



Ryan Energy Technologied Survey Report



Company: DEVON ENERGY CORPORATION				Date: 11/15/2006		Time: 10:24:54		Page: 1	
Field: San Juan County, NM				Co-ordinate(NE) Reference:		Site: NEBU 323N, True North			
Site: NEBU 323N				Vertical (TVD) Reference:		Site: 0.0			
Well: NEBU 323N				Section (VS) Reference:		Well: (0.00N,0.00E,114.95Azi)			
Wellpath: Original Hole				Survey Calculation Method:		Minimum Curvature		Db: Sybase	

Field: San Juan County, NM			
USA			
Map System: US State Plane Coordinate System 1983			
Geo Datum: GRS 1980			
Sys Datum: Mean Sea Level			
Map Zone:		New Mexico, Western Zone	
Coordinate System:		Site Centre	
Geomagnetic Model:		igrf2005	

30-046-33496
 Surface 1405/S 425/W
 INT B/L 682/S 184/W

Site: NEBU 323N			
Site Position: San Juan County, NM			
From: Local Only	Northing:	ft	Latitude:
Position Uncertainty: 0.00 ft	Easting:	ft	Longitude:
Ground Level: 0.00 ft			North Reference: True
			Grid Convergence: deg

Well: NEBU 323N				Slot Name:	
Well Position: +N/-S 0.00 ft	Northing:	ft	Latitude:	HOLD 0104 <i>deviation survey of B/L.</i>	
Well Position: +E/-W 0.00 ft	Easting:	ft	Longitude:		
Position Uncertainty: 0.00 ft					

Wellpath: Original Hole				Drilled From: Surface	
				Tie-on Depth: 0.00 ft	
Current Datum: Site	Height 0.00 ft	Above System Datum: Mean Sea Level			
Magnetic Data: 9/13/2006		Declination: 0.00 deg			
Field Strength: 0 nT		Mag Dip Angle: 0.00 deg			
Vertical Section: Depth From (TVD)	+N/-S	+E/-W	Direction		
ft	ft	ft	deg		
0.00	0.00	0.00	114.95		

Survey Program for Definitive Wellpath					
Date: 11/15/2006		Validated: No		Version: 0	
Actual From	To	Survey	Toolcode	Tool Name	
ft	ft				
303.00	3972.00	Survey #1 (303.00-3972.00)	MWD		
4406.00	8396.00	Survey #2 (4406.00-8396.00)	Project		

Survey										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
303.00	0.90	192.10	302.99	-2.33	-0.50	0.53	0.30	0.30	0.00	MWD
338.00	0.80	132.70	337.98	-2.76	-0.38	0.82	2.42	-0.29	-169.71	MWD
369.00	0.80	163.70	368.98	-3.12	-0.16	1.17	1.38	0.00	100.00	MWD
399.00	1.10	144.20	398.98	-3.55	0.07	1.56	1.46	1.00	-65.00	MWD
430.00	2.10	121.50	429.97	-4.09	0.73	2.39	3.76	3.23	-73.23	MWD
461.00	3.30	114.30	460.93	-4.75	2.03	3.84	4.02	3.87	-23.23	MWD
493.00	4.70	109.90	492.85	-5.58	4.10	6.07	4.48	4.37	-13.75	MWD
523.00	5.90	106.90	522.72	-6.44	6.73	8.82	4.10	4.00	-10.00	MWD
551.00	6.80	108.00	550.55	-7.37	9.68	11.89	3.24	3.21	3.93	MWD
580.00	7.60	108.40	579.32	-8.51	13.14	15.50	2.76	2.76	1.38	MWD
610.00	8.60	109.30	609.02	-9.88	17.13	19.70	3.36	3.33	3.00	MWD
642.00	10.00	109.80	640.60	-11.61	22.01	24.85	4.38	4.37	1.56	MWD
673.00	11.30	109.60	671.07	-13.54	27.40	30.56	4.20	4.19	-0.65	MWD
705.00	12.70	109.20	702.37	-15.75	33.68	37.18	4.38	4.37	-1.25	MWD
734.00	13.50	110.00	730.61	-17.96	39.87	43.72	2.83	2.76	2.76	MWD
764.00	14.40	110.80	759.73	-20.48	46.65	50.93	3.07	3.00	2.67	MWD
794.00	15.30	112.50	788.72	-23.32	53.79	58.61	3.33	3.00	5.67	MWD
823.00	16.40	113.40	816.62	-26.41	61.08	66.52	3.89	3.79	3.10	MWD
854.00	17.20	114.30	846.30	-30.03	69.28	75.48	2.71	2.58	2.90	MWD
885.00	18.20	115.30	875.83	-33.99	77.83	84.90	3.37	3.23	3.23	MWD
918.00	19.30	115.90	907.08	-38.57	87.40	95.51	3.38	3.33	1.82	MWD



Ryan Energy Technologies Survey Report



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Field: San Juan County, NM
Site: NEBU 323N
Well: NEBU 323N
Wellpath: Original Hole

Date: 11/15/2006 **Time:** 10:24:54 **Page:** 2
Co-ordinate(NE) Reference: Site: NEBU 323N, True North
Vertical (TVD) Reference: Site 0.0
Section (VS) Reference: Well (0.00N,0.00E,114.95Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

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
948.00	20.30	116.80	935.30	-43.08	96.50	105.67	3.48	3.33	3.00	MWD
979.00	21.20	116.50	964.29	-48.01	106.32	116.65	2.92	2.90	-0.97	MWD
1011.00	22.30	115.80	994.01	-53.23	116.96	128.50	3.53	3.44	-2.19	MWD
1042.00	23.40	114.70	1022.58	-58.37	127.85	140.54	3.81	3.55	-3.55	MWD
1074.00	24.30	114.30	1051.85	-63.73	139.62	153.48	2.86	2.81	-1.25	MWD
1105.00	25.30	114.50	1079.99	-69.10	151.47	166.48	3.24	3.23	0.65	MWD
1135.00	25.80	113.90	1107.06	-74.41	163.27	179.42	1.88	1.67	-2.00	MWD
1167.00	26.00	114.50	1135.84	-80.14	176.02	193.39	1.03	0.62	1.87	MWD
1198.00	26.90	114.70	1163.60	-85.88	188.57	207.20	2.92	2.90	0.65	MWD
1229.00	28.00	115.00	1191.11	-91.89	201.54	221.49	3.58	3.55	0.97	MWD
1261.00	28.70	115.30	1219.27	-98.35	215.29	236.69	2.23	2.19	0.94	MWD
1292.00	29.30	115.70	1246.38	-104.82	228.86	251.72	2.03	1.94	1.29	MWD
1323.00	30.00	115.10	1273.32	-111.40	242.71	267.05	2.45	2.26	-1.94	MWD
1355.00	30.80	115.40	1300.92	-118.30	257.36	283.24	2.54	2.50	0.94	MWD
1386.00	31.60	115.50	1327.44	-125.21	271.86	299.30	2.59	2.58	0.32	MWD
1417.00	32.40	115.40	1353.73	-132.26	286.69	315.73	2.59	2.58	-0.32	MWD
1447.00	33.20	115.10	1378.94	-139.20	301.39	331.98	2.72	2.67	-1.00	MWD
1479.00	34.60	114.90	1405.50	-146.74	317.56	349.83	4.39	4.37	-0.62	MWD
1511.00	35.80	115.20	1431.65	-154.55	334.27	368.27	3.79	3.75	0.94	MWD
1542.00	37.00	115.30	1456.60	-162.40	350.91	386.67	3.88	3.87	0.32	MWD
1572.00	37.80	114.90	1480.44	-170.12	367.41	404.89	2.79	2.67	-1.33	MWD
1603.00	38.80	114.30	1504.76	-178.12	384.88	424.10	3.44	3.23	-1.94	MWD
1696.00	41.40	114.20	1575.89	-202.72	439.50	483.99	2.80	2.80	-0.11	MWD
1791.00	41.40	114.20	1647.16	-228.48	496.80	546.81	0.00	0.00	0.00	MWD
1884.00	41.20	114.20	1717.02	-253.64	552.79	608.19	0.22	-0.22	0.00	MWD
1944.00	41.10	114.90	1762.20	-270.04	588.70	647.67	0.79	-0.17	1.17	MWD
2038.00	41.10	114.80	1833.04	-296.01	644.77	709.46	0.07	0.00	-0.11	MWD
2101.00	41.30	115.00	1880.44	-313.48	682.41	750.96	0.38	0.32	0.32	MWD
2195.00	41.30	116.10	1951.06	-340.24	738.38	812.99	0.77	0.00	1.17	MWD
2226.00	41.60	116.30	1974.30	-349.30	756.79	833.51	1.06	0.97	0.65	MWD
2258.00	41.30	116.70	1998.28	-358.75	775.75	854.68	1.25	-0.94	1.25	MWD
2289.00	40.40	117.10	2021.73	-367.92	793.83	874.95	3.02	-2.90	1.29	MWD
2321.00	40.20	117.40	2046.13	-377.40	812.23	895.63	0.87	-0.62	0.94	MWD
2352.00	39.50	117.10	2069.93	-386.49	829.89	915.48	2.34	-2.26	-0.97	MWD
2382.00	38.50	116.90	2093.25	-395.07	846.71	934.34	3.36	-3.33	-0.67	MWD
2412.00	38.60	116.50	2116.71	-403.47	863.42	953.03	0.90	0.33	-1.33	MWD
2443.00	38.30	116.40	2140.99	-412.05	880.68	972.30	0.99	-0.97	-0.32	MWD
2474.00	38.10	117.00	2165.35	-420.67	897.80	991.46	1.36	-0.65	1.94	MWD
2506.00	37.80	117.30	2190.58	-429.65	915.31	1011.13	1.10	-0.94	0.94	MWD
2538.00	37.00	117.80	2216.00	-438.63	932.54	1030.54	2.67	-2.50	1.56	MWD
2570.00	36.00	117.80	2241.73	-447.51	949.38	1049.55	3.12	-3.12	0.00	MWD
2600.00	35.70	118.10	2266.04	-455.75	964.90	1067.10	1.16	-1.00	1.00	MWD
2631.00	35.40	118.50	2291.27	-464.29	980.77	1085.09	1.22	-0.97	1.29	MWD
2662.00	35.40	117.30	2316.53	-472.69	996.64	1103.03	2.24	0.00	-3.87	MWD
2694.00	35.30	116.00	2342.64	-481.00	1013.19	1121.53	2.37	-0.31	-4.06	MWD
2728.00	35.60	113.80	2370.33	-489.30	1031.07	1141.25	3.86	0.88	-6.47	MWD
2757.00	35.40	112.00	2393.94	-495.85	1046.58	1158.08	3.67	-0.69	-6.21	MWD
2787.00	34.70	111.10	2418.50	-502.18	1062.61	1175.27	2.90	-2.33	-3.00	MWD
2818.00	34.60	112.60	2444.01	-508.74	1078.97	1192.87	2.77	-0.32	4.84	MWD
2850.00	34.60	110.60	2470.35	-515.43	1095.86	1211.01	3.55	0.00	-6.25	MWD
2881.00	33.90	110.90	2495.97	-521.61	1112.17	1228.41	2.32	-2.26	0.97	MWD
2911.00	33.80	111.50	2520.89	-527.65	1127.75	1245.09	1.16	-0.33	2.00	MWD
2942.00	33.30	112.70	2546.72	-534.10	1143.63	1262.20	2.68	-1.61	3.87	MWD



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Field: San Juan County, NM
Site: NEBU 323N
Well: NEBU 323N
Wellpath: Original Hole

Date: 11/15/2006 **Time:** 10:24:54 **Page:** 3
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Vertical (TVD) Reference: Site 0.0
Section (VS) Reference: Well (0.00N,0.00E,114.95Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

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
2973.00	32.70	113.30	2572.72	-540.69	1159.17	1279.07	2.20	-1.94	1.94	MWD
3004.00	32.10	114.20	2598.89	-547.38	1174.37	1295.68	2.48	-1.94	2.90	MWD
3036.00	31.40	114.70	2626.11	-554.35	1189.70	1312.51	2.34	-2.19	1.56	MWD
3069.00	30.10	115.00	2654.47	-561.44	1205.01	1329.39	3.97	-3.94	0.91	MWD
3101.00	28.70	114.90	2682.34	-568.07	1219.25	1345.09	4.38	-4.37	-0.31	MWD
3133.00	27.40	115.70	2710.58	-574.49	1232.86	1360.14	4.23	-4.06	2.50	MWD
3159.00	26.60	115.50	2733.75	-579.59	1243.50	1371.94	3.10	-3.08	-0.77	MWD
3189.00	25.50	116.40	2760.70	-585.36	1255.35	1385.12	3.90	-3.67	3.00	MWD
3220.00	25.10	117.20	2788.73	-591.33	1267.18	1398.36	1.70	-1.29	2.58	MWD
3252.00	24.70	117.60	2817.75	-597.53	1279.14	1411.82	1.36	-1.25	1.25	MWD
3283.00	23.50	117.10	2846.05	-603.35	1290.38	1424.46	3.93	-3.87	-1.61	MWD
3313.00	23.50	119.20	2873.56	-608.99	1300.93	1436.41	2.79	0.00	7.00	MWD
3343.00	23.50	119.00	2901.08	-614.81	1311.38	1448.34	0.27	0.00	-0.67	MWD
3374.00	22.60	118.60	2929.60	-620.66	1322.01	1460.45	2.95	-2.90	-1.29	MWD
3408.00	21.00	117.10	2961.17	-626.56	1333.17	1473.06	4.98	-4.71	-4.41	MWD
3442.00	19.30	114.80	2993.09	-631.69	1343.70	1484.76	5.52	-5.00	-6.76	MWD
3470.00	18.50	114.00	3019.58	-635.44	1351.96	1493.83	3.00	-2.86	-2.86	MWD
3499.00	17.70	112.80	3047.14	-639.02	1360.23	1502.84	3.04	-2.76	-4.14	MWD
3531.00	17.20	112.30	3077.67	-642.70	1369.09	1512.43	1.63	-1.56	-1.56	MWD
3594.00	15.90	111.50	3138.06	-649.40	1385.74	1530.35	2.09	-2.06	-1.27	MWD
3626.00	14.90	111.30	3168.91	-652.50	1393.65	1538.83	3.13	-3.12	-0.62	MWD
3657.00	14.50	111.70	3198.89	-655.38	1400.97	1546.68	1.33	-1.29	1.29	MWD
3688.00	14.60	111.00	3228.90	-658.22	1408.22	1554.45	0.65	0.32	-2.26	MWD
3719.00	14.50	110.60	3258.91	-660.98	1415.50	1562.22	0.46	-0.32	-1.29	MWD
3751.00	14.10	110.90	3289.91	-663.78	1422.89	1570.10	1.27	-1.25	0.94	MWD
3782.00	13.20	112.90	3320.04	-666.51	1429.68	1577.41	3.28	-2.90	6.45	MWD
3813.00	13.00	112.60	3350.23	-669.22	1436.16	1584.43	0.68	-0.65	-0.97	MWD
3844.00	12.80	112.40	3380.45	-671.87	1442.55	1591.34	0.66	-0.65	-0.65	MWD
3875.00	12.70	112.40	3410.68	-674.48	1448.88	1598.18	0.32	-0.32	0.00	MWD
3906.00	11.60	113.20	3440.99	-677.00	1454.89	1604.70	3.59	-3.55	2.58	MWD
3940.00	10.20	114.00	3474.38	-679.58	1460.79	1611.12	4.14	-4.12	2.35	MWD
3972.00	8.70	115.70	3505.94	-681.78	1465.56	1616.38	4.77	-4.69	5.31	MWD
4406.00	0.00	115.70	3938.27	-696.04	1495.19	1649.26	2.00	-2.00	0.00	
8396.00	0.00	115.70	7928.27	-696.04	1495.19	1649.26	0.00	0.00	0.00	

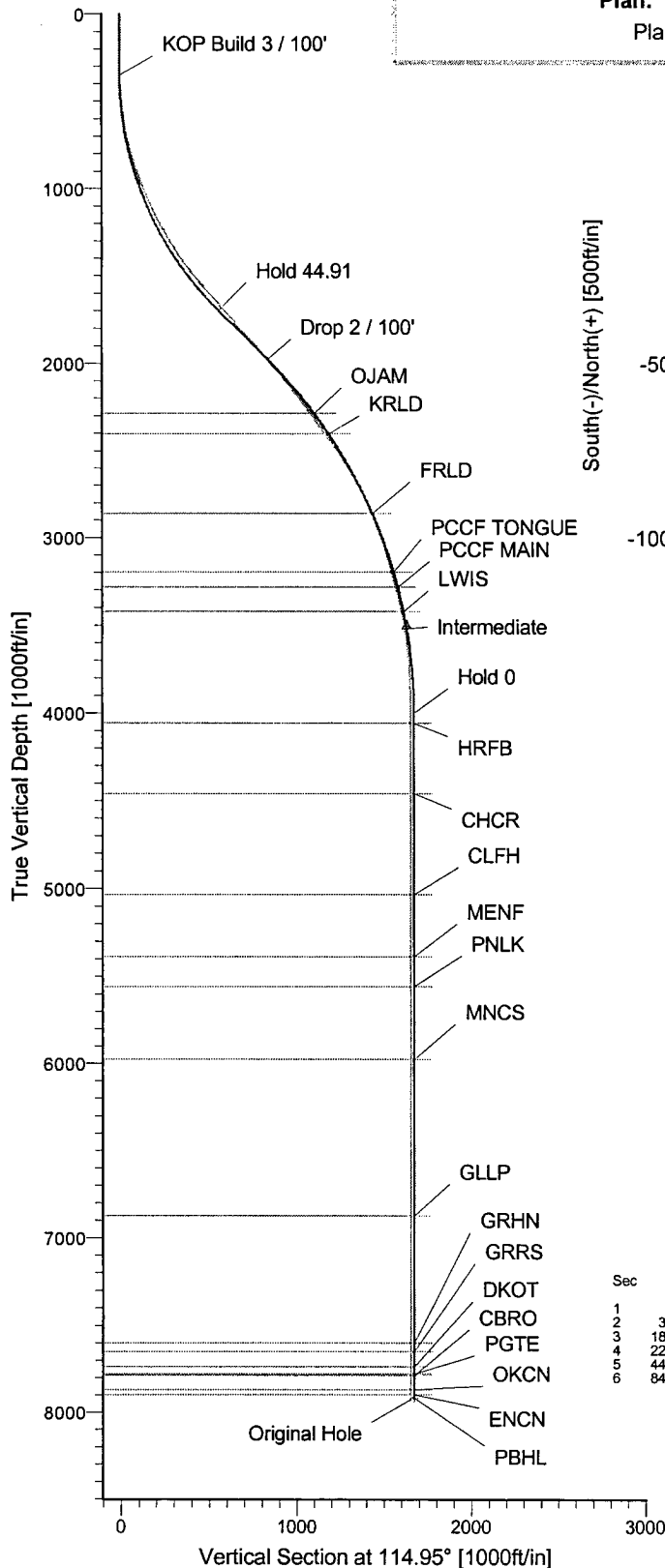


DEVON ENERGY CORPORATION

Field: San Juan County, NM
Site: NEBU 323N
Well: NEBU 323N
Wellpath: Original Hole
Plan: Plan #1

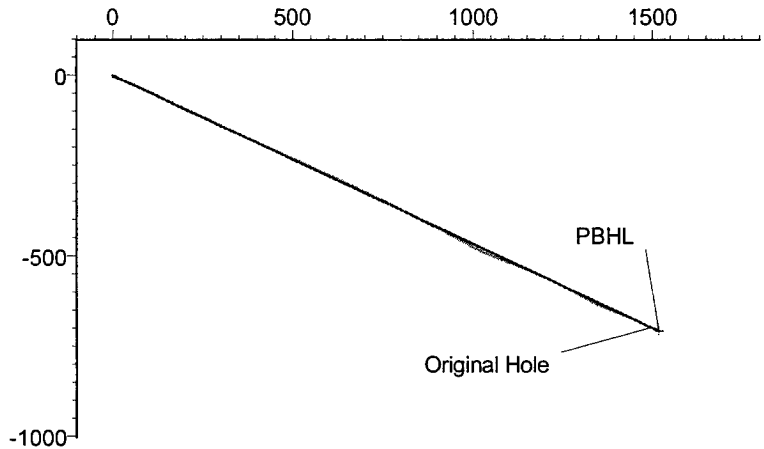


Plan Vs Actual



South(-)/North(+) [500ft/in]

West(-)/East(+) [500ft/in]



FIELD DETAILS

San Juan County, NM
USA

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980

Zone: New Mexico, Western Zone
Magnetic Model: igr2005

System Datum: Mean Sea Level
Local North: True North

WELLPATH DETAILS

Original Hole

Rig:			
Ref. Datum:	Site	0.00ft	
V. Section Angle	Origin +N-S	Origin +E-W	Starting From TVD
114.95°	0.00	0.00	0.00

TARGET DETAILS

Name	TVD	+N-S	+E-W	Shape
PBHL	7916.00	-705.01	1515.52	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	0.00	0.00	114.95	0.00	0.00	0.00	0.00	0.00	0.00	
2	350.00	0.00	114.95	350.00	0.00	0.00	0.00	0.00	0.00	
3	1847.00	44.91	114.95	1898.35	-235.05	505.27	3.00	114.95	557.27	
4	2241.22	44.91	114.95	1977.54	-352.44	757.62	0.00	0.00	835.58	
5	4486.72	0.00	114.95	4000.07	-705.01	1515.52	2.00	180.00	1671.48	
6	8402.65	0.00	114.95	7916.00	-705.01	1515.52	0.00	0.00	1671.48	PBHL