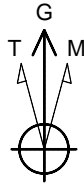


TEXAS AMERICAN RESOURCES CO.

Field: Weld County, CO
Site: Siefken 11-30H
Well: 11-30H
Wellpath: Lateral
Plan: Plan #1



Azimuths to Grid North
True North: -0.80°
Magnetic North: 7.81°

Magnetic Field
Strength: 53311nT
Dip Angle: 67.26°
Date: 05/24/2011
Model: IGRF2010



Section Distances

SL
320.0'FNL, 529.0'FWL

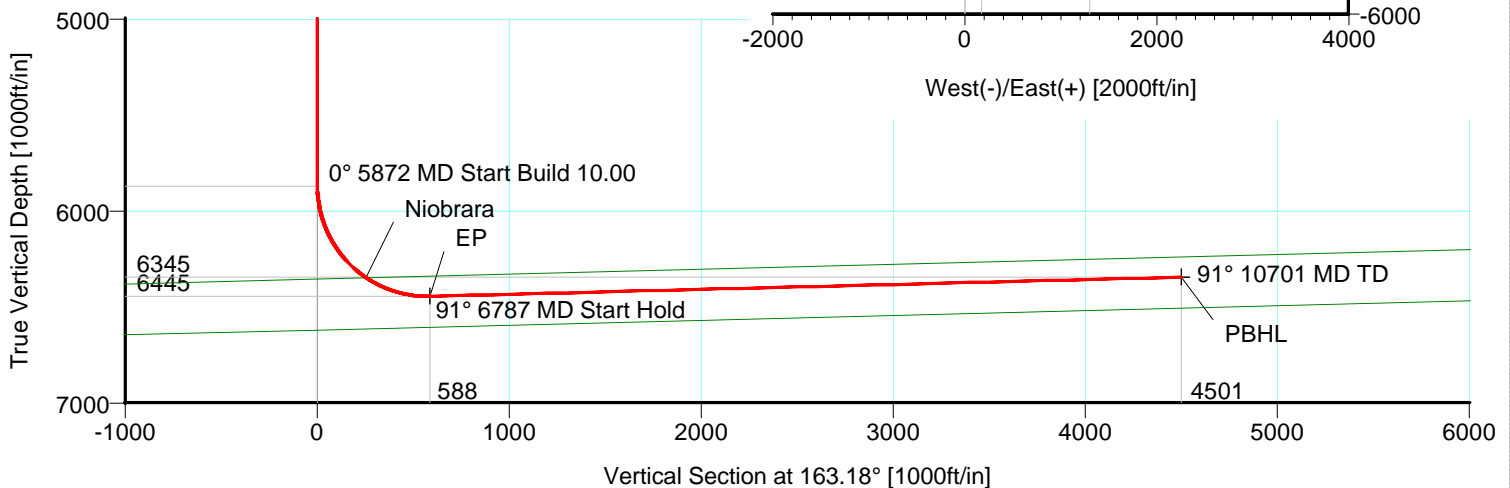
Entry Point
886.0'FNL, 700.9'FWL

PBHL
620.0'FSL, 1845.0'FWL

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	1555.00	1555.00	Pierre
2	6348.51	6434.53	Niobrara

Pilot Hole will be drilled to 6935'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	1446302.01	3345033.15	40°33'06.696N	104°15'30.060W	Point
PBHL	6345.00	-4308.04	1302.10	1441993.97	3346335.25	40°32'23.949N	104°15'13.977W	Point
EP	6445.00	-562.47	170.00	1445739.54	3345203.15	40°33'01.115N	104°15'27.960W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	163.18	0.00	0.00	0.00	0.00	0.00	0.00	
2	5872.23	0.00	163.18	5872.23	0.00	0.00	0.00	0.00	0.00	
3	6786.87	91.46	163.18	6445.00	-562.47	170.00	10.00	163.18	587.60	
4	10701.07	91.46	163.18	6345.00	-4308.04	1302.10	0.00	0.00	4500.52	PBHL

Plan: Plan #1 (11-30H/Lateral)

Created By: Ivonne Gonzalez

Date: 05/24/2011

ARCHER DIRECTIONAL DRILLING SERVICES
911 Regional Park Drive Houston, Texas 77060
Phone: 713-934-9600 Fax: 713-934-9067

Archer

ARCHER

Planning Report

Company: TEXAS AMERICAN RESOURCES CO. Field: Weld County, CO Site: Siefken 11-30H Well: 11-30H Wellpath: Lateral	Date: 05/24/2011 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 14:50:01 Well: 11-30H, Grid North 4820'GL+15'KB 4835.0 Well (0.00N,0.00E,163.18Azi) Plan #1	Page: 1
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Field: Weld County, CO	
Map System: US State Plane Coordinate System 1983 Geo Datum: GRS 1980 Sys Datum: Mean Sea Level	Map Zone: Colorado, Northern Zone Coordinate System: Well Centre Geomagnetic Model: IGRF2010

Site: Siefken 11-30H	
Site Position: From: Geographic Position Uncertainty: 0.00 ft Ground Level: 4820.00 ft	Northing: 1446302.01 ft Easting: 3345033.15 ft Latitude: 40 33 6.696 N Longitude: 104 15 30.060 W North Reference: Grid Grid Convergence: 0.80 deg

Well: 11-30H	Slot Name:
Well Position: +N/-S 0.00 ft +E/-W 0.00 ft Position Uncertainty: 0.00 ft	Northing: 1446302.01 ft Easting : 3345033.15 ft Latitude: 40 33 6.696 N Longitude: 104 15 30.060 W

Wellpath: Lateral Current Datum: 4820'GL+15'KB Magnetic Data: 05/24/2011 Field Strength: 53311 nT Vertical Section: Depth From (TVD) ft	Height 4835.00 ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.61 deg Mag Dip Angle: 67.26 deg +N/-S ft +E/-W ft Direction deg
0.00	0.00	0.00 163.18

Plan: Plan #1 Principal: No	Date Composed: 05/24/2011 Version: 1 Tied-to: From Surface
----------------------------------------------	---------------------------------------------------------------------------------------

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	163.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5872.23	0.00	163.18	5872.23	0.00	0.00	0.00	0.00	0.00	0.00	
6786.87	91.46	163.18	6445.00	-562.47	170.00	10.00	10.00	0.00	163.18	
10701.07	91.46	163.18	6345.00	-4308.04	1302.10	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
5872.23	0.00	163.18	5872.23	0.00	0.00	0.00	0.00	0.00	0.00	
5900.00	2.78	163.18	5899.99	-0.64	0.19	0.67	10.00	10.00	0.00	
5950.00	7.78	163.18	5949.76	-5.04	1.52	5.27	10.00	10.00	0.00	
6000.00	12.78	163.18	5998.94	-13.58	4.10	14.19	10.00	10.00	0.00	
6050.00	17.78	163.18	6047.16	-26.19	7.91	27.36	10.00	10.00	0.00	
6100.00	22.78	163.18	6094.05	-42.77	12.93	44.68	10.00	10.00	0.00	
6150.00	27.78	163.18	6139.25	-63.20	19.10	66.02	10.00	10.00	0.00	
6200.00	32.78	163.18	6182.41	-87.32	26.39	91.22	10.00	10.00	0.00	
6250.00	37.78	163.18	6223.22	-114.95	34.74	120.09	10.00	10.00	0.00	
6300.00	42.78	163.18	6261.35	-145.89	44.09	152.40	10.00	10.00	0.00	
6350.00	47.78	163.18	6296.53	-179.88	54.37	187.92	10.00	10.00	0.00	
6400.00	52.78	163.18	6328.47	-216.68	65.49	226.36	10.00	10.00	0.00	
6434.53	56.23	163.18	6348.51	-243.58	73.62	254.47	10.00	10.00	0.00	Niobrara
6450.00	57.78	163.18	6356.94	-256.01	77.38	267.45	10.00	10.00	0.00	
6500.00	62.78	163.18	6381.72	-297.56	89.94	310.85	10.00	10.00	0.00	
6550.00	67.78	163.18	6402.63	-341.02	103.07	356.26	10.00	10.00	0.00	
6600.00	72.78	163.18	6419.50	-386.06	116.69	403.31	10.00	10.00	0.00	

ARCHER

Planning Report

Company: TEXAS AMERICAN RESOURCES CO.
Field: Weld County, CO
Site: Siefken 11-30H
Well: 11-30H
Wellpath: Lateral

Date: 05/24/2011
Co-ordinate(NE) Reference: Well: 11-30H, Grid North
Vertical (TVD) Reference: 4820'GL+15'KB 4835.0
Section (VS) Reference: Well (0.00N,0.00E,163.18Azi)
Plan: Plan #1

Page: 2

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
6650.00	77.78	163.18	6432.20	-432.33	130.67	451.65	10.00	10.00	0.00	
6700.00	82.78	163.18	6440.64	-479.49	144.93	500.92	10.00	10.00	0.00	
6750.00	87.78	163.18	6444.76	-527.18	159.34	550.73	10.00	10.00	0.00	
6786.87	91.46	163.18	6445.00	-562.47	170.00	587.60	10.00	10.00	0.00	
6800.00	91.46	163.18	6444.67	-575.03	173.80	600.72	0.00	0.00	0.00	
6900.00	91.46	163.18	6442.11	-670.72	202.72	700.69	0.00	0.00	0.00	
7000.00	91.46	163.18	6439.56	-766.41	231.65	800.65	0.00	0.00	0.00	
7100.00	91.46	163.18	6437.00	-862.10	260.57	900.62	0.00	0.00	0.00	
7200.00	91.46	163.18	6434.45	-957.80	289.49	1000.59	0.00	0.00	0.00	
7300.00	91.46	163.18	6431.89	-1053.49	318.41	1100.56	0.00	0.00	0.00	
7400.00	91.46	163.18	6429.34	-1149.18	347.34	1200.52	0.00	0.00	0.00	
7500.00	91.46	163.18	6426.78	-1244.87	376.26	1300.49	0.00	0.00	0.00	
7600.00	91.46	163.18	6424.23	-1340.56	405.18	1400.46	0.00	0.00	0.00	
7700.00	91.46	163.18	6421.67	-1436.26	434.11	1500.43	0.00	0.00	0.00	
7800.00	91.46	163.18	6419.12	-1531.95	463.03	1600.39	0.00	0.00	0.00	
7900.00	91.46	163.18	6416.56	-1627.64	491.95	1700.36	0.00	0.00	0.00	
8000.00	91.46	163.18	6414.01	-1723.33	520.87	1800.33	0.00	0.00	0.00	
8100.00	91.46	163.18	6411.45	-1819.02	549.80	1900.30	0.00	0.00	0.00	
8200.00	91.46	163.18	6408.90	-1914.71	578.72	2000.26	0.00	0.00	0.00	
8300.00	91.46	163.18	6406.34	-2010.41	607.64	2100.23	0.00	0.00	0.00	
8400.00	91.46	163.18	6403.79	-2106.10	636.57	2200.20	0.00	0.00	0.00	
8500.00	91.46	163.18	6401.23	-2201.79	665.49	2300.16	0.00	0.00	0.00	
8600.00	91.46	163.18	6398.68	-2297.48	694.41	2400.13	0.00	0.00	0.00	
8700.00	91.46	163.18	6396.13	-2393.17	723.33	2500.10	0.00	0.00	0.00	
8800.00	91.46	163.18	6393.57	-2488.87	752.26	2600.07	0.00	0.00	0.00	
8900.00	91.46	163.18	6391.02	-2584.56	781.18	2700.03	0.00	0.00	0.00	
9000.00	91.46	163.18	6388.46	-2680.25	810.10	2800.00	0.00	0.00	0.00	
9100.00	91.46	163.18	6385.91	-2775.94	839.02	2899.97	0.00	0.00	0.00	
9200.00	91.46	163.18	6383.35	-2871.63	867.95	2999.94	0.00	0.00	0.00	
9300.00	91.46	163.18	6380.80	-2967.33	896.87	3099.90	0.00	0.00	0.00	
9400.00	91.46	163.18	6378.24	-3063.02	925.79	3199.87	0.00	0.00	0.00	
9500.00	91.46	163.18	6375.69	-3158.71	954.72	3299.84	0.00	0.00	0.00	
9600.00	91.46	163.18	6373.13	-3254.40	983.64	3399.81	0.00	0.00	0.00	
9700.00	91.46	163.18	6370.58	-3350.09	1012.56	3499.77	0.00	0.00	0.00	
9800.00	91.46	163.18	6368.02	-3445.79	1041.48	3599.74	0.00	0.00	0.00	
9900.00	91.46	163.18	6365.47	-3541.48	1070.41	3699.71	0.00	0.00	0.00	
10000.00	91.46	163.18	6362.91	-3637.17	1099.33	3799.67	0.00	0.00	0.00	
10100.00	91.46	163.18	6360.36	-3732.86	1128.25	3899.64	0.00	0.00	0.00	
10200.00	91.46	163.18	6357.80	-3828.55	1157.17	3999.61	0.00	0.00	0.00	
10300.00	91.46	163.18	6355.25	-3924.25	1186.10	4099.58	0.00	0.00	0.00	
10400.00	91.46	163.18	6352.69	-4019.94	1215.02	4199.54	0.00	0.00	0.00	
10500.00	91.46	163.18	6350.14	-4115.63	1243.94	4299.51	0.00	0.00	0.00	
10600.00	91.46	163.18	6347.58	-4211.32	1272.87	4399.48	0.00	0.00	0.00	
10701.07	91.46	163.18	6345.00	-4308.04	1302.10	4500.52	0.00	0.00	0.00	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->		
Surface			0.00	0.00	0.00	1446302.01	3345033.15	40	33	6.696 N	104	15	30.060 W
PBHL			6345.00	-4308.04	1302.10	1441993.97	3346335.25	40	32	23.949 N	104	15	13.977 W

ARCHER

Planning Report

Company: TEXAS AMERICAN RESOURCES CO.
Field: Weld County, CO
Site: Siefken 11-30H
Well: 11-30H
Wellpath: Lateral

Date: 05/24/2011
Co-ordinate(NE) Reference: Well: 11-30H, Grid North
Vertical (TVD) Reference: 4820'GL+15'KB 4835.0
Section (VS) Reference: Well (0.00N,0.00E,163.18Azi)
Plan: Plan #1

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
EP			6445.00	-562.47	170.00	1445739.54	3345203.15	40	33	1.115	N	104	15 27.960 W

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
1555.00	1555.00	Pierre		-1.46	163.18
6434.53	6348.51	Niobrara		-1.46	163.18
	0.00	Codell		-1.46	163.18