



Cimarex Energy Co.

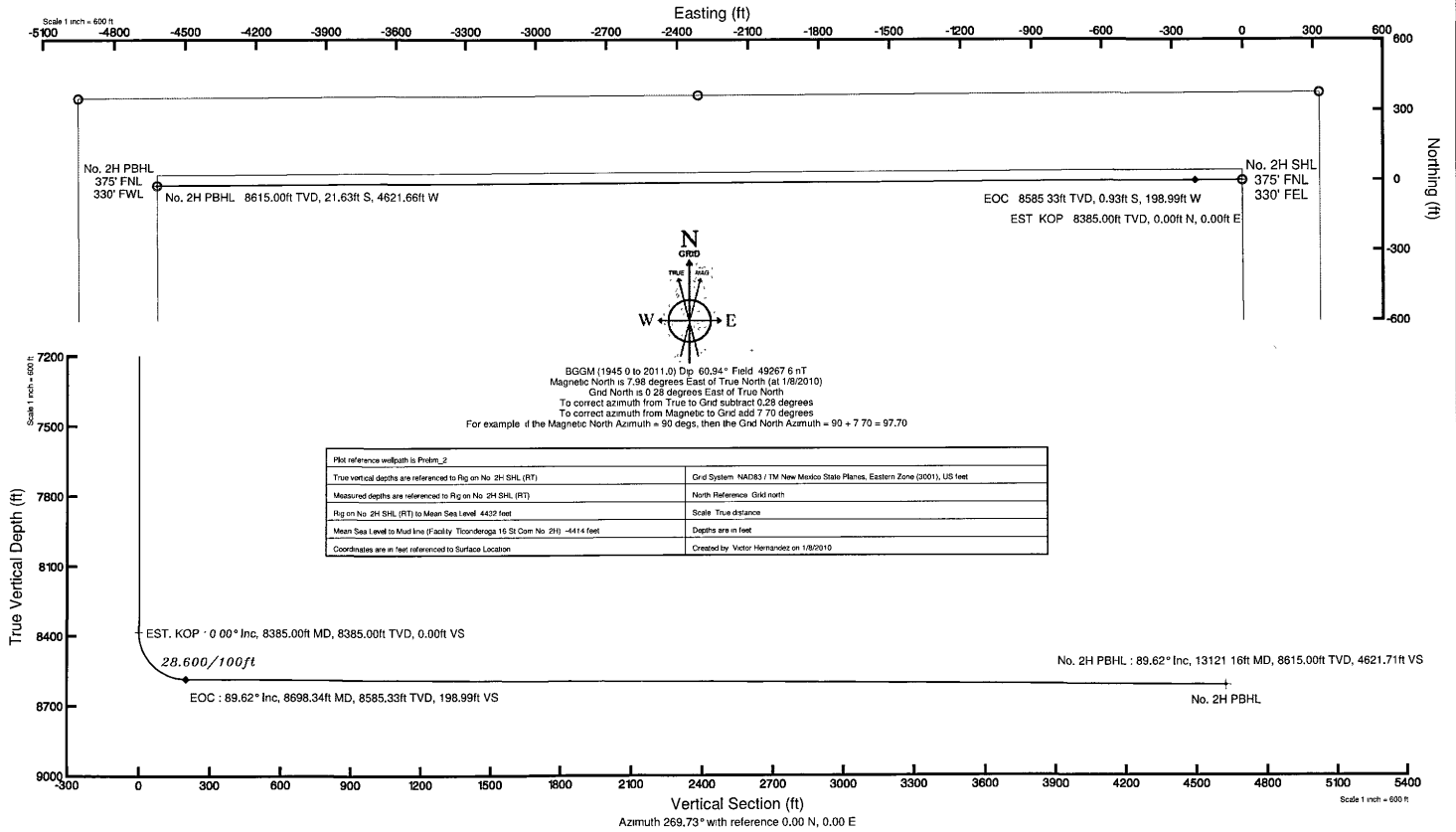
Location: Chaves County, NM
Field: (Ticonderoga) Sec 16, T15S, R31E
Facility: Ticonderoga 16 St Com No. 2H

Slot: No. 2H SHL
Well: No. 2H
Wellbore: No. 2H PWB



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	269.732	0.00	0.00	0.00	0.00	0.00
EST. KOP	8385.00	0.000	269.732	8385.00	0.00	0.00	0.00	0.00
EOC	8698.34	89.616	269.732	8585.33	-0.93	-198.99	28.60	198.99
No. 2H PBHL	13121.16	89.616	269.732	8615.00	-21.63	-4621.66	0.00	4621.71





Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Ticonderoga) Sec 16, T15S, R31E	Wellbore	No. 2H PWB
Facility	Ticonderoga 16 St Com No. 2H		

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	Victor Hernandez
Scale	0.999938	Report Generated	1/8/2010 at 1:51:29 PM
Convergence at slot	0.28° East	Database/Source file	WA_Midland/No._2H_PWB.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	698899.70	735961.80	33°01'19.556"N	103°49'09.362"W
Facility Reference Pt			698899.70	735961.80	33°01'19.556"N	103°49'09.362"W
Field Reference Pt			694286.00	734335.70	33°01'03.686"N	103°50'03.641"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 2H SHL (RT) to GL	18.00ft
Horizontal Reference Pt	Surface Location	Rig on No. 2H SHL (RT) to Mean Sea Level	4432.00ft
Vertical Reference Pt	Rig on No. 2H SHL (RT)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 2H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.73°



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Facility	Ticonderoga 16 St Com No. 2H		

WELLPATH DATA (51 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	269.732	0.00	0.00	0.00	0.00	0.00	Tie On
8385.00	0.000	269.732	8385.00	0.00	0.00	0.00	0.00	EST. KOP
8485.00†	28.600	269.732	8480.90	24.44	-0.11	-24.44	28.60	
8585.00†	57.200	269.732	8553.39	91.81	-0.43	-91.81	28.60	
8685.00†	85.800	269.732	8584.80	185.66	-0.87	-185.66	28.60	
8698.34	89.616	269.732	8585.33	198.99	-0.93	-198.99	28.60	EOC
8785.00†	89.616	269.732	8585.91	285.65	-1.34	-285.64	0.00	
8885.00†	89.616	269.732	8586.58	385.65	-1.80	-385.64	0.00	
8985.00†	89.616	269.732	8587.25	485.64	-2.27	-485.64	0.00	
9085.00†	89.616	269.732	8587.92	585.64	-2.74	-585.63	0.00	
9185.00†	89.616	269.732	8588.60	685.64	-3.21	-685.63	0.00	
9285.00†	89.616	269.732	8589.27	785.64	-3.68	-785.63	0.00	
9385.00†	89.616	269.732	8589.94	885.63	-4.15	-885.62	0.00	
9485.00†	89.616	269.732	8590.61	985.63	-4.61	-985.62	0.00	
9585.00†	89.616	269.732	8591.28	1085.63	-5.08	-1085.62	0.00	
9685.00†	89.616	269.732	8591.95	1185.63	-5.55	-1185.61	0.00	
9785.00†	89.616	269.732	8592.62	1285.63	-6.02	-1285.61	0.00	
9885.00†	89.616	269.732	8593.29	1385.62	-6.49	-1385.61	0.00	
9985.00†	89.616	269.732	8593.96	1485.62	-6.95	-1485.60	0.00	
10085.00†	89.616	269.732	8594.63	1585.62	-7.42	-1585.60	0.00	
10185.00†	89.616	269.732	8595.30	1685.62	-7.89	-1685.60	0.00	
10285.00†	89.616	269.732	8595.97	1785.61	-8.36	-1785.59	0.00	
10385.00†	89.616	269.732	8596.65	1885.61	-8.83	-1885.59	0.00	
10485.00†	89.616	269.732	8597.32	1985.61	-9.29	-1985.59	0.00	
10585.00†	89.616	269.732	8597.99	2085.61	-9.76	-2085.58	0.00	
10685.00†	89.616	269.732	8598.66	2185.60	-10.23	-2185.58	0.00	
10785.00†	89.616	269.732	8599.33	2285.60	-10.70	-2285.58	0.00	
10885.00†	89.616	269.732	8600.00	2385.60	-11.17	-2385.57	0.00	
10985.00†	89.616	269.732	8600.67	2485.60	-11.63	-2485.57	0.00	
11085.00†	89.616	269.732	8601.34	2585.60	-12.10	-2585.57	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
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Area	Chaves County, NM	Well	No. 2H
Field	(Ticonderoga) Sec 16, T15S, R31E	Wellbore	No. 2H PWB
Facility	Ticonderoga 16 St Com No. 2H		

WELLPATH DATA (51 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
11185.00†	89.616	269.732	8602.01	2685.59	-12.57	-2685.56	0.00	
11285.00†	89.616	269.732	8602.68	2785.59	-13.04	-2785.56	0.00	
11385.00†	89.616	269.732	8603.35	2885.59	-13.51	-2885.56	0.00	
11485.00†	89.616	269.732	8604.02	2985.59	-13.97	-2985.55	0.00	
11585.00†	89.616	269.732	8604.69	3085.58	-14.44	-3085.55	0.00	
11685.00†	89.616	269.732	8605.37	3185.58	-14.91	-3185.55	0.00	
11785.00†	89.616	269.732	8606.04	3285.58	-15.38	-3285.54	0.00	
11885.00†	89.616	269.732	8606.71	3385.58	-15.85	-3385.54	0.00	
11985.00†	89.616	269.732	8607.38	3485.58	-16.31	-3485.54	0.00	
12085.00†	89.616	269.732	8608.05	3585.57	-16.78	-3585.53	0.00	
12185.00†	89.616	269.732	8608.72	3685.57	-17.25	-3685.53	0.00	
12285.00†	89.616	269.732	8609.39	3785.57	-17.72	-3785.53	0.00	
12385.00†	89.616	269.732	8610.06	3885.57	-18.19	-3885.52	0.00	
12485.00†	89.616	269.732	8610.73	3985.56	-18.65	-3985.52	0.00	
12585.00†	89.616	269.732	8611.40	4085.56	-19.12	-4085.52	0.00	
12685.00†	89.616	269.732	8612.07	4185.56	-19.59	-4185.51	0.00	
12785.00†	89.616	269.732	8612.74	4285.56	-20.06	-4285.51	0.00	
12885.00†	89.616	269.732	8613.42	4385.56	-20.53	-4385.51	0.00	
12985.00†	89.616	269.732	8614.09	4485.55	-20.99	-4485.50	0.00	
13085.00†	89.616	269.732	8614.76	4585.55	-21.46	-4585.50	0.00	
13121.16	89.616	269.732	8615.00 ¹	4621.71	-21.63	-4621.66	0.00	No. 2H PBHL



Planned Wellpath Report

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INTEQ

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Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Chaves County, NM	Well	No. 2H
Field	(Ticonderoga) Sec 16, T15S, R31E	Wellbore	No. 2H PWB
Facility	Ticonderoga 16 St Com No. 2H		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 2H PBHL	13121.16	8615.00	-21.63	-4621.66	694278.34	735940.17	33°01'19.562"N	-103°50'03.641"W	point

SURVEY PROGRAM Ref Wellbore: No. 2H PWB Ref Wellpath: Prelim_2				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.00	13121.16	NaviTrak (Standard)		No. 2H PWB