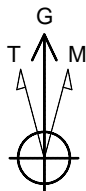


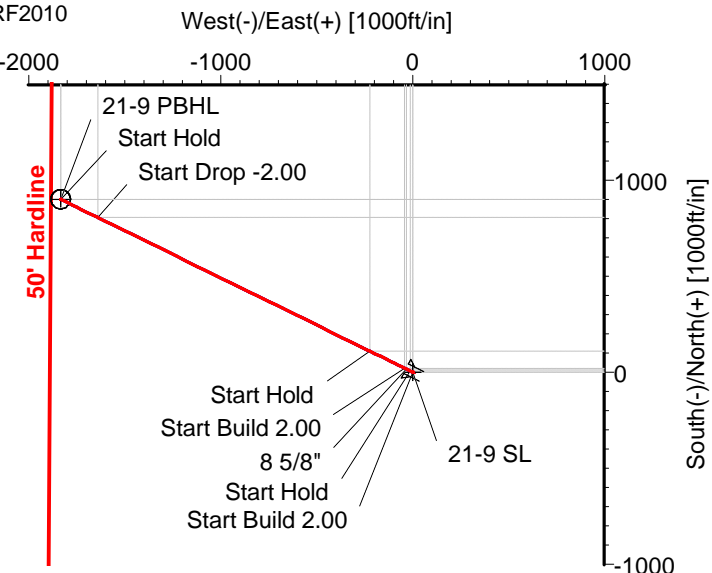
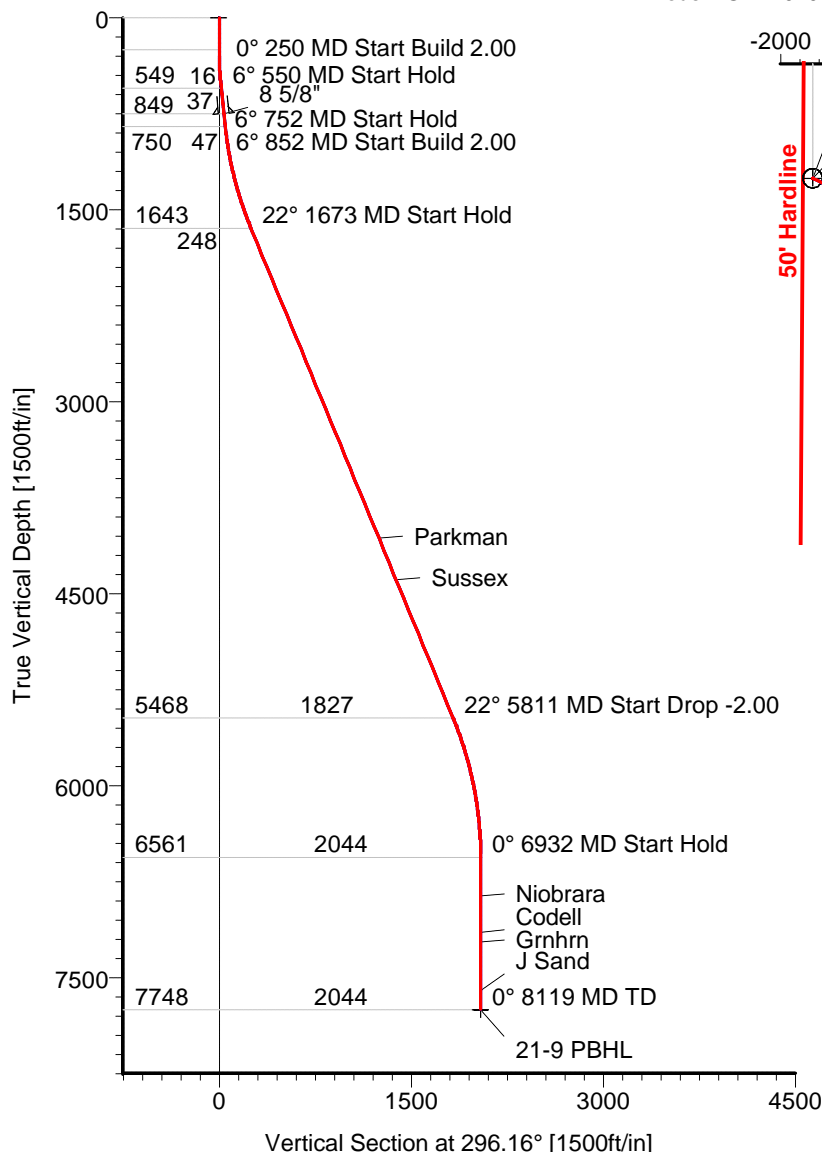
ANADARKO PETROLEUM

Field: Weld County, CO
Site: REI 8-9 Pad
Well: 21-9
Wellpath: Original Hole
Plan: Plan #1



Azimuths to Grid North
True North: -0.54°
Magnetic North: 8.25°

Magnetic Field
Strength: 53091nT
Dip Angle: 66.94°
Date: 07/13/2011
Model: IGRF2010



CASING DETAILS

No.	TVD	MD	Name	Size
1	750.00	751.65	8 5/8"	8.625

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	4066.00	4294.32	Parkman
2	4389.00	4643.75	Sussex
3	6861.00	7232.45	Niobrara
4	7143.00	7514.45	Codell
5	7221.00	7592.45	Grnhm
6	7598.00	7969.45	J Sand

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
21-9 SL	0.00	0.00	0.00	40°14'28.253N	104°39'41.865W	Point
21-9 PBHL	7748.00	900.96	-1834.23	40°14'37.327N	104°40'05.408W	Circle (Radius: 50)

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	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	550.00	6.00	296.16	549.45	6.92	-14.09	2.00	296.16	15.69	
4	751.65	6.00	296.16	750.00	16.21	-33.01	0.00	0.00	36.77	
5	851.65	6.00	296.16	849.45	20.82	-42.39	0.00	0.00	47.22	
6	1672.98	22.43	296.16	1642.91	109.43	-222.77	2.00	0.00	248.20	
7	5811.12	22.43	296.16	5468.09	805.44	-1639.76	0.00	0.00	1826.89	
8	6932.45	0.00	296.16	6561.00	900.96	-1834.23	2.00	180.00	2043.56	
9	8119.45	0.00	296.16	7748.00	900.96	-1834.23	0.00	0.00	2043.56	21-9 PBHL

Plan: Plan #1 (21-9/Original Hole)

Created By: Ivonne Gonzalez

Date: 03/11/2011

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



DIRECTIONAL
DRILLING SERVICES

Allis-Chalmers Energy, Inc.

Planning Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Site: REI 8-9 Pad Well: 21-9 Wellpath: Original Hole	Date: 03/11/2011 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 15:23:15 Well: 21-9, Grid North 4816'GL+13'KB 4829.0 Well (0.00N,0.00E,296.16Azi) 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: REI 8-9 Pad	
Site Position: From: Geographic Position Uncertainty: 0.00 ft Ground Level: 4816.00 ft	Northing: 1331813.57 ft Easting: 3234093.02 ft Latitude: 40 14 28.252 N Longitude: 104 39 41.245 W North Reference: Grid Grid Convergence: 0.54 deg

Well: 21-9	Slot Name: 21-9
Well Position: +N/-S -0.36 ft +E/-W -48.04 ft Position Uncertainty: 0.00 ft	Northing: 1331813.21 ft Easting : 3234044.98 ft Latitude: 40 14 28.253 N Longitude: 104 39 41.865 W

Wellpath: Original Hole Current Datum: 4816'GL+13'KB Magnetic Data: 07/13/2011 Field Strength: 53091 nT Vertical Section: Depth From (TVD) ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.79 deg Mag Dip Angle: 66.94 deg +N/-S ft +E/-W ft Direction deg
0.00	0.00 0.00 296.16

Plan: Plan #1 Principal: Yes	Date Composed: 03/11/2011 Version: 1 Tied-to: 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
550.00	6.00	296.16	549.45	6.92	-14.09	2.00	2.00	0.00	296.16	
751.65	6.00	296.16	750.00	16.21	-33.01	0.00	0.00	0.00	0.00	
851.65	6.00	296.16	849.45	20.82	-42.39	0.00	0.00	0.00	0.00	
1672.98	22.43	296.16	1642.91	109.43	-222.77	2.00	2.00	0.00	0.00	
5811.12	22.43	296.16	5468.09	805.44	-1639.76	0.00	0.00	0.00	0.00	
6932.45	0.00	296.16	6561.00	900.96	-1834.23	2.00	-2.00	0.00	180.00	
8119.45	0.00	296.16	7748.00	900.96	-1834.23	0.00	0.00	0.00	0.00	21-9 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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	1.00	296.16	300.00	0.19	-0.39	0.44	2.00	2.00	0.00	
400.00	3.00	296.16	399.93	1.73	-3.52	3.93	2.00	2.00	0.00	
500.00	5.00	296.16	499.68	4.81	-9.78	10.90	2.00	2.00	0.00	
550.00	6.00	296.16	549.45	6.92	-14.09	15.69	2.00	2.00	0.00	
600.00	6.00	296.16	599.18	9.22	-18.78	20.92	0.00	0.00	0.00	
700.00	6.00	296.16	698.63	13.83	-28.16	31.37	0.00	0.00	0.00	
751.65	6.00	296.16	750.00	16.21	-33.01	36.77	0.00	0.00	0.00	8 5/8"
800.00	6.00	296.16	798.08	18.44	-37.54	41.83	0.00	0.00	0.00	
851.65	6.00	296.16	849.45	20.82	-42.39	47.22	0.00	0.00	0.00	
900.00	6.97	296.16	897.49	23.23	-47.29	52.68	2.00	2.00	0.00	
1000.00	8.97	296.16	996.52	29.34	-59.73	66.54	2.00	2.00	0.00	
1100.00	10.97	296.16	1095.01	36.97	-75.26	83.85	2.00	2.00	0.00	

Allis-Chalmers Energy, Inc.

Planning Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Site: REI 8-9 Pad Well: 21-9 Wellpath: Original Hole	Date: 03/11/2011 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Plan:	Time: 15:23:15 Well: 21-9, Grid North 4816'GL+13'KB 4829.0 Well (0.00N,0.00E,296.16Azi) Plan #1	Page: 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
1200.00	12.97	296.16	1192.83	46.11	-93.87	104.58	2.00	2.00	0.00	
1300.00	14.97	296.16	1289.87	56.75	-115.53	128.72	2.00	2.00	0.00	
1400.00	16.97	296.16	1386.00	68.88	-140.22	156.23	2.00	2.00	0.00	
1500.00	18.97	296.16	1481.12	82.48	-167.91	187.07	2.00	2.00	0.00	
1600.00	20.97	296.16	1575.11	97.53	-198.56	221.22	2.00	2.00	0.00	
1672.98	22.43	296.16	1642.91	109.43	-222.77	248.20	2.00	2.00	0.00	
1700.00	22.43	296.16	1667.89	113.97	-232.03	258.51	0.00	0.00	0.00	
1800.00	22.43	296.16	1760.33	130.79	-266.27	296.66	0.00	0.00	0.00	
1900.00	22.43	296.16	1852.76	147.61	-300.51	334.80	0.00	0.00	0.00	
2000.00	22.43	296.16	1945.20	164.43	-334.75	372.95	0.00	0.00	0.00	
2100.00	22.43	296.16	2037.64	181.25	-368.99	411.10	0.00	0.00	0.00	
2200.00	22.43	296.16	2130.07	198.07	-403.24	449.25	0.00	0.00	0.00	
2300.00	22.43	296.16	2222.51	214.89	-437.48	487.40	0.00	0.00	0.00	
2400.00	22.43	296.16	2314.95	231.71	-471.72	525.55	0.00	0.00	0.00	
2500.00	22.43	296.16	2407.39	248.53	-505.96	563.70	0.00	0.00	0.00	
2600.00	22.43	296.16	2499.82	265.35	-540.20	601.85	0.00	0.00	0.00	
2700.00	22.43	296.16	2592.26	282.16	-574.45	640.00	0.00	0.00	0.00	
2800.00	22.43	296.16	2684.70	298.98	-608.69	678.15	0.00	0.00	0.00	
2900.00	22.43	296.16	2777.13	315.80	-642.93	716.30	0.00	0.00	0.00	
3000.00	22.43	296.16	2869.57	332.62	-677.17	754.45	0.00	0.00	0.00	
3100.00	22.43	296.16	2962.01	349.44	-711.41	792.60	0.00	0.00	0.00	
3200.00	22.43	296.16	3054.44	366.26	-745.66	830.75	0.00	0.00	0.00	
3300.00	22.43	296.16	3146.88	383.08	-779.90	868.90	0.00	0.00	0.00	
3400.00	22.43	296.16	3239.32	399.90	-814.14	907.05	0.00	0.00	0.00	
3500.00	22.43	296.16	3331.75	416.72	-848.38	945.20	0.00	0.00	0.00	
3600.00	22.43	296.16	3424.19	433.54	-882.62	983.35	0.00	0.00	0.00	
3700.00	22.43	296.16	3516.63	450.36	-916.87	1021.50	0.00	0.00	0.00	
3800.00	22.43	296.16	3609.07	467.18	-951.11	1059.65	0.00	0.00	0.00	
3900.00	22.43	296.16	3701.50	484.00	-985.35	1097.80	0.00	0.00	0.00	
4000.00	22.43	296.16	3793.94	500.82	-1019.59	1135.95	0.00	0.00	0.00	
4100.00	22.43	296.16	3886.38	517.64	-1053.83	1174.10	0.00	0.00	0.00	
4200.00	22.43	296.16	3978.81	534.46	-1088.08	1212.25	0.00	0.00	0.00	
4294.32	22.43	296.16	4066.00	550.32	-1120.37	1248.24	0.00	0.00	0.00	Parkman
4300.00	22.43	296.16	4071.25	551.28	-1122.32	1250.40	0.00	0.00	0.00	
4400.00	22.43	296.16	4163.69	568.10	-1156.56	1288.55	0.00	0.00	0.00	
4500.00	22.43	296.16	4256.12	584.92	-1190.80	1326.70	0.00	0.00	0.00	
4600.00	22.43	296.16	4348.56	601.73	-1225.05	1364.85	0.00	0.00	0.00	
4643.75	22.43	296.16	4389.00	609.09	-1240.03	1381.54	0.00	0.00	0.00	Sussex
4700.00	22.43	296.16	4441.00	618.55	-1259.29	1403.00	0.00	0.00	0.00	
4800.00	22.43	296.16	4533.43	635.37	-1293.53	1441.15	0.00	0.00	0.00	
4900.00	22.43	296.16	4625.87	652.19	-1327.77	1479.30	0.00	0.00	0.00	
5000.00	22.43	296.16	4718.31	669.01	-1362.01	1517.45	0.00	0.00	0.00	
5100.00	22.43	296.16	4810.75	685.83	-1396.26	1555.60	0.00	0.00	0.00	
5200.00	22.43	296.16	4903.18	702.65	-1430.50	1593.75	0.00	0.00	0.00	
5300.00	22.43	296.16	4995.62	719.47	-1464.74	1631.90	0.00	0.00	0.00	
5400.00	22.43	296.16	5088.06	736.29	-1498.98	1670.05	0.00	0.00	0.00	
5500.00	22.43	296.16	5180.49	753.11	-1533.22	1708.20	0.00	0.00	0.00	
5600.00	22.43	296.16	5272.93	769.93	-1567.47	1746.35	0.00	0.00	0.00	
5700.00	22.43	296.16	5365.37	786.75	-1601.71	1784.50	0.00	0.00	0.00	
5800.00	22.43	296.16	5457.80	803.57	-1635.95	1822.65	0.00	0.00	0.00	
5811.12	22.43	296.16	5468.09	805.44	-1639.76	1826.89	0.00	0.00	0.00	
5900.00	20.65	296.16	5550.75	819.82	-1669.04	1859.52	2.00	-2.00	0.00	
6000.00	18.65	296.16	5644.93	834.65	-1699.22	1893.14	2.00	-2.00	0.00	

Allis-Chalmers Energy, Inc.

Planning Report

Company: ANADARKO PETROLEUM
Field: Weld County, CO
Site: REI 8-9 Pad
Well: 21-9
Wellpath: Original Hole

Date: 03/11/2011
Co-ordinate(NE) Reference: Well: 21-9, Grid North
Vertical (TVD) Reference: 4816'GL+13'KB 4829.0
Section (VS) Reference: Well (0.00N,0.00E,296.16Azi)
Plan: Plan #1

Page: 3

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
6100.00	16.65	296.16	5740.21	848.01	-1726.43	1923.46	2.00	-2.00	0.00	
6200.00	14.65	296.16	5836.50	859.91	-1750.64	1950.43	2.00	-2.00	0.00	
6300.00	12.65	296.16	5933.67	870.31	-1771.82	1974.03	2.00	-2.00	0.00	
6400.00	10.65	296.16	6031.61	879.21	-1789.95	1994.22	2.00	-2.00	0.00	
6500.00	8.65	296.16	6130.19	886.60	-1804.99	2010.98	2.00	-2.00	0.00	
6600.00	6.65	296.16	6229.29	892.47	-1816.94	2024.29	2.00	-2.00	0.00	
6700.00	4.65	296.16	6328.80	896.81	-1825.77	2034.13	2.00	-2.00	0.00	
6800.00	2.65	296.16	6428.60	899.61	-1831.48	2040.50	2.00	-2.00	0.00	
6900.00	0.65	296.16	6528.55	900.88	-1834.07	2043.38	2.00	-2.00	0.00	
6932.45	0.00	296.16	6561.00	900.96	-1834.23	2043.56	2.00	-2.00	0.00	
7000.00	0.00	296.16	6628.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7100.00	0.00	296.16	6728.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7200.00	0.00	296.16	6828.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7232.45	0.00	296.16	6861.00	900.96	-1834.23	2043.56	0.00	0.00	0.00	Niobrara
7300.00	0.00	296.16	6928.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7400.00	0.00	296.16	7028.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7500.00	0.00	296.16	7128.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7514.45	0.00	296.16	7143.00	900.96	-1834.23	2043.56	0.00	0.00	0.00	Codell
7592.45	0.00	296.16	7221.00	900.96	-1834.23	2043.56	0.00	0.00	0.00	Grnhm
7600.00	0.00	296.16	7228.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7700.00	0.00	296.16	7328.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7800.00	0.00	296.16	7428.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7900.00	0.00	296.16	7528.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
7969.45	0.00	296.16	7598.00	900.96	-1834.23	2043.56	0.00	0.00	0.00	J Sand
8000.00	0.00	296.16	7628.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
8100.00	0.00	296.16	7728.55	900.96	-1834.23	2043.56	0.00	0.00	0.00	
8119.45	0.00	296.16	7748.00	900.96	-1834.23	2043.56	0.00	0.00	0.00	21-9 PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
21-9 SL			0.00	0.00	0.00	1331813.21	3234044.98	40	14	28.253 N	104	39	41.865 W
21-9 PBHL			7748.00	900.96	-1834.23	1332714.18	3232210.74	40	14	37.327 N	104	40	5.408 W
-Circle (Radius: 50)													
-Plan hit target													

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
751.65	750.00	8.625	9.875	8 5/8"

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
4294.32	4066.00	Parkman		0.00	0.00
4643.75	4389.00	Sussex		0.00	0.00
7232.45	6861.00	Niobrara		0.00	0.00
7514.45	7143.00	Codell		0.00	0.00
7592.45	7221.00	Grnhm		0.00	0.00
7969.45	7598.00	J Sand		0.00	0.00

Allis-Chalmers Energy, Inc.

Anticollision Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Reference Site: REI 8-9 Pad Reference Well: 21-9 Reference Wellpath: Original Hole	Date: 03/11/2011 Time: 15:23:06 Page: 1	Co-ordinate(NE) Reference: Well: 21-9, Grid North Vertical (TVD) Reference: 4816'GL+13'KB 4829.0 Db: Sybase
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NO GLOBAL SCAN: Using user defined selection & scan criteria
Interpolation Method: MD **Interval:** 100.00 ft
Depth Range: 0.00 to 8119.45 ft
Maximum Radius: 500.00 ft

Reference: Plan: Plan #1
Error Model: Systematic Ellipse
Scan Method: Closest Approach 3D
Error Surface: Ellipse

Plan: Plan #1 Principal: Yes	Date Composed: 03/11/2011 Version: 1 Tied-to: From Surface
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Summary

<----- Offset Wellpath ----->			Reference	Offset	Ctr-Ctr	Edge	Separation	Warning
Site	Well	Wellpath	MD ft	MD ft	Distance ft	Distance ft	Factor	
REI 8-9 Pad	25-9	Original Hole V0 Plan:	200.00	200.00	16.01			No Offset Errors
REI 8-9 Pad	39-9	Original Hole V0 Plan:	200.00	200.00	32.01			No Offset Errors
REI 8-9 Pad	41-9	Original Hole V0 Plan:	200.00	200.00	48.04			No Offset Errors

Site: REI 8-9 Pad Well: 25-9 Wellpath: Original Hole V0 Plan: Plan #1 V1	Inter-Site Error: 0.00 ft
---	----------------------------------

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr	Edge	Separation	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft	TFO-HS deg	North ft	East ft	Distance ft	Distance ft	Factor	
0.00	0.00	0.00	0.00	0.00	0.00	89.64	0.10	16.01	16.01			No Data
100.00	100.00	100.00	100.00	0.00	0.00	89.64	0.10	16.01	16.01			No Offset Errors
200.00	200.00	200.00	200.00	0.00	0.00	89.64	0.10	16.01	16.01			No Offset Errors
300.00	300.00	300.21	300.20	0.00	0.00	154.39	0.04	15.69	16.08			No Offset Errors
400.00	399.93	400.60	400.56	0.00	0.00	161.36	-0.46	13.09	16.77			No Offset Errors
500.00	499.68	500.93	500.75	0.00	0.00	173.33	-1.46	7.92	18.81			No Offset Errors
600.00	599.18	601.10	600.61	0.00	0.00	186.46	-2.94	0.22	22.60			No Offset Errors
700.00	698.63	700.90	700.03	0.00	0.00	196.71	-4.58	-8.33	27.10			No Offset Errors
800.00	798.08	800.70	799.45	0.00	0.00	203.88	-6.22	-16.87	32.21			No Offset Errors
900.00	897.49	900.69	899.03	0.00	0.00	209.21	-7.92	-25.74	37.91			No Offset Errors
1000.00	996.52	1000.73	998.43	0.00	0.00	213.82	-10.06	-36.85	45.60			No Offset Errors
1100.00	1095.01	1100.58	1097.31	0.00	0.00	217.56	-12.68	-50.49	55.53			No Offset Errors
1200.00	1192.83	1200.19	1195.55	0.00	0.00	220.46	-15.78	-66.62	67.68			No Offset Errors
1300.00	1289.87	1299.53	1293.07	0.00	0.00	222.69	-19.35	-85.20	81.99			No Offset Errors
1400.00	1386.00	1398.56	1389.76	0.00	0.00	224.42	-23.39	-106.20	98.41			No Offset Errors
1500.00	1481.12	1497.25	1485.53	0.00	0.00	225.76	-27.88	-129.57	116.91			No Offset Errors
1600.00	1575.11	1595.57	1580.30	0.00	0.00	226.84	-32.82	-155.25	137.45			No Offset Errors
1700.00	1667.89	1693.50	1674.00	0.00	0.00	227.66	-38.19	-183.21	159.92			No Offset Errors
1800.00	1760.33	1791.34	1766.85	0.00	0.00	228.67	-44.01	-213.49	182.71			No Offset Errors
1900.00	1852.76	1889.10	1858.81	0.00	0.00	230.17	-50.27	-246.07	205.32			No Offset Errors
2000.00	1945.20	1986.66	1949.70	0.00	0.00	232.01	-56.96	-280.88	227.90			No Offset Errors
2100.00	2037.64	2083.80	2039.58	0.00	0.00	233.90	-63.92	-317.05	250.61			No Offset Errors
2200.00	2130.07	2180.87	2129.39	0.00	0.00	235.49	-70.87	-353.24	273.55			No Offset Errors
2300.00	2222.51	2277.95	2219.20	0.00	0.00	236.83	-77.83	-389.43	296.65			No Offset Errors
2400.00	2314.95	2375.03	2309.01	0.00	0.00	237.98	-84.79	-425.63	319.89			No Offset Errors
2500.00	2407.39	2472.10	2398.82	0.00	0.00	238.97	-91.74	-461.82	343.23			No Offset Errors
2600.00	2499.82	2569.18	2488.63	0.00	0.00	239.83	-98.70	-498.01	366.65			No Offset Errors
2700.00	2592.26	2666.26	2578.44	0.00	0.00	240.60	-105.65	-534.20	390.15			No Offset Errors
2800.00	2684.70	2763.34	2668.25	0.00	0.00	241.27	-112.61	-570.39	413.70			No Offset Errors
2900.00	2777.13	2860.41	2758.06	0.00	0.00	241.88	-119.57	-606.59	437.30			No Offset Errors
3000.00	2869.57	2957.49	2847.87	0.00	0.00	242.42	-126.52	-642.78	460.94			No Offset Errors
3100.00	2962.01	3054.57	2937.68	0.00	0.00	242.90	-133.48	-678.97	484.62			No Offset Errors

Allis-Chalmers Energy, Inc.

Anticollision Report

Company: ANADARKO PETROLEUM	Date: 03/11/2011	Time: 15:23:06	Page: 2
Field: Weld County, CO			
Reference Site: REI 8-9 Pad	Co-ordinate(NE) Reference: Well: 21-9, Grid North		
Reference Well: 21-9	Vertical (TVD) Reference: 4816'GL+13'KB 4829.0		
Reference Wellpath: Original Hole	Db: Sybase		

Site: REI 8-9 Pad
Well: 39-9
Wellpath: Original Hole V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East				
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
0.00	0.00	0.00	0.00	0.00	0.00	89.57	0.24	32.01	32.01			No Data
100.00	100.00	100.00	100.00	0.00	0.00	89.57	0.24	32.01	32.01			No Offset Errors
200.00	200.00	200.00	200.00	0.00	0.00	89.57	0.24	32.01	32.01			No Offset Errors
300.00	300.00	299.85	299.85	0.00	0.00	154.49	-0.18	32.12	32.51			No Offset Errors
400.00	399.93	399.26	399.19	0.00	0.00	161.99	-3.52	32.99	36.89			No Offset Errors
500.00	499.68	497.77	497.46	0.00	0.00	172.33	-10.12	34.70	46.97			No Offset Errors
600.00	599.18	596.30	595.61	0.00	0.00	180.28	-18.44	36.85	62.23			No Offset Errors
700.00	698.63	694.78	693.72	0.00	0.00	185.04	-26.74	39.01	78.63			No Offset Errors
800.00	798.08	793.26	791.82	0.00	0.00	188.14	-35.05	41.16	95.37			No Offset Errors
900.00	897.49	890.47	888.64	0.00	0.00	190.38	-43.51	43.36	112.91			No Offset Errors
1000.00	996.52	984.54	982.06	0.00	0.00	192.47	-54.17	46.12	135.60			No Offset Errors
1100.00	1095.01	1076.36	1072.85	0.00	0.00	194.37	-67.44	49.56	164.23			No Offset Errors
1200.00	1192.83	1165.48	1160.50	0.00	0.00	196.02	-83.00	53.60	198.65			No Offset Errors
1300.00	1289.87	1251.54	1244.63	0.00	0.00	197.42	-100.53	58.14	238.63			No Offset Errors
1400.00	1386.00	1334.22	1324.91	0.00	0.00	198.62	-119.66	63.11	283.94			No Offset Errors
1500.00	1481.12	1413.27	1401.10	0.00	0.00	199.67	-140.04	68.39	334.30			No Offset Errors
1600.00	1575.11	1488.49	1473.04	0.00	0.00	200.61	-161.32	73.91	389.44			No Offset Errors
1700.00	1667.89	1559.81	1540.69	0.00	0.00	201.34	-183.18	79.58	448.97			No Offset Errors

Site: REI 8-9 Pad
Well: 41-9
Wellpath: Original Hole V0 Plan: Plan #1 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East				
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
0.00	0.00	0.00	0.00	0.00	0.00	89.57	0.36	48.04	48.04			No Data
100.00	100.00	100.00	100.00	0.00	0.00	89.57	0.36	48.04	48.04			No Offset Errors
200.00	200.00	200.00	200.00	0.00	0.00	89.57	0.36	48.04	48.04			No Offset Errors
300.00	300.00	299.45	299.45	0.00	0.00	153.45	0.52	48.32	48.71			No Offset Errors
400.00	399.93	398.15	398.11	0.00	0.00	153.69	1.80	50.53	54.08			No Offset Errors
500.00	499.68	496.25	496.08	0.00	0.00	154.06	4.33	54.91	64.80			No Offset Errors
600.00	599.18	593.62	593.15	0.00	0.00	154.34	8.08	61.40	80.42			No Offset Errors
700.00	698.63	692.18	691.34	0.00	0.00	154.39	12.37	68.84	97.29			No Offset Errors
800.00	798.08	790.75	789.54	0.00	0.00	154.42	16.67	76.28	114.16			No Offset Errors
900.00	897.49	888.15	886.55	0.00	0.00	154.40	21.00	83.79	131.55			No Offset Errors
1000.00	996.52	982.73	980.56	0.00	0.00	154.35	26.16	92.73	153.32			No Offset Errors
1100.00	1095.01	1075.58	1072.58	0.00	0.00	154.31	32.36	103.46	180.19			No Offset Errors
1200.00	1192.83	1166.39	1162.25	0.00	0.00	154.25	39.50	115.83	212.02			No Offset Errors
1300.00	1289.87	1259.72	1254.13	0.00	0.00	154.09	48.31	129.70	247.97			No Offset Errors
1400.00	1386.00	1353.29	1346.05	0.00	0.00	153.71	59.37	143.25	286.44			No Offset Errors
1500.00	1481.12	1445.98	1436.86	0.00	0.00	153.17	72.54	156.27	327.34			No Offset Errors
1600.00	1575.11	1537.69	1526.44	0.00	0.00	152.52	87.73	168.76	370.65			No Offset Errors
1700.00	1667.89	1628.43	1614.74	0.00	0.00	151.93	104.86	180.71	416.24			No Offset Errors
1800.00	1760.33	1719.10	1702.60	0.00	0.00	151.50	124.06	192.24	462.18			No Offset Errors