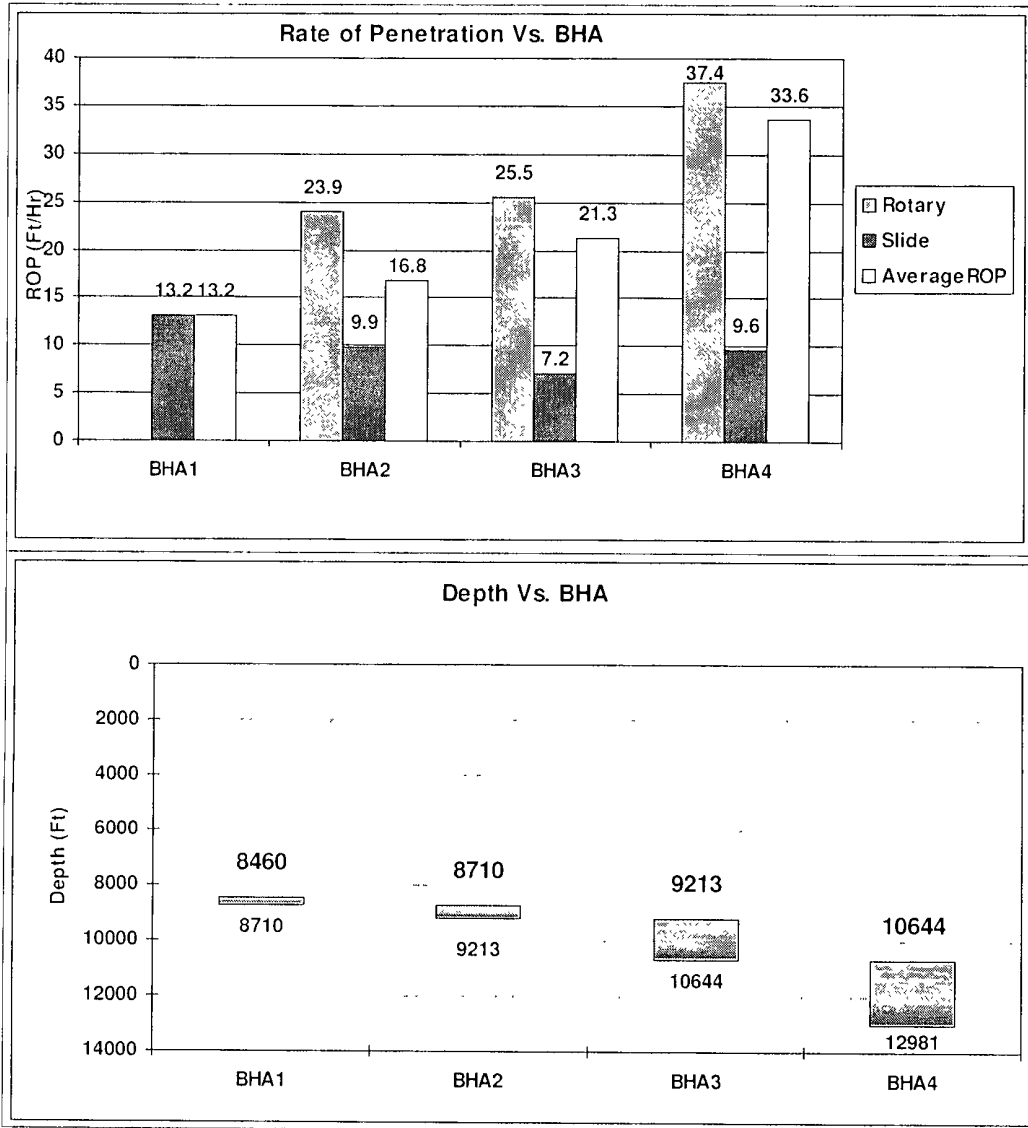


- ☒ Rotary Drill
- ☒ Slide Drill
- ☐ Survey Circulating
- ☐ Tripping In (From Surface)
- ☒ Tripping Out (To Surface)
- ☒ Short Tripping
- ☒ Other Circulating
- ☐ Other Non-circulating
- ☒ Rig Repair

Description of Activity	Hours	%
Other Circulating	9.50	3%
Other Non-circulating	49.75	17%
Rig Repair	1.50	1%
Rotary Drill	126.50	42%
Short Tripping	1.50	1%
Slide Drill	59.25	20%
Survey Circulating	23.25	8%
Tripping In (From Surface)	11.25	4%
Tripping Out (To Surface)	15.50	5%
Total	298	

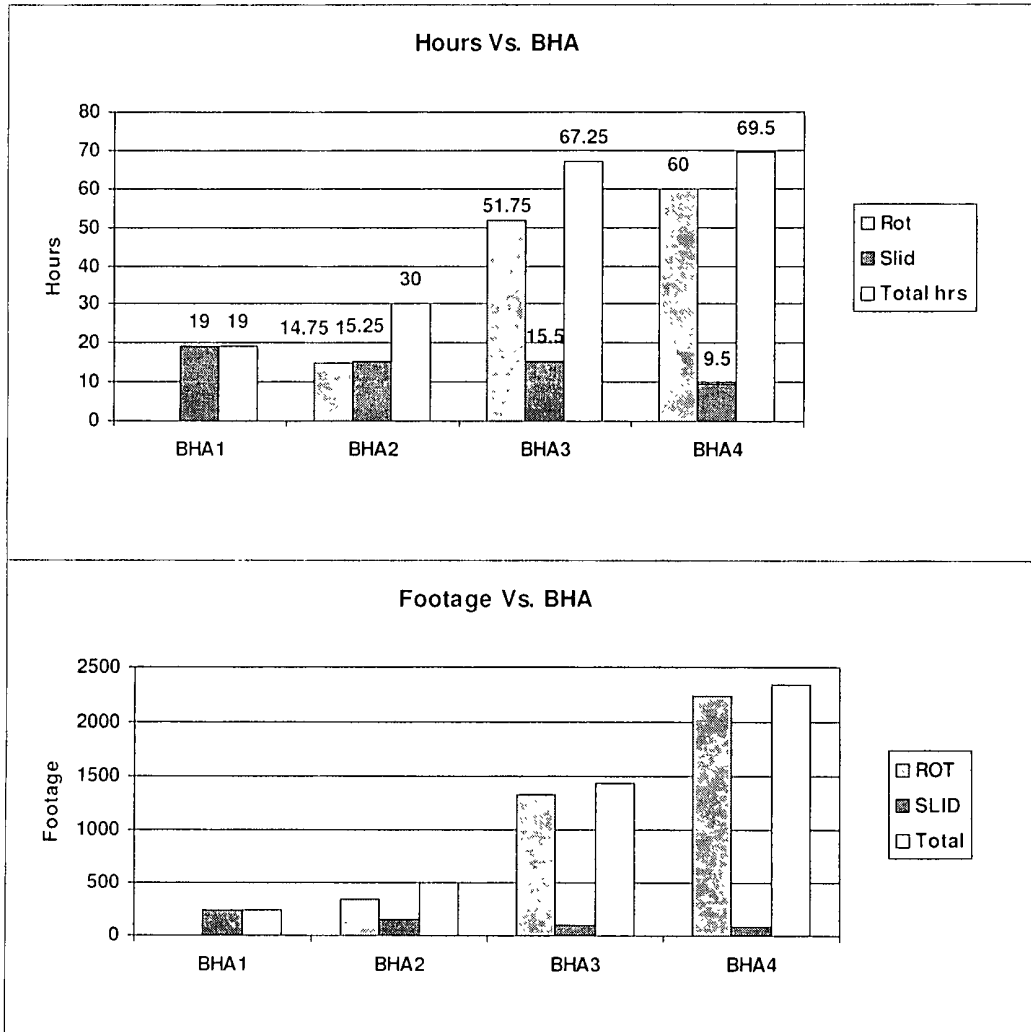
Baker Hughes INTEQ

BHA analysis for Cimarex Energy Co. Hancock 19 State Com 1H



Baker Hughes INTEQ

BHA analysis for Cimarex Energy Co. Hancock 19 State Com 1H



Baker Hughes INTEQ

BHA analysis for Cimarex Energy Co. Hancock 19 State Com 1H

BHA #	1
Rotary Footage	
%Rot Ft	
Slide Footage	250
%Slid Ft	100
Tt Ft	250
Rotary Hours	
%Rot Hrs	
Slide Hours	19 00
%Slid Hrs	100
Total Hours	19
Rotary ROP	
Slide ROP	13 16
Average ROP	13 16

BHA #	2
Rotary Footage	352
%Rot Ft	70
Slide Footage	151
%Slid Ft	30
Tt Ft	503
Rotary Hours	14 75
%Rot Hrs	49
Slide Hours	15 25
%Slid Hrs	51
Total Hours	30
Rotary ROP	23 86
Slide ROP	9 90
Average ROP	16 77

BHA analysis for Cimarex Energy Co. Hancock 19 State Com 1H

BHA #	3
Rotary Footage	1320
%Rot Ft	92
Slide Footage	111
%Slid Ft	8
Tt Ft	1431
Rotary Hours	51 75
%Rot Hrs	77
Slide Hours	15 50
%Slid Hrs	23
Total Hours	67 25
Rotary ROP	25.51
Slide ROP	7.16
Average ROP	21 28

BHA #	4
Rotary Footage	2246
%Rot Ft	96
Slide Footage	91
%Slid Ft	4
Tt Ft	2337
Rotary Hours	60 00
%Rot Hrs	86
Slide Hours	9 50
%Slid Hrs	14
Total Hours	69.5
Rotary ROP	37 43
Slide ROP	9 58
Average ROP	33 63

BHA analysis for Cimarex Energy Co. Hancock 19 State Com 1H

Job Summary

<i>Total Rotary Ft:</i>	3918	<i>Total Rotary Hrs:</i>	126.50	<i>Total Rot ROP:</i>	30.97
<i>Total Slide Ft:</i>	603	<i>Total Slide Hrs:</i>	59.25	<i>Total Slid ROP:</i>	10.18
<i>Total Footage:</i>	4521	<i>Total Hours:</i>	185.75	<i>Total Avg ROP:</i>	24.34

4.2 Survey Listings



Cimarex Energy Co.

Location Chaves County NM
Field (Hancock) Sec 19, T15S, R31E
Facility Hancock 19 St.Com No. 1H

SLOT NO 1H SHL
WELL NO 1H
Wellbore NO 1H PWB

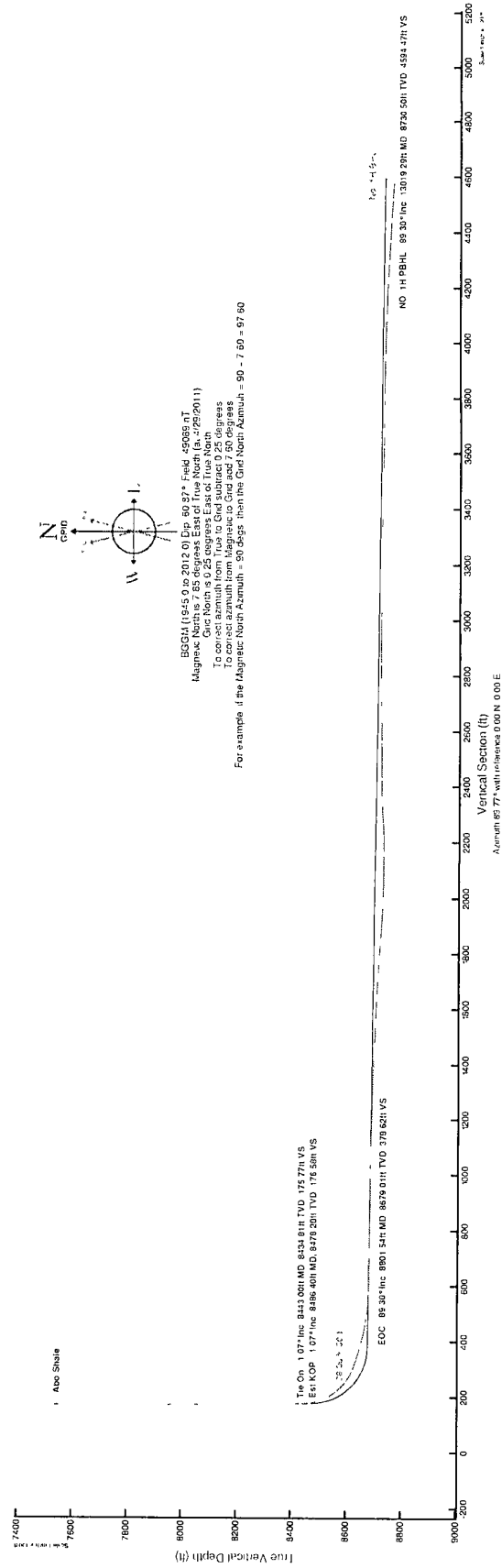
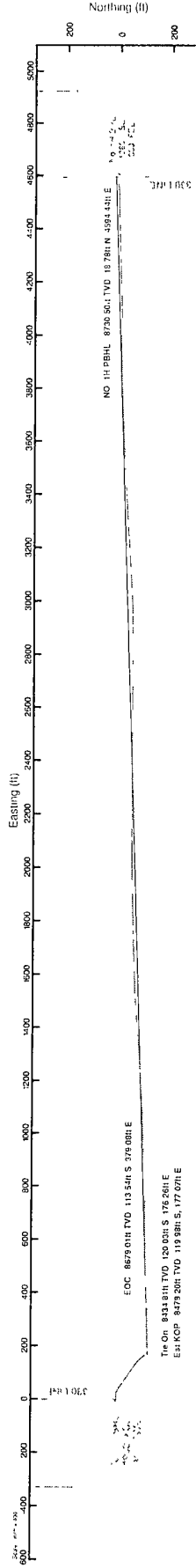


Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (%100ft)	VS (ft)
Tie On	8443.00	1.070	86.670	8434.81	-120.03	176.26	0.00	175.77
Est KOP	8486.40	1.070	86.670	8478.20	-119.98	177.07	0.00	176.58
EOC	8801.54	89.301	88.202	8679.01	-113.54	379.08	28.00	378.62
NO 1H PBHL	13019.29	89.301	88.202	8730.50	18.78	4594.44	0.00	4594.47

Plot reference wellpath is Plan 1

True vertical depths are referenced to Rig on No. 1H SHL (PKB)	Grid System NAD83 / TM New Mexico SP Eastern Zone (3001) US feet
Measured depths are referenced to Rig on No. 1H SHL (PKB)	North Reference Grid north
Rig on No. 1H SHL (PKB) to Mean Sea Level -178 feet	Scale True distance
Mean Sea Level to Mud line (At Slot No. 1H SHL) -1157 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by calphphik on 5/13/2011

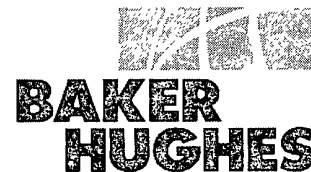




Actual Wellpath Report

No. 1H AWP

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WELL IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Hancock) Sec 19, T15S, R31E	Wellbore	No. 1H AWP
Facility	Hancock 19 St Com No. 1H		

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	Callphik
Scale	0.999932	Report Generated	5/25/2011 at 10:05:01 AM
Convergence at slot	0.25° East	Database/Source file	WA Midland/No. 1H_AWP.xml

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	683769.40	727691.90	32°59'58.426"N	103°52'07.498"W
Facility Reference Pt			683769.40	727691.90	32°59'58.426"N	103°52'07.498"W
Field Reference Pt			683769.40	727691.90	32°59'58.426"N	103°52'07.498"W

WELL PATH DATA			
Calculation method	Minimum curvature	Rig on No. 1H SHL (RKB) to Facility Vertical Datum	21.00ft
Horizontal Reference Pt	Slot	Rig on No. 1H SHL (RKB) to Mean Sea Level	4478.00ft
Vertical Reference Pt	Rig on No. 1H SHL (RKB)	Rig on No. 1H SHL (RKB) to Mud Line at Slot (No. 1H SHL)	21.00ft
MD Reference Pt	Rig on No. 1H SHL (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.77°



Actual Wellpath Report

No. 1H AWP

Page 2 of 5



BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Hancock) Sec 19, T15S, R31E	Wellbore	No. 1H AWP
Facility	Hancock 19 St Com No. 1H		

WELLPATH DATA (179 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	291.300	0.00	0.00	0.00	0.00	683769.40	727691.90	32°59'58.426"N	103°52'07.498"W	0.00	
21.00	0.000	291.300	21.00	0.00	0.00	0.00	683769.40	727691.90	32°59'58.426"N	103°52'07.498"W	0.00	
83.00	0.320	291.300	83.00	-0.16	0.06	-0.16	683769.24	727691.96	32°59'58.427"N	103°52'07.500"W	0.52	
178.00	0.360	335.270	178.00	-0.53	0.43	-0.53	683768.87	727692.33	32°59'58.430"N	103°52'07.504"W	0.27	
273.00	0.420	350.430	273.00	-0.71	1.04	-0.72	683768.68	727692.94	32°59'58.436"N	103°52'07.506"W	0.13	
368.00	0.460	322.110	367.99	-1.00	1.69	-1.01	683768.39	727693.59	32°59'58.443"N	103°52'07.509"W	0.23	
463.00	0.420	308.760	462.99	-1.50	2.21	-1.51	683767.89	727694.11	32°59'58.448"N	103°52'07.515"W	0.12	
558.00	0.500	304.870	557.99	-2.11	2.66	-2.13	683767.27	727694.56	32°59'58.452"N	103°52'07.522"W	0.09	
653.00	0.470	293.820	652.98	-2.81	3.06	-2.82	683766.58	727694.96	32°59'58.456"N	103°52'07.531"W	0.10	
748.00	0.330	281.000	747.98	-3.43	3.27	-3.45	683765.95	727695.17	32°59'58.458"N	103°52'07.538"W	0.17	
843.00	0.370	275.010	842.98	-4.01	3.35	-4.02	683765.38	727695.25	32°59'58.459"N	103°52'07.545"W	0.06	
938.00	0.360	275.230	937.98	-4.61	3.40	-4.62	683764.78	727695.30	32°59'58.460"N	103°52'07.552"W	0.01	
1033.00	0.330	268.410	1032.98	-5.18	3.42	-5.19	683764.21	727695.32	32°59'58.460"N	103°52'07.558"W	0.05	
1128.00	0.320	257.220	1127.97	-5.71	3.35	-5.73	683763.67	727695.25	32°59'58.459"N	103°52'07.565"W	0.07	
1223.00	0.260	263.500	1222.97	-6.19	3.27	-6.20	683763.20	727695.17	32°59'58.459"N	103°52'07.570"W	0.07	
1318.00	0.270	236.430	1317.97	-6.59	3.12	-6.60	683762.80	727695.02	32°59'58.457"N	103°52'07.575"W	0.13	
1413.00	0.250	209.860	1412.97	-6.88	2.82	-6.89	683762.51	727694.72	32°59'58.454"N	103°52'07.578"W	0.13	
1508.00	0.270	203.580	1507.97	-7.07	2.43	-7.08	683762.32	727694.33	32°59'58.450"N	103°52'07.581"W	0.04	
1603.00	0.300	209.790	1602.97	-7.29	2.01	-7.30	683762.10	727693.91	32°59'58.446"N	103°52'07.583"W	0.05	
1698.00	0.300	148.680	1697.97	-7.28	1.58	-7.29	683762.11	727693.48	32°59'58.442"N	103°52'07.583"W	0.32	
1793.00	0.430	131.770	1792.97	-6.89	1.13	-6.89	683762.51	727693.03	32°59'58.438"N	103°52'07.579"W	0.18	
1888.00	0.630	111.960	1887.96	-6.14	0.70	-6.14	683763.26	727692.60	32°59'58.433"N	103°52'07.570"W	0.28	
1983.00	1.120	103.560	1982.95	-4.76	0.29	-4.76	683764.64	727692.19	32°59'58.429"N	103°52'07.553"W	0.53	
2078.00	1.770	93.810	2077.92	-2.39	-0.03	-2.39	683767.01	727691.87	32°59'58.426"N	103°52'07.526"W	0.73	
2173.00	1.760	91.580	2172.88	0.53	-0.16	0.53	683769.93	727691.74	32°59'58.424"N	103°52'07.491"W	0.07	
2268.00	1.840	88.280	2267.83	3.51	-0.16	3.51	683772.91	727691.74	32°59'58.424"N	103°52'07.456"W	0.14	
2363.00	1.900	85.670	2362.78	6.61	0.01	6.61	683776.01	727691.91	32°59'58.426"N	103°52'07.420"W	0.11	
2458.00	1.740	89.780	2457.73	9.62	0.13	9.62	683779.02	727692.03	32°59'58.427"N	103°52'07.385"W	0.22	
2553.00	1.750	90.600	2552.69	12.51	0.12	12.51	683781.91	727692.02	32°59'58.427"N	103°52'07.351"W	0.03	
2648.00	1.620	90.110	2647.64	15.31	0.10	15.31	683784.71	727692.00	32°59'58.426"N	103°52'07.318"W	0.14	
2743.00	1.540	91.320	2742.61	17.93	0.07	17.93	683787.33	727691.97	32°59'58.426"N	103°52'07.287"W	0.09	
2838.00	1.830	101.560	2837.57	20.69	-0.26	20.69	683790.09	727691.64	32°59'58.423"N	103°52'07.255"W	0.44	
2933.00	2.010	106.930	2932.51	23.76	-1.05	23.77	683793.17	727690.85	32°59'58.415"N	103°52'07.219"W	0.27	
3028.00	2.100	110.870	3027.45	26.98	-2.16	26.99	683796.39	727689.74	32°59'58.403"N	103°52'07.181"W	0.18	
3123.00	2.310	112.940	3122.38	30.36	-3.52	30.38	683799.78	727688.38	32°59'58.390"N	103°52'07.141"W	0.24	
3503.00	4.000	126.960	3501.80	47.96	-14.48	48.02	683817.42	727677.42	32°59'58.281"N	103°52'06.935"W	0.49	
3598.00	5.160	126.510	3596.49	54.03	-19.01	54.10	683823.50	727672.89	32°59'58.236"N	103°52'06.863"W	1.22	
3693.00	6.680	125.630	3690.98	61.93	-24.77	62.03	683831.43	727667.13	32°59'58.178"N	103°52'06.771"W	1.60	
3788.00	7.720	124.930	3785.23	71.62	-31.65	71.75	683841.15	727660.26	32°59'58.110"N	103°52'06.657"W	1.10	
3883.00	7.860	125.050	3879.36	82.14	-39.03	82.30	683851.70	727652.87	32°59'58.036"N	103°52'06.533"W	0.15	
3978.00	6.800	124.960	3973.58	92.04	-45.98	92.23	683861.62	727645.92	32°59'57.967"N	103°52'06.417"W	1.12	
4073.00	5.640	125.580	4068.02	100.42	-51.92	100.63	683870.03	727639.98	32°59'57.908"N	103°52'06.319"W	1.22	
4168.00	5.120	124.920	4162.60	107.67	-57.06	107.91	683877.30	727634.84	32°59'57.857"N	103°52'06.234"W	0.55	
4263.00	4.800	124.660	4257.24	114.40	-61.75	114.65	683884.04	727630.15	32°59'57.810"N	103°52'06.155"W	0.34	
4358.00	4.380	125.740	4351.94	120.60	-66.13	120.87	683890.26	727625.77	32°59'57.766"N	103°52'06.082"W	0.45	



Actual Wellpath Report

No. 1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Hancock) Sec 19, T15S, R31E	Wellbore	No. 1H AWP
Facility	Hancock 19 St Com No. 1H		

WELLPATH DATA (179 stations)													
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]
4453.00	3.990	127.140	4446.69	126.16	-70.25	126.45	683895.84	727621.66	32°59'57.725"N		103°52'06.017"W		0.42
4548.00	3.910	127.860	4541.46	131.33	-74.23	131.64	683901.03	727617.68	32°59'57.686"N		103°52'05.956"W		0.10
4643.00	3.790	127.330	4636.25	136.37	-78.12	136.69	683906.08	727613.79	32°59'57.647"N		103°52'05.897"W		0.13
4738.00	3.580	129.300	4731.05	141.15	-81.90	141.48	683910.87	727610.00	32°59'57.609"N		103°52'05.841"W		0.26
4833.00	3.440	135.880	4825.87	145.41	-85.83	145.76	683915.15	727606.08	32°59'57.570"N		103°52'05.791"W		0.45
4928.00	3.380	138.900	4920.70	149.22	-89.98	149.59	683918.98	727601.92	32°59'57.529"N		103°52'05.746"W		0.20
5023.00	3.580	142.480	5015.53	152.85	-94.45	153.24	683922.62	727597.46	32°59'57.485"N		103°52'05.703"W		0.31
5118.00	3.280	139.950	5110.36	156.38	-98.88	156.79	683926.18	727593.03	32°59'57.441"N		103°52'05.662"W		0.35
5403.00	2.440	143.170	5395.00	165.22	-109.98	165.67	683935.06	727581.93	32°59'57.331"N		103°52'05.558"W		0.30
5498.00	1.720	141.120	5489.94	167.32	-112.71	167.78	683937.17	727579.20	32°59'57.304"N		103°52'05.534"W		0.76
5593.00	1.490	140.760	5584.90	168.99	-114.77	169.46	683938.84	727577.14	32°59'57.283"N		103°52'05.514"W		0.24
5688.00	1.130	139.570	5679.88	170.37	-116.44	170.85	683940.23	727575.47	32°59'57.266"N		103°52'05.498"W		0.38
5783.00	0.820	136.980	5774.86	171.43	-117.65	171.92	683941.30	727574.26	32°59'57.254"N		103°52'05.485"W		0.33
5878.00	0.520	147.630	5869.85	172.13	-118.51	172.61	683942.00	727573.40	32°59'57.246"N		103°52'05.477"W		0.34
5973.00	0.290	163.730	5964.85	172.42	-119.11	172.91	683942.30	727572.80	32°59'57.240"N		103°52'05.474"W		0.27
6068.00	0.180	167.750	6059.85	172.52	-119.48	173.01	683942.40	727572.42	32°59'57.236"N		103°52'05.472"W		0.12
6163.00	0.180	209.940	6154.85	172.47	-119.76	172.97	683942.35	727572.15	32°59'57.234"N		103°52'05.473"W		0.14
6258.00	0.090	241.230	6249.85	172.33	-119.92	172.83	683942.21	727571.98	32°59'57.232"N		103°52'05.475"W		0.12
6353.00	0.190	273.620	6344.85	172.11	-119.95	172.60	683941.99	727571.96	32°59'57.232"N		103°52'05.477"W		0.13
6448.00	0.190	260.200	6439.85	171.80	-119.97	172.29	683941.68	727571.94	32°59'57.232"N		103°52'05.481"W		0.05
6543.00	0.230	226.090	6534.85	171.51	-120.13	172.00	683941.39	727571.78	32°59'57.230"N		103°52'05.484"W		0.14
6638.00	0.200	238.010	6629.85	171.23	-120.35	171.72	683941.11	727571.56	32°59'57.228"N		103°52'05.488"W		0.06
6733.00	0.380	232.800	6724.85	170.83	-120.62	171.33	683940.72	727571.28	32°59'57.225"N		103°52'05.492"W		0.19
6828.00	0.330	230.210	6819.85	170.37	-120.99	170.87	683940.26	727570.92	32°59'57.221"N		103°52'05.498"W		0.06
6923.00	0.320	232.430	6914.84	169.95	-121.33	170.45	683939.84	727570.58	32°59'57.218"N		103°52'05.503"W		0.02
7018.00	0.340	243.600	7009.84	169.49	-121.61	169.98	683939.37	727570.29	32°59'57.215"N		103°52'05.508"W		0.07
7113.00	0.280	250.760	7104.84	169.01	-121.82	169.51	683938.90	727570.09	32°59'57.213"N		103°52'05.514"W		0.08
7208.00	0.210	243.960	7199.84	168.64	-121.97	169.14	683938.53	727569.94	32°59'57.212"N		103°52'05.518"W		0.08
7303.00	0.140	261.900	7294.84	168.37	-122.06	168.87	683938.25	727569.85	32°59'57.211"N		103°52'05.521"W		0.09
7398.00	0.110	111.170	7389.84	168.34	-122.11	168.84	683938.22	727569.80	32°59'57.210"N		103°52'05.522"W		0.25
7493.00	0.310	74.690	7484.84	168.67	-122.08	169.17	683938.56	727569.83	32°59'57.211"N		103°52'05.518"W		0.24
7588.00	0.330	61.090	7579.84	169.16	-121.88	169.66	683939.04	727570.03	32°59'57.213"N		103°52'05.512"W		0.08
7683.00	0.300	81.140	7674.84	169.64	-121.71	170.14	683939.53	727570.20	32°59'57.214"N		103°52'05.506"W		0.12
7778.00	0.430	86.850	7769.83	170.24	-121.65	170.74	683940.13	727570.26	32°59'57.215"N		103°52'05.499"W		0.14
7873.00	0.370	87.250	7864.83	170.91	-121.61	171.41	683940.79	727570.30	32°59'57.215"N		103°52'05.491"W		0.06
7968.00	0.300	52.180	7959.83	171.41	-121.45	171.91	683941.30	727570.46	32°59'57.217"N		103°52'05.485"W		0.22
8063.00	0.370	67.030	8054.83	171.89	-121.17	172.39	683941.78	727570.73	32°59'57.220"N		103°52'05.480"W		0.12
8158.00	0.540	61.730	8149.83	172.57	-120.84	173.06	683942.45	727571.07	32°59'57.223"N		103°52'05.472"W		0.18
8253.00	0.650	64.990	8244.82	173.45	-120.40	173.95	683943.33	727571.51	32°59'57.227"N		103°52'05.462"W		0.12
8348.00	0.570	84.140	8339.82	174.41	-120.13	174.90	683944.29	727571.78	32°59'57.230"N		103°52'05.450"W		0.23
8443.00	1.070	86.670	8434.81	175.77	-120.03	176.26	683945.65	727571.88	32°59'57.231"N		103°52'05.434"W		0.53
8470.00	5.600	82.700	8461.75	177.33	-119.84	177.82	683947.21	727572.06	32°59'57.233"N		103°52'05.416"W		16.79
8502.00	16.000	84.400	8493.14	183.28	-119.21	183.77	683953.16	727572.69	32°59'57.238"N		103°52'05.346"W		32.51
8533.00	24.400	84.200	8522.21	193.93	-118.15	194.42	683963.80	727573.76	32°59'57.249"N		103°52'05.221"W		27.10
8565.00	33.500	87.500	8550.18	209.37	-117.09	209.85	683979.23	727574.82	32°59'57.258"N		103°52'05.040"W		28.86



Actual Wellpath Report

No. 1H AWP

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BAKER HUGHES

REFERENCE WELLPAID IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Hancock) Sec 19, T15S, R31E	Wellbore	No. 1H AWP
Facility	Hancock 19 St Com No. 1H		

WELLPATH DATA (179 stations)

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
8597.00	42.500	90.200	8575.38	229.04	-116.74	229.52	683998.90	727575.16	32°59'57.261"N	103°52'04.809"W	28.59	
8628.00	51.600	91.700	8596.48	251.70	-117.14	252.18	684021.56	727574.77	32°59'57.256"N	103°52'04.543"W	29.57	
8660.00	59.800	91.400	8614.49	278.10	-117.85	278.59	684047.97	727574.05	32°59'57.248"N	103°52'04.233"W	25.64	
8690.00	69.400	88.500	8627.35	305.17	-117.80	305.65	684075.03	727574.11	32°59'57.247"N	103°52'03.915"W	33.17	
8723.00	72.500	87.400	8638.12	336.34	-116.68	336.82	684106.19	727575.22	32°59'57.257"N	103°52'03.549"W	9.91	
8755.00	73.100	87.200	8647.58	366.88	-115.24	367.35	684136.73	727576.66	32°59'57.270"N	103°52'03.190"W	1.97	
8786.00	75.400	87.600	8656.00	396.69	-113.89	397.16	684166.53	727578.02	32°59'57.282"N	103°52'02.840"W	7.52	
8818.00	77.700	87.500	8663.44	427.78	-112.56	428.25	684197.62	727579.35	32°59'57.294"N	103°52'02.475"W	7.19	
8850.00	79.600	88.300	8669.74	459.14	-111.41	459.60	684228.97	727580.50	32°59'57.304"N	103°52'02.107"W	6.42	
8881.00	82.400	89.000	8674.58	489.75	-110.69	490.21	684259.57	727581.22	32°59'57.309"N	103°52'01.748"W	9.30	
8913.00	83.700	89.000	8678.46	521.51	-110.14	521.97	684291.33	727581.77	32°59'57.313"N	103°52'01.375"W	4.06	
8945.00	85.400	88.400	8681.50	553.36	-109.41	553.81	684323.17	727582.49	32°59'57.319"N	103°52'01.001"W	5.63	
8976.00	87.400	88.900	8683.44	584.29	-108.69	584.74	684354.10	727583.22	32°59'57.325"N	103°52'00.638"W	6.65	
9007.00	89.800	89.800	8684.20	615.28	-108.33	615.73	684385.08	727583.57	32°59'57.327"N	103°52'00.274"W	8.27	
9039.00	90.300	89.800	8684.17	647.28	-108.22	647.73	684417.08	727583.69	32°59'57.327"N	103°51'59.898"W	1.56	
9070.00	90.100	89.800	8684.06	678.28	-108.11	678.73	684448.08	727583.79	32°59'57.327"N	103°51'59.534"W	0.65	
9102.00	89.700	90.300	8684.12	710.28	-108.14	710.73	684480.08	727583.77	32°59'57.325"N	103°51'59.158"W	2.00	
9134.00	90.200	89.700	8684.15	742.28	-108.14	742.72	684512.07	727583.77	32°59'57.324"N	103°51'58.783"W	2.44	
9166.00	89.400	88.700	8684.26	774.27	-107.69	774.72	684544.07	727584.21	32°59'57.327"N	103°51'58.407"W	4.00	
9197.00	88.400	88.600	8684.85	805.26	-106.96	805.71	684575.05	727584.94	32°59'57.332"N	103°51'58.043"W	3.24	
9229.00	87.600	87.100	8685.97	837.22	-105.77	837.66	684607.00	727586.14	32°59'57.343"N	103°51'57.668"W	5.31	
9261.00	87.900	87.400	8687.23	869.17	-104.23	869.60	684638.94	727587.68	32°59'57.357"N	103°51'57.293"W	1.33	
9293.00	89.400	87.900	8687.98	901.14	-102.92	901.56	684670.90	727588.99	32°59'57.368"N	103°51'56.917"W	4.94	
9324.00	90.500	88.100	8688.01	932.12	-101.84	932.55	684701.88	727590.07	32°59'57.378"N	103°51'56.554"W	3.61	
9356.00	90.800	88.000	8687.65	964.10	-100.75	964.52	684733.86	727591.16	32°59'57.387"N	103°51'56.178"W	0.99	
9387.00	90.900	87.900	8687.19	995.09	-99.64	995.50	684764.83	727592.27	32°59'57.397"N	103°51'55.814"W	0.46	
9419.00	90.700	88.000	8686.74	1027.07	-98.50	1027.48	684796.81	727593.41	32°59'57.406"N	103°51'55.439"W	0.70	
9450.00	88.700	87.200	8686.90	1058.04	-97.20	1058.45	684827.77	727594.71	32°59'57.418"N	103°51'55.075"W	6.95	
9482.00	88.200	86.700	8687.77	1089.99	-95.50	1090.39	684859.72	727596.41	32°59'57.433"N	103°51'54.700"W	2.21	
9514.00	87.600	86.700	8688.94	1121.92	-93.65	1122.32	684891.64	727598.25	32°59'57.450"N	103°51'54.325"W	1.87	
9545.00	87.200	86.700	8690.35	1152.85	-91.87	1153.23	684922.55	727600.03	32°59'57.466"N	103°51'53.962"W	1.29	
9576.00	87.800	86.500	8691.70	1183.77	-90.04	1184.15	684953.47	727601.87	32°59'57.483"N	103°51'53.599"W	2.04	
9608.00	89.000	86.100	8692.59	1215.70	-87.97	1216.07	684985.38	727603.94	32°59'57.502"N	103°51'53.224"W	3.95	
9640.00	88.700	86.000	8693.23	1247.63	-85.77	1247.99	685017.30	727606.14	32°59'57.523"N	103°51'52.849"W	0.99	
9672.00	88.500	85.900	8694.02	1279.55	-83.51	1279.90	685049.21	727608.40	32°59'57.544"N	103°51'52.474"W	0.70	
9704.00	88.700	85.800	8694.80	1311.46	-81.19	1311.80	685081.11	727610.71	32°59'57.565"N	103°51'52.100"W	0.70	
9735.00	88.600	85.900	8695.53	1342.38	-78.95	1342.71	685112.02	727612.96	32°59'57.586"N	103°51'51.737"W	0.46	
9798.00	87.600	85.500	8697.62	1405.19	-74.23	1405.50	685174.80	727617.68	32°59'57.630"N	103°51'50.999"W	1.71	
9861.00	87.300	85.500	8700.42	1467.95	-69.29	1468.24	685237.54	727622.61	32°59'57.676"N	103°51'50.262"W	0.48	
9925.00	87.700	86.800	8703.21	1531.76	-65.00	1532.04	685301.33	727626.91	32°59'57.716"N	103°51'49.513"W	2.12	
9988.00	87.600	88.700	8705.79	1594.66	-62.53	1594.93	685364.22	727629.38	32°59'57.737"N	103°51'48.774"W	3.02	
10051.00	87.500	88.100	8708.49	1657.59	-60.77	1657.85	685427.14	727631.14	32°59'57.752"N	103°51'48.035"W	0.96	
10115.00	86.200	87.900	8712.00	1721.46	-58.54	1721.71	685490.99	727633.36	32°59'57.771"N	103°51'47.286"W	2.06	
10178.00	86.400	88.400	8716.07	1784.30	-56.51	1784.55	685553.83	727635.39	32°59'57.788"N	103°51'46.548"W	0.85	
10242.00	85.300	88.600	8720.70	1848.12	-54.84	1848.36	685617.63	727637.07	32°59'57.802"N	103°51'45.798"W	1.75	



Actual Wellpath Report

No. 1H AWP

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OPERATOR INFORMATION				WELL INFORMATION	
Operator	Cimarex Energy Co.			Slot	No. 1H SHL
Area	Chaves County, NM			Well	No. 1H
Field	(Hancock) Sec 19, T15S, R31E			Wellbore	No. 1H AWB
Facility	Hancock 19 St Com No. 1H				

WELLPATH DATA (179 stations)

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
10305.00	86.400	88.700	8725.26	1910.94	-53.36	1911.18	685680.44	727638.55	32°59'57.814"N	103°51'45.061"W	1.75	
10368.00	87.400	89.000	8728.67	1973.84	-52.10	1974.07	685743.33	727639.81	32°59'57.824"N	103°51'44.322"W	1.66	
10431.00	88.700	90.000	8730.81	2036.80	-51.55	2037.03	685806.29	727640.36	32°59'57.826"N	103°51'43.583"W	2.60	
10495.00	90.100	90.200	8731.48	2100.79	-51.66	2101.02	685870.28	727640.25	32°59'57.822"N	103°51'42.832"W	2.21	
10558.00	89.500	89.300	8731.70	2163.79	-51.38	2164.02	685933.27	727640.52	32°59'57.822"N	103°51'42.092"W	1.72	
10621.00	92.100	89.900	8730.82	2226.78	-50.94	2227.01	685996.25	727640.96	32°59'57.824"N	103°51'41.352"W	4.24	
10685.00	94.400	90.700	8727.19	2290.67	-51.28	2290.90	686060.14	727640.63	32°59'57.818"N	103°51'40.602"W	3.80	
10748.00	91.200	89.800	8724.12	2353.58	-51.55	2353.81	686123.05	727640.35	32°59'57.812"N	103°51'39.863"W	5.28	
10811.00	90.800	90.400	8723.02	2416.57	-51.66	2416.80	686186.04	727640.24	32°59'57.808"N	103°51'39.124"W	1.14	
10875.00	90.700	90.000	8722.18	2480.57	-51.88	2480.80	686250.03	727640.02	32°59'57.803"N	103°51'38.373"W	0.64	
10938.00	90.500	90.100	8721.52	2543.56	-51.94	2543.80	686313.02	727639.96	32°59'57.800"N	103°51'37.633"W	0.35	
11002.00	90.300	90.200	8721.07	2607.56	-52.11	2607.79	686377.01	727639.80	32°59'57.795"N	103°51'36.881"W	0.35	
11065.00	90.600	90.700	8720.58	2670.55	-52.60	2670.79	686440.00	727639.30	32°59'57.788"N	103°51'36.142"W	0.93	
11128.00	90.300	90.100	8720.08	2733.55	-53.04	2733.79	686503.00	727638.86	32°59'57.781"N	103°51'35.402"W	1.06	
11192.00	91.000	90.100	8719.36	2797.54	-53.15	2797.78	686566.99	727638.75	32°59'57.777"N	103°51'34.651"W	1.09	
11255.00	89.900	89.400	8718.86	2860.54	-52.88	2860.78	686629.98	727639.03	32°59'57.777"N	103°51'33.911"W	2.07	
11318.00	89.900	89.800	8718.97	2923.54	-52.44	2923.78	686692.97	727639.46	32°59'57.778"N	103°51'33.171"W	0.63	
11382.00	89.600	88.200	8719.25	2987.53	-51.32	2987.76	686756.95	727640.58	32°59'57.786"N	103°51'32.420"W	2.54	
11445.00	89.900	86.600	8719.53	3050.47	-48.46	3050.70	686819.88	727643.44	32°59'57.812"N	103°51'31.681"W	2.58	
11508.00	89.900	86.300	8719.64	3113.37	-44.56	3113.57	686882.76	727647.34	32°59'57.848"N	103°51'30.943"W	0.48	
11572.00	89.900	86.500	8719.75	3177.26	-40.54	3177.45	686946.63	727651.36	32°59'57.884"N	103°51'30.192"W	0.31	
11635.00	89.400	86.100	8720.13	3240.14	-36.48	3240.31	687009.49	727655.42	32°59'57.922"N	103°51'29.454"W	1.02	
11698.00	89.200	86.500	8720.90	3303.02	-32.41	3303.18	687072.35	727659.49	32°59'57.959"N	103°51'28.716"W	0.71	
11762.00	89.300	86.400	8721.74	3366.91	-28.45	3367.05	687136.22	727663.45	32°59'57.996"N	103°51'27.966"W	0.22	
11825.00	89.300	86.800	8722.51	3429.81	-24.72	3429.93	687199.10	727667.19	32°59'58.030"N	103°51'27.227"W	0.63	
11888.00	88.700	87.800	8723.61	3492.74	-21.75	3492.85	687262.01	727670.15	32°59'58.056"N	103°51'26.488"W	1.85	
11952.00	88.600	87.600	8725.12	3556.68	-19.18	3556.78	687325.94	727672.72	32°59'58.079"N	103°51'25.737"W	0.35	
12015.00	89.000	87.100	8726.44	3619.61	-16.27	3619.70	687388.85	727675.63	32°59'58.105"N	103°51'24.998"W	1.02	
12078.00	89.000	87.000	8727.54	3682.53	-13.03	3682.61	687451.75	727678.87	32°59'58.134"N	103°51'24.260"W	0.16	
12141.00	89.100	87.900	8728.58	3745.47	-10.22	3745.54	687514.68	727681.68	32°59'58.159"N	103°51'23.521"W	1.44	
12205.00	89.200	88.400	8729.53	3809.43	-8.16	3809.50	687578.63	727683.74	32°59'58.177"N	103°51'22.770"W	0.80	
12268.00	88.900	89.100	8730.57	3872.41	-6.78	3872.47	687641.60	727685.12	32°59'58.187"N	103°51'22.030"W	1.21	
12331.00	88.400	89.300	8732.06	3935.39	-5.90	3935.45	687704.58	727686.00	32°59'58.193"N	103°51'21.291"W	0.85	
12394.00	88.400	89.400	8733.82	3998.37	-5.19	3998.42	687767.54	727686.71	32°59'58.198"N	103°51'20.551"W	0.16	
12457.00	88.000	89.900	8735.80	4061.34	-4.81	4061.39	687830.51	727687.09	32°59'58.198"N	103°51'19.812"W	1.02	
12520.00	88.300	89.100	8737.83	4124.30	-4.26	4124.35	687893.47	727687.64	32°59'58.201"N	103°51'19.073"W	1.36	
12584.00	87.700	88.300	8740.06	4188.25	-2.81	4188.30	687957.40	727689.10	32°59'58.213"N	103°51'18.322"W	1.56	
12647.00	87.300	88.300	8742.81	4251.17	-0.94	4251.21	688020.31	727690.96	32°59'58.228"N	103°51'17.583"W	0.63	
12711.00	86.800	88.300	8746.11	4315.06	0.96	4315.10	688084.19	727692.86	32°59'58.244"N	103°51'16.833"W	0.78	
12774.00	87.000	88.300	8749.51	4377.95	-2.82	4377.98	688147.07	727694.72	32°59'58.260"N	103°51'16.094"W	0.32	
12837.00	86.700	87.900	8752.97	4440.83	4.91	4440.85	688209.94	727696.81	32°59'58.278"N	103°51'15.356"W	0.79	
12900.00	86.400	88.700	8756.77	4503.69	6.78	4503.70	688272.79	727698.68	32°59'58.293"N	103°51'14.618"W	1.35	
12931.00	86.300	88.500	8758.74	4534.62	7.53	4534.63	688303.72	727699.43	32°59'58.299"N	103°51'14.255"W	0.72	
12981.00	86.300	88.500	8761.97	4584.51	8.84	4584.51	688353.59	727700.74	32°59'58.310"N	103°51'13.669"W	0.00	Project to Bit

TARGETS

Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape
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	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			
No. 1H BHL	8730.50	18.78	4594.44	688363.52	727710.67	32°59'58.408"N	103°51'13.552"W	point	

WELLPATH COMPOSITION - Ref Wellbore: No. 1H AWB Ref Wellpath: No. 1H AWP						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore
21.00	8443.00	Generic gyro - northseeking (Standard)		Gyro		No. 1H AWB
8443.00	12981.00	NaviTrak (Standard)		MWD		No. 1H AWB

4.3 Bottom Hole Assembly

BOTTOM HOLE ASSEMBLY

INTEO

BHA # 1

Company:	Cimarex Energy Co	Well Name & No.:	Hancock 19 State Com 1H	Date Run:	5/13/2011
Field:	Caprock	Rig Contractor & No.:	Patriot 4	Depth In:	8460
County/Block/Par.:	Chaves Co			Depth Out:	8710

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	6 1/8 H47 B	H27829	2x15-1x14		250	19	8710	1	3	BT	H	1	1	WT	BHA	0 65

BHA DESCRIPTION

[illegible]

STABILIZER DATA

[illegible]

DRILL PIPE DATA

Drillpipe	Grade	OD	ID	Wt /ft	Conn	Lgth
Upper	S-135	3 1/2		0.0	3 1/2 IF	.....
Lower				0.0		0.00

BHA WEIGHT DATA

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

RUN SUMMARY

Mode	Footage	Drlg Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	250	19 00	.....	13 2	23			254	150	1675
Rotating		0 00	.....							
Total	250	19 00	2.00	13 2	23		0	254	150	1675

Survey Sensor to Bit	48.49	Gamma Sensor to Bit:	49.99	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 8.3	Hrs in Hole. 29.5
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Objective For Running BHA. Avg Temp: Max Temp

Drill Curve

BHA Results

BHA 1 performed well, gave all expected build rates of 28%/100'

Reason for POOH

Change motor out from 3 2 to 1 8 AKO setting to finish landing curve.

BHI Directional Drillers Fidencio Naranjo J R Short

BHI Job # 3803817

BOTTOM HOLE ASSEMBLY

INTEO

BHA # 2

Company	Cimarex Energy Co	Well Name & No :	Hancock 19 State Com 1H	Date Run	5/14/2011
Field	Caprock	Rig Contractor & No :	Patriot 4	Depth In.	8710
County/Block/Par	Chaves Co			Depth Out	9213

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 1/8	JZ	HF43-SB	J00474	3x15's		503	30	9213	2	2	NO	A	2	1	NO	BHA	0 65

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	(
Lower	0	(

RUN SUMMARY

Mode	Footage	Drig Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	151	15 25	.....	9 9	25			257	137	1699
Rotating	352	14 75	.....	23.9	16	51	4104	259	124	1714
Total	503	30 00	13 00	16 8	21	51	4104	258	130	1707

Survey Sensor to Bit	48 49	Gamma Sensor to Bit	49 99	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 8 3	Hrs in Hole 51 5
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Objective For Running BHA	Avg Temp	Max Temp
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Land Curve and drill lateral

BHA Results

Performed well Landed curve

Reason for POOH.

Change Bit

BHI Directional Drillers Fidencio Naranjo J R Short

BHI Job #: 3803817



BHA # 3

Company	Cimarex Energy Co	Well Name & No	Hancock 19 State Com 1H	Date Run	5/16/2011
Field	Caprock	Rig Contractor & No	Patriot 4	Depth In	9213
County/Block/Par	Chaves Co			Depth Out.	10644

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	
3	6 1/8	DC Log	193 PDC B	SO7475	4x13's		1431	67 25	10644	0	6	BT	S	X	1/16"	CT	DMF	0 65

[illegible]

DRILL PIPE DATA

[illegible]

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	111	15 50	.....	7 2	21			273	119	2116
Rotating	1320	51 75	.....	25 5	16	66	6555	273	329	2270
Total	1431	67 25	8 25	21.3	18	66	6555	273	269	2227

Survey Sensor to Bit	48 49	Gamma Sensor to Bit	49 99	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	8.4	Hrs in Hole	90 25
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Objective For Running BHA	Avg Temp.	Max Temp
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Drill Lateral

BHA Results

Performed well while drilling

Reason for POOH.

Motor was stalling out with differential going from 250 to 750 - 800 psi with 2-5 wob while torque was going from 7500 to 12000 with very little weight on bit and would not drill off. Picked up off bottom and lost 200 psi pump pressure.

BHI Directional Drillers Fidencio Naranjo J R Short BHI Job # 3803817

BOTTOM HOLE ASSEMBLY

INTEQ

BHA #. 4

Company	<u>Cimarex Energy Co</u>	Well Name & No	<u>Hancock 19 State Com 1H</u>	Date Run	<u>5/20/2011</u>
Field	<u>Caprock</u>	Rig Contractor & No	<u>Patriot 4</u>	Depth In	<u>10644</u>
County/Block/Par	<u>Chaves Co</u>			Depth Out	<u>12981</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	
4	6 1/8	Hillbur	1/8 FM3733	11264071	3x11.3x12	4"	2337	69.5	12981	1	1	WT	A	X	I	NO	TD	0.65

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	91	9 50	*****	9 6	23			273	69	2203
Rotating	2246	60 00	*****	37 4	15	78	6962	273	350	2308
Total	2337	69 50	9 50	33 6	17	78	6962	273	284	2283

Survey Sensor to Bit	48 49	Gamma Sensor to Bit	49 99	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 8.4	Hrs in Hole 89.75
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Objective For Running BHA	Avg Temp	Max Temp
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Drill Lateral

BHA Results

Performed well

Reason for POOH

TD Well

BHI Directional Drillers, Fidencio Naranjo J R Short

BHI Job # 3803817

4.4 Daily Drilling Reports



DAILY DRILLING REPORT

No: 1 Date 5/12/2011

INTEQ

Company: Cimarex Energy CoWell Name & No.: Hancock 19 State Com 1HField: CaprockRig Contractor & No.: Patriot 4County/Block/Parish: Chaves Co

BHA No(s) Today: _____

Depth: _____ Feet last 24 Hrs _____

Last CSG Depth: 8335Size 7

MUD DATA

Mud Type Brine Weight: _____ Viscosity: _____ PV _____ YP: _____ WL: _____
Gels: _____ % Oil: _____ % Solid _____ % Sand _____ PH 0 CL: _____

BIT DATA

No	Bit Size	Mfr	Type	Serial No.	Noz. or TFA	Gauge Length	Cum Footage	Cum Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff Press.	Drill Hrs. Today	Drill Hrs. Accum.	Circ. Hrs Today	Circ. Hrs. Accum	Depth In	Depth Out
			Tool	Angle								

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0.00	15.5	ONC	Other Non-circulating
15:30	1.5	ONC	Other Non-circulating
			Arrive on location
17 00	0 5	ONC	Other Non-circulating
			Unload tools. strap and caliper same
17 30	6 5	ONC	Other Non-circulating
			Standby

24 Hr Summary: Arrive on LocationProj svy at 0 00 NONE ENTERED

Proj svy at 24 00 _____

Bottom Hole Temp (F), Circulating. _____

Formation Name/Depth: _____

Remarks _____

BHI DIRECTIONAL REP: Fidencio Naranjo, J R Short

BHI MWD REP.: _____

COMPANY REP.: Keith Mc CallDAILY COST: \$7,150 00CUMMULATIVE COST \$7,150 00BHI JOB # 3803817



DAILY DRILLING REPORT

No 2 Date 5/13/2011

INTEQ

Company Cimarex Energy Co.Well Name & No. Hancock 19 State Corn 1HField CaprockRig Contractor & No Patriot 4County/Block/Parish Chaves CoBHA No(s) Today 1Depth 8505Feet last 24 Hrs 45Last CSG Depth 8335Size 7

MUD DATA

Mud Type BrineWeight 8.4Viscosity 28PV 68YP 1WL Gels 1/1/1% Oil % Solid 1% Sand PH 8.5CL 6000

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz or TFA	Gauge Length	Cum Footage	Cum. Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
1	6 1/8	JZ	1 1/8 H47 B	H27829	2x15-1x1		45	5.75		1	3	BT	H	1	I	WT	BHA

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff Press	Drill Hrs Today	Drill Hrs Accum	Circ Hrs Today	Circ Hrs Accum	Depth In	Depth Out
			Tool	Angle								
1	4 4 13/16	3/4 M1XP/I	AKO	3.2	33544	150.0	5.8	5.8	0.3	0.3	8460	

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0 00	13	ONC	Other Non-circulating
			Standby - Wait on rig
13 00	1.5	ONC	Other Non-circulating
			P/U - M/U BHA #1 - scribe and test - Good
14 30	3.5	TI	Tripping In (From Surface)
			TIH filling every 45 stds
18 00	4.5	SLID	Slide Drill fr 8460 to 8488
			90 MTF
22 30	0.25	SVC	Survey Circulating
			Checkshot @ 8438' Inc 1 1 Az 76.5
22 45	1.25	SLID	Slide Drill fr 8488 to 8505
			90 MTF

24 Hr Summary TIH w/ BHA #1 Drill CurveProj svy at 0 00 Proj svy at 24 00 Bottom Hole Temp (F), Circulating Formation Name/Depth: Remarks BHI DIRECTIONAL REP Fidencio Naranjo, J R ShortBHI MWD REP Jeff Lunquist, Rob ShumanCOMPANY REP Keith Mc CallDAILY COST \$17,185.00CUMMULATIVE COST \$24,335.00BHI JOB # 3803817



DAILY DRILLING REPORT

No: 3 Date: 5/14/2011

INTEQ

Company: Cimarex Energy Co.Well Name & No. Hancock 19 State Com 1HField CaprockRig Contractor & No.: Patriot 4County/Block/Parish: Chaves CoBHA No(s) Today: 1,2Depth: 8715Feet last 24 Hrs 210Last CSG Depth: 8335Size: 7

14 45	0 25	SVC	Survey Circulating
			Srv @ 8660' Inc 59 8° Az 91.4°
15 00	3	TO	Tripping Out (To Surface)
			PooH to C/O Bit and Motor to 1 8°
18:00	0 5	ONC	Other Non-circulating
			B/O Bit , L/D Motor
18 30	1 5	ONC	Other Non-circulating
			P/U & Reshim Motor to 1 8 & Scribe Tools, Test MWD
20:00	3	ONC	Other Non-circulating
			M/U Bit TIH w BHA # 2. Filling Every 45 STDS
23:00	1	SLID	Slide Drill fr 8710 to 8715

DAILY DRILLING REPORT

No 4 Date 5/15/2011

INTEQ

Company Cimarex Energy Co Well Name & No.: Hancock 19 State Com 1H
Field Caprock Rig Contractor & No. Patriot 4
County/Block/Parish Chaves Co BHA No(s) Today 2
Depth 8889 Feet last 24 Hrs 174 Last CSG Depth 8335 Size 7

MUD DATA

Mud Type Brine Weight 8.4 Viscosity 28 PV 68 YP 1 WL:
Gels 1/1/1 % Oil % Solid .1 % Sand PH 8.5 CL 6000

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz or TFA	Gauge Length	Cum Footage	Cum Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
2	6 1/8	JZ	HF43-SB	J00474	3x15's		179	13.25		2	2	NO	A	2	1	NO	BHA

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff. Press	Drill Hrs Today	Drill Hrs Accum	Circ Hrs Today	Circ Hrs Accum	Depth In	Depth Out
			Tool	Angle								
2	4 13/16	3/4 M1XP/I	AKO	1.8	43406	130.9	12.3	13.3	10.8	10.8	8710	

PUMP DATA

Pump #	Line X Stroke	Gal. / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0 00	1.5	ROT	Rotary Drill fr: 8715 to 8741
1.30	0.25	SVC	Survey Circulating
			SVY @ 8690 69.4 inc 88.5 azm
1.45	1.25	ROT	Rotary Drill fr: 8741 to 8773
3 00	0.25	SVC	Survey Circulating
			SVY @ 8723 72.5 inc 87.4 azm
3 15	1.25	SLID	Slide Drill fr: 8773 to 8786
			HS
4 30	0.5	OC	Other Circulating
			Troubleshoot smart box. Turned off by itself tried to reboot, won't turn on
5 00	0.5	ST	Short Tripping
			Pull 4 stds into casing
5 30	0.5	OC	Other Circulating
			Wait on smart box
6 00	7	OC	Other Circulating
			Wait on smart box
13 00	0.5	TI	Tripping In (From Surface)
			TIH I/ 8646'
13 30	0.25	OC	Other Circulating
			Wash I/ 8646' - 8715'
13 45	1.25	OC	Other Circulating
			Relog I/8715 - 8786
15 00	1.5	SLID	Slide Drill fr: 8786 to 8810

24 Hr Summary. Land Curve, Drill Laterail
Proj svy at 0:00
Proj svy at 24:00
Bottom Hole Temp (F), Circulating.
Formation Name/Depth:
Remarks
@ 21 30p Mike move target TVD to 8681' Top and 8688' Base @ 8870'

BHI DIRECTIONAL REP: Fidencio Naranjo, J.R. Short
BHI MWD REP.: Jeff Lunquist, Rob Shuman
COMPANY REP.: Keith Mc Call
DAILY COST: \$13,585.00
CUMMULATIVE COST: \$49,005.00
BHI JOB #: 3803817



DAILY DRILLING REPORT

No: 4 Date 5/15/2011

INTEQ

Company: Cimarex Energy CoWell Name & No.: Hancock 19 State Com 1HField: CaprockRig Contractor & No: Patriot 4County/Block/Parish: Chaves CoBHA No(s) Today: 2Depth: 8889Feet last 24 Hrs: 174Last CSG Depth: 8335Size: 7

16 30	0 25	SVC	Survey Circulating
			SVY @ 8755 73 1 inc 87 2 azm
16 45	0 75	ROT	Rotary Drill fr 8810 to 8826
17 30	1 5	SLID	Slide Drill fr 8826 to 8836
			5 R GTF
19 00	0.25	SVC	Survey Circulating
			SVY @ 8786 75 4 inc 87 6 azm
19.15	0.75	ROT	Rotary Drill fr 8836 to 8851
20:00	1 75	SLID	Slide Drill fr 8851 to 8868
21 45	0.25	SVC	Survey Circulating
			SVY @ 8818 77 7 inc 87 5 azm
22 00	1.25	ROT	Rotary Drill fr 8868 to 8880
23 15	0.75	SLID	Slide Drill fr 8880 to 8889

INTEQ

Company. Cimarex Energy Co.

Well Name & No.: Hancock 19 State Com 1H

Field: Caprock

Rig Contractor & No . Patriot 4

County/Block/Parish Chaves Co

BHA No(s) Today 2,3

Depth: 9213

Feet last 24 Hrs. 324

Last CSG Depth: 8335

Size: 7

MUD DATA

Mud Type Brine

Weight. 8.4

Viscosity 28

PV 68

YP 1

WL:

Gels. 1/1/1

% Oil

% Solid

% Sand.

PH. 85

CL: 13000

BIT DATA

[illegible]

MOTOR DATA / RUN DATA

[illegible]

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2 42	3500
2	5x10	2 42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0 00	1	SLID	Slide Drill fr 8889 to 8900
1:00	0.25	SVC	Survey Circulating
			SVT @ 8850 79 6 inc 88 3 azm
1 15	1 75	ROT	Rotary Drill fr: 8900 to 8931
3 00	0 25	SVC	Survey Circulating
			SVY @ 8881 82 4 inc 89 0 azm
3:15	1	SLID	Slide Drill fr 8931 to 8943
4 15	1	ROT	Rotary Drill fr 8943 to 8963
5 15	0 25	SVC	Survey Circulating
			SVY @ 8913
5 30	1 5	SLID	Slide Drill fr: 8963 to 8978
			5 L GTF
7 00	0 75	ROT	Rotary Drill fr 8978 to 8995
7 45	0.25	SVC	Survey Circulating
			Srv @ 8945' Inc 85.4° Az 88 4°
8 00	1 5	SLID	Slide Drill fr 8995 to 9007
			HS
9 30	0 75	ROT	Rotary Drill fr 9007 to 9029
10.15	0.25	SVC	Survey Circulating
			C/S @ 8976' Inc 87 4° Az 88 9°

24 Hr Summary Drill Lateral

Proj svy at 0 00:

Proj svy at 24 00

Bottom Hole Temp (F), Circulating:

Formation Name/Depth

Remarks

New center line by Mike at 1400PM 8679' @ 0 VS @ 89.4

BHI DIRECTIONAL REP Fidencia Naranjo, J.R. Short

BHI MWD REP : Jeff Lunquist, Rob Shuman

COMPANY REP · Keith Mc Call

DAILY COST	\$11,085 00
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CUMMULATIVE COST: \$60,090.00

BHI JOB # 3803817



DAILY DRILLING REPORT

No. 5 Date 5/16/2011

INTEQ

Company	Cimarex Energy Co	Well Name & No	Hancock 19 State Com 1H
Field	Caprock	Rig Contractor & No.	Patriot 4
County/Block/Parish	Chaves Co	BHA No(s) Today	2,3
Depth	9213	Last CSG Depth	8335
	Feet last 24 Hrs.	324	Size: 7

10 30	0 75	ROT	Rotary Drill fr: 9029 to 9057
11 15	0.25	SVC	Survey Circulating
			Srv @ 9007' Inc 89.8° Az 89 8°
11 30	0.75	ROT	Rotary Drill fr: 9057 to 9089
12 15	0.25	SVC	Survey Circulating
			Srv @ 9039' inc 90 3° Az 89.8°
12.30	2	ROT	Rotary Drill fr: 9089 to 9141
14.30	1 25	SLID	Slide Drill fr 9141 to 9151
			270L
15 45	0 25	SVC	Survey Circulating
			Srv @ 9102' Inc 89.7° Az 90 3°
16 00	1	ROT	Rotary Drill fr 9151 to 9184
17 00	0 25	SVC	Survey Circulating
			Srv @ 9134' Inc 90 2° Az 89 7°
17.15	0 5	ROT	Rotary Drill fr. 9184 to 9200
17 45	1.25	SLID	Slide Drill fr 9200 to 9213
			225L
19 00	3	TO	Tripping Out (To Surface)
			POOH to change bit & motor
22 00	1 5	ONC	Other Non-circulating
			M/U motor and bit, Test MWD
23:30	0 5	TI	Tripping In (From Surface)
			TIH w/ BHA # 3

INTEQ

Company Cimarex Energy Co

Well Name & No Hancock 19 State Com 1H

Field Caprock

Rig Contractor & No	Patriot 4
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County/Block/Parish Chaves Co

BHA No(s) Today: 3

Depth: 9595

Feet last 24 Hrs. 382

Last CSG Depth. 8335

Size 7

MUD DATA

Mud Type Brine

Weight 8 4

Viscosity 28

PV 68

YP: 1

WL

Gels 1/1/1

% Oil:

% Solid.

% Sand:

PH 85

CL 13000

BIT DATA

[illegible]

MOTOR DATA / RUN DATA

[illegible]

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2 42	3500
2	5x10	2 42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0 00	3	TI	Tripping In (From Surface)
			TIH w/ BHA # 3
3:00	0 25	ROT	Rotary Drill fr 9213 to 9216
3.15	0 25	SVC	Survey Circulating
			SVY @ 9166 89 4 inc 88 7 azm
3.30	1.5	ROT	Rotary Drill fr 9216 to 9247
5 00	0 25	SVC	Survey Circulating
			SVY @ 9197 88 4 inc 88 6 azm
5 15	0 75	SLID	Slide Drill fr 9247 to 9254
			20L
6 00	1	ROT	Rotary Drill fr 9254 to 9281
7 00	0 25	SVC	Survey Circulating
			Srv @ 9229' Inc 87 6° Az 87 1°
7:15	1 5	SLID	Slide Drill fr. 9281 to 9290
			HS
8 45	0 75	ROT	Rotary Drill fr 9290 to 9311
9.30	0 5	ONC	Other Non-circulating
			Install Rotating Head
10 00	0 25	SVC	Survey Circulating
			C/S @ 9261' Inc 87.9° Az 87 4°
10 15	0 5	ROT	Rotary Drill fr 9311 to 9326

24 Hr Summary Drill Lateral

Proj svy at 0 00:

Proj svy at 24 00:

Bottom Hole Temp (F), Circulating:

Formation Name/Depth

Remarks

Center Line @ 8679' @ 0' VS @ 89.4°

BHI DIRECTIONAL REP Fidencia Naranjo, J.R. Short

BHI MWD REP. Jeff Lunquist, Rob Shuman

COMPANY REP : Keith Mc Call

DAILY COST.	\$13.585 00
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CUMMULATIVE COST	\$73,675 00
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BHI JOB # 3803817



DAILY DRILLING REPORT

No. 6 Date. 5/17/2011

INTEQ

Company Cimarex Energy Co.Field CaprockCounty/Block/Parish. Chaves CoDepth 9595 Feet last 24 Hrs. 382

Well Name & No

Hancock 19 State Com 1H

Rig Contractor & No.

Patriot 4

BHA No(s) Today

3

Last CSG Depth:

8335Size 7

10:45	0.25	ROT	Rotary Drill fr 9326 to 9330
11:00	1	SLID	Slide Drill fr 9330 to 9337
			5L GTF
12:00	0.5	ROT	Rotary Drill fr. 9337 to 9343
12:30	0.25	SVC	Survey Circulating
			Srv @ 9293' Inc 89 4° Az 87 9°
12:45	1	ROT	Rotary Drill fr 9343 to 9381
13:45	0.25	SVC	Survey Circulating
			Srv @ 9324' Inc 90 5° Az 88 1°
14:00	0.5	ST	Short Tripping
			PooH 11 Stands to casing
14:30	1.5	RIGR	Rig Repair
			Repair leak on stand pipe under structure, gasket leak
16:00	0.5	ST	Short Tripping
			TIH to bottom
16:30	1.25	ROT	Rotary Drill fr 9381 to 9406
17:45	0.25	SVC	Survey Circulating
			C/S @ 9356' Inc 90 8° Az 88.0°
18:00	0.5	ROT	Rotary Drill fr. 9406 to 9443
18:30	0.25	SVC	Survey Circulating
			SVY @ 9387 90 9 inc 87.9 azm
18:45	0.75	SLID	Slide Drill fr: 9443 to 9450
			165L GTF
19:30	0.5	ROT	Rotary Drill fr 9450 to 9469
20:00	0.25	SVC	Survey Circulating
			SVY @ 9419 90.7 inc 88 0 azm
20:15	0.75	ROT	Rotary Drill fr 9469 to 9500
21:00	0.25	SVC	Survey Circulating
			SVY @ 9450 88 7 inc 87 2 azm
21:15	0.5	ROT	Rotary Drill fr 9500 to 9532
21:45	0.25	SVC	Survey Circulating
			SVY @ 9482 88.2 inc 86 7 azm
22:00	0.5	ROT	Rotary Drill fr 9532 to 9564
22:30	0.25	SVC	Survey Circulating
22:45	0.5	SLID	Slide Drill fr. 9564 to 9569
			HS
23:15	0.75	ROT	Rotary Drill fr 9569 to 9595



DAILY DRILLING REPORT

No 7 Date 5/18/2011

INTEQ

Company Cimarex Energy CoWell Name & No. Hancock 19 State Com 1HField CaprockRig Contractor & No Patriot 4County/Block/Parish Chaves CoBHA No(s) Today 3Depth 10048Feet last 24 Hrs 453Last CSG Depth: 8335Size 7

MUD DATA

Mud Type BrineWeight 8.4Viscosity 28PV 68YP 1WL Gels 1/1/1% Oil % Solid 1% Sand PH 8.5CL 13000

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz or TFA	Gauge Length	Cum Footage	Cum Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
3	6 1/8	DC Lo	193 PDC	SO7475	4x13's		835	36.25		0	6	BT	S	X	1/16"	CT	DMF

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff. Press	Drill Hrs Today	Drill Hrs Accum.	Circ Hrs Today	Circ Hrs Accum.	Depth In	Depth Out
			Tool	Angle								
3	4 13/16	3/4 M1XP/I	AKO	1.8	42308	266.6	21.3	36.3	2.8	5.8	9213	

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0 00	0 25	SVC	Survey Circulating
			SVY @ 9545 87.2 inc 86.7 azm
0 15	1	SLID	Slide Drill fr 9595 to 9600
			HS
1 15	1 25	ROT	Rotary Drill fr 9600 to 9626
2 30	0 25	SVC	Survey Circulating
			SVY @ 9576 87.8 inc 86.5 azm
2 45	1	ROT	Rotary Drill fr 9626 to 9658
3 45	0 25	SVC	Survey Circulating
			SVY @ 9608 89.0 inc 86.1 azm
4 00	1 25	ROT	Rotary Drill fr 9658 to 9690
5 15	0 25	SVC	Survey Circulating
			SVY @ 9640
5 30	0 75	SLID	Slide Drill fr 9690 to 9694
			20R
6.15	0 75	ROT	Rotary Drill fr 9694 to 9722
7:00	0 25	SVC	Survey Circulating
			Srv @ 9672' Inc 88.5° Az 85.9°
7 15	1	ROT	Rotary Drill fr 9722 to 9755
8 15	0 25	SVC	Survey Circulating
			Srv @ 9704' Inc 88.7° Az 85.8°

24 Hr Summary Drill LateralProj svy at 0 00: Proj svy at 24 00: Bottom Hole Temp (F), Circulating. Formation Name/Depth

Remarks

Victor email, 8678 TVD @ 0' VS @ 89.25 new centerlineVictor Email, 8660' @ 0' VS @ 88.25 new center lineBHI DIRECTIONAL REP: Fidencio Naranjo, J R ShortBHI MWD REP Jeff Lunquist, Rob ShumanCOMPANY REP Keith Mc CallDAILY COST \$11,085.00CUMMULATIVE COST \$84,760.00BHI JOB # 3803817



DAILY DRILLING REPORT

No 7 Date 5/18/2011

INTEQ

Company Cimarex Energy Co.Well Name & No : Hancock 19 State Com 1HField CaprockRig Contractor & No.. Patriot 4County/Block/Parish Chaves CoBHA No(s) Today 3Depth 10048Feet last 24 Hrs 453Last CSG Depth: 8335Size 7

8:30	0.5	SLID	Slide Drill fr. 9755 to 9761 160R
9:00	0.5	ROT	Rotary Drill fr. 9761 to 9785
9:30	0.25	SVC	Survey Circulating C/S @ 9735' Inc 88.6° Az 85.9°
9:45	1.25	ROT	Rotary Drill fr. 9785 to 9848
11:00	0.25	SVC	Survey Circulating Srv @ 9798' Inc 87.6° Az 85.5°
11:15	3.25	ROT	Rotary Drill fr. 9848 to 9913
14:30	0.25	SVC	Survey Circulating C/S @ 9861' Inc 87.3° Az 85.5°
14:45	0.75	SLID	Slide Drill fr. 9913 to 9921 65R
15:30	2.75	ROT	Rotary Drill fr. 9921 to 9975
18:15	0.25	SVC	Survey Circulating C/S @ 9925' Inc 87.7° Az 86.8°
18:30	2.25	SLID	Slide Drill fr. 9975 to 9983 90 R GTF
20:45	2.5	ROT	Rotary Drill fr. 9983 to 10038
23:15	0.25	SVC	Survey Circulating SVY @ 9988 87.6 inc 88.7 azm
23:30	0.5	ROT	Rotary Drill fr. 10038 to 10048



DAILY DRILLING REPORT

No 8 Date 5/19/2011

INTEQ

Company Cimarex Energy CoWell Name & No Hancock 19 State Com 1HField CaprockRig Contractor & No Patriot 4County/Block/Parish Chaves CoBHA No(s) Today 3Depth 10493Feet last 24 Hrs 445Last CSG Depth 8335Size 7

MUD DATA

Mud Type Brine Weight 8.4 Viscosity 28 PV 68 YP 1 WL
Gels 1/1/1 % Oil % Solid 1 % Sand PH 8.5 CL 13000

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz or TFA	Gauge Length	Cum Footage	Cum Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
3	6 1/8	DC Lo	193 PDC	SO7475	4x13's		1280	58.25		0	6	BT	S	X	1/16"	CT	DMF

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff. Press	Drill Hrs Today	Drill Hrs Accum	Circ Hrs Today	Circ Hrs Accum	Depth In	Depth Out
			Tool	Angle								
3	4 13/16	3/4 M1XP/1	AKO	1.8	42308	268.4	22.0	58.3	2.0	7.8	9213	

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0:00	2.25	ROT	Rotary Drill fr. 10048 to 10101
2:15	0.25	SVC	Survey Circulating
			SVY @ 10051' 87.5 inc 88.1 azm
2:30	0.5	SLID	Slide Drill fr 10101 to 10105
			180 GTF
3:00	2.25	ROT	Rotary Drill fr. 10105 to 10165
5:15	0.25	SVC	Survey Circulating
			SVY @ 10115
5:30	0.25	SVC	Survey Circulating
			Srv @ 10115' Inc 86.2° Az 87.9°
5:45	3.25	ROT	Rotary Drill fr 10165 to 10228
9:00	0.25	SVC	Survey Circulating
			Srv @ 10178' Inc 86.4° Az 88.4°
9:15	2.25	ROT	Rotary Drill fr 10228 to 10279
11:30	1	SLID	Slide Drill fr 10279 to 10286
			5R GTF
12:30	0.25	ROT	Rotary Drill fr 10286 to 10292
12:45	0.25	SVC	Survey Circulating
			C/S @ 10242' Inc 85.3° Az 88.6°
13:00	0.5	ROT	Rotary Drill fr 10292 to 10309

24 Hr Summary Drill LateralProj svy at 0.00 Proj svy at 24.00 Bottom Hole Temp. (F), Circulating Formation Name/Depth

Remarks:

Victor e-mail @ 24.00 TVD-8654, INC 88.0BHI DIRECTIONAL REP Fidencio Naranjo, J R ShortBHI MWD REP Jeff Lunquist, Rob ShumanCOMPANY REP Keith Mc CallDAILY COST \$11,085.00CUMMULATIVE COST \$95,845.00BHI JOB # 3803817



DAILY DRILLING REPORT

No. 8 Date 5/19/2011

INTEQ

Company: Cimarex Energy CoWell Name & No.: Hancock 19 State Com 1HField: CaprockRig Contractor & No Patriot 4County/Block/Parish: Chaves CoBHA No(s) Today: 3Depth: 10493Feet last 24 Hrs 445Last CSG Depth 8335Size 7

13.30	1	SLID	Slide Drill fr 10309 to 10317
			20L GTF
14.30	1.5	ROT	Rotary Drill fr. 10317 to 10355
16.00	0.25	SVC	Survey Circulating
			Srv @ 10305' Inc 86.4°Az 88.7°
16.15	0.75	ROT	Rotary Drill fr 10355 to 10371
17.00	0.5	SLID	Slide Drill fr 10371 to 10375
			HS
17.30	1.5	ROT	Rotary Drill fr 10375 to 10418
19.00	0.25	SVC	Survey Circulating
			SVY @ 10368 87.4 inc 89.0 azm
19.15	1.75	ROT	Rotary Drill fr: 10418 to 10450
21.00	1	SLID	Slide Drill fr 10450 to 10458
			5 L GTF
22.00	1.25	ROT	Rotary Drill fr 10458 to 10481
23.15	0.25	SVC	Survey Circulating
			SVY @ 10431 88.7 inc 90.0 azm
23.30	0.5	ROT	Rotary Drill fr 10481 to 10493



DAILY DRILLING REPORT

No 9 Date 5/20/2011

INTEQ

Company Cimarex Energy CoWell Name & No. Hancock 19 State Com 1HField. CaprockRig Contractor & No Patriot 4County/Block/Parish Chaves CoBHA No(s) Today 3,4Depth 10715Feet last 24 Hrs 222Last CSG Depth. 8335Size 7

MUD DATA

Mud Type Brine Weight 8.4 Viscosity 28 PV 68 YP. 1 WL
Gels 1/1/1 % Oil. % Solid .1 % Sand PH 8.5 CL. 13000

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz or TFA	Gauge Length	Cum Footage	Cum. Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
3	6 1/8	OC Loc	193 PDC	SO7475	4x13's		1431	67.25	10644	0	6	BT	S	X	1/16"	CT	DMF
4	6 1/8	Illibur	1/8 FM373	11264071	3x11,3x1	4"	71	3.75		1	1	WT	A	X	I	NO	TD

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff Press	Drill Hrs Today	Drill Hrs Accum	Circ. Hrs. Today	Circ. Hrs. Accum	Depth In	Depth Out
			Tool	Angle								
3	4 13/16	3/4 M1XP/	AKO	1.8	42308	269.1	9.0	67.3	0.5	8.3	9213	10644
4	4 13/16	3/4 M1XP/	AKO	1.8	ET-14858	261.7	3.8	3.8	0.3	0.3	10644	

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0 00	1 25	ROT	Rotary Drill fr 10493 to 10513
1 15	1	SLID	Slide Drill fr 10513 to 10523
			HS
2 15	1 25	ROT	Rotary Drill fr 10523 to 10545
3 30	0 25	SVC	Survey Circulating
			SVY @ 10495 90.1 inc 90.2 azm
3 45	0 5	ONC	Other Non-circulating
			Tool Jt Leaking L/D DP
4 15	1 75	ROT	Rotary Drill fr 10545 to 10590
6:00	0 5	ONC	Other Non-circulating
			C/O 2 Jnts. Leaking on the face at connection
6 30	1 5	ROT	Rotary Drill fr 10590 to 10608
8:00	0 25	SVC	Survey Circulating
			Srv @ 10558' Inc 89.5° Az 89.3°
8 15	0 75	SLID	Slide Drill fr 10608 to 10612
			30L
9 00	1 5	ROT	Rotary Drill fr 10612 to 10644
10.30	4 5	TO	Tripping Out (To Surface)
			POOH torqueing up to 12k from 8k and Diff up to 750, stalling out

24 Hr Summary Drill LateralProj svy at 0 00: Proj svy at 24 00: Bottom Hole Temp (F), Circulating Formation Name/Depth

Remarks:

Victor email

Bring INC up to 90

BHI DIRECTIONAL REP Fidencio Naranjo, J R ShortBHI MWD REP Jeff Lunquist, Rob ShumanCOMPANY REP.: SamDAILY COST \$13,585.00CUMMULATIVE COST \$109,430.00BHI JOB # 3803817



DAILY DRILLING REPORT

No. 9 Date. 5/20/2011

INTEQ

Company: Cimarex Energy Co.Well Name & No.: Hancock 19 State Com 1HField CaprockRig Contractor & No.: Patriot 4County/Block/Parish Chaves CoBHA No(s) Today 3.4Depth 10715Feet last 24 Hrs 222Last CSG Depth 8335Size 7

15 00	0 25	ONC	Other Non-circulating
			B/O-L/O bit and motor
15.15	0 5	ONC	Other Non-circulating
			P/U - M/U Motor and scribe to MWD
15 45	0.5	ONC	Other Non-circulating
			Test Mwd and M/U Bit - ok
16 15	3.75	TI	Tripping In (From Surface)
			TIH, Filling every 45 stds
20 00	0.75	ROT	Rotary Drill fr. 10644 to 10671
20 45	0 25	SVC	Survey Circulating
			SVY @ 10621 92.1 inc 89.9 azm
21 00	1 5	ROT	Rotary Drill fr. 10671 to 10703
22 30	1 5	SLID	Slide Drill fr. 10703 to 10715
			165 L

DAILY DRILLING REPORT

No 10 Date 5/21/2011

INTEQ

Company Cimarex Energy Co
Field Caprock
County/Block/Parish Chaves Co
Depth 11343 Feet last 24 Hrs 628

Well Name & No Hancock 19 State Com 1H
Rig Contractor & No Patriot 4
BHA No(s) Today 4
Last CSG Depth 8335 Size 7

MUD DATA

Mud Type Brine Weight 8.4 Viscosity 28 PV 68 YP 1 WL
Gels 1/1/1 % Oil % Solid 1 % Sand PH 8.5 CL 13000

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz or TFA	Gauge Length	Cum. Footage	Cum Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
4	6 1/8	Illibur	1/8 FM373	11264071	3x11,3x1	4"	699	25 25		1	1	WT	A	X	I	NO	TD

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff. Press	Drill Hrs Today	Drill Hrs. Accum.	Circ Hrs Today	Circ Hrs Accum	Depth In	Depth Out
			Tool	Angle								
4	4 13/16	3/4 M1XP/I	AKO	1.8	ET-14858	276.4	21.5	25.3	2.5	2.8	10644	

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0:00	1	ROT	Rotary Drill fr 10715 to 10735
1:00	0.25	SVC	Survey Circulating
			SVY @ 10685 94.4 inc 90.7 azm
1:15	2.75	ROT	Rotary Drill fr 10735 to 10798
4:00	0.25	SVC	Survey Circulating
			SVY @ 10748 91.2 inc 89.8 azm
4:15	1.75	ROT	Rotary Drill fr 10798 to 10861
6:00	0.25	SVC	Survey Circulating
			SVY @ 10811 90.8 inc 90.4 azm
6:15	2.75	ROT	Rotary Drill fr 10861 to 10925
9:00	0.25	SVC	Survey Circulating
			SVY @ 10875 90.7 inc 90.0 azm
9:15	2	ROT	Rotary Drill fr 10925 to 10988
11:15	0.25	SVC	Survey Circulating
			SVY @ 10938 90.5 inc 90.1 azm
11:30	2	ROT	Rotary Drill fr 10988 to 11052
13:30	0.25	SVC	Survey Circulating
			SVY @ 11002 90.3 inc 90.2 azm
13:45	1.5	ROT	Rotary Drill fr 11052 to 11115

24 Hr Summary: Drill Lateral
Proj svy at 0:00
Proj svy at 24:00
Bottom Hole Temp. (F), Circulating
Formation Name/Depth
Remarks
Victor e mail
Keep INC. 90 to 91 Degrees

BHI DIRECTIONAL REP: Fidencio Naranjo, J.R. Short
BHI MWD REP: Jeff Lunquist, Rob Shuman
COMPANY REP: Sam
DAILY COST: \$11,085.00
CUMMULATIVE COST: \$120,515.00
BHI JOB #: 3803817



DAILY DRILLING REPORT

No 10 Date 5/21/2011

INTEQ

Company Cimarex Energy CoWell Name & No. Hancock 19 State Com 1HField: CaprockRig Contractor & No. Patriot 4County/Block/Parish Chaves CoBHA No(s) Today 4Depth 11343 Feet last 24 Hrs 628Last CSG Depth. 8335 Size 7

15:15	0.25	SVC	Survey Circulating
			SVY @ 11065 90.6 inc 90.7 azm
15:30	0.5	SLID	Slide Drill fr 11115 to 11120
			100 L
16:00	2	ROT	Rotary Drill fr 11120 to 11178
18:00	0.25	SVC	Survey Circulating
			SVY @ 11128 90.3 inc 90.1 azm
18:15	0.5	SLID	Slide Drill fr. 11178 to 11183
			90 L
18:45	1.75	ROT	Rotary Drill fr. 11183 to 11242
20:30	0.25	SVC	Survey Circulating
			SVY @ 11192 91.0 inc 90.1 azm
20:45	0.5	SLID	Slide Drill fr: 11242 to 11262
			130L
21:15	1.25	ROT	Rotary Drill fr 11262 to 11305
22:30	0.25	SVC	Survey Circulating
			SVY @ 11255 89.9 inc 89.4 azm
22:45	1	ROT	Rotary Drill fr 11305 to 11337
23:45	0.25	SLID	Slide Drill fr 11337 to 11343
			90L



DAILY DRILLING REPORT

No. 11 Date 5/22/2011

INTEQ

Company Cimarex Energy Co
Field Caprock
County/Block/Parish Chaves Co
Depth 12128 Feet last 24 Hrs 785Well Name & No Hancock 19 State Com 1H
Rig Contractor & No Patriot 4
BHA No(s) Today 4
Last CSG Depth 8335 Size 7

MUD DATA

Mud Type Brine Weight 8.4 Viscosity 28 PV 68 YP 1 WL _____
Gels 1/1/1 % Oil _____ % Solid 1 % Sand _____ PH 8.5 CL 13000

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz or TFA	Gauge Length	Cum Footage	Cum Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
4	6 1/8	Illibur	1/8 FM373	11264071	3x11.3x1	4"	1484	46		1	1	WT	A	X	I	NO	TD

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff Press	Drill Hrs. Today	Drill Hrs Accum	Circ Hrs Today	Circ Hrs Accum	Depth in	Depth Out
			Tool	Angle								
4	4 13/16	3/4 M1XP/I	AKO	1.8	ET-14858	283.6	20.8	46.0	3.3	6.0	10644	

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0 00	0 25	SLID	Slide Drill fr 11343 to 11346
			90L
0 15	0 5	ROT	Rotary Drill fr 11346 to 11368
0 45	0 25	SVC	Survey Circulating
			SVY @ 11318 89.9 inc 89.8 azm
1 00	1 5	ROT	Rotary Drill fr 11368 to 11432
2 30	0 25	SVC	Survey Circulating
			SVY @ 11382 89.6 inc 88.2 azm
2 45	0 25	SLID	Slide Drill fr 11432 to 11436
			80L
3 00	1 25	ROT	Rotary Drill fr 11436 to 11495
4 15	0 25	SVC	Survey Circulating
			SVY @ 11445 89.9 inc 86.6 azm
4 30	1 5	ROT	Rotary Drill fr 11495 to 11558
6 00	0 25	SVC	Survey Circulating
			Srv @ 11508' Inc 89.9° Az 86.3°
6 15	0 75	ROT	Rotary Drill fr 11558 to 11622
7 00	0 25	SVC	Survey Circulating
			C/S @ 11572' Inc 89.9° Az 86.5°
7 15	1.25	ROT	Rotary Drill fr 11622 to 11685

24 Hr Summary Drill Lateral
Proj svy at 0.00 _____
Proj svy at 24.00 _____
Bottom Hole Temp (F), Circulating _____
Formation Name/Depth _____
Remarks:
Victor called @ 0830a TVD @ 0 VS 8660' @ 89.0° - 11717'BHI DIRECTIONAL REP: Fidencio Naranjo, J R Short
BHI MWD REP.: Jeff Lunquist, Rob Shuman
COMPANY REP.: Sam
DAILY COST: \$11,085.00
CUMMULATIVE COST \$131,600.00
BHI JOB # 3803817



DAILY DRILLING REPORT

No 11 Date 5/22/2011

INTEQ

Company Cimarex Energy CoField CaprockCounty/Block/Parish Chaves CoDepth. 12128 Feet last 24 Hrs 785Well Name & No.: Hancock 19 State Com 1HRig Contractor & No Patriot 4BHA No(s) Today: 4Last CSG Depth: 8335 Size: 7

8 30	0 25	SVC	Survey Circulating
			C/S @ 11635' Inc 89.4° Az 86.1°
8.45	1 5	ROT	Rotary Drill fr. 11685 to 11748
10:15	0 25	SVC	Survey Circulating
			Srv @ 11698' Inc 89 2° Az 86.5°
10 30	2	ROT	Rotary Drill fr 11748 to 11812
12 30	0 25	SVC	Survey Circulating
			C/S @ 11762' Inc 89.3° Az 86 4°
12.45	0.75	ROT	Rotary Drill fr 11812 to 11843
13:30	1	SLID	Slide Drill fr 11843 to 11851
			90R
14:30	0 25	ROT	Rotary Drill fr 11851 to 11875
14 45	0.25	SVC	Survey Circulating
			C/S @ 11825' Inc 89 3° Az 86 8°
15 00	1.75	ROT	Rotary Drill fr. 11875 to 11938
16:45	0 25	SVC	Survey Circulating
			Srv @ 11888' Inc 88.7° Az 87 8°
17:00	1	ROT	Rotary Drill fr. 11938 to 12002
18 00	0.25	SVC	Survey Circulating
			SVY @ 11952 88 6 inc 87.6 azm
18.15	1 75	ROT	Rotary Drill fr 12002 to 12033
20.00	1	SLID	Slide Drill fr 12033 to 12038
			60 R
21.00	0 5	ROT	Rotary Drill fr 12038 to 12065
21:30	0 25	SVC	Survey Circulating
			SVY @ 12015 89 0 inc 87.1 azm
21 45	2	ROT	Rotary Drill fr 12065 to 12128
23 45	0.25	SVC	Survey Circulating
			SVY @ 12078 89.0 inc 87.0 azm



DAILY DRILLING REPORT

No. 12 Date: 5/23/2011

INTEQ

Company: Cimarex Energy CoWell Name & No.: Hancock 19 State Com 1HField: CaprockRig Contractor & No: Patriot 4County/Block/Parish: Chaves CoBHA No(s) Today: 4Depth: 12887 Feet last 24 Hrs: 759Last CSG Depth: 8335 Size 7

MUD DATA

Mud Type Brine Weight: 8.4 Viscosity 28 PV: 68 YP 1 WL:
Gels: 1/1/1 % Oil: % Solid .1 % Sand: PH: 8.5 CL: 13000

BIT DATA

No	Bit Size	Mfr	Type	Serial No	Noz. or TFA	Gauge Length	Cum Footage	Cum. Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
4	6 1/8	Hallibur	1/8 FM373	11264071	3x11,3x11	4"	2243	67.25		1	1	WT	A	X	1	NO	TD

MOTOR DATA / RUN DATA

BHA No	Size	Type	Deflection		Serial Number	Avg Diff. Press	Drill Hrs Today	Drill Hrs. Accum	Circ. Hrs. Today	Circ. Hrs. Accum.	Depth In	Depth Out
			Tool	Angle								
4	4 13/16	3/4 M1XP/L	AKO	1.8	ET-14858	281.0	21.3	67.3	2.8	8.8	10644	

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0:00	0.5	SLID	Slide Drill fr 12128 to 12132
			60 R
0:30	1.5	ROT	Rotary Drill fr 12132 to 12191
2:00	0.25	SVC	Survey Circulating
			SVY @ 12141 89.1 inc 87.9 azm
2:15	1	ROT	Rotary Drill fr 12191 to 12255
3:15	0.25	SVC	Survey Circulating
			SVY @ 12205 89.2 inc 88.4 azm
3:30	1.5	ROT	Rotary Drill fr 12255 to 12318
5:00	0.25	SVC	Survey Circulating
			SVY @ 12268 88.9 inc 89.1 azm
5:15	0.75	ROT	Rotary Drill fr. 12318 to 12381
6:00	0.25	SVC	Survey Circulating
			SVY @ 12331 88.4 INC 89.3 AZM
6:15	1.75	ROT	Rotary Drill fr. 12381 to 12444
8:00	0.25	SVC	Survey Circulating
			SVY @ 12394 88.4 INC 89.4 AZM
8:15	0.75	ROT	Rotary Drill fr 12444 to 12510
9:00	0.25	SVC	Survey Circulating
			SVY @ 12457 88.0 INC 89.9 AZM

24 Hr Summary Drill VerticalProj svy at 0:00: Proj svy at 24:00: Bottom Hole Temp. (F), Circulating Formation Name/Depth:

Remarks:

Victor email. Everything looks good. T D @ 4584' VSBHI DIRECTIONAL REP: Fidencio Naranjo, J R. ShortBHI MWD REP: Jeff Lunquist, Rob ShumanCOMPANY REP: SamDAILY COST: \$11,085.00CUMMULATIVE COST: \$142,685.00BHI JOB #: 3803817



DAILY DRILLING REPORT

No. 12 Date: 5/23/2011

INTEQ

Company Cimarex Energy CoWell Name & No.: Hancock 19 State Com 1HField CaprockRig Contractor & No. Patriot 4County/Block/Parish: Chaves CoBHA No(s) Today 4Depth. 12887Feet last 24 Hrs: 759Last CSG Depth 8335Size. 7

9.15	1.5	SLID	Slide Drill fr 12510 to 12515 100 L
10.45	1.5	ROT	Rotary Drill fr 12515 to 12570
12.15	0.25	SVC	Survey Circulating SVY @ 12520 88.3 INC 89.1 AZM
12.30	1	SLID	Slide Drill fr 12570 to 12580 130 L
13.30	1.25	ROT	Rotary Drill fr 12580 to 12634
14.45	0.25	SVC	Survey Circulating SVY @ 12584 87.7 INC 88.3 AZM
15.00	2	ROT	Rotary Drill fr 12634 to 12697
17.00	0.25	SVC	Survey Circulating SVY @ 12647 87.3 INC 88.3 AZM
17.15	1.75	ROT	Rotary Drill fr 12697 to 12761
19.00	0.25	SVC	Survey Circulating SVY @ 12711 86.8 INC 88.3 AZM
19.15	0.75	SLID	Slide Drill fr 12761 to 12765 20 L
20.00	2	ROT	Rotary Drill fr 12765 to 12824
22.00	0.25	SVC	Survey Circulating SVY @ 12774 87.0 INC 88.3 AZM
22.15	1.75	ROT	Rotary Drill fr 12824 to 12887



DAILY DRILLING REPORT

No. 13 Date: 5/24/2011

INTEQ

Company Cimarex Energy CoWell Name & No : Hancock 19 State Com 1HField: CaprockRig Contractor & No. Patriot 4County/Block/Parish Chaves CoBHA No(s) Today 4Depth 12981Feet last 24 Hrs 94Last CSG Depth 8335Size 7

MUD DATA

Mud Type Brine Weight 8.4 Viscosity 28 PV 68 YP: 1 WL:
Gels 1/1/1 % Oil % Solid 1 % Sand PH: 8.5 CL: 13000

BIT DATA

No.	Bit Size	Mfr	Type	Serial No	Noz or TFA	Gauge Length	Cum Footage	Cum Hours	Depth Out	DULL CONDITION							
										IR	OR	DC	LOC	B/S	G/16	OC	RPLD
4	6 1/8	Illibur	1/8 FM373	11264071	3x11,3x11	4"	2337	69.5	12981	1	1	WT	A	X	I	NO	TD

MOTOR DATA / RUN DATA

BHA No.	Size	Type	Deflection		Serial Number	Avg Diff Press	Drill Hrs Today	Drill Hrs. Accum	Circ. Hrs Today	Circ. Hrs Accum	Depth In	Depth Out
			Tool	Angle								
4	4 13/16	3/4 M1XP/1	AKO	1.8	ET-14858	283.5	2.3	69.5	0.8	9.5	10644	12981

PUMP DATA

Pump #	Liner X Stroke	Gal / Stroke	Max Allowable SPP
1	5x10	2.42	3500
2	5x10	2.42	3500

TARGET DESCRIPTION / DETAILS

TIME BREAKDOWN

From	HRS	Code	Description
0.00	0.25	SVC	Survey Circulating
			SVY @ 12837 86.7 INC 87.9 AZM
0.15	1.5	ROT	Rotary Drill fr 12887 to 12950
1.45	0.25	SVC	Survey Circulating
			SVY @ 12900 86.4 INC 88.7 AZM
2.00	0.75	ROT	Rotary Drill fr 12950 to 12981
2.45	0.25	SVC	Survey Circulating
			SVY @ 12931 86.3 INC 88.5 AZM
3.00	5	TO	Tripping Out (To Surface)
			TD @ 12981 POOH to Laydown Tools
8.00	2	ONC	Other Non-circulating
			L/D BHA # 4 & Load truck

24 Hr Summary Drill LateralProj svy at 0.00: Proj svy at 24.00: NONE ENTEREDBottom Hole Temp (F), Circulating: Formation Name/Depth Remarks: BHI DIRECTIONAL REP: Fidencio Naranjo, J R ShortBHI MWD REP.: Jeff Lunquist, Rob ShumanCOMPANY REP.: SamDAILY COST \$11,085.00CUMMULATIVE COST \$153,770.00BHI JOB # 3803817

4.5 Drilling Parameter Records

DRILLING PARAMETERS RECORD

INTEQ

Company Cimarex Energy Co Well Name No Hancock 19 State Com 1H
 Field Caprock Rig Contractor No.: Patriot 4
 County/Block/Parish Chaves Co

Date	Depth From	Depth To	Fig Drilled	Mode S/R	Drig Hrs.	ROP	WOB (Klbs)	Rot RPM	Rot Tq	TFO	Flow Rate	Diff Pres	Temp	SPP	BHA No
5/13/2011	8460	8488	28	O	4 5	6 222	20			90 MTF	254	150		1675	1
5/13/2011	8488	8505	17	O	1 25	13 60	23			90 MTF	254	150		1675	1
5/14/2011	8505	8520	15	O	0.75	20	23			HS	254	150		1675	1
5/14/2011	8520	8551	31	O	2.5	12.4	23			10R GTF	254	150		1675	1
5/14/2011	8551	8583	32	O	1 5	21.33	23			10R GTF	254	150		1675	1
5/14/2011	8583	8615	32	O	2	16	23			30R GTF	254	150		1675	1
5/14/2011	8615	8647	32	O	2 25	14 22	23			HS	254	150		1675	1
5/14/2011	8647	8678	31	O	2	15 5	23			5L GTF	254	150		1675	1
5/14/2011	8678	8710	32	O	2 25	14 22	23			25L GTF	254	150		1675	1

Mode	Footage	Drig Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	250	19 0	.....	13 2	22 7			254 0	150 0	1675.0
Rotating		0 0	.....							
Total	250	19 0	2 0	13 2	22 7		0 0	254 0	150.0	1675 0

5/14/2011	8710	8715	5	O	1	5	23			0	254	150		1675	2
5/15/2011	8715	8741	26	R	1 5	17 33	10	50	3650		254	100		1560	2
5/15/2011	8741	8773	32	R	1 25	25 60	10	50	3650		254	100		1560	2
5/15/2011	8773	8786	13	O	1 25	10 4	23			HS	254	150		1675	2
5/15/2011	8786	8810	24	O	1 5	16	23			5 R	254	150		1675	2
5/15/2011	8810	8826	16	R	0 75	21 33	15	50	3650		254	100		1560	2
5/15/2011	8826	8836	10	O	1 5	6 667	25			5 R	254	150		1675	2
5/15/2011	8836	8851	15	R	0 75	20	15	50	3725		254	120		1670	2
5/15/2011	8851	8868	17	O	1 75	9 714	25			5 R	254	150		1675	2
5/15/2011	8868	8880	12	R	1 25	9 600	15	50	3725		254	120		1670	2
5/15/2011	8880	8889	9	O	0 75	12	25			0	254	150		1675	2
5/16/2011	8889	8900	11	O	1	11	25			0	254	150		1675	2
5/16/2011	8900	8931	31	R	1 75	17.71	15	50	3725		254	120		1670	2
5/16/2011	8931	8943	12	O	1	12	25			5 L	254	150		1675	2
5/16/2011	8943	8963	20	R	1	20	15	50	3725		254	120		1670	2
5/16/2011	8963	8978	15	O	1 5	10	25			5L GTF	254	120		1670	2
5/16/2011	8978	8995	17	R	0 75	22 67	15	50	3725		254	120		1670	2
5/16/2011	8995	9007	12	O	1 5	8	25			HS	254	120		1670	2
5/16/2011	9007	9029	22	R	0 75	29 33	15	50	3725		254	120		1670	2
5/16/2011	9029	9057	28	R	0 75	37 33	20	50	4550		254	120		1670	2
5/16/2011	9057	9089	32	R	0.75	42 67	20	55	4550		273	150		1890	2
5/16/2011	9089	9141	52	R	2	26	20	55	4550		273	150		1890	2
5/16/2011	9141	9151	10	O	1 25	8	30			270L	273	100		1825	2
5/16/2011	9151	9184	33	R	1	33	22	55	5250		273	150		1920	2
5/16/2011	9184	9200	16	R	0 5	32	22	55	5250		273	150		1920	2
5/16/2011	9200	9213	13	O	1.25	10 4	30			225L	273	100		1825	2

DRILLING PARAMETERS RECORD

INTEQ

Company Cimarex Energy Co Well Name No Hancock 19 State Com 1H
 Field Caprock Rig Contractor No Patriot 4
 County/Block/Parish Chaves Co

Date	Depth From	Depth To	Ftg Drilled	Mode S/R	Drig Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	TFO	Flow Rate	Diff Pres	Temp	SPP	BHA No.
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Mode	Footage	Drig Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	151	15 3	.....	9.9	25 3			257 2	136.7	1699 2
Rotating	352	14 8	.....	23.9	16.4	51 4	4103 6	259.4	124.3	1713 6
Total	503	30 0	13 0	16.8	20.5	51 4	4103 6	258 4	130 0	1706 9

5/17/2011	9213	9216	3	R	0 25	12	22	55	5250		273	150		1920	3
5/17/2011	9216	9247	31	R	1 5	20.67	12	50	4000		265	277		2050	3
5/17/2011	9247	9254	7	O	0 75	9 333	12			20L	265	277		2050	3
5/17/2011	9254	9281	27	R	1	27	15	65	4350		273	325		2250	3
5/17/2011	9281	9290	9	O	1 5	6	18			HS	273	75		2075	3
5/17/2011	9290	9311	21	R	0 75	28	15	65	5275		273	325		2250	3
5/17/2011	9311	9326	15	R	0 5	30	15	65	5275		273	325		2250	3
5/17/2011	9326	9330	4	R	0 25	16	15	65	5275		273	325		2250	3
5/17/2011	9330	9337	7	O	1	7	18			5L GTF	273	75		2075	3
5/17/2011	9337	9343	6	R	0 5	12	15	65	5275		273	325		2250	3
5/17/2011	9343	9381	38	R	1	38	15	65	6235		273	300		2185	3
5/17/2011	9381	9406	25	R	1 25	20	15	65	6235		273	300		2185	3
5/17/2011	9406	9443	37	R	0 5	74	15	65	6425		273	325		2235	3
5/17/2011	9443	9450	7	O	0 75	9 333	18			65L GTF	273	75		2075	3
5/17/2011	9450	9469	19	R	0.5	38	15	65	6425		273	325		2235	3
5/17/2011	9469	9500	31	R	0 75	41.33	15	65	6425		273	325		2235	3
5/17/2011	9500	9532	32	R	0.5	64	15	65	6425		273	300		2235	3
5/17/2011	9532	9564	32	R	0 5	64	15	65	6425		273	300		2235	3
5/17/2011	9564	9569	5	O	0.5	10	18			HS	273	75		2075	3
5/17/2011	9569	9595	26	R	0.75	34.67	15	65	6425		273	300		2235	3
5/18/2011	9595	9600	5	O	1	5	18			HS	273	75		2075	3
5/18/2011	9600	9626	26	R	1 25	20 8	15	65	6425		273	300		2235	3
5/18/2011	9626	9658	32	R	1	32	15	65	6425		273	300		2235	3
5/18/2011	9658	9690	32	R	1 25	25 60	15	65	6425		273	300		2235	3
5/18/2011	9690	9694	4	O	0 75	5 333	15			20R	273	300		2235	3
5/18/2011	9694	9722	28	R	0 75	37 33	15	65	6425		273	300		2235	3
5/18/2011	9722	9755	33	R	1	33	16	65	6425		273	350		2320	3
5/18/2011	9755	9761	6	O	0 5	12	23			160R	273	300		2235	3
5/18/2011	9761	9785	24	R	0 5	48	16	65	6425		273	350		2320	3
5/18/2011	9785	9848	63	R	1 25	50.40	16	65	6425		273	350		2320	3
5/18/2011	9848	9913	65	R	3 25	20	16	65	6425		273	350		2320	3
5/18/2011	9913	9921	8	O	0 75	10 67	25			65R	273	85		2120	3
5/18/2011	9921	9975	54	R	2 75	19 64	16	65	6425		273	350		2320	3
5/18/2011	9975	9983	8	O	2 25	3 556	25			90 R	273	85		2120	3
5/18/2011	9983	10038	55	R	2.5	22	17	65	6425		273	350		2320	3
5/18/2011	10038	10048	10	R	0 5	20	17	65	6425		273	350		2320	3
5/19/2011	10048	10101	53	R	2 25	23 56	17	65	6425		273	350		2320	3
5/19/2011	10101	10105	4	O	0 5	8	25			180 GTF	273	85		2120	3
5/19/2011	10105	10165	60	R	2 25	26 67	17	65	6425		273	350		2320	3

DRILLING PARAMETERS RECORD

INTEQ

Company Cimarex Energy Co Well Name No Hancock 19 State Com 1H
 Field Caprock Rig Contractor No Patriot 4
 County/Block/Parish Chaves Co

Date	Depth From	Depth To	Ftg Drilled	Mode S/R	Drlg. Hrs.	ROP	WOB (Klbs)	Rot RPM	Rot Tq	TFO	Flow Rate	Diff Pres	Temp	SPP	BHA No.
5/19/2011	10165	10228	63	R	3.25	19 38	17	65	6425		273	350		2320	3
5/19/2011	10228	10279	51	R	2 25	22 67	20	75	6425		273	350		2320	3
5/19/2011	10279	10286	7	O	1	7	25			5R GTF	273	85		2120	3
5/19/2011	10286	10292	6	R	0 25	24	20	75	6425		273	350		2320	3
5/19/2011	10292	10309	17	R	0 5	34	25	80	8200		273	350		2320	3
5/19/2011	10309	10317	8	O	1	8	25			20L GTF	273	85		2120	3
5/19/2011	10317	10355	38	R	1 5	25 33	23	70	7650		273	350		2320	3
5/19/2011	10355	10371	16	R	0 75	21 33	15	65	7650		273	350		2320	3
5/19/2011	10371	10375	4	O	0 5	8	25			HS	273	85		2120	3
5/19/2011	10375	10418	43	R	1 5	28 67	15	65	7650		273	350		2320	3
5/19/2011	10418	10450	32	R	1 75	18 29	15	65	7650		273	350		2320	3
5/19/2011	10450	10458	8	O	1	8	25			5 L GTF	273	85		2120	3
5/19/2011	10458	10481	23	R	1 25	18 4	15	65	7650		273	350		2320	3
5/19/2011	10481	10493	12	R	0 5	24	15	65	7650		273	350		2320	3
5/20/2011	10493	10513	20	R	1.25	16	15	65	7650		273	350		2320	3
5/20/2011	10513	10523	10	O	1	10	25			0 GTF	273	85		2120	3
5/20/2011	10523	10545	22	R	1 25	17 60	15	65	7650		273	350		2320	3
5/20/2011	10545	10590	45	R	1 75	25.71	15	65	7650		273	350		2320	3
5/20/2011	10590	10608	18	R	1.5	12	15	70	7650		273	350		2320	3
5/20/2011	10608	10612	4	O	0 75	5 333	25			30L	273	85		2120	3
5/20/2011	10612	10644	32	R	1 5	21 33	15	80	8650		273	350		2320	3

Mode	Footage	Drlg Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	111	15 5	.....	7.2	21.5			272.5	118 6	2116.2
Rotating	1320	51 8	.....	25.5	16 1	65.8	6555.1	272.8	328 5	2270 2
Total	1431	67 3	8 3	21.3	17 6	65 8	6555.1	272 7	269 1	2226 6

5/20/2011	10644	10671	27	R	0 75	36	15	80	8650		273	350		2320	4
5/20/2011	10671	10703	32	R	1 5	21 33	15	80	8650		273	350		2179	4
5/20/2011	10703	10715	12	O	1 5	8	25			165 L	273	85		2120	4
5/21/2011	10715	10735	20	R	1	20	15	80	8650		273	350		2179	4
5/21/2011	10735	10798	63	R	2 75	22.91	15	80	8650		273	350		2179	4
5/21/2011	10798	10861	63	R	1 75	36	15	80	8650		273	350		2179	4
5/21/2011	10861	10925	64	R	2 75	23 27	15	80	8650		273	350		2179	4
5/21/2011	10925	10988	63	R	2	31 5	15	80	8650		273	350		2179	4
5/21/2011	10988	11052	64	R	2	32	15	80	8650		273	350		2179	4
5/21/2011	11052	11115	63	R	1 5	42	15	80	8650		273	350		2179	4
5/21/2011	11115	11120	5	O	0 5	10	25			100 L	273	85		2120	4
5/21/2011	11120	11178	58	R	2	29	15	80	8650		273	350		2179	4
5/21/2011	11178	11183	5	O	0.5	10	25			90 L	273	85		2120	4
5/21/2011	11183	11242	59	R	1 75	33 71	15	80	8650		273	350		2179	4
5/21/2011	11242	11262	20	O	0 5	40	25			130L	273	85		2120	4
5/21/2011	11262	11305	43	R	1.25	34.40	15	80	8650		273	350		2179	4
5/21/2011	11305	11337	32	R	1	32	15	80	8650		273	350		2179	4
5/21/2011	11337	11343	6	O	0 25	24	25			90L	273	85		2120	4

DRILLING PARAMETERS RECORD

INTEQ

Company Cimarex Energy Co Well Name No Hancock 19 State Com 1H
 Field Caprock Rig Contractor No Patriot 4
 County/Block/Parish Chaves Co

Date	Depth From	Depth To	Ftg Drilled	Mode S/R	Drig Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	TFO	Flow Rate	Diff Pres	Temp	SPP	BHA No
5/22/2011	11343	11346	3	O	0 25	12	25			90L	273	85		2120	4
5/22/2011	11346	11368	22	R	0 5	44	15	80	8650		273	350		2179	4
5/22/2011	11368	11432	64	R	1 5	42 67	15	80	8650		273	350		2179	4
5/22/2011	11432	11436	4	O	0 25	16	25			80 L	273	85		2120	4
5/22/2011	11436	11495	59	R	1 25	47 20	15	80	8650		273	350		2179	4
5/22/2011	11495	11558	63	R	1 5	42	15	80	8650		273	350		2179	4
5/22/2011	11558	11622	64	R	0 75	85 33	15	80	5750		273	350		2375	4
5/22/2011	11622	11685	63	R	1 25	50 40	15	80	5750		273	350		2375	4
5/22/2011	11685	11748	63	R	1 5	42	15	80	5750		273	350		2375	4
5/22/2011	11748	11812	64	R	2	32	15	80	5750		273	350		2375	4
5/22/2011	11812	11843	31	R	0 75	41 33	15	80	5750		273	350		2375	4
5/22/2011	11843	11851	8	O	1	8	20			90R	273	50		2300	4
5/22/2011	11851	11875	24	R	0 25	96	15	80	5750		273	350		2375	4
5/22/2011	11875	11938	63	R	1 75	36	15	80	5750		273	350		2375	4
5/22/2011	11938	12002	64	R	1	64	15	80	5750		273	350		2375	4
5/22/2011	12002	12033	31	R	1 75	17 71	15	75	5750		273	350		2375	4
5/22/2011	12033	12038	5	O	1	5	20			60 R	273	50		2300	4
5/22/2011	12038	12065	27	R	0 5	54	15	75	5750		273	350		2375	4
5/22/2011	12065	12128	63	R	2	31.5	15	75	5750		273	350		2375	4
5/23/2011	12128	12132	4	O	0 5	8	20			60 R	273	50		2300	4
5/23/2011	12132	12191	59	R	1 5	39 33	15	75	5750		273	350		2375	4
5/23/2011	12191	12255	64	R	1	64	15	75	5750		273	350		2375	4
5/23/2011	12255	12318	63	R	1 5	42	15	75	5750		273	350		2375	4
5/23/2011	12318	12381	63	R	0 75	84	15	75	5750		273	350		2375	4
5/23/2011	12381	12444	63	R	1 75	36	15	75	5750		273	350		2375	4
5/23/2011	12444	12510	66	R	0 75	88	15	75	5750		273	350		2375	4
5/23/2011	12510	12515	5	O	1.5	3 333	20			100 L	273	50		2300	4
5/23/2011	12515	12570	55	R	1 5	36 67	15	75	5750		273	350		2375	4
5/23/2011	12570	12580	10	O	1	10	20			130 L	273	50		2300	4
5/23/2011	12580	12634	54	R	1 25	43 20	15	75	5750		273	350		2375	4
5/23/2011	12634	12697	63	R	2	31 5	15	75	5750		273	350		2375	4
5/23/2011	12697	12761	64	R	1 75	36 57	15	75	5750		273	350		2375	4
5/23/2011	12761	12765	4	O	0 75	5 333	20			20 L	273	50		2300	4
5/23/2011	12765	12824	59	R	2	29.5	15	75	5750		273	350		2375	4
5/23/2011	12824	12887	63	R	1 75	36	15	75	5750		273	350		2375	4
5/24/2011	12887	12950	63	R	1 5	42	15	80	6550		275	350		2560	4
5/24/2011	12950	12981	31	R	0 75	41 33	15	80	6550		275	350		2560	4

Mode	Footage	Drig Hrs	Circ Hrs	ROP	WOB (Klbs)	Rot RPM	Rot Tq	Flow Rate	Avg Diff	SPP
Sliding	91	9 5	.....	9.6	22 7			273 0	68 8	2203 1
Rotating	2246	60 0	.....	37 4	15 0	78 2	6961 9	273 1	350 0	2307 8
Total	2337	69 5	9 5	33 6	16 8	78 2	6961 9	273 1	283 5	2283 1

BHI Job # 3803817