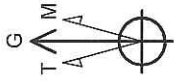


# Continental Resources

Field: Weld County, Co. (NAD 83)  
 Site: Hahn  
 Well: 1-4H  
 Wellpath: OH  
 Plan: Plan #4

## SITE DETAILS

Hahn  
 Sec. 4, T7N, R62W  
 SHL: 480' FSL & 700' FEL  
 PBHL: 660' FNL & 700' FEL  
 Site Centre Latitude: 40°35'49.708N  
 Longitude: 104°19'08.850W  
 Ground Level: 4848.00  
 KB: 16.00



Azimuths to Grid North  
 True North: -0.76°  
 Magnetic North: 7.89°  
 Magnetic Field  
 Strength: 53329nT  
 Dip Angle: 67.29°  
 Date: 5/19/2011  
 Model: GRF2010



## SECTION DETAILS

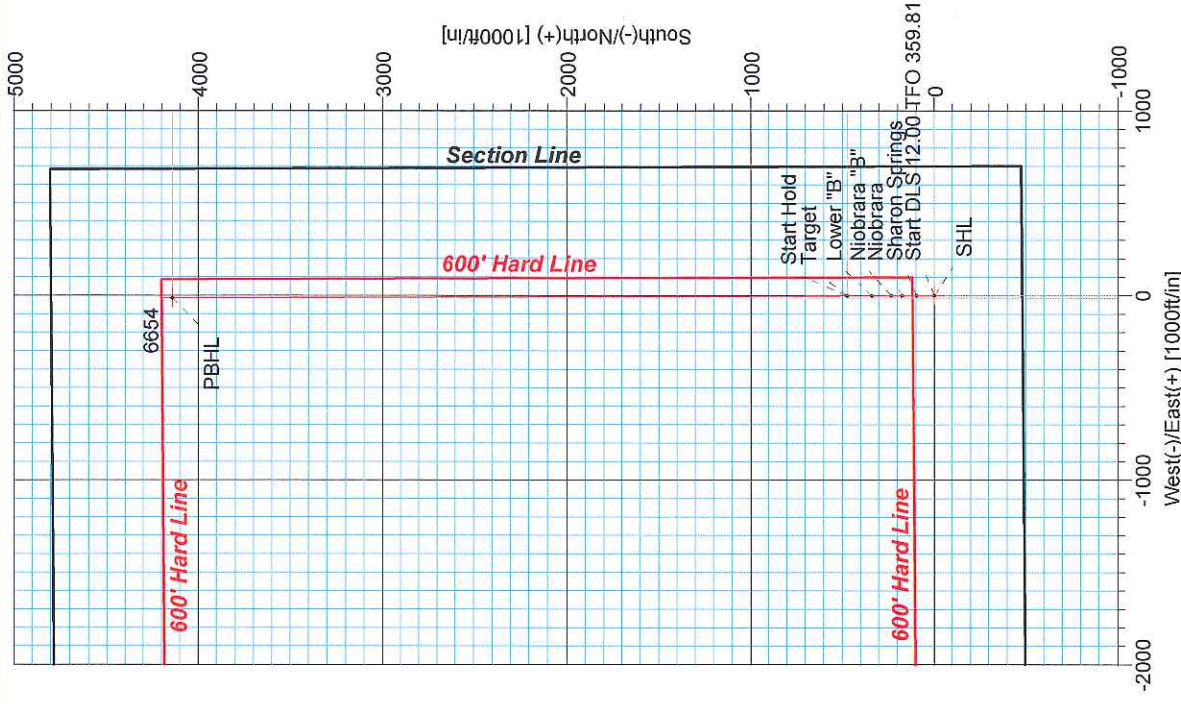
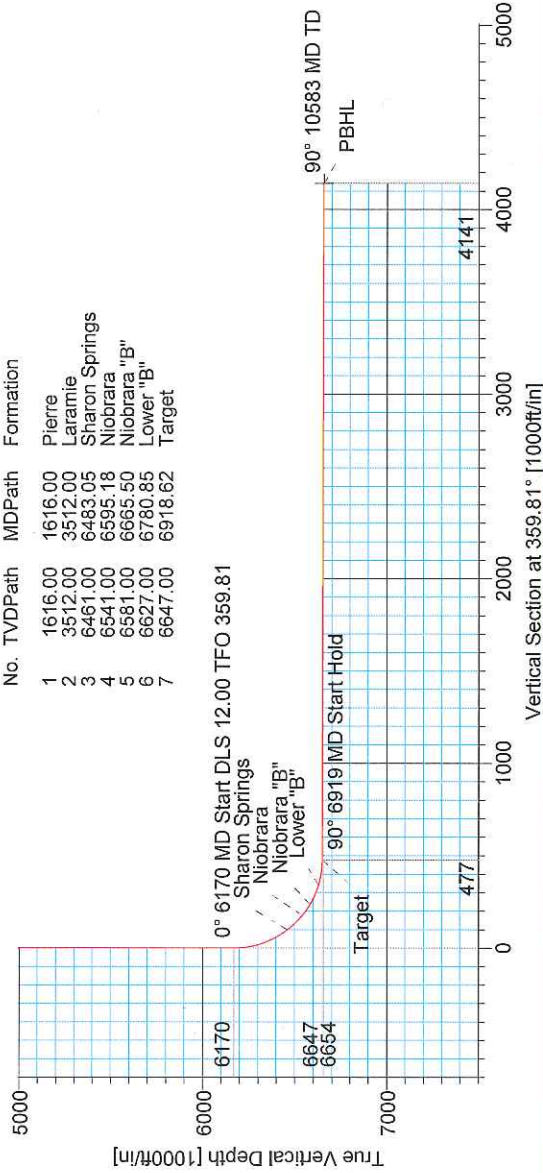
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6169.54	0.00	0.00	6169.54	0.00	0.00	0.00	0.00	0.00	
3	6918.62	89.89	359.81	6647.00	476.55	-1.59	12.00	359.81	476.55	PBHL
4	10583.47	89.89	359.81	6654.00	4141.37	-13.78	0.00	0.00	4141.39	PBHL

## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	North	East	Latitude	Longitude	Shape
SHL	0.00	0.00	0.00	1462566.33	3327926.47	40°35'49.708N	104°19'08.850W	Point
PBHL	6654.00	4141.37	-13.78	1466707.70	3327912.69	40°36'30.629N	104°19'08.314W	Point

## FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	1616.00	1616.00	Pierre
2	3512.00	3512.00	Laramie
3	6461.00	6483.05	Sharon Springs
4	6541.00	6595.18	Niobrara
5	6581.00	6665.50	Niobrara "B"
6	6627.00	6780.85	Lower "B"
7	6647.00	6918.62	Target



LEAM DRILLING SYSTEMS, INC.  
 2010 East Davis, Conroe, Texas 77301  
 Phone: 936-756-7577 Fax: 936-756-7595

Plan: Plan #4 (1-4H)CH  
 Created By: Tyler Carlson  
 Checked: \_\_\_\_\_ Date: 7/13/2011  
 Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_  
 Approved: \_\_\_\_\_ Date: \_\_\_\_\_

# LEAM Drilling Systems, Inc.

## Planning Report

<b>Company:</b> Continental Resources <b>Field:</b> Weld County, Co. (NAD 83) <b>Site:</b> Hahn <b>Well:</b> 1-4H <b>Wellpath:</b> OH	<b>Date:</b> 7/13/2011 <b>Time:</b> 11:50:03 <b>Page:</b> 1 <b>Co-ordinate(NE) Reference:</b> Well: 1-4H, Grid North <b>Vertical (TVD) Reference:</b> GL 4848' + KB 16' 4864.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,359.81Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Adapti
---	--

<b>Field:</b> Weld County, Co. (NAD 83)	
<b>Map System:</b> US State Plane Coordinate System 1983 <b>Geo Datum:</b> GRS 1980 <b>Sys Datum:</b> Mean Sea Level	<b>Map Zone:</b> Colorado, Northern Zone <b>Coordinate System:</b> Well Centre <b>Geomagnetic Model:</b> IGRF2010

<b>Site:</b> Hahn Sec. 4, T7N, R62W 480' FSL & 700' FEL									
<b>Site Position:</b> <b>From:</b> Geographic <b>Position Uncertainty:</b> 0.00 ft <b>Ground Level:</b> 4848.00 ft	<table style="width: 100%;"> <tr> <td style="width: 30%;"><b>Northing:</b> 1462566.33 ft</td> <td style="width: 30%;"><b>Latitude:</b> 40 35 49.708 N</td> </tr> <tr> <td><b>Easting:</b> 3327926.47 ft</td> <td><b>Longitude:</b> 104 19 8.850 W</td> </tr> <tr> <td></td> <td><b>North Reference:</b> Grid</td> </tr> <tr> <td></td> <td><b>Grid Convergence:</b> 0.76 deg</td> </tr> </table>	<b>Northing:</b> 1462566.33 ft	<b>Latitude:</b> 40 35 49.708 N	<b>Easting:</b> 3327926.47 ft	<b>Longitude:</b> 104 19 8.850 W		<b>North Reference:</b> Grid		<b>Grid Convergence:</b> 0.76 deg
<b>Northing:</b> 1462566.33 ft	<b>Latitude:</b> 40 35 49.708 N								
<b>Easting:</b> 3327926.47 ft	<b>Longitude:</b> 104 19 8.850 W								
	<b>North Reference:</b> Grid								
	<b>Grid Convergence:</b> 0.76 deg								

<b>Well:</b> 1-4H <b>Slot Name:</b>			
<b>Well Position:</b> +N/-S 0.00 ft <b>Northing:</b> 1462566.33 ft +E/-W 0.00 ft <b>Easting:</b> 3327926.47 ft <b>Position Uncertainty:</b> 0.00 ft	<table style="width: 100%;"> <tr> <td style="width: 30%;"><b>Latitude:</b> 40 35 49.708 N</td> </tr> <tr> <td><b>Longitude:</b> 104 19 8.850 W</td> </tr> </table>	<b>Latitude:</b> 40 35 49.708 N	<b>Longitude:</b> 104 19 8.850 W
<b>Latitude:</b> 40 35 49.708 N			
<b>Longitude:</b> 104 19 8.850 W			

<b>Plan:</b> Plan #4  <b>Principal:</b> No	<b>Date Composed:</b> 7/13/2011 <b>Version:</b> 1 <b>Tied-to:</b> User Defined
--	--

Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6169.54	0.00	0.00	6169.54	0.00	0.00	0.00	0.00	0.00	0.00	
6918.62	89.89	359.81	6647.00	476.55	-1.59	12.00	12.00	-0.03	359.81	
10583.47	89.89	359.81	6654.00	4141.37	-13.78	0.00	0.00	0.00	0.00	PBHL

Survey										
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
6169.54	0.00	0.00	6169.54	0.00	0.00	0.00	0.00	0.00	0.00	
6175.00	0.66	359.81	6175.00	0.03	0.00	0.03	12.00	12.00	0.00	
6200.00	3.66	359.81	6199.98	0.97	0.00	0.97	12.00	12.00	0.00	
6225.00	6.66	359.81	6224.88	3.22	-0.01	3.22	12.00	12.00	0.00	
6250.00	9.66	359.81	6249.62	6.76	-0.02	6.76	12.00	12.00	0.00	
6275.00	12.66	359.81	6274.14	11.60	-0.04	11.60	12.00	12.00	0.00	
6300.00	15.66	359.81	6298.38	17.71	-0.06	17.71	12.00	12.00	0.00	
6325.00	18.66	359.81	6322.27	25.09	-0.08	25.09	12.00	12.00	0.00	
6350.00	21.66	359.81	6345.73	33.70	-0.11	33.70	12.00	12.00	0.00	
6375.00	24.66	359.81	6368.72	43.53	-0.14	43.53	12.00	12.00	0.00	
6400.00	27.66	359.81	6391.15	54.55	-0.18	54.55	12.00	12.00	0.00	
6425.00	30.66	359.81	6412.98	66.73	-0.22	66.73	12.00	12.00	0.00	
6450.00	33.66	359.81	6434.15	80.03	-0.27	80.03	12.00	12.00	0.00	
6475.00	36.66	359.81	6454.58	94.42	-0.31	94.43	12.00	12.00	0.00	
6483.05	37.62	359.81	6461.00	99.28	-0.33	99.28	12.00	12.00	0.00	Sharon Springs
6500.00	39.66	359.81	6474.24	109.87	-0.37	109.87	12.00	12.00	0.00	
6525.00	42.66	359.81	6493.06	126.32	-0.42	126.32	12.00	12.00	0.00	
6550.00	45.66	359.81	6511.00	143.73	-0.48	143.73	12.00	12.00	0.00	
6575.00	48.66	359.81	6527.99	162.06	-0.54	162.06	12.00	12.00	0.00	
6595.18	51.08	359.81	6541.00	177.49	-0.59	177.49	12.00	12.00	0.00	Niobrara
6600.00	51.66	359.81	6544.01	181.25	-0.60	181.25	12.00	12.00	0.00	
6625.00	54.66	359.81	6559.00	201.26	-0.67	201.26	12.00	12.00	0.00	
6650.00	57.66	359.81	6572.92	222.02	-0.74	222.02	12.00	12.00	0.00	
6665.50	59.52	359.81	6581.00	235.25	-0.78	235.25	12.00	12.00	0.00	Niobrara "B"
6675.00	60.66	359.81	6585.74	243.48	-0.81	243.48	12.00	12.00	0.00	

# LEAM Drilling Systems, Inc.

## Planning Report

<b>Company:</b> Continental Resources	<b>Date:</b> 7/13/2011	<b>Time:</b> 11:50:03	<b>Page:</b> 2
<b>Field:</b> Weld County, Co. (NAD 83)	<b>Co-ordinate(NE) Reference:</b> Well: 1-4H, Grid North		
<b>Site:</b> Hahn	<b>Vertical (TVD) Reference:</b> GL 4848' + KB 16' 4864.0		
<b>Well:</b> 1-4H	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,359.81Azi)		
<b>Wellpath:</b> OH	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Adapti	

### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
6700.00	63.66	359.81	6597.41	265.58	-0.88	265.58	12.00	12.00	0.00	
6725.00	66.66	359.81	6607.92	288.27	-0.96	288.27	12.00	12.00	0.00	
6750.00	69.66	359.81	6617.22	311.47	-1.04	311.47	12.00	12.00	0.00	
6775.00	72.66	359.81	6625.29	335.13	-1.12	335.13	12.00	12.00	0.00	
6780.85	73.36	359.81	6627.00	340.72	-1.13	340.72	12.00	12.00	0.00	Lower "B"
6800.00	75.66	359.81	6632.11	359.17	-1.20	359.17	12.00	12.00	0.00	
6825.00	78.66	359.81	6637.67	383.54	-1.28	383.55	12.00	12.00	0.00	
6850.00	81.66	359.81	6641.95	408.17	-1.36	408.18	12.00	12.00	0.00	
6875.00	84.66	359.81	6644.92	432.99	-1.44	432.99	12.00	12.00	0.00	
6900.00	87.66	359.81	6646.60	457.93	-1.52	457.94	12.00	12.00	0.00	
6918.62	89.89	359.81	6647.00	476.55	-1.59	476.55	12.00	12.00	0.00	Target
7000.00	89.89	359.81	6647.15	557.93	-1.86	557.93	0.00	0.00	0.00	
7100.00	89.89	359.81	6647.35	657.93	-2.19	657.93	0.00	0.00	0.00	
7200.00	89.89	359.81	6647.54	757.92	-2.52	757.93	0.00	0.00	0.00	
7300.00	89.89	359.81	6647.73	857.92	-2.85	857.93	0.00	0.00	0.00	
7400.00	89.89	359.81	6647.92	957.92	-3.19	957.93	0.00	0.00	0.00	
7500.00	89.89	359.81	6648.11	1057.92	-3.52	1057.93	0.00	0.00	0.00	
7600.00	89.89	359.81	6648.30	1157.92	-3.85	1157.93	0.00	0.00	0.00	
7700.00	89.89	359.81	6648.49	1257.92	-4.19	1257.93	0.00	0.00	0.00	
7800.00	89.89	359.81	6648.68	1357.92	-4.52	1357.93	0.00	0.00	0.00	
7900.00	89.89	359.81	6648.87	1457.92	-4.85	1457.93	0.00	0.00	0.00	
8000.00	89.89	359.81	6649.06	1557.92	-5.18	1557.93	0.00	0.00	0.00	
8100.00	89.89	359.81	6649.26	1657.92	-5.52	1657.93	0.00	0.00	0.00	
8200.00	89.89	359.81	6649.45	1757.92	-5.85	1757.93	0.00	0.00	0.00	
8300.00	89.89	359.81	6649.64	1857.92	-6.18	1857.93	0.00	0.00	0.00	
8400.00	89.89	359.81	6649.83	1957.92	-6.51	1957.93	0.00	0.00	0.00	
8500.00	89.89	359.81	6650.02	2057.92	-6.85	2057.93	0.00	0.00	0.00	
8600.00	89.89	359.81	6650.21	2157.91	-7.18	2157.93	0.00	0.00	0.00	
8700.00	89.89	359.81	6650.40	2257.91	-7.51	2257.93	0.00	0.00	0.00	
8800.00	89.89	359.81	6650.59	2357.91	-7.85	2357.93	0.00	0.00	0.00	
8900.00	89.89	359.81	6650.78	2457.91	-8.18	2457.93	0.00	0.00	0.00	
9000.00	89.89	359.81	6650.98	2557.91	-8.51	2557.93	0.00	0.00	0.00	
9100.00	89.89	359.81	6651.17	2657.91	-8.84	2657.93	0.00	0.00	0.00	
9200.00	89.89	359.81	6651.36	2757.91	-9.18	2757.93	0.00	0.00	0.00	
9300.00	89.89	359.81	6651.55	2857.91	-9.51	2857.93	0.00	0.00	0.00	
9400.00	89.89	359.81	6651.74	2957.91	-9.84	2957.93	0.00	0.00	0.00	
9500.00	89.89	359.81	6651.93	3057.91	-10.17	3057.92	0.00	0.00	0.00	
9600.00	89.89	359.81	6652.12	3157.91	-10.51	3157.92	0.00	0.00	0.00	
9700.00	89.89	359.81	6652.31	3257.91	-10.84	3257.92	0.00	0.00	0.00	
9800.00	89.89	359.81	6652.50	3357.91	-11.17	3357.92	0.00	0.00	0.00	
9900.00	89.89	359.81	6652.69	3457.91	-11.51	3457.92	0.00	0.00	0.00	
10000.00	89.89	359.81	6652.89	3557.90	-11.84	3557.92	0.00	0.00	0.00	
10100.00	89.89	359.81	6653.08	3657.90	-12.17	3657.92	0.00	0.00	0.00	
10200.00	89.89	359.81	6653.27	3757.90	-12.50	3757.92	0.00	0.00	0.00	
10300.00	89.89	359.81	6653.46	3857.90	-12.84	3857.92	0.00	0.00	0.00	
10400.00	89.89	359.81	6653.65	3957.90	-13.17	3957.92	0.00	0.00	0.00	
10500.00	89.89	359.81	6653.84	4057.90	-13.50	4057.92	0.00	0.00	0.00	
10583.47	89.89	359.81	6654.00	4141.37	-13.78	4141.39	0.00	0.00	0.00	PBHL

# LEAM Drilling Systems, Inc.

## Planning Report

<b>Company:</b> Continental Resources <b>Field:</b> Weld County, Co. (NAD 83) <b>Site:</b> Hahn <b>Well:</b> 1-4H <b>Wellpath:</b> OH	<b>Date:</b> 7/13/2011 <b>Time:</b> 11:50:03 <b>Page:</b> 3 <b>Co-ordinate(NE) Reference:</b> Well: 1-4H, Grid North <b>Vertical (TVD) Reference:</b> GL 4848' + KB 16' 4864.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,359.81Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Adapti
---	--

### Targets

Name	Description		TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->		
	Dip.	Dir.						Deg	Min	Sec	Deg	Min	Sec
SHL			0.00	0.00	0.00	1462566.33	3327926.47	40	35	49.708 N	104	19	8.850 W
PBHL			6654.00	4141.37	-13.78	1466707.70	3327912.69	40	36	30.629 N	104	19	8.314 W

### Casing Points

MD	TVD	Diameter	Hole Size	Name

### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
1616.00	1616.00	Pierre		0.00	359.81
3512.00	3512.00	Laramie		0.00	359.81
6483.05	6461.00	Sharon Springs		0.00	359.81
6595.18	6541.00	Niobrara		0.00	359.81
6665.50	6581.00	Niobrara "B"		0.00	359.81
6780.85	6627.00	Lower "B"		0.00	359.81
6918.62	6647.00	Target		0.00	359.81