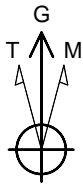


# TEXAS AMERICAN RESOURCES CO.

Field: Weld County, CO  
Site: Cass Farms 11-25H  
Well: #11-25H  
Wellpath: Lateral  
Plan: Plan #2



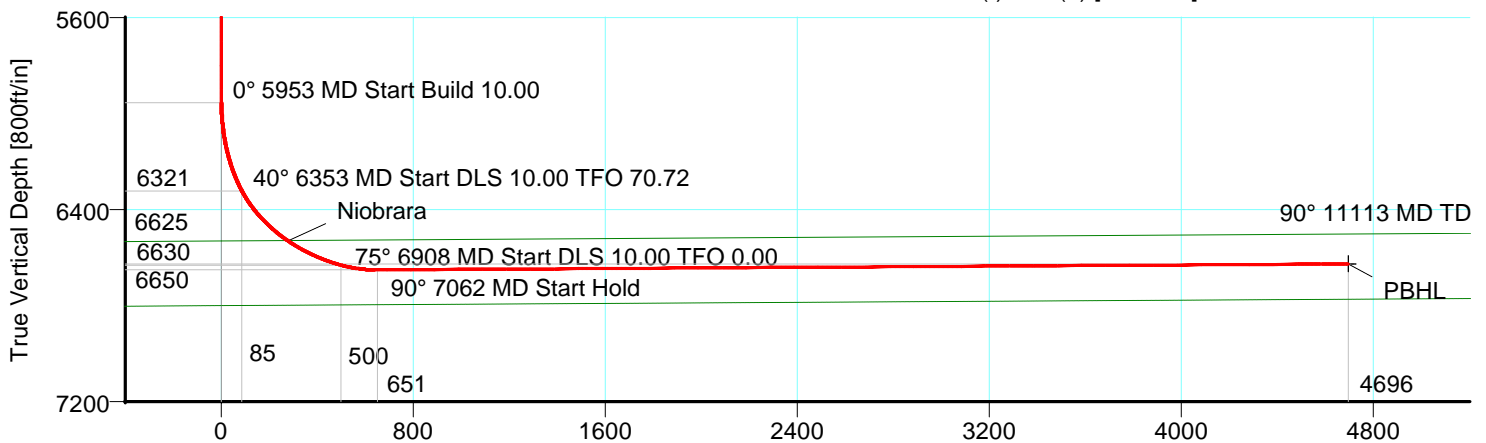
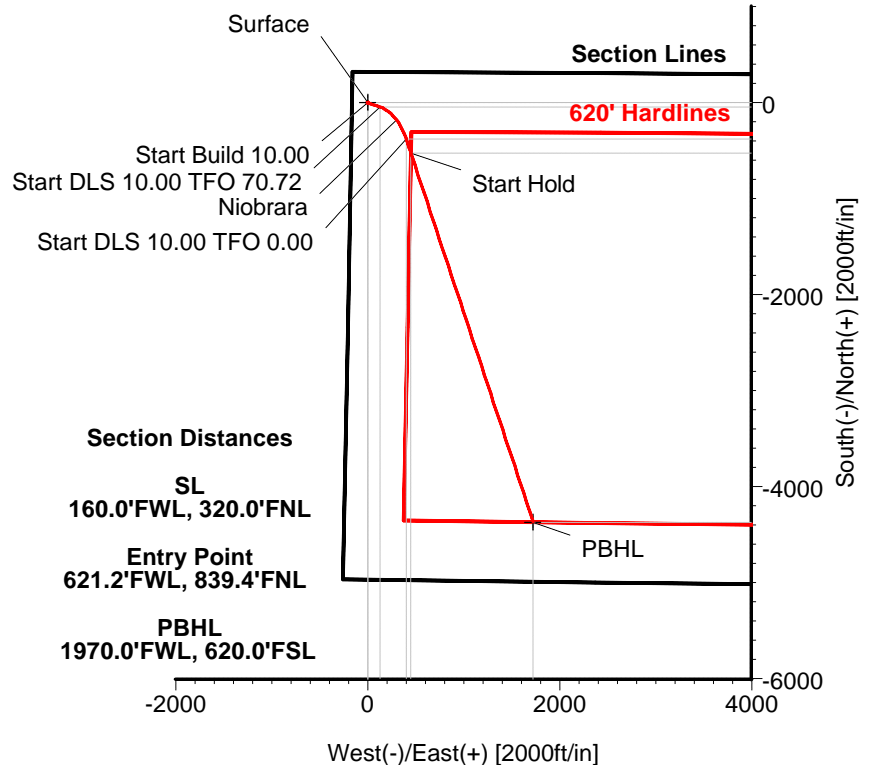
Azimuths to Grid North  
True North: -0.79°  
Magnetic North: 7.93°

Magnetic Field  
Strength: 53427nT  
Dip Angle: 67.35°  
Date: 09/17/2010  
Model: IGRF2010

## FORMATION TOP DETAILS

No.	TVDPATH	MDPATH	Formation
1	6528.31	6659.82	Niobrara

Pilot Hole will be drilled to 7105'TVD  
then plug back to KOP



## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface	0.00	0.00	0.00	1477949.67	3339541.23	40°38'20.148N	104°16'35.544W	Point
PBHL	6625.00	-4367.21	1726.41	1473582.46	3341267.64	40°37'36.762N	104°16'13.937W	Point

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	108.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5953.18	0.00	108.00	5953.18	0.00	0.00	0.00	108.00	0.00	
3	6353.18	40.00	108.00	6321.47	-41.42	127.49	10.00	108.00	85.39	
4	6908.30	75.00	161.65	6630.49	-377.76	403.49	10.00	70.72	499.64	
5	7061.83	90.35	161.65	6650.00	-521.87	451.27	10.00	0.00	651.23	
6	11113.16	90.35	161.65	6625.00	-4367.21	1726.41	0.00	0.00	4696.06	PBHL



# Allis-Chalmers Energy, Inc.

## Planning Report

<b>Company:</b> TEXAS AMERICAN RESOURCES CO. <b>Field:</b> Weld County, CO <b>Site:</b> Cass Farms 11-25H <b>Well:</b> #11-25H <b>Wellpath:</b> Lateral	<b>Date:</b> 10/07/2010 <b>Co-ordinate(NE) Reference:</b> <b>Vertical (TVD) Reference:</b> <b>Section (VS) Reference:</b> <b>Plan:</b>	<b>Time:</b> 11:23:49 <b>Well:</b> #11-25H, Grid North Est.5006'GL+19'KB 5025.0 <b>Well (0.00N,0.00E,158.43Azi)</b> <b>Plan #2</b>	<b>Page:</b> 1
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<b>Field:</b> Weld County, CO	
<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> Cass Farms 11-25H	
<b>Site Position:</b> <b>From:</b> Geographic <b>Position Uncertainty:</b> 0.00 ft <b>Ground Level:</b> 5006.00 ft	<b>Northing:</b> 1477949.67 ft <b>Easting:</b> 3339541.23 ft <b>Latitude:</b> 40 38 20.148 N <b>Longitude:</b> 104 16 35.544 W <b>North Reference:</b> Grid <b>Grid Convergence:</b> 0.79 deg

<b>Well:</b> #11-25H	<b>Slot Name:</b>
<b>Well Position:</b> +N/-S 0.00 ft +E/-W 0.00 ft <b>Position Uncertainty:</b> 0.00 ft	<b>Well Position:</b> +N/-S 0.00 ft +E/-W 0.00 ft <b>Position Uncertainty:</b> 0.00 ft

<b>Wellpath:</b> Lateral <b>Current Datum:</b> Est.5006'GL+19'KB <b>Magnetic Data:</b> 09/17/2010 <b>Field Strength:</b> 53427 nT <b>Vertical Section:</b> Depth From (TVD) ft	<b>Height</b> 5025.00 ft	<b>Drilled From:</b> Surface <b>Tie-on Depth:</b> 0.00 ft <b>Above System Datum:</b> Mean Sea Level <b>Declination:</b> 8.72 deg <b>Mag Dip Angle:</b> 67.35 deg <b>+E/-W</b> ft <b>Direction</b> deg
0.00	0.00	0.00 158.43

<b>Plan:</b> Plan #2 p2 for BHL & Hardlines <b>Principal:</b> No	<b>Date Composed:</b> 10/07/2010 <b>Version:</b> 1 <b>Tied-to:</b> From Surface
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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	108.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5953.18	0.00	108.00	5953.18	0.00	0.00	0.00	0.00	0.00	108.00	
6353.18	40.00	108.00	6321.47	-41.42	127.49	10.00	10.00	0.00	108.00	
6908.30	75.00	161.65	6630.49	-377.76	403.49	10.00	6.30	9.67	70.72	
7061.83	90.35	161.65	6650.00	-521.87	451.27	10.00	10.00	0.00	0.00	
11113.16	90.35	161.65	6625.00	-4367.21	1726.41	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	Tool/Comment
5953.18	0.00	108.00	5953.18	0.00	0.00	0.00	0.00	0.00	0.00	
6000.00	4.68	108.00	5999.95	-0.59	1.82	1.22	10.00	10.00	0.00	
6050.00	9.68	108.00	6049.54	-2.52	7.76	5.20	10.00	10.00	0.00	
6100.00	14.68	108.00	6098.40	-5.78	17.79	11.92	10.00	10.00	0.00	
6150.00	19.68	108.00	6146.15	-10.34	31.84	21.32	10.00	10.00	0.00	
6200.00	24.68	108.00	6192.44	-16.18	49.78	33.35	10.00	10.00	0.00	
6250.00	29.68	108.00	6236.90	-23.23	71.50	47.89	10.00	10.00	0.00	
6300.00	34.68	108.00	6279.21	-31.46	96.82	64.85	10.00	10.00	0.00	
6353.18	40.00	108.00	6321.47	-41.42	127.49	85.39	10.00	10.00	0.00	
6400.00	41.74	114.65	6356.89	-52.58	155.98	106.24	10.00	3.72	14.19	
6450.00	43.99	121.21	6393.55	-68.53	185.98	132.10	10.00	4.50	13.13	
6500.00	46.59	127.23	6428.74	-88.53	215.31	161.48	10.00	5.19	12.03	
6550.00	49.47	132.72	6462.19	-112.42	243.74	194.16	10.00	5.77	10.99	
6600.00	52.60	137.75	6493.64	-140.03	271.07	229.88	10.00	6.25	10.05	
6650.00	55.91	142.36	6522.86	-171.14	297.09	268.38	10.00	6.64	9.22	

# Allis-Chalmers Energy, Inc.

## Planning Report

**Company:** TEXAS AMERICAN RESOURCES CO.  
**Field:** Weld County, CO  
**Site:** Cass Farms 11-25H  
**Well:** #11-25H  
**Wellpath:** Lateral

**Date:** 10/07/2010  
**Co-ordinate(NE) Reference:** Well: #11-25H, Grid North  
**Vertical (TVD) Reference:** Est.5006'GL+19'KB 5025.0  
**Section (VS) Reference:** Well (0.00N,0.00E,158.43Azi)  
**Plan:** Plan #2

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### 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	Tool/Comment
6659.82	56.59	143.22	6528.31	-177.65	302.03	276.24	10.00	6.84	8.78	Niobrara
6700.00	59.39	146.61	6549.61	-205.53	321.59	309.36	10.00	6.98	8.44	
6750.00	63.00	150.57	6573.71	-242.92	344.39	352.52	10.00	7.21	7.91	
6800.00	66.71	154.27	6594.96	-283.03	365.32	397.51	10.00	7.42	7.41	
6850.00	70.50	157.77	6613.20	-325.56	384.21	444.01	10.00	7.58	7.00	
6900.00	74.36	161.11	6628.30	-370.18	400.93	491.65	10.00	7.71	6.68	
6908.30	75.00	161.65	6630.49	-377.76	403.49	499.64	10.00	7.77	6.52	
6950.00	79.17	161.65	6639.81	-416.33	416.28	540.22	10.00	10.00	0.00	
7000.00	84.17	161.65	6647.05	-463.28	431.84	589.60	10.00	10.00	0.00	
7050.00	89.17	161.65	6649.95	-510.64	447.55	639.42	10.00	10.00	0.00	
7061.83	90.35	161.65	6650.00	-521.87	451.27	651.23	10.00	10.00	0.00	
7100.00	90.35	161.65	6649.76	-558.10	463.29	689.34	0.00	0.00	0.00	
7200.00	90.35	161.65	6649.15	-653.01	494.76	789.18	0.00	0.00	0.00	
7300.00	90.35	161.65	6648.53	-747.93	526.24	889.02	0.00	0.00	0.00	
7400.00	90.35	161.65	6647.91	-842.85	557.71	988.86	0.00	0.00	0.00	
7500.00	90.35	161.65	6647.30	-937.76	589.19	1088.70	0.00	0.00	0.00	
7600.00	90.35	161.65	6646.68	-1032.68	620.66	1188.53	0.00	0.00	0.00	
7700.00	90.35	161.65	6646.06	-1127.59	652.13	1288.37	0.00	0.00	0.00	
7800.00	90.35	161.65	6645.45	-1222.51	683.61	1388.21	0.00	0.00	0.00	
7900.00	90.35	161.65	6644.83	-1317.42	715.08	1488.05	0.00	0.00	0.00	
8000.00	90.35	161.65	6644.21	-1412.34	746.56	1587.89	0.00	0.00	0.00	
8100.00	90.35	161.65	6643.59	-1507.25	778.03	1687.73	0.00	0.00	0.00	
8200.00	90.35	161.65	6642.98	-1602.17	809.51	1787.57	0.00	0.00	0.00	
8300.00	90.35	161.65	6642.36	-1697.09	840.98	1887.41	0.00	0.00	0.00	
8400.00	90.35	161.65	6641.74	-1792.00	872.46	1987.25	0.00	0.00	0.00	
8500.00	90.35	161.65	6641.13	-1886.92	903.93	2087.09	0.00	0.00	0.00	
8600.00	90.35	161.65	6640.51	-1981.83	935.40	2186.93	0.00	0.00	0.00	
8700.00	90.35	161.65	6639.89	-2076.75	966.88	2286.77	0.00	0.00	0.00	
8800.00	90.35	161.65	6639.27	-2171.66	998.35	2386.61	0.00	0.00	0.00	
8900.00	90.35	161.65	6638.66	-2266.58	1029.83	2486.45	0.00	0.00	0.00	
9000.00	90.35	161.65	6638.04	-2361.49	1061.30	2586.29	0.00	0.00	0.00	
9100.00	90.35	161.65	6637.42	-2456.41	1092.78	2686.13	0.00	0.00	0.00	
9200.00	90.35	161.65	6636.81	-2551.33	1124.25	2785.97	0.00	0.00	0.00	
9300.00	90.35	161.65	6636.19	-2646.24	1155.73	2885.81	0.00	0.00	0.00	
9400.00	90.35	161.65	6635.57	-2741.16	1187.20	2985.65	0.00	0.00	0.00	
9500.00	90.35	161.65	6634.95	-2836.07	1218.68	3085.49	0.00	0.00	0.00	
9600.00	90.35	161.65	6634.34	-2930.99	1250.15	3185.33	0.00	0.00	0.00	
9700.00	90.35	161.65	6633.72	-3025.90	1281.62	3285.17	0.00	0.00	0.00	
9800.00	90.35	161.65	6633.10	-3120.82	1313.10	3385.01	0.00	0.00	0.00	
9900.00	90.35	161.65	6632.49	-3215.74	1344.57	3484.85	0.00	0.00	0.00	
10000.00	90.35	161.65	6631.87	-3310.65	1376.05	3584.69	0.00	0.00	0.00	
10100.00	90.35	161.65	6631.25	-3405.57	1407.52	3684.53	0.00	0.00	0.00	
10200.00	90.35	161.65	6630.64	-3500.48	1439.00	3784.37	0.00	0.00	0.00	
10300.00	90.35	161.65	6630.02	-3595.40	1470.47	3884.21	0.00	0.00	0.00	
10400.00	90.35	161.65	6629.40	-3690.31	1501.95	3984.05	0.00	0.00	0.00	
10500.00	90.35	161.65	6628.78	-3785.23	1533.42	4083.89	0.00	0.00	0.00	
10600.00	90.35	161.65	6628.17	-3880.14	1564.89	4183.73	0.00	0.00	0.00	
10700.00	90.35	161.65	6627.55	-3975.06	1596.37	4283.57	0.00	0.00	0.00	
10800.00	90.35	161.65	6626.93	-4069.98	1627.84	4383.41	0.00	0.00	0.00	
10900.00	90.35	161.65	6626.32	-4164.89	1659.32	4483.25	0.00	0.00	0.00	
11000.00	90.35	161.65	6625.70	-4259.81	1690.79	4583.09	0.00	0.00	0.00	PBHL
11100.00	90.35	161.65	6625.08	-4354.72	1722.27	4682.93	0.00	0.00	0.00	
11113.16	90.35	161.65	6625.00	-4367.21	1726.41	4696.06	0.00	0.00	0.00	

# Allis-Chalmers Energy, Inc.

## Planning Report

**Company:** TEXAS AMERICAN RESOURCES CO.  
**Field:** Weld County, CO  
**Site:** Cass Farms 11-25H  
**Well:** #11-25H  
**Wellpath:** Lateral

**Date:** 10/07/2010  
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**Vertical (TVD) Reference:** Est.5006'GL+19'KB 5025.0  
**Section (VS) Reference:** Well (0.00N,0.00E,158.43Azi)  
**Plan:** Plan #2

**Page:** 3

### Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->		
								Deg	Min	Sec	Deg	Min	Sec
Surface			0.00	0.00	0.00	1477949.67	3339541.23	40	38	20.148	N	104	16 35.544
PBHL			6625.00	-4367.21	1726.41	1473582.46	3341267.64	40	37	36.762	N	104	16 13.937

### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
6659.82	6528.31	Niobrara		-0.35	158.43
	0.00	Codell		-0.35	158.43