

Scientific Drilling

DEVON ENERGY

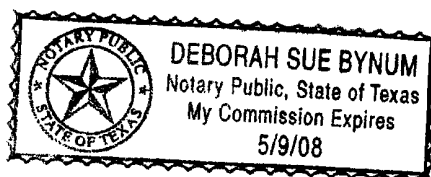
Field: Los Medanos
Site: Eddy County, NM
Well: North Pure Gold 4 Fed #2H
Wellpath: VH - Job #32K0806631
Survey: 08/04/06

This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*R. Wharton*..... Company Representative

Notorized this date 17th of September, 2006.

Deborah Sue Bynum
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: DEVON ENERGY	Date: 09/06/2006	Time: 13:42:11	Page: 1
Field: Los Medanos	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: North Pure Gold 4 Fed #2H	Section (VS) Reference:	Well (0.00N,0.00E,355.67Azi)	
Wellpath: VH - Job #32K0806631	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 08/04/06	Start Date: 08/04/2006
Company: Scientific Drilling Internatio	Engineer: Gonzales/Rehders/Rando
Tool: Keeper;Keeper GYRO	Tied-to: From Surface

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	359.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.17	169.97	100.00	-0.15	-0.15	0.03	0.17	0.15	169.97
200.00	0.18	147.30	200.00	-0.43	-0.42	0.14	0.07	0.45	162.16
300.00	0.38	186.50	300.00	-0.90	-0.89	0.18	0.27	0.90	168.28
400.00	0.21	213.30	400.00	-1.37	-1.37	0.05	0.21	1.37	178.09
500.00	0.27	248.66	500.00	-1.58	-1.61	-0.27	0.16	1.63	189.69
600.00	0.20	255.54	600.00	-1.68	-1.74	-0.66	0.08	1.86	200.89
700.00	0.13	226.17	699.99	-1.78	-1.86	-0.91	0.11	2.07	206.17
800.00	0.22	267.95	799.99	-1.85	-1.94	-1.19	0.15	2.28	211.41
900.00	0.17	233.18	899.99	-1.92	-2.04	-1.50	0.13	2.53	216.29
1000.00	0.27	248.54	999.99	-2.07	-2.22	-1.84	0.12	2.88	219.65
1100.00	0.22	238.54	1099.99	-2.23	-2.40	-2.22	0.07	3.27	222.74
1200.00	0.10	210.72	1199.99	-2.39	-2.58	-2.43	0.14	3.54	223.29
1300.00	0.17	315.98	1299.99	-2.34	-2.55	-2.58	0.22	3.62	225.33
1400.00	0.24	269.26	1399.99	-2.22	-2.44	-2.89	0.17	3.78	229.79
1500.00	0.03	152.75	1499.99	-2.23	-2.47	-3.09	0.25	3.95	231.35
1600.00	0.22	31.81	1599.99	-2.10	-2.33	-2.97	0.24	3.77	231.93
1700.00	0.17	267.10	1699.99	-1.94	-2.17	-3.02	0.35	3.72	234.27
1800.00	0.04	236.10	1799.99	-1.95	-2.20	-3.20	0.14	3.88	235.47
1900.00	0.03	189.09	1899.99	-1.99	-2.24	-3.23	0.03	3.93	235.20
2000.00	0.15	93.04	1999.99	-2.04	-2.28	-3.10	0.16	3.85	233.73
2100.00	0.22	73.06	2099.99	-2.01	-2.23	-2.79	0.09	3.57	231.37
2200.00	0.16	46.73	2199.99	-1.88	-2.08	-2.50	0.10	3.25	230.32
2300.00	0.22	54.23	2299.99	-1.69	-1.87	-2.25	0.06	2.92	230.24
2400.00	0.28	71.16	2399.99	-1.53	-1.68	-1.86	0.09	2.50	227.93
2500.00	0.37	53.93	2499.99	-1.30	-1.41	-1.37	0.13	1.96	224.13
2600.00	0.31	66.03	2599.98	-1.04	-1.11	-0.86	0.09	1.40	217.75
2700.00	0.55	42.25	2699.98	-0.62	-0.64	-0.29	0.29	0.70	204.13
2800.00	0.47	73.67	2799.98	-0.20	-0.17	0.43	0.29	0.46	111.93
2900.00	0.63	53.96	2899.97	0.17	0.27	1.27	0.25	1.29	78.12
3000.00	0.51	13.88	2999.97	0.88	1.02	1.82	0.41	2.09	60.66
3100.00	0.46	9.26	3099.96	1.69	1.85	1.99	0.06	2.72	47.07
3200.00	0.62	329.87	3199.96	2.57	2.71	1.78	0.39	3.25	33.29
3300.00	0.43	327.52	3299.96	3.39	3.50	1.31	0.19	3.74	20.51
3400.00	0.22	8.62	3399.95	3.91	4.01	1.14	0.30	4.16	15.84
3500.00	0.34	48.62	3499.95	4.27	4.39	1.39	0.22	4.61	17.54
3600.00	0.28	69.80	3599.95	4.52	4.67	1.84	0.13	5.02	21.49
3700.00	0.37	118.88	3699.95	4.41	4.60	2.35	0.28	5.17	27.08
3800.00	0.71	126.83	3799.95	3.82	4.07	3.13	0.35	5.14	37.55
3900.00	0.79	116.78	3899.94	3.06	3.39	4.24	0.15	5.43	51.36
4000.00	0.45	132.88	3999.93	2.42	2.81	5.14	0.38	5.86	61.33
4075.00	1.05	128.77	4074.92	1.73	2.18	5.90	0.80	6.29	69.69



Actual Wellpath Report

Actual Wellpath

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	SHL
Area	Eddy County, NM	Well	North Pure Gold 4 Federal #2H
Field	Sand Dunes West Field	Wellbore	Actual Wellbore Survey
Facility	North Pure Gold 4 Federal		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect™ 1.2
North Reference	Grid	User	Gomeoscr
Scale	0.999942	Report Generated	08/29/06 at 14:14:05
Wellbore last revised	08/04/06	Database/Source file	WellArchitectDB/Actua

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
Slot Location	0.00	0.00	668566.00	481656.00	32 19 22.831N	103 47 15.521W
Facility Reference Pt			668566.00	481656.00	32 19 22.831N	103 47 15.521W
Field Reference Pt			668566.00	481656.00	32 19 22.831N	103 47 15.521W

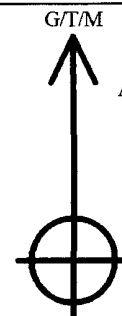
WELLPATH DATUM

Calculation method	Minimum curvature	Rig on SHL (RT) to Facility Vertical Datum	0.00 feet
Horizontal Reference Pt	Slot	Rig on SHL (RT) to Mean Sea Level	0.00 feet
Vertical Reference Pt	Rig on SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00 feet
MD Reference Pt	Rig on SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	355.67°



Scientific
Drilling

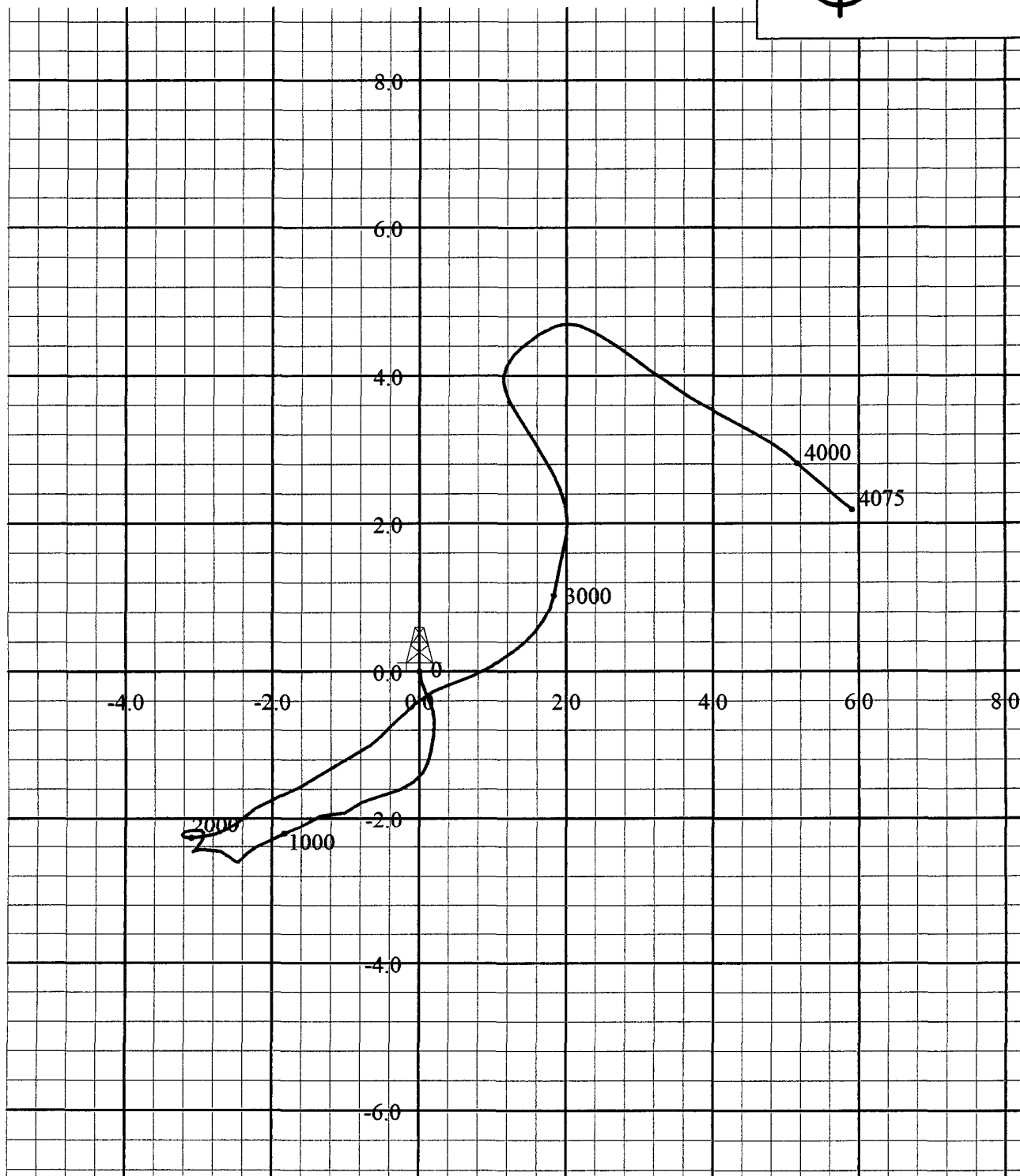
Field: Los Medanos
Site: Eddy County, NM
Well: North Pure Gold 4 Fed #2H
Wellpath: VH - Job #32K0806631
Survey: 08/04/06



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: . 0nT
Dip Angle: 0.00°
Date: 09/06/2006
Model: igrf2000

South(-)/North(+) [2ft/in]



West(-)/East(+) [2ft/in]



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REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	SHL
Area	Eddy County, NM	Well	North Pure Gold 4 Federal #2H
Field	Sand Dunes West Field	Wellbore	Actual Wellbore Survey
Facility	North Pure Gold 4 Federal		

WELLPATH DATA (176 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [%/100ft]
0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00
100.00	0.170	169.970	100.00	-0.15	-0.15	0.03	0.17
200.00	0.180	147.300	200.00	-0.43	-0.42	0.14	0.07
300.00	0.380	186.500	300.00	-0.90	-0.89	0.18	0.27
500.00	0.270	248.660	500.00	-1.58	-1.61	-0.27	0.16
600.00	0.200	255.540	600.00	-1.68	-1.74	-0.66	0.08
700.00	0.130	226.170	699.99	-1.78	-1.86	-0.91	0.11
800.00	0.220	267.950	799.99	-1.85	-1.94	-1.19	0.15
1000.00	0.270	248.540	999.99	-2.07	-2.22	-1.84	0.12
1100.00	0.220	238.540	1099.99	-2.23	-2.40	-2.22	0.07
1200.00	0.100	210.720	1199.99	-2.39	-2.58	-2.43	0.14
1300.00	0.170	315.980	1299.99	-2.34	-2.55	-2.58	0.22
1500.00	0.030	152.750	1499.99	-2.23	-2.47	-3.09	0.25
1600.00	0.220	31.810	1599.99	-2.10	-2.33	-2.97	0.24
1700.00	0.170	267.100	1699.99	-1.94	-2.17	-3.02	0.35
1800.00	0.040	236.100	1799.99	-1.95	-2.20	-3.20	0.14
2000.00	0.150	93.040	1999.99	-2.04	-2.28	-3.10	0.16
2100.00	0.220	73.060	2099.99	-2.01	-2.23	-2.79	0.09
2200.00	0.160	46.730	2199.99	-1.88	-2.08	-2.50	0.10
2300.00	0.220	54.230	2299.99	-1.69	-1.87	-2.25	0.06
2500.00	0.370	53.930	2499.99	-1.30	-1.41	-1.37	0.13
2600.00	0.310	66.030	2599.98	-1.04	-1.11	-0.86	0.09
2700.00	0.550	42.250	2699.98	-0.62	-0.64	-0.29	0.29
2800.00	0.470	73.670	2799.98	-0.20	-0.17	0.43	0.29
3000.00	0.510	13.880	2999.97	0.88	1.02	1.82	0.41
3100.00	0.460	9.260	3099.96	1.69	1.85	1.99	0.06
3200.00	0.620	329.870	3199.96	2.57	2.71	1.78	0.39
3300.00	0.430	327.520	3299.96	3.39	3.50	1.31	0.19
3500.00	0.340	48.620	3499.95	4.27	4.39	1.39	0.22
3600.00	0.280	69.800	3599.95	4.52	4.67	1.84	0.13
3700.00	0.370	118.880	3699.95	4.41	4.60	2.35	0.28
3800.00	0.710	126.830	3799.95	3.82	4.07	3.13	0.35



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REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	SHL
Area	Eddy County, NM	Well	North Pure Gold 4 Federal #2H
Field	Sand Dunes West Field	Wellbore	Actual Wellbore Survey
Facility	North Pure Gold 4 Federal		

WELLPATH DATA (176 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [%/100ft]
4000.00	0.450	132.880	3999.93	2.42	2.81	5.14	0.38
4075.00	1.050	128.770	4074.92	1.73	2.18	5.90	0.80
4118.00	0.880	123.400	4117.92	1.26	1.75	6.48	0.45
4213.00	0.970	133.300	4212.91	0.22	0.80	7.67	0.19
4403.00	0.620	118.200	4402.89	-1.61	-0.88	9.68	0.26
4496.00	0.620	128.000	4495.88	-2.22	-1.43	10.52	0.11
4590.00	0.530	115.400	4589.88	-2.78	-1.93	11.31	0.16
4683.00	0.620	158.900	4682.87	-3.47	-2.58	11.88	0.47
4872.00	0.440	188.800	4871.87	-4.87	-3.96	12.20	0.22
4967.00	0.350	171.900	4966.87	-5.52	-4.61	12.18	0.15
5060.00	0.700	175.500	5059.86	-6.37	-5.46	12.27	0.38
5154.00	0.700	162.500	5153.85	-7.50	-6.58	12.49	0.17
5339.00	0.880	163.200	5338.84	-9.87	-8.90	13.10	0.21
5432.00	0.790	164.200	5431.83	-11.19	-10.20	13.48	0.10
5527.00	0.790	155.100	5526.82	-12.45	-11.43	13.93	0.13
5621.00	0.700	148.100	5620.81	-13.56	-12.50	14.51	0.14
5809.00	0.700	162.800	5808.80	-15.61	-14.49	15.34	0.09
5901.00	0.700	163.200	5900.79	-16.70	-15.57	15.67	0.01
5994.00	0.700	175.100	5993.79	-17.83	-16.68	15.88	0.16
6087.00	0.620	168.800	6086.78	-18.89	-17.74	16.03	0.12
6275.00	1.000	340.000	6274.77	-18.28	-17.17	15.34	0.81
6368.00	1.140	345.300	6367.76	-16.59	-15.52	14.82	0.18
6462.00	1.140	342.500	6461.74	-14.76	-13.72	14.31	0.06
6554.00	1.140	330.800	6553.72	-13.04	-12.05	13.58	0.25
6742.00	1.050	335.820	6741.68	-9.68	-8.81	11.88	0.13
6838.00	1.230	336.170	6837.66	-7.88	-7.06	11.10	0.19
6931.00	1.050	340.390	6930.65	-6.11	-5.34	10.41	0.21
7025.00	0.970	333.000	7024.63	-4.55	-3.82	9.76	0.16
7214.00	0.790	335.100	7213.61	-2.17	-1.53	8.53	0.12
7307.00	0.790	330.190	7306.60	-0.99	-0.39	7.94	0.07
7403.00	0.790	333.360	7402.59	0.22	0.77	7.32	0.05
7448.00	0.900	348.100	7447.59	0.86	1.40	7.10	0.54



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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	SHL
Area	Eddy County, NM	Well	North Pure Gold 4 Federal #2H
Field	Sand Dunes West Field	Wellbore	Actual Wellbore Survey
Facility	North Pure Gold 4 Federal		

WELLPATH DATA (176 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
7512.00	6.900	358.000	7511.42	5.03	5.57	6.94	10.31
7543.00	10.600	356.200	7542.06	9.75	10.28	6.68	11.97
7573.00	14.900	354.800	7571.31	16.37	16.88	6.15	14.37
7605.00	19.500	353.700	7601.87	25.82	26.29	5.19	14.41
7673.00	28.900	352.300	7663.77	53.75	54.05	1.84	13.31
7703.00	32.900	353.000	7689.51	69.13	69.32	-0.13	13.39
7734.00	35.800	354.400	7715.10	86.61	86.71	-2.04	9.70
7766.00	38.400	354.800	7740.62	105.91	105.92	-3.85	8.16
7829.00	46.200	356.200	7787.20	148.26	148.13	-7.26	12.69
7861.00	50.400	357.600	7808.48	172.14	171.99	-8.55	13.52
7891.00	54.100	359.400	7826.85	195.83	195.69	-9.16	13.21
7922.00	57.800	1.100	7844.20	221.42	221.37	-9.04	12.77
7985.00	65.200	3.600	7874.31	276.32	276.61	-6.67	12.57
8017.00	68.100	3.600	7886.99	305.42	305.92	-4.82	9.06
8049.00	71.000	2.500	7898.17	335.15	335.86	-3.23	9.62
8080.00	74.500	1.800	7907.36	364.56	365.44	-2.12	11.49
8142.00	78.800	0.100	7921.65	424.61	425.75	-1.05	7.47
8173.00	80.900	358.000	7927.11	455.07	456.25	-1.56	9.51
8204.00	81.100	356.600	7931.96	485.68	486.84	-3.00	4.51
8236.00	81.600	356.200	7936.78	517.31	518.41	-4.98	1.99
8312.00	90.000	355.500	7943.14	592.97	593.87	-10.48	13.72
8344.00	90.900	355.500	7942.89	624.97	625.77	-12.99	2.81
8376.00	91.100	355.600	7942.33	656.96	657.67	-15.47	0.70
8408.00	88.700	355.200	7942.39	688.96	689.56	-18.04	7.60
8471.00	87.900	355.500	7944.53	751.92	752.34	-22.84	1.29
8503.00	88.100	355.500	7945.65	783.90	784.22	-25.35	0.62
8534.00	88.300	355.500	7946.62	814.89	815.11	-27.78	0.65
8563.00	87.800	354.800	7947.61	843.87	843.99	-30.23	2.97
8690.00	88.800	353.400	7951.71	970.72	970.17	-44.04	1.27
8754.00	90.100	352.300	7952.33	1034.64	1033.66	-52.01	2.66
8817.00	90.900	352.700	7951.78	1097.54	1096.12	-60.23	1.42
8879.00	90.900	352.700	7950.81	1159.45	1157.61	-68.11	0.00



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Field	Sand Dunes West Field	Wellbore	Actual Wellbore Survey
Facility	North Pure Gold 4 Federal		

WELLPATH DATA (176 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
9006.00	91.400	350.100	7948.42	1286.06	1283.13	-87.19	2.01
9070.00	90.300	350.900	7947.48	1349.79	1346.25	-97.75	2.13
9133.00	89.500	350.900	7947.59	1412.57	1408.45	-107.71	1.27
9197.00	90.400	351.300	7947.64	1476.36	1471.68	-117.62	1.54
9324.00	89.100	353.400	7948.25	1603.11	1597.49	-134.91	2.42
9387.00	88.400	353.800	7949.62	1666.06	1660.08	-141.94	1.28
9450.00	88.700	353.800	7951.21	1729.00	1722.69	-148.74	0.48
9514.00	89.600	354.100	7952.16	1792.97	1786.33	-155.48	1.48
9641.00	89.700	354.100	7952.11	1919.93	1912.70	-168.10	1.26
9703.00	88.800	354.800	7952.92	1981.91	1974.40	-174.09	1.84
9767.00	91.500	355.800	7952.75	2045.90	2038.18	-179.33	4.50
9830.00	89.100	355.100	7952.42	2108.89	2100.97	-184.33	3.97
9956.00	88.900	359.000	7954.40	2234.83	2226.73	-191.42	4.00
10019.00	91.100	1.100	7954.40	2297.64	2289.73	-191.36	4.83
10083.00	90.200	1.500	7953.67	2361.33	2353.71	-189.91	1.54
10147.00	90.000	2.500	7953.56	2424.93	2417.67	-187.68	1.59
10274.00	90.000	0.780	7953.78	2551.30	2544.62	-184.65	0.59
10337.00	90.200	359.700	7953.67	2614.10	2607.62	-184.39	1.74
10400.00	91.200	0.780	7952.90	2676.90	2670.62	-184.12	2.34
10464.00	90.200	0.400	7952.12	2740.65	2734.61	-183.46	1.67
10590.00	89.200	359.000	7952.89	2866.36	2860.60	-184.45	0.90
10654.00	89.000	358.700	7953.90	2930.25	2924.57	-185.74	0.56
10717.00	89.600	358.300	7954.67	2993.17	2987.55	-187.39	1.14
10780.00	89.400	357.600	7955.22	3056.12	3050.50	-189.64	1.16
10907.00	87.500	355.900	7956.93	3183.07	3177.28	-196.66	4.27
10971.00	90.100	356.600	7958.27	3247.04	3241.13	-200.85	4.21
11034.00	88.900	355.900	7958.82	3310.04	3303.99	-204.97	2.21
11097.00	87.900	354.500	7960.58	3373.01	3366.74	-210.24	2.73
11224.00	88.500	352.700	7965.23	3499.82	3492.83	-224.60	1.81
11288.00	90.000	353.000	7966.07	3563.74	3556.33	-232.56	2.39
11351.00	89.300	350.900	7966.45	3626.60	3618.70	-241.38	3.51
11414.00	89.000	350.500	7967.39	3689.36	3680.87	-251.56	0.79



Actual Wellpath Report

Actual Wellpath

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	SHL
Area	Eddy County, NM	Well	North Pure Gold 4 Federal #2H
Field	Sand Dunes West Field	Wellbore	Actual Wellbore Survey
Facility	North Pure Gold 4 Federal		

WELLPATH DATA (176 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
11541.00	90.500	349.900	7966.68	3815.81	3806.08	-272.74	1.28
11605.00	88.500	348.500	7967.23	3879.40	3868.94	-284.73	3.81
11668.00	90.400	348.500	7967.84	3941.90	3930.67	-297.29	3.02
11731.00	91.600	348.800	7966.74	4004.41	3992.43	-309.68	1.96
11858.00	91.400	348.500	7964.74	4130.26	4116.64	-336.03	2.47
11921.00	89.800	347.400	7964.08	4192.68	4178.25	-349.18	3.08
11983.00	88.600	347.400	7964.95	4254.03	4238.75	-362.70	1.94
12046.00	91.500	348.800	7964.89	4316.47	4300.39	-375.69	5.11
12173.00	92.800	348.100	7961.74	4442.22	4424.46	-402.57	3.69
12236.00	92.900	347.400	7958.61	4504.54	4485.95	-415.92	1.12
12299.00	93.500	347.100	7955.09	4566.76	4547.30	-429.81	1.06
12362.00	92.900	347.000	7951.58	4628.96	4608.60	-443.90	0.97
12504.00	92.900	346.200	7944.39	4768.93	4746.46	-477.18	0.13

TARGETS

Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
PBHL		7935.00	4759.00	-360.00	668206.00	486414.99	32 20 09.943N	103 47 19.434W	point

WELLPATH COMPOSITION Ref Wellbore: Actual Wellbore Survey Ref Wellpath: Actual Wellpath

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	4075.00	Generic gyro - northseeking (Standard)	Gyro 0' - 4075' SDI	Actual Wellbore Survey
4075.00	12504.00	NaviTrak (Standard)	MWD	Actual Wellbore Survey

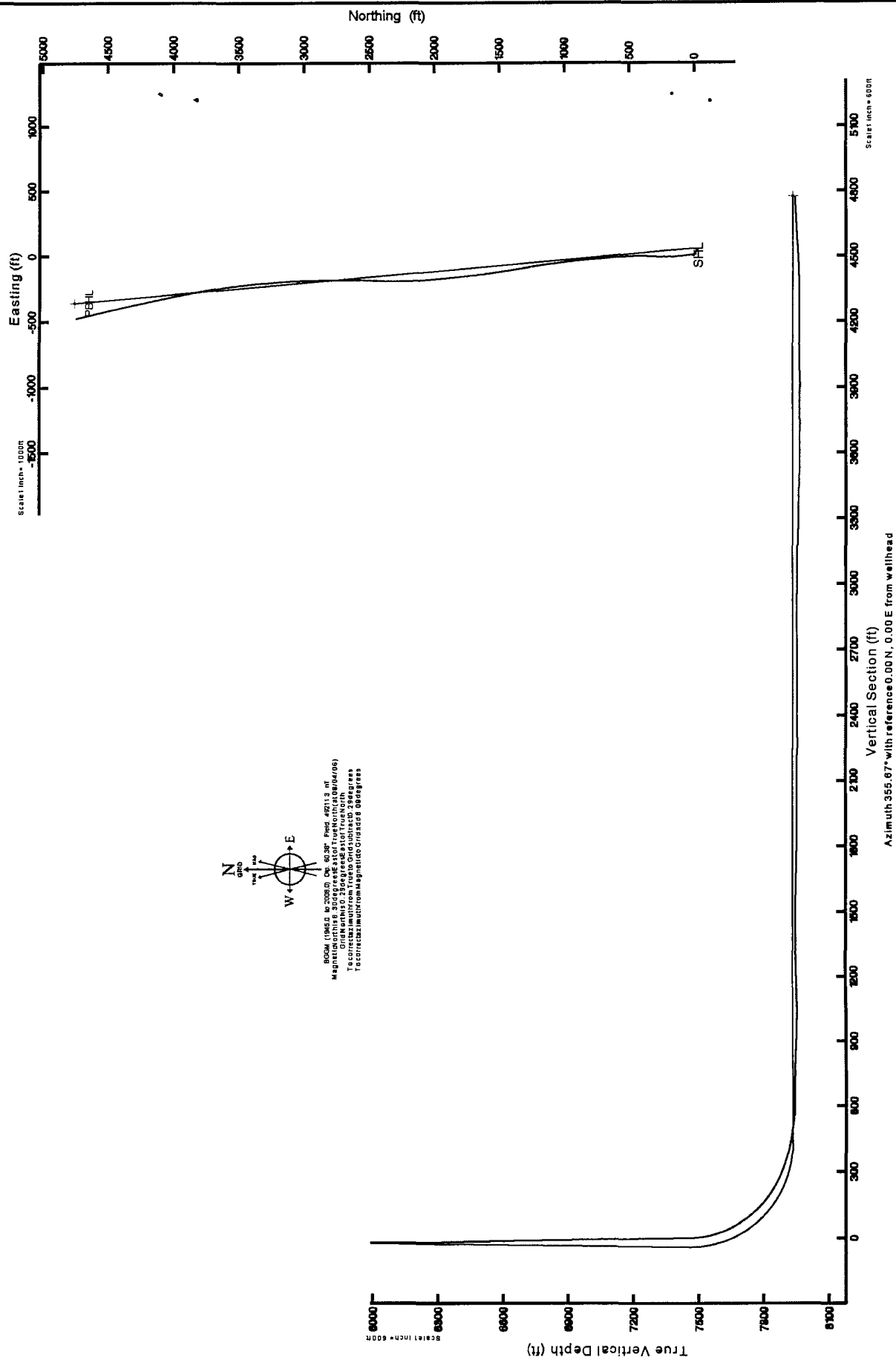
Devon Energy

Location:	Eddy County, NM	Slot	SHL
Field:	Sand Dunes West Field	Well:	North Pure Gold 4 Federal#2H
Facility:	North Pure Gold 4 Federal	Wellbore:	Actual Wellbore Survey



**BAKER
HUGHES**

INTEQ



ACTUAL WELLPATH REPORT (CSV version)

Prepared by Baker Hughes INTEQ
Software System: WellArchitect™ 1.2

REFERENCE WELLPATH IDENTIFICATION

Operator Devon Energy
Area Eddy County, NM
Field Sand Dunes West Field
Facility North Pure Gold 4 Federal
Slot SHL
Well North Pure Gold 4 Federal #2H
Wellbore Actual Wellbore Survey
Wellpath Actual Wellpath
Sidetrack (none)

REPORT SETUP INFORMATION

Projection : NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet
North Refe Grid
Scale 0.999942
Wellbore L 8/4/2006
Software S WellArchitect™
User Gomeoscr
Report Gen 08/29/06 at 14:14:42
DataBase/ WellArchitectDB/ev05.xml

WELLPAT	Local North [ft]	Local East [ft]	Grid East [ft]	Grid North [ft]	Latitude [°]	Longitude [°]
Slot Locati	0	0	668566	481656	32 19 22.8	103 47 15.521W
Facility Ref			668566	481656	32 19 22.8	103 47 15.521W
Field Refer			668566	481656	32 19 22.8	103 47 15.521W

WELLPATH DATUM

Calculation Minimum curvature
Horizontal Slot
Vertical Re Rig on SHL (RT)
MD Refere Rig on SHL (RT)
Field Vertic Mean Sea Level
Rig on SHL 0.00 feet
Rig on SHL 0.00 feet
Facility Ver 0.00 feet
Section Ori 0.00 feet
Section Ori 0.00 feet
Section Azi 355.67°

WELLPATH DATA Wellbore: Actual Wellbore Survey Wellpath: Actual Wellpath † = interpo								
MD feet	Inclination deg	Azimuth deg	TVD feet	Vert Sect feet	North feet	East feet	DLS deg/100ft	
0	0	0	0	0	0	0	0	0
100	0.17	169.97	100	-0.15	-0.15	0.03	0.17	
200	0.18	147.3	200	-0.43	-0.42	0.14	0.07	
300	0.38	186.5	300	-0.9	-0.89	0.18	0.27	

400	0.21	213.3	400	-1.37	-1.37	0.05	0.21
500	0.27	248.66	500	-1.58	-1.61	-0.27	0.16
600	0.2	255.54	600	-1.68	-1.74	-0.66	0.08
700	0.13	226.17	699.99	-1.78	-1.86	-0.91	0.11
800	0.22	267.95	799.99	-1.85	-1.94	-1.19	0.15
900	0.17	233.18	899.99	-1.92	-2.04	-1.5	0.13
1000	0.27	248.54	999.99	-2.07	-2.22	-1.84	0.12
1100	0.22	238.54	1099.99	-2.23	-2.4	-2.22	0.07
1200	0.1	210.72	1199.99	-2.39	-2.58	-2.43	0.14
1300	0.17	315.98	1299.99	-2.34	-2.55	-2.58	0.22
1400	0.24	269.26	1399.99	-2.22	-2.44	-2.89	0.17
1500	0.03	152.75	1499.99	-2.23	-2.47	-3.09	0.25
1600	0.22	31.81	1599.99	-2.1	-2.33	-2.97	0.24
1700	0.17	267.1	1699.99	-1.94	-2.17	-3.02	0.35
1800	0.04	236.1	1799.99	-1.95	-2.2	-3.2	0.14
1900	0.03	189.09	1899.99	-1.99	-2.24	-3.23	0.03
2000	0.15	93.04	1999.99	-2.04	-2.28	-3.1	0.16
2100	0.22	73.06	2099.99	-2.01	-2.23	-2.79	0.09
2200	0.16	46.73	2199.99	-1.88	-2.08	-2.5	0.1
2300	0.22	54.23	2299.99	-1.69	-1.87	-2.25	0.06
2400	0.28	71.16	2399.99	-1.53	-1.68	-1.86	0.09
2500	0.37	53.93	2499.99	-1.3	-1.41	-1.37	0.13
2600	0.31	66.03	2599.98	-1.04	-1.11	-0.86	0.09
2700	0.55	42.25	2699.98	-0.62	-0.64	-0.29	0.29
2800	0.47	73.67	2799.98	-0.2	-0.17	0.43	0.29
2900	0.63	53.96	2899.97	0.17	0.27	1.27	0.25
3000	0.51	13.88	2999.97	0.88	1.02	1.82	0.41
3100	0.46	9.26	3099.96	1.69	1.85	1.99	0.06
3200	0.62	329.87	3199.96	2.57	2.71	1.78	0.39
3300	0.43	327.52	3299.96	3.39	3.5	1.31	0.19
3400	0.22	8.62	3399.95	3.91	4.01	1.14	0.3
3500	0.34	48.62	3499.95	4.27	4.39	1.39	0.22
3600	0.28	69.8	3599.95	4.52	4.67	1.84	0.13
3700	0.37	118.88	3699.95	4.41	4.6	2.35	0.28
3800	0.71	126.83	3799.95	3.82	4.07	3.13	0.35
3900	0.79	116.78	3899.94	3.06	3.39	4.24	0.15
4000	0.45	132.88	3999.93	2.42	2.81	5.14	0.38
4075	1.05	128.77	4074.92	1.73	2.18	5.9	0.8
4118	0.88	123.4	4117.92	1.26	1.75	6.48	0.45
4213	0.97	133.3	4212.91	0.22	0.8	7.67	0.19
4308	0.79	132.6	4307.9	-0.85	-0.19	8.74	0.19
4403	0.62	118.2	4402.89	-1.61	-0.88	9.68	0.26
4496	0.62	128	4495.88	-2.22	-1.43	10.52	0.11
4590	0.53	115.4	4589.88	-2.78	-1.93	11.31	0.16
4683	0.62	158.9	4682.87	-3.47	-2.58	11.88	0.47
4778	0.35	160.7	4777.87	-4.24	-3.33	12.16	0.28
4872	0.44	188.8	4871.87	-4.87	-3.96	12.2	0.22
4967	0.35	171.9	4966.87	-5.52	-4.61	12.18	0.15
5060	0.7	175.5	5059.86	-6.37	-5.46	12.27	0.38
5154	0.7	162.5	5153.85	-7.5	-6.58	12.49	0.17
5246	0.7	168.1	5245.85	-8.61	-7.66	12.77	0.07
5339	0.88	163.2	5338.84	-9.87	-8.9	13.1	0.21

5432	0.79	164.2	5431.83	-11.19	-10.2	13.48	0.1
5527	0.79	155.1	5526.82	-12.45	-11.43	13.93	0.13
5621	0.7	148.1	5620.81	-13.56	-12.5	14.51	0.14
5714	0.62	159.3	5713.81	-14.55	-13.46	14.98	0.16
5809	0.7	162.8	5808.8	-15.61	-14.49	15.34	0.09
5901	0.7	163.2	5900.79	-16.7	-15.57	15.67	0.01
5994	0.7	175.1	5993.79	-17.83	-16.68	15.88	0.16
6087	0.62	168.8	6086.78	-18.89	-17.74	16.03	0.12
6180	0.35	298.9	6179.78	-19.24	-18.09	15.87	0.95
6275	1	340	6274.77	-18.28	-17.17	15.34	0.81
6368	1.14	345.3	6367.76	-16.59	-15.52	14.82	0.18
6462	1.14	342.5	6461.74	-14.76	-13.72	14.31	0.06
6554	1.14	330.8	6553.72	-13.04	-12.05	13.58	0.25
6649	1.14	331.25	6648.7	-11.32	-10.39	12.67	0.01
6742	1.05	335.82	6741.68	-9.68	-8.81	11.88	0.13
6838	1.23	336.17	6837.66	-7.88	-7.06	11.1	0.19
6931	1.05	340.39	6930.65	-6.11	-5.34	10.41	0.21
7025	0.97	333	7024.63	-4.55	-3.82	9.76	0.16
7119	0.7	329.14	7118.62	-3.3	-2.62	9.1	0.29
7214	0.79	335.1	7213.61	-2.17	-1.53	8.53	0.12
7307	0.79	330.19	7306.6	-0.99	-0.39	7.94	0.07
7403	0.79	333.36	7402.59	0.22	0.77	7.32	0.05
7448	0.9	348.1	7447.59	0.86	1.4	7.1	0.54
7480	3.6	358.7	7479.56	2.11	2.65	7.03	8.5
7512	6.9	358	7511.42	5.03	5.57	6.94	10.31
7543	10.6	356.2	7542.06	9.75	10.28	6.68	11.97
7573	14.9	354.8	7571.31	16.37	16.88	6.15	14.37
7605	19.5	353.7	7601.87	25.82	26.29	5.19	14.41
7636	24	353.4	7630.66	37.3	37.7	3.9	14.52
7673	28.9	352.3	7663.77	53.75	54.05	1.84	13.31
7703	32.9	353	7689.51	69.13	69.32	-0.13	13.39
7734	35.8	354.4	7715.1	86.61	86.71	-2.04	9.7
7766	38.4	354.8	7740.62	105.91	105.92	-3.85	8.16
7797	42.2	355.2	7764.26	125.96	125.89	-5.6	12.29
7829	46.2	356.2	7787.2	148.26	148.13	-7.26	12.69
7861	50.4	357.6	7808.48	172.14	171.99	-8.55	13.52
7891	54.1	359.4	7826.85	195.83	195.69	-9.16	13.21
7922	57.8	1.1	7844.2	221.42	221.37	-9.04	12.77
7953	61.3	2.5	7859.91	247.99	248.08	-8.19	11.94
7985	65.2	3.6	7874.31	276.32	276.61	-6.67	12.57
8017	68.1	3.6	7886.99	305.42	305.92	-4.82	9.06
8049	71	2.5	7898.17	335.15	335.86	-3.23	9.62
8080	74.5	1.8	7907.36	364.56	365.44	-2.12	11.49
8111	76.7	1.1	7915.07	394.43	395.46	-1.36	7.43
8142	78.8	0.1	7921.65	424.61	425.75	-1.05	7.47
8173	80.9	358	7927.11	455.07	456.25	-1.56	9.51
8204	81.1	356.6	7931.96	485.68	486.84	-3	4.51
8236	81.6	356.2	7936.78	517.31	518.41	-4.98	1.99
8266	83.7	355.9	7940.61	547.06	548.09	-7.03	7.07
8312	90	355.5	7943.14	592.97	593.87	-10.48	13.72
8344	90.9	355.5	7942.89	624.97	625.77	-12.99	2.81
8376	91.1	355.6	7942.33	656.96	657.67	-15.47	0.7

8408	88.7	355.2	7942.39	688.96	689.56	-18.04	7.6
8439	87.8	355.9	7943.33	719.94	720.45	-20.44	3.68
8471	87.9	355.5	7944.53	751.92	752.34	-22.84	1.29
8503	88.1	355.5	7945.65	783.9	784.22	-25.35	0.62
8534	88.3	355.5	7946.62	814.89	815.11	-27.78	0.65
8563	87.8	354.8	7947.61	843.87	843.99	-30.23	2.97
8627	88	353.4	7949.96	907.8	907.61	-36.8	2.21
8690	88.8	353.4	7951.71	970.72	970.17	-44.04	1.27
8754	90.1	352.3	7952.33	1034.64	1033.66	-52.01	2.66
8817	90.9	352.7	7951.78	1097.54	1096.12	-60.23	1.42
8879	90.9	352.7	7950.81	1159.45	1157.61	-68.11	0
8943	91	351.3	7949.74	1223.31	1220.98	-77.01	2.19
9006	91.4	350.1	7948.42	1286.06	1283.13	-87.19	2.01
9070	90.3	350.9	7947.48	1349.79	1346.25	-97.75	2.13
9133	89.5	350.9	7947.59	1412.57	1408.45	-107.71	1.27
9197	90.4	351.3	7947.64	1476.36	1471.68	-117.62	1.54
9261	89.7	352	7947.59	1540.2	1535	-126.91	1.55
9324	89.1	353.4	7948.25	1603.11	1597.49	-134.91	2.42
9387	88.4	353.8	7949.62	1666.06	1660.08	-141.94	1.28
9450	88.7	353.8	7951.21	1729	1722.69	-148.74	0.48
9514	89.6	354.1	7952.16	1792.97	1786.33	-155.48	1.48
9577	90.4	354.5	7952.16	1855.95	1849.02	-161.74	1.42
9641	89.7	354.1	7952.11	1919.93	1912.7	-168.1	1.26
9703	88.8	354.8	7952.92	1981.91	1974.4	-174.09	1.84
9767	91.5	355.8	7952.75	2045.9	2038.18	-179.33	4.5
9830	89.1	355.1	7952.42	2108.89	2100.97	-184.33	3.97
9893	89.2	356.5	7953.36	2171.88	2163.8	-188.95	2.23
9956	88.9	359	7954.4	2234.83	2226.73	-191.42	4
10019	91.1	1.1	7954.4	2297.64	2289.73	-191.36	4.83
10083	90.2	1.5	7953.67	2361.33	2353.71	-189.91	1.54
10147	90	2.5	7953.56	2424.93	2417.67	-187.68	1.59
10210	89.8	1.1	7953.67	2487.57	2480.63	-185.7	2.24
10274	90	0.78	7953.78	2551.3	2544.62	-184.65	0.59
10337	90.2	359.7	7953.67	2614.1	2607.62	-184.39	1.74
10400	91.2	0.78	7952.9	2676.9	2670.62	-184.12	2.34
10464	90.2	0.4	7952.12	2740.65	2734.61	-183.46	1.67
10527	89.6	359.4	7952.23	2803.48	2797.61	-183.57	1.85
10590	89.2	359	7952.89	2866.36	2860.6	-184.45	0.9
10654	89	358.7	7953.9	2930.25	2924.57	-185.74	0.56
10717	89.6	358.3	7954.67	2993.17	2987.55	-187.39	1.14
10780	89.4	357.6	7955.22	3056.12	3050.5	-189.64	1.16
10844	90	356.9	7955.55	3120.09	3114.43	-192.71	1.44
10907	87.5	355.9	7956.93	3183.07	3177.28	-196.66	4.27
10971	90.1	356.6	7958.27	3247.04	3241.13	-200.85	4.21
11034	88.9	355.9	7958.82	3310.04	3303.99	-204.97	2.21
11097	87.9	354.5	7960.58	3373.01	3366.74	-210.24	2.73
11161	87.6	353.4	7963.09	3436.93	3430.33	-216.98	1.78
11224	88.5	352.7	7965.23	3499.82	3492.83	-224.6	1.81
11288	90	353	7966.07	3563.74	3556.33	-232.56	2.39
11351	89.3	350.9	7966.45	3626.6	3618.7	-241.38	3.51
11414	89	350.5	7967.39	3689.36	3680.87	-251.56	0.79
11478	90.9	350.6	7967.45	3753.1	3744	-262.07	2.97

11541	90.5	349.9	7966.68	3815.81	3806.08	-272.74	1.28
11605	88.5	348.5	7967.23	3879.4	3868.94	-284.73	3.81
11668	90.4	348.5	7967.84	3941.9	3930.67	-297.29	3.02
11731	91.6	348.8	7966.74	4004.41	3992.43	-309.68	1.96
11795	90.3	347.4	7965.68	4067.84	4055.04	-322.88	2.98
11858	91.4	348.5	7964.74	4130.26	4116.64	-336.03	2.47
11921	89.8	347.4	7964.08	4192.68	4178.25	-349.18	3.08
11983	88.6	347.4	7964.95	4254.03	4238.75	-362.7	1.94
12046	91.5	348.8	7964.89	4316.47	4300.39	-375.69	5.11
12110	90.7	347.1	7963.67	4379.88	4362.96	-389.05	2.94
12173	92.8	348.1	7961.74	4442.22	4424.46	-402.57	3.69
12236	92.9	347.4	7958.61	4504.54	4485.95	-415.92	1.12
12299	93.5	347.1	7955.09	4566.76	4547.3	-429.81	1.06
12362	92.9	347	7951.58	4628.96	4608.6	-443.9	0.97
12425	92.9	346.3	7948.39	4691.1	4669.82	-458.43	1.11
12504	92.9	346.2	7944.39	4768.93	4746.46	-477.18	0.13

T A R G E T S

Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude
	feet	feet	feet	feet	us survey f	us survey f	DegMinSec	DegMinSec
PBHL		7935	4759	-360	668206	486415	32 20 09.9	103 47 19.

WELLPATH COMPOSITION Ref Wellbore: Actual Wellbore Survey Ref Wellpath: Actual Wellpath

Log Name/	Start MD	End MD	Pos Unc	Model
	feet	feet		
Gyro 0' - 4(	0	4075		Generic gyro - northseeking (Standard)
MWD	4075	12504		NaviTrak (Standard)