

# TABULA RASA ENERGY

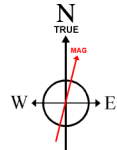
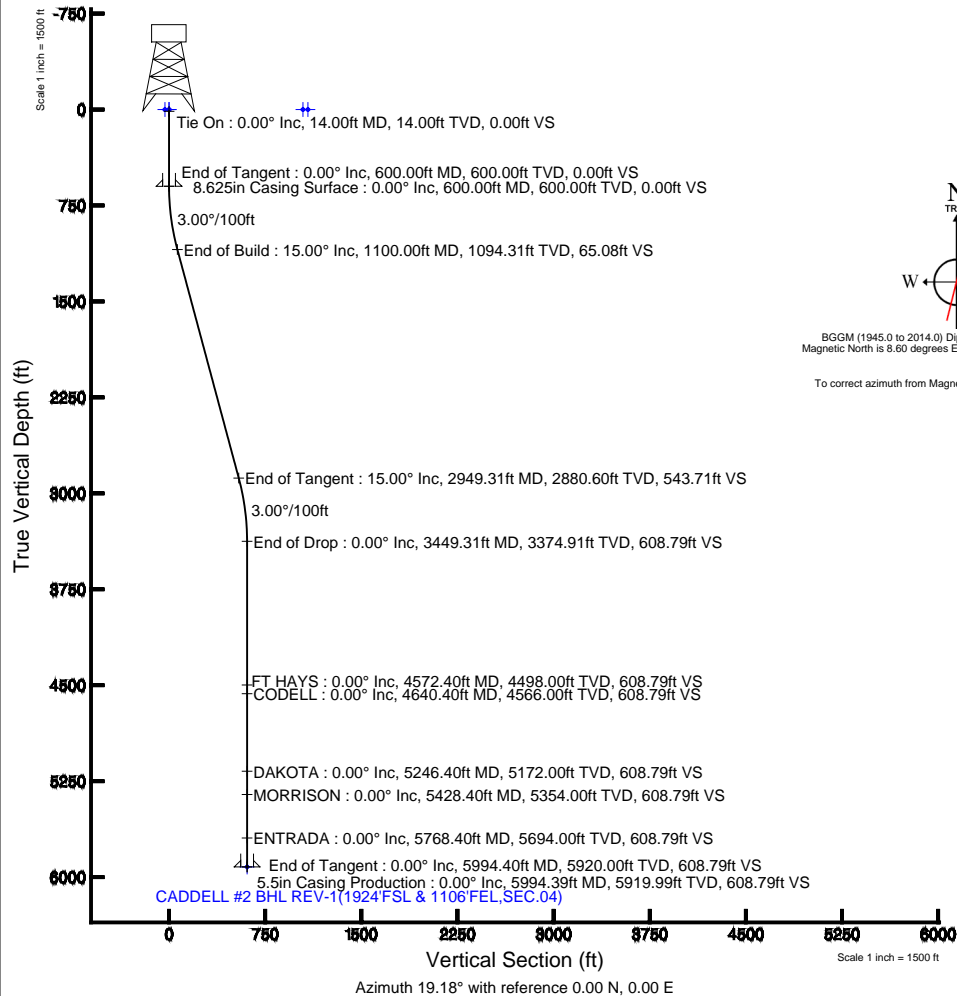
Location: COLORADO Slot: SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)  
Field: HUERFANO COUNTY Well: CADDELL #2  
Facility: SEC.04-T29S-R69W Wellbore: CADDELL #2 PWB

Plot reference wellpath is CADDELL #2 (REV-A.0) PWP

True vertical depths are referenced to RIG (RKB)	Grid System: NAD83 / Lambert Colorado SP, Southern Zone (503), US feet
Measured depths are referenced to RIG (RKB)	North Reference: True north
RIG (RKB) to Mean Sea Level: 7847 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 7/26/2013

## Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.04-T29S-R69W		3112455.884	1322536.440	37°33'06.574"N	105°06'43.492"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)	0.00	0.00	3112455.884	1322536.440	37°33'06.574"N
RIG (RKB) to Mud line (At Slot: SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04))			7847ft		
Mean Sea Level to Mud line (At Slot: SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04))			0ft		
RIG (RKB) to Mean Sea Level			7847ft		



BGGM (1945.0 to 2014.0) Dip: 64.56° Field: 51275.1 nT  
Magnetic North is 8.60 degrees East of True North (at 7/26/2013)

To correct azimuth from Magnetic to True add 8.60 degrees

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
CADDELL #2 SECTION 04		0.00	0.00	0.00	3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W
CADDELL BOUNDARY		0.00	0.00	0.00	3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W
EX.CADDELL #1		0.00	-55.02	60.64	3112516.75	1322481.67	37°33'06.030"N	105°06'42.739"W
EX.STAUDER #1		0.00	1258.08	-319.89	3112130.99	1323793.13	37°33'19.012"N	105°06'47.462"W
EX.STAUDER #2		0.00	1193.55	-251.57	3112199.38	1323728.88	37°33'18.374"N	105°06'46.616"W
CADDELL #2 BHL REV-1(1924'FSL & 1106'FEL,SEC.04)	5994.40	5920.00	575.00	200.00	3112653.49	1323112.24	37°33'12.269"N	105°06'41.008"W

## Hole and Casing Sections

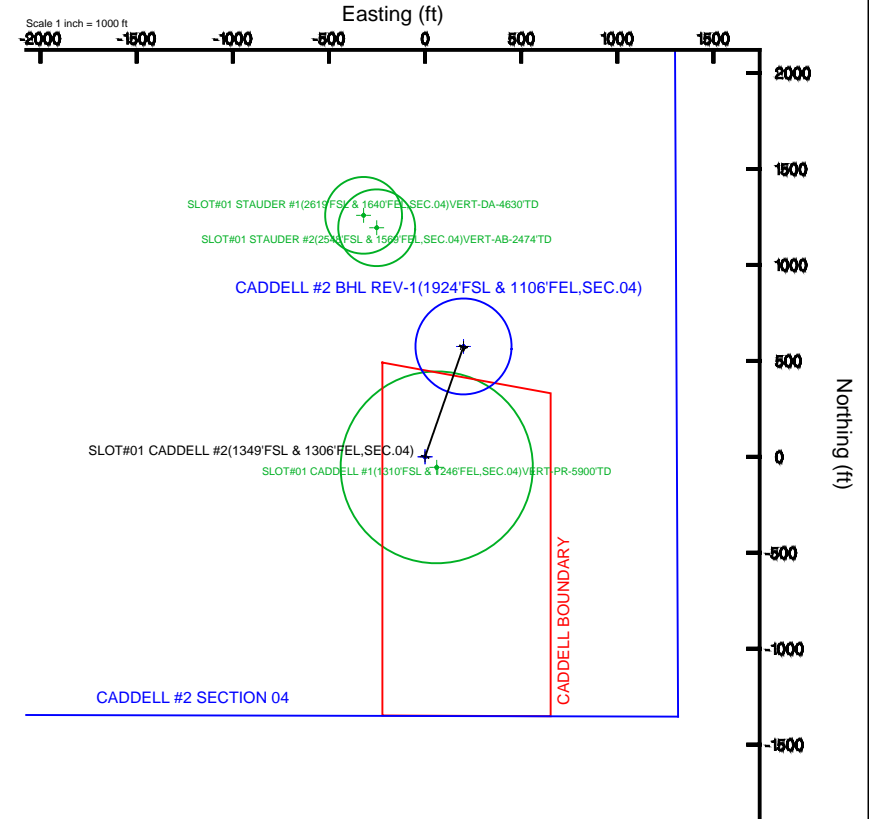
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
8.625in Casing Surface	14.00	600.00	586.00	14.00	600.00	0.00	0.00	0.00	0.00	CADDELL #2 PWB
5.5in Casing Production	14.00	5994.39	5980.39	14.00	5919.99	0.00	0.00	575.00	200.00	CADDELL #2 PWB

## Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
14.00	6500.00	NaviTrak	NaviTrak (Standard)		CADDELL #2 PWB

## Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	14.00	0.000	19.179	14.00	0.00	0.00	0.00	0.00
End of Tangent	600.00	0.000	19.179	600.00	0.00	0.00	0.00	0.00
End of Build	1100.00	15.000	19.179	1094.31	61.46	21.38	3.00	65.08
End of Tangent	2949.31	15.000	19.179	2880.60	513.54	178.62	0.00	543.71
End of Drop	3449.31	0.000	19.179	3374.91	575.00	200.00	3.00	608.79
End of Tangent	5994.40	0.000	19.179	5920.00	575.00	200.00	0.00	608.79





# Planned Wellpath Report

CADDELL #2 (REV-A.0) PWP

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	TABULA RASA ENERGY	Slot	SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)
Area	COLORADO	Well	CADDELL #2
Field	HUERFANO COUNTY	Wellbore	CADDELL #2 PWB
Facility	SEC.04-T29S-R69W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Southern Zone (503), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Painsetr
Scale	0.999957	Report Generated	7/26/2013 at 1:29:46 PM
Convergence at slot	n/a	Database/Source file	WA_Denver/CADDELL_#2_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W
Facility Reference Pt			3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W
Field Reference Pt			3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (RKB) to Facility Vertical Datum	7847.00ft
Horizontal Reference Pt	Slot	RIG (RKB) to Mean Sea Level	7847.00ft
Vertical Reference Pt	RIG (RKB)	RIG (RKB) to Mud Line at Slot (SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04))	7847.00ft
MD Reference Pt	RIG (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	19.18°



# Planned Wellpath Report

CADDELL #2 (REV-A.0) PWP

Page 2 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	TABULA RASA ENERGY	Slot	SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)
Area	COLORADO	Well	CADDELL #2
Field	HUERFANO COUNTY	Wellbore	CADDELL #2 PWB
Facility	SEC.04-T29S-R69W		

## WELLPATH DATA (66 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	19.179	0.00	0.00	0.00	0.00	0.00	
14.00	0.000	19.179	14.00	0.00	0.00	0.00	0.00	Tie On
114.00†	0.000	19.179	114.00	0.00	0.00	0.00	0.00	
214.00†	0.000	19.179	214.00	0.00	0.00	0.00	0.00	
314.00†	0.000	19.179	314.00	0.00	0.00	0.00	0.00	
414.00†	0.000	19.179	414.00	0.00	0.00	0.00	0.00	
514.00†	0.000	19.179	514.00	0.00	0.00	0.00	0.00	
600.00	0.000	19.179	600.00	0.00	0.00	0.00	0.00	End of Tangent
614.00†	0.420	19.179	614.00	0.05	0.05	0.02	3.00	
714.00†	3.420	19.179	713.93	3.40	3.21	1.12	3.00	
814.00†	6.420	19.179	813.55	11.98	11.31	3.93	3.00	
914.00†	9.420	19.179	912.59	25.75	24.32	8.46	3.00	
1014.00†	12.420	19.179	1010.77	44.70	42.22	14.68	3.00	
1100.00	15.000	19.179	1094.31	65.08	61.46	21.38	3.00	End of Build
1114.00†	15.000	19.179	1107.83	68.70	64.89	22.57	0.00	
1214.00†	15.000	19.179	1204.42	94.58	89.33	31.07	0.00	
1314.00†	15.000	19.179	1301.02	120.46	113.78	39.57	0.00	
1414.00†	15.000	19.179	1397.61	146.35	138.22	48.08	0.00	
1514.00†	15.000	19.179	1494.20	172.23	162.67	56.58	0.00	
1614.00†	15.000	19.179	1590.79	198.11	187.11	65.08	0.00	
1714.00†	15.000	19.179	1687.39	223.99	211.56	73.59	0.00	
1814.00†	15.000	19.179	1783.98	249.87	236.00	82.09	0.00	
1914.00†	15.000	19.179	1880.57	275.76	260.45	90.59	0.00	
2014.00†	15.000	19.179	1977.16	301.64	284.90	99.09	0.00	
2114.00†	15.000	19.179	2073.76	327.52	309.34	107.60	0.00	
2214.00†	15.000	19.179	2170.35	353.40	333.79	116.10	0.00	
2314.00†	15.000	19.179	2266.94	379.28	358.23	124.60	0.00	
2414.00†	15.000	19.179	2363.53	405.17	382.68	133.11	0.00	
2514.00†	15.000	19.179	2460.13	431.05	407.12	141.61	0.00	
2614.00†	15.000	19.179	2556.72	456.93	431.57	150.11	0.00	



# Planned Wellpath Report

CADDELL #2 (REV-A.0) PWP

Page 3 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	TABULA RASA ENERGY	Slot	SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)
Area	COLORADO	Well	CADDELL #2
Field	HUERFANO COUNTY	Wellbore	CADDELL #2 PWB
Facility	SEC.04-T29S-R69W		

## WELLPATH DATA (66 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2714.00†	15.000	19.179	2653.31	482.81	456.01	158.61	0.00	
2814.00†	15.000	19.179	2749.90	508.69	480.46	167.12	0.00	
2914.00†	15.000	19.179	2846.50	534.57	504.90	175.62	0.00	
2949.31	15.000	19.179	2880.60	543.71	513.54	178.62	0.00	End of Tangent
3014.00†	13.059	19.179	2943.36	559.40	528.35	183.77	3.00	
3114.00†	10.059	19.179	3041.32	579.43	547.27	190.36	3.00	
3214.00†	7.059	19.179	3140.20	594.31	561.33	195.24	3.00	
3314.00†	4.059	19.179	3239.72	604.00	570.47	198.43	3.00	
3414.00†	1.059	19.179	3339.60	608.46	574.69	199.89	3.00	
3449.31	0.000	19.179	3374.91	608.79	575.00	200.00	3.00	End of Drop
3514.00†	0.000	19.179	3439.60	608.79	575.00	200.00	0.00	
3614.00†	0.000	19.179	3539.60	608.79	575.00	200.00	0.00	
3714.00†	0.000	19.179	3639.60	608.79	575.00	200.00	0.00	
3814.00†	0.000	19.179	3739.60	608.79	575.00	200.00	0.00	
3914.00†	0.000	19.179	3839.60	608.79	575.00	200.00	0.00	
4014.00†	0.000	19.179	3939.60	608.79	575.00	200.00	0.00	
4114.00†	0.000	19.179	4039.60	608.79	575.00	200.00	0.00	
4214.00†	0.000	19.179	4139.60	608.79	575.00	200.00	0.00	
4314.00†	0.000	19.179	4239.60	608.79	575.00	200.00	0.00	
4414.00†	0.000	19.179	4339.60	608.79	575.00	200.00	0.00	
4514.00†	0.000	19.179	4439.60	608.79	575.00	200.00	0.00	
4614.00†	0.000	19.179	4539.60	608.79	575.00	200.00	0.00	
4714.00†	0.000	19.179	4639.60	608.79	575.00	200.00	0.00	
4814.00†	0.000	19.179	4739.60	608.79	575.00	200.00	0.00	
4914.00†	0.000	19.179	4839.60	608.79	575.00	200.00	0.00	
5014.00†	0.000	19.179	4939.60	608.79	575.00	200.00	0.00	
5114.00†	0.000	19.179	5039.60	608.79	575.00	200.00	0.00	
5214.00†	0.000	19.179	5139.60	608.79	575.00	200.00	0.00	
5314.00†	0.000	19.179	5239.60	608.79	575.00	200.00	0.00	
5414.00†	0.000	19.179	5339.60	608.79	575.00	200.00	0.00	



# Planned Wellpath Report

CADDELL #2 (REV-A.0) PWP

Page 4 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	TABULA RASA ENERGY	Slot	SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)
Area	COLORADO	Well	CADDELL #2
Field	HUERFANO COUNTY	Wellbore	CADDELL #2 PWB
Facility	SEC.04-T29S-R69W		

## WELLPATH DATA (66 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5514.00†	0.000	19.179	5439.60	608.79	575.00	200.00	0.00	
5614.00†	0.000	19.179	5539.60	608.79	575.00	200.00	0.00	
5714.00†	0.000	19.179	5639.60	608.79	575.00	200.00	0.00	
5814.00†	0.000	19.179	5739.60	608.79	575.00	200.00	0.00	
5914.00†	0.000	19.179	5839.60	608.79	575.00	200.00	0.00	
5994.40	0.000	19.179	5920.00 <sup>1</sup>	608.79	575.00	200.00	0.00	End of Tangent

## HOLE & CASING SECTIONS - Ref Wellbore: CADDELL #2 PWB Ref Wellpath: CADDELL #2 (REV-A.0) PWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.625in Casing Surface	14.00	600.00	586.00	14.00	600.00	0.00	0.00	0.00	0.00
5.5in Casing Production	14.00	5994.39	5980.39	14.00	5919.99	0.00	0.00	575.00	200.00



# Planned Wellpath Report

CADDELL #2 (REV-A.0) PWP

Page 5 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	TABULA RASA ENERGY	Slot	SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)
Area	COLORADO	Well	CADDELL #2
Field	HUERFANO COUNTY	Wellbore	CADDELL #2 PWB
Facility	SEC.04-T29S-R69W		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
CADDELL #2 SECTION 04		0.00	0.00	0.00	3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W	polygon
CADDELL BOUNDARY		0.00	0.00	0.00	3112455.88	1322536.44	37°33'06.574"N	105°06'43.492"W	polygon
EX.CADDELL #1		0.00	-55.02	60.64	3112516.75	1322481.67	37°33'06.030"N	105°06'42.739"W	circle
EX.STAUDER #1		0.00	1258.08	-319.69	3112130.99	1323793.13	37°33'19.012"N	105°06'47.462"W	circle
EX.STAUDER #2		0.00	1193.55	-251.57	3112199.38	1323728.88	37°33'18.374"N	105°06'46.616"W	circle
1) CADDELL #2 BHL REV-1 (1924'FSL & 1106'FEL,SEC.04)	5994.40	5920.00	575.00	200.00	3112653.49	1323112.24	37°33'12.259"N	105°06'41.008"W	circle

## SURVEY PROGRAM - Ref Wellbore: CADDELL #2 PWB Ref Wellpath: CADDELL #2 (REV-A.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
14.00	6500.00	NaviTrak (Standard)		CADDELL #2 PWB



# Planned Wellpath Report

CADDELL #2 (REV-A.0) PWP

Page 6 of 6



## REFERENCE WELLPATH IDENTIFICATION

Operator	TABULA RASA ENERGY	Slot	SLOT#01 CADDELL #2(1349'FSL & 1306'FEL,SEC.04)
Area	COLORADO	Well	CADDELL #2
Field	HUERFANO COUNTY	Wellbore	CADDELL #2 PWB
Facility	SEC.04-T29S-R69W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
4572.40	0.000	19.179	4498.00	FT HAYS
4640.40	0.000	19.179	4566.00	CODELL
5246.40	0.000	19.179	5172.00	DAKOTA
5428.40	0.000	19.179	5354.00	MORRISON
5768.40	0.000	19.179	5694.00	ENTRADA