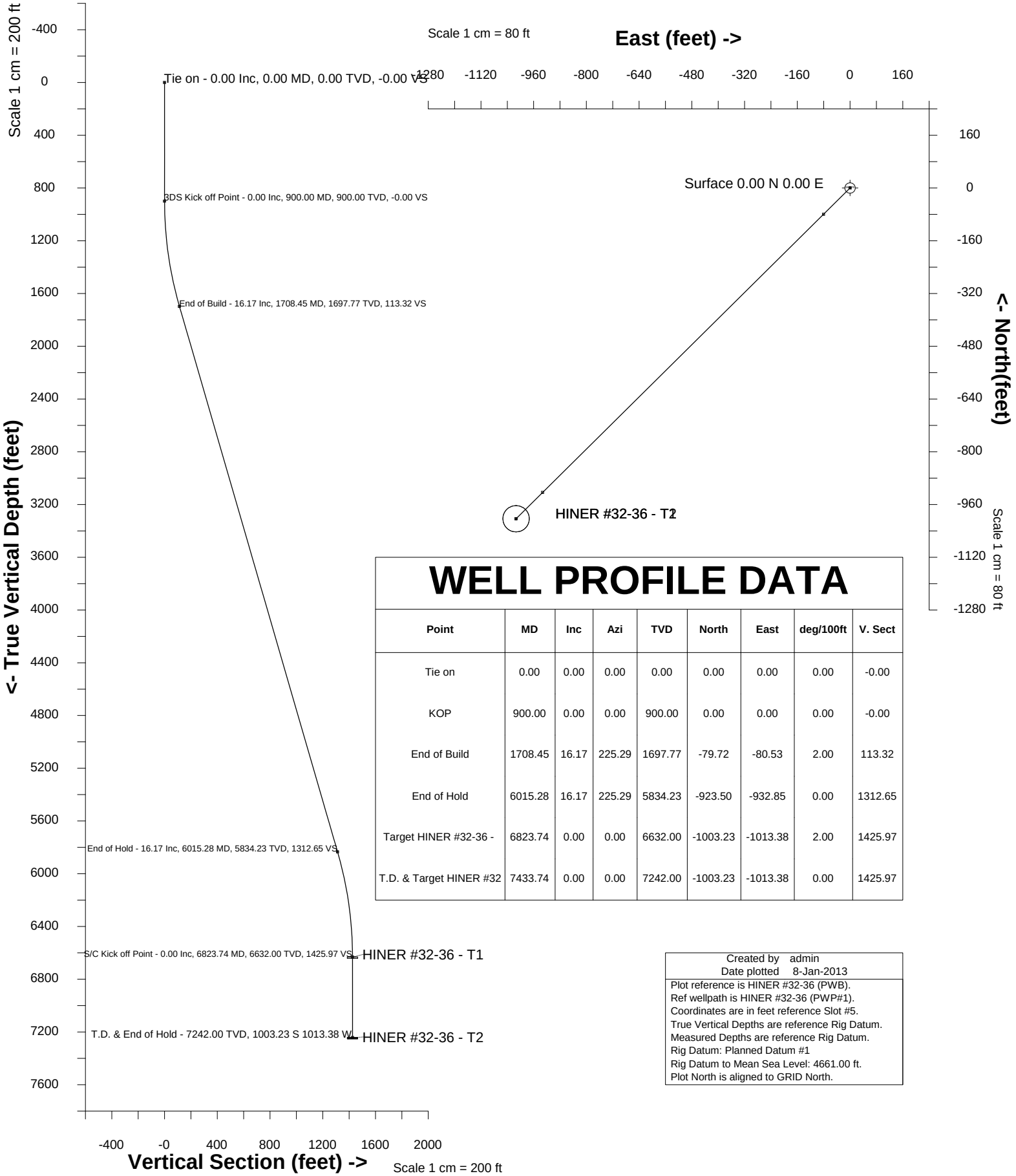
HRM Resources

Location	**Weld County, CO, USA**	**Slot**	**Slot #5**
Field	**WATTENBERG**	**Well**	**HINER #32-36**
Installation	**Hiner Pad**	**Wellbore**	**HINER #32-36 (PWB)**



Azimuth 225.29 with reference 0.00 N, 0.00 E from Slot #5

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.00
KOP	900.00	0.00	0.00	900.00	0.00	0.00	0.00	-0.00
End of Build	1708.45	16.17	225.29	1697.77	-79.72	-80.53	2.00	113.32
End of Hold	6015.28	16.17	225.29	5834.23	-923.50	-932.85	0.00	1312.65
Target HINER #32-36 -	6823.74	0.00	0.00	6632.00	-1003.23	-1013.38	2.00	1425.97
T.D. & Target HINER #32	7433.74	0.00	0.00	7242.00	-1003.23	-1013.38	0.00	1425.97

Created by admin
Date plotted 8-Jan-2013

Plot reference is HINER #32-36 (PWB).
Ref wellpath is HINER #32-36 (PWP#1).
Coordinates are in feet reference Slot #5.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 4661.00 ft.
Plot North is aligned to GRID North.

SYSDRILL
Wellpath Report
Wellbore: HINER #32-36 (PWB)
Wellpath: HINER #32-36 (PWP#1)

Wellbore

Name	Created	Last Revised
HINER #32-36 (PWB)	19-Dec-2012	8-Jan-2013

Well

Name	Government ID	Last Revised
HINER #32-36		19-Dec-2012

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #5	1407600.8796	3217332.9511	N40 26 58.7011	W104 43 8.6789	1.00S	80.00W

Installation

Name	Easting	Northing	Coord System Name	North Alignment
Hiner Pad	3217412.9479	1407601.8796	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Field

Name	Easting	Northing	Coord System Name	North Alignment
WATTENBERG	3217412.9943	1407601.8800	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00
1000.00	2.00	225.290	999.98	1.23S	1.24W	2.00	1.75
1100.00	4.00	225.290	1099.84	4.91S	4.96W	2.00	6.98
1200.00	6.00	225.290	1199.45	11.04S	11.15W	2.00	15.69
1300.00	8.00	225.290	1298.70	19.61S	19.81W	2.00	27.88
1400.00	10.00	225.290	1397.47	30.62S	30.93W	2.00	43.52
1500.00	12.00	225.290	1495.62	44.04S	44.49W	2.00	62.60
1600.00	14.00	225.290	1593.06	59.87S	60.47W	2.00	85.10
1700.00	16.00	225.290	1689.64	78.08S	78.87W	2.00	110.98
1708.45	16.17	225.290	1697.77	79.72S	80.53W	2.00	113.32
1800.00	16.17	225.290	1785.69	97.66S	98.65W	==>	138.81
1900.00	16.17	225.290	1881.74	117.25S	118.44W	==>	166.66
2000.00	16.17	225.290	1977.78	136.84S	138.23W	==>	194.51
2100.00	16.17	225.290	2073.82	156.43S	158.02W	==>	222.35
2200.00	16.17	225.290	2169.87	176.03S	177.81W	==>	250.20
2300.00	16.17	225.290	2265.91	195.62S	197.60W	==>	278.05
2400.00	16.17	225.290	2361.96	215.21S	217.39W	==>	305.90
2500.00	16.17	225.290	2458.00	234.80S	237.18W	==>	333.74
2600.00	16.17	225.290	2554.05	254.39S	256.97W	==>	361.59
2700.00	16.17	225.290	2650.09	273.98S	276.76W	==>	389.44
2800.00	16.17	225.290	2746.13	293.58S	296.55W	==>	417.28
2900.00	16.17	225.290	2842.18	313.17S	316.34W	==>	445.13
3000.00	16.17	225.290	2938.22	332.76S	336.13W	==>	472.98
3100.00	16.17	225.290	3034.27	352.35S	355.92W	==>	500.83
3200.00	16.17	225.290	3130.31	371.94S	375.71W	==>	528.67
3300.00	16.17	225.290	3226.36	391.53S	395.50W	==>	556.52
3400.00	16.17	225.290	3322.40	411.13S	415.29W	==>	584.37
3500.00	16.17	225.290	3418.45	430.72S	435.08W	==>	612.22
3600.00	16.17	225.290	3514.49	450.31S	454.86W	==>	640.06
3700.00	16.17	225.290	3610.53	469.90S	474.65W	==>	667.91
3800.00	16.17	225.290	3706.58	489.49S	494.44W	==>	695.76
3900.00	16.17	225.290	3802.62	509.08S	514.23W	==>	723.60
4000.00	16.17	225.290	3898.67	528.68S	534.02W	==>	751.45
4100.00	16.17	225.290	3994.71	548.27S	553.81W	==>	779.30
4200.00	16.17	225.290	4090.76	567.86S	573.60W	==>	807.15
4300.00	16.17	225.290	4186.80	587.45S	593.39W	==>	834.99
4400.00	16.17	225.290	4282.85	607.04S	613.18W	==>	862.84
4500.00	16.17	225.290	4378.89	626.63S	632.97W	==>	890.69
4600.00	16.17	225.290	4474.93	646.23S	652.76W	==>	918.54

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 4661.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 225.290 degrees
Bottom hole distance is 1425.97 Feet on azimuth 225.29 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Peterson Energy
Date Printed: 8-Jan-2013

SYSDRILL
Wellpath Report
Wellbore: HINER #32-36 (PWB)
Wellpath: HINER #32-36 (PWP#1)

Wellpath Report

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
4700.00	16.17	225.290	4570.98	665.82S	672.55W	==>	946.38
4800.00	16.17	225.290	4667.02	685.41S	692.34W	==>	974.23
4900.00	16.17	225.290	4763.07	705.00S	712.13W	==>	1002.08
5000.00	16.17	225.290	4859.11	724.59S	731.92W	==>	1029.92
5100.00	16.17	225.290	4955.16	744.18S	751.71W	==>	1057.77
5200.00	16.17	225.290	5051.20	763.78S	771.50W	==>	1085.62
5300.00	16.17	225.290	5147.25	783.37S	791.29W	==>	1113.47
5400.00	16.17	225.290	5243.29	802.96S	811.08W	==>	1141.31
5500.00	16.17	225.290	5339.33	822.55S	830.87W	==>	1169.16
5600.00	16.17	225.290	5435.38	842.14S	850.66W	==>	1197.01
5700.00	16.17	225.290	5531.42	861.73S	870.45W	==>	1224.86
5800.00	16.17	225.290	5627.47	881.33S	890.24W	==>	1252.70
5900.00	16.17	225.290	5723.51	900.92S	910.03W	==>	1280.55
6000.00	16.17	225.290	5819.56	920.51S	929.82W	==>	1308.40
6015.28	16.17	225.290	5834.23	923.50S	932.85W	==>	1312.65
6115.28	14.17	225.290	5930.75	941.91S	951.44W	2.00	1338.82
6215.28	12.17	225.290	6028.11	957.94S	967.63W	2.00	1361.60
6315.28	10.17	225.290	6126.21	971.57S	981.39W	2.00	1380.97
6415.28	8.17	225.290	6224.93	982.78S	992.72W	2.00	1396.90
6515.28	6.17	225.290	6324.14	991.56S	1001.59W	2.00	1409.38
6615.28	4.17	225.290	6423.73	997.89S	1007.99W	2.00	1418.39
6715.28	2.17	225.290	6523.57	1001.78S	1011.92W	2.00	1423.92
6815.28	0.17	225.290	6623.55	1003.22S	1013.37W	2.00	1425.96
6823.74	0.00	0.000	6632.00	1003.23S	1013.38W	2.00	1425.97
6900.00	0.00	0.000	6708.26	1003.23S	1013.38W	==>	1425.97
7000.00	0.00	0.000	6808.26	1003.23S	1013.38W	==>	1425.97
7100.00	0.00	0.000	6908.26	1003.23S	1013.38W	==>	1425.97
7200.00	0.00	0.000	7008.26	1003.23S	1013.38W	==>	1425.97
7300.00	0.00	0.000	7108.26	1003.23S	1013.38W	==>	1425.97
7400.00	0.00	0.000	7208.26	1003.23S	1013.38W	==>	1425.97
7433.74	0.00	0.000	7242.00	1003.23S	1013.38W	==>	1425.97

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Prepared by Peterson Energy
Date Printed: 8-Jan-2013

SYSDRILL
Wellpath Report
Wellbore: HINER #32-36 (PWB)
Wellpath: HINER #32-36 (PWP#1)

Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Easting	Northing	Last Revised
HINER #32-36 - T1	1003.23S	1013.38W	6632.00	N40 26 48.8760	W104 43 21.9000	3216319.61	1406597.69	10-Dec-2012
HINER #32-36 - T2	1003.23S	1013.38W	7242.00	N40 26 48.8760	W104 43 21.9000	3216319.61	1406597.69	10-Dec-2012

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
19273	Planned	7433.74	7242.00	WdW Rate Gyro	Standard

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: HINER #32-36 (PWB)
Wellpath: HINER #32-36 (PWP#1)

Ellipse separations are reported ONLY if BOTH wells have uncertainty data
Only Depth and Magnetic Reference Field error terms are correlated across tie points
Cutoff is calculated on CENTRE to CENTRE distance

Summary data uses Closest Approach clearance calculation for all minima
Hole size/Casings ARE included
Hole size/Casings are NOT subtracted from Centre-Centre distance
Confidence limit of 95.00% / 2.80 SD.

Wellbore

Name	Created	Last Revised
HINER #32-36 (PWB)	19-Dec-2012	8-Jan-2013

Well

Name	Government ID	Last Revised
HINER #32-36		19-Dec-2012

Slot

Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #5	1407600.8796	3217332.9511	N40 26 58.7011	W104 43 8.6789	1.00S	80.00W

Installation

Name	Easting	Northing	Coord System Name	North Alignment
Hiner Pad	3217412.9479	1407601.8796	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Field

Name	Easting	Northing	Coord System Name	North Alignment
WATTENBERG	3217412.9943	1407601.8800	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Clearance Summary

Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
HINER #6-2-36	HINER #6-2-36 (PWB)	Slot #6	Hiner Pad	14.27	1345.14	7433.74	12.02	1361.55	6.12	1427.17
HINER 6-4-36	HINER 6-4-36 (PWB)	Slot #4	Hiner Pad	20.00	902.23	7433.74	18.53	918.64	12.82	1033.46
HINER #4-2-36	HINER #4-2-36 (PWB)	Slot #7	Hiner Pad	38.92	1085.09	7433.74	37.17	1085.09	20.22	1312.34
HINER 41-36	HINER 41-36 (PWB)	Slot #3	Hiner Pad	40.00	902.23	7433.74	38.55	902.23	25.34	1049.87
HINER 31-36	HINER 31-36 (PWB)	Slot #8	Hiner Pad	60.00	836.61	7433.74	58.64	853.02	36.72	1213.91
HINER #42-36	HINER #42-36 (PWB)	Slot #2	Hiner Pad	60.00	902.23	7433.74	58.55	902.23	36.97	1131.89
HINER #8-2-36	HINER #8-2-36 (PWB)	Slot #1	Hiner Pad	80.05	900.00	7433.74	78.60	900.00	50.88	1066.27

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