

DEVON ENERGY
Apache 13 Federal 8H

slot #1
DELAWARE
EDDY COUNTY, NM.

S U R V E Y L I S T I N G

by
Baker Hughes INTEQ

Your ref : Scientific Gyro
Our ref : svy2852
License :

Date printed : 11-Nov-2005
Date created : 2-Sep-2005
Last revised : 2-Sep-2005

Field is centred on n32 23 0.000,w103 49 0
Structure is centred on 656555.620,506571.200,999.00000,N

Slot location is n32 23 29.970,w103 49 34.110
Slot Grid coordinates are N 506571.200, E 656555.620
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - New Mexico East (3001), Spheroid: Clarke - 1866

Reference North is True North

30-C15-34221

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SURVEY LISTING Page 1
Your ref : Scientific Gyro
Last revised : 2-Sep-2005

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect	G R I D Easting	C O O R D S Northing
0.00	0.00	100.20	0.00	0.00N	0.00E	0.00	0.00	656555.62	506571.20
100.00	0.35	227.69	100.00	0.21S	0.23W	0.35	0.17	656555.40	506570.99
200.00	0.34	232.53	200.00	0.59S	0.69W	0.03	0.51	656554.94	506570.61
300.00	0.19	260.58	300.00	0.80S	1.09W	0.19	0.84	656554.54	506570.40
400.00	0.24	70.05	400.00	0.76S	1.05W	0.43	0.82	656554.57	506570.44
500.00	0.51	85.88	499.99	0.65S	0.41W	0.29	0.23	656555.21	506570.55
600.00	0.71	101.65	599.99	0.74S	0.64E	0.26	-0.81	656556.26	506570.46
700.00	0.90	111.79	699.98	1.16S	1.97E	0.24	-2.21	656557.60	506570.05
800.00	0.84	107.44	799.97	1.67S	3.40E	0.09	-3.72	656559.03	506569.54
900.00	0.88	106.91	899.96	2.12S	4.84E	0.04	-5.22	656560.47	506569.11
1000.00	0.88	107.86	999.94	2.57S	6.30E	0.01	-6.75	656561.93	506568.66
1100.00	0.87	108.49	1099.93	3.05S	7.75E	0.01	-8.28	656563.39	506568.19
1200.00	0.88	108.80	1199.92	3.54S	9.20E	0.01	-9.80	656564.84	506567.70
1300.00	0.89	106.99	1299.91	4.01S	10.67E	0.03	-11.34	656566.31	506567.24
1400.00	0.92	109.13	1399.90	4.50S	12.17E	0.05	-12.92	656567.81	506566.75
1500.00	0.99	106.60	1499.88	5.01S	13.76E	0.08	-14.59	656569.40	506566.25
1600.00	1.06	110.07	1599.87	5.58S	15.45E	0.09	-16.37	656571.10	506565.70
1700.00	1.13	106.84	1699.85	6.18S	17.27E	0.09	-18.28	656572.92	506565.10
1800.00	1.02	108.46	1799.83	6.75S	19.06E	0.11	-20.15	656574.71	506564.54
1900.00	1.23	113.52	1899.81	7.46S	20.88E	0.23	-22.10	656576.54	506563.84
2000.00	1.23	114.39	1999.79	8.33S	22.85E	0.02	-24.22	656578.50	506562.98
2100.00	1.18	112.49	2099.77	9.17S	24.77E	0.06	-26.30	656580.44	506562.15
2200.00	1.18	112.03	2199.74	9.95S	26.68E	0.01	-28.34	656582.35	506561.38
2300.00	1.12	114.77	2299.72	10.74S	28.52E	0.08	-30.33	656584.19	506560.59
2400.00	1.08	117.44	2399.71	11.59S	30.25E	0.07	-32.21	656585.92	506559.76
2500.00	1.10	115.18	2499.69	12.43S	31.95E	0.05	-34.07	656587.63	506558.92
2600.00	1.10	114.56	2599.67	13.24S	33.69E	0.01	-35.97	656589.37	506558.12
2700.00	1.00	117.92	2699.65	14.04S	35.34E	0.12	-37.76	656591.02	506557.32
2800.00	1.01	121.88	2799.64	14.92S	36.86E	0.07	-39.46	656592.54	506556.46
2900.00	1.01	120.40	2899.62	15.83S	38.36E	0.03	-41.15	656594.06	506555.55
3000.00	1.12	120.82	2999.60	16.78S	39.96E	0.11	-42.94	656595.66	506554.61
3100.00	1.22	120.24	3099.58	17.81S	41.72E	0.10	-44.90	656597.42	506553.59
3200.00	1.38	115.89	3199.56	18.88S	43.73E	0.19	-47.11	656599.43	506552.53
3300.00	1.58	118.11	3299.52	20.05S	46.03E	0.21	-49.64	656601.74	506551.37
3400.00	1.79	113.43	3399.48	21.32S	48.67E	0.25	-52.52	656604.39	506550.11
3500.00	1.90	109.01	3499.43	22.48S	51.67E	0.18	-55.72	656607.40	506548.96
3600.00	1.95	108.28	3599.37	23.56S	54.86E	0.06	-59.07	656610.59	506547.91
3700.00	1.61	110.56	3699.32	24.58S	57.79E	0.35	-62.17	656613.52	506546.89
3800.00	1.54	109.98	3799.29	25.54S	60.37E	0.07	-64.91	656616.10	506545.95
3808.00	1.56	104.28	3807.28	25.60S	60.57E	1.94	-65.12	656616.31	506545.89

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
 Coordinates from structure and TVD from rotary table.
 Bottom hole distance is 65.76 on azimuth 112.91 degrees from wellhead.
 Vertical section is from N 0.00 E 0.00 on azimuth 284.93 degrees.
 Grid is mercator - New Mexico East (3001).
 Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
 Presented by Baker Hughes INTEQ

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SURVEY LISTING Page 2
 Your ref : Scientific Gyro
 Last revised : 2-Sep-2005

Targets associated with this wellpath

Target name	Geographic Location	T.V.D.	Rectangular Coordinates		Revised
KOP		6302.50	0.00S	0.00W	2-Sep-2005
End of curve		6780.00	125.14N	469.34W	2-Sep-2005
TD		6730.00	880.00N	3300.00W	2-Sep-2005

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DELAWARE
EDDY COUNTY, NM.

S U R V E Y L I S T I N G

by
Baker Hughes INTEQ

Your ref : MWD
Our ref : svy2851
License :

Date printed : 11-Nov-2005
Date created : 2-Sep-2005
Last revised : 5-Oct-2005

Field is centred on n32 23 0.000,w103 49 0
Structure is centred on 656555.620,506571.200,999.00000,N

Slot location is n32 23 29.970,w103 49 34.110
Slot Grid coordinates are N 506571.200, E 656555.620
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - New Mexico East (3001), Spheroid: Clarke - 1866

Reference North is True North

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SURVEY LISTING Page 1
Your ref : MWD
Last revised : 5-Oct-2005

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect	G R I D C O O R D S Easting Northing	
0.00	0.00	100.20	0.00	0.00N	0.00E	0.00	0.00	656555.62	506571.20
100.00	0.35	227.69	100.00	0.21S	0.23W	0.35	0.17	656555.40	506570.99
200.00	0.34	232.53	200.00	0.59S	0.69W	0.03	0.51	656554.94	506570.61
300.00	0.19	260.58	300.00	0.80S	1.09W	0.19	0.84	656554.54	506570.40
400.00	0.24	70.05	400.00	0.76S	1.05W	0.43	0.82	656554.57	506570.44
500.00	0.51	85.88	499.99	0.65S	0.41W	0.29	0.23	656555.21	506570.55
600.00	0.71	101.65	599.99	0.74S	0.64E	0.26	-0.81	656556.26	506570.46
700.00	0.90	111.79	699.98	1.16S	1.97E	0.24	-2.21	656557.60	506570.05
800.00	0.84	107.44	799.97	1.67S	3.40E	0.09	-3.72	656559.03	506569.54
900.00	0.88	106.91	899.96	2.12S	4.84E	0.04	-5.22	656560.47	506569.11
1000.00	0.88	107.86	999.94	2.57S	6.30E	0.01	-6.75	656561.93	506568.66
1100.00	0.87	108.49	1099.93	3.05S	7.75E	0.01	-8.28	656563.39	506568.19
1200.00	0.88	108.80	1199.92	3.54S	9.20E	0.01	-9.80	656564.84	506567.70
1300.00	0.89	106.99	1299.91	4.01S	10.67E	0.03	-11.34	656566.31	506567.24
1400.00	0.92	109.13	1399.90	4.50S	12.17E	0.05	-12.92	656567.81	506566.75
1500.00	0.99	106.60	1499.88	5.01S	13.76E	0.08	-14.59	656569.40	506566.25
1600.00	1.06	110.07	1599.87	5.58S	15.45E	0.09	-16.37	656571.10	506565.70
1700.00	1.13	106.84	1699.85	6.18S	17.27E	0.09	-18.28	656572.92	506565.10
1800.00	1.02	108.46	1799.83	6.75S	19.06E	0.11	-20.15	656574.71	506564.54
1900.00	1.23	113.52	1899.81	7.46S	20.88E	0.23	-22.10	656576.54	506563.84
2000.00	1.23	114.39	1999.79	8.33S	22.85E	0.02	-24.22	656578.50	506562.98
2100.00	1.18	112.49	2099.77	9.17S	24.77E	0.06	-26.30	656580.44	506562.15
2200.00	1.18	112.03	2199.74	9.95S	26.68E	0.01	-28.34	656582.35	506561.38
2300.00	1.12	114.77	2299.72	10.74S	28.52E	0.08	-30.33	656584.19	506560.59
2400.00	1.08	117.44	2399.71	11.59S	30.25E	0.07	-32.21	656585.92	506559.76
2500.00	1.10	115.18	2499.69	12.43S	31.95E	0.05	-34.07	656587.63	506558.92
2600.00	1.10	114.56	2599.67	13.24S	33.69E	0.01	-35.97	656589.37	506558.12
2700.00	1.00	117.92	2699.65	14.04S	35.34E	0.12	-37.76	656591.02	506557.32
2800.00	1.01	121.88	2799.64	14.92S	36.86E	0.07	-39.46	656592.54	506556.46
2900.00	1.01	120.40	2899.62	15.83S	38.36E	0.03	-41.15	656594.06	506555.55

3000.00	1.12	120.82	2999.60	16.78S	39.96E	0.11	-42.94	656595.66	506554.61
3100.00	1.22	120.24	3099.58	17.81S	41.72E	0.10	-44.90	656597.42	506553.59
3200.00	1.38	115.89	3199.56	18.88S	43.73E	0.19	-47.11	656599.43	506552.53
3300.00	1.58	118.11	3299.52	20.05S	46.03E	0.21	-49.64	656601.74	506551.37
3400.00	1.79	113.43	3399.48	21.32S	48.67E	0.25	-52.52	656604.39	506550.11
3500.00	1.90	109.01	3499.43	22.48S	51.67E	0.18	-55.72	656607.40	506548.96
3600.00	1.95	108.28	3599.37	23.56S	54.86E	0.06	-59.07	656610.59	506547.91
3700.00	1.61	110.56	3699.32	24.58S	57.79E	0.35	-62.17	656613.52	506546.89
3800.00	1.54	109.98	3799.29	25.54S	60.37E	0.07	-64.91	656616.10	506545.95
3808.00	1.56	104.28	3807.28	25.60S	60.57E	1.94	-65.12	656616.31	506545.89
3918.00	1.60	101.60	3917.24	26.28S	63.53E	0.08	-68.15	656619.27	506545.23
4014.00	1.40	102.60	4013.21	26.80S	65.99E	0.21	-70.66	656621.73	506544.71
4109.00	1.40	95.60	4108.18	27.17S	68.27E	0.18	-72.97	656624.02	506544.36
4205.00	1.20	100.20	4204.16	27.46S	70.43E	0.23	-75.13	656626.18	506544.07
4300.00	1.00	106.50	4299.14	27.87S	72.20E	0.25	-76.95	656627.95	506543.67
4395.00	0.70	124.10	4394.13	28.43S	73.48E	0.42	-78.32	656629.23	506543.12
4490.00	0.40	114.20	4489.12	28.89S	74.26E	0.33	-79.20	656630.01	506542.66
4585.00	0.20	165.60	4584.12	29.19S	74.61E	0.33	-79.61	656630.36	506542.36
4680.00	0.40	241.50	4679.12	29.51S	74.36E	0.42	-79.45	656630.11	506542.04
4775.00	1.10	263.70	4774.11	29.77S	73.16E	0.78	-78.36	656628.91	506541.78

All data in feet unless otherwise stated. Calculation uses minimum curvature method.

Coordinates from structure and TVD from rotary table.

Bottom hole distance is 2467.70 on azimuth 284.64 degrees from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 284.93 degrees.

Grid is mercator - New Mexico East (3001).

Grid coordinates in FEET and computed using the Clarke - 1866 spheroid

Presented by Baker Hughes INTEQ

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SURVEY LISTING Page 2
Your ref : MWD
Last revised : 5-Oct-2005

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect	G R I D Easting	C O O R D S Northing
4868.00	1.80	269.30	4867.08	29.88S	70.81E	0.77	-76.12	656626.57	506541.65
4963.00	1.80	274.20	4962.04	29.79S	67.83E	0.16	-73.22	656623.59	506541.73
5057.00	1.80	273.80	5055.99	29.59S	64.88E	0.01	-70.32	656620.64	506541.92
5152.00	1.80	272.80	5150.94	29.42S	61.91E	0.03	-67.39	656617.66	506542.08
5244.00	1.80	277.40	5242.90	29.16S	59.03E	0.16	-64.55	656614.78	506542.32
5338.00	1.70	274.20	5336.85	28.87S	56.18E	0.15	-61.72	656611.93	506542.60
5432.00	1.80	283.00	5430.81	28.43S	53.35E	0.30	-58.87	656609.10	506543.02
5525.00	1.70	291.80	5523.77	27.59S	50.64E	0.31	-56.04	656606.39	506543.85
5618.00	1.60	285.80	5616.73	26.73S	48.11E	0.21	-53.37	656603.86	506544.70
5709.00	1.60	282.60	5707.69	26.10S	45.65E	0.10	-50.83	656601.39	506545.32
5802.00	1.80	293.20	5800.65	25.24S	43.04E	0.40	-48.09	656598.78	506546.16
5893.00	1.80	288.30	5891.61	24.23S	40.37E	0.17	-45.25	656596.10	506547.16
5985.00	2.40	285.80	5983.54	23.25S	37.14E	0.66	-41.88	656592.87	506548.12
6081.00	2.40	282.60	6079.46	22.27S	33.25E	0.14	-37.86	656588.97	506549.09
6173.00	2.30	279.80	6171.38	21.53S	29.55E	0.17	-34.10	656585.27	506549.81
6290.00	3.00	290.00	6288.26	20.09S	24.36E	0.72	-28.71	656580.07	506551.23
6318.00	5.70	294.20	6316.18	19.27S	22.40E	9.70	-26.61	656578.11	506552.04
6353.00	9.80	293.50	6350.85	17.37S	18.08E	11.72	-21.95	656573.78	506553.92
6385.00	14.60	293.90	6382.12	14.64S	11.89E	15.00	-15.27	656567.58	506556.61
6417.00	19.50	293.50	6412.70	10.88S	3.30E	15.32	-6.00	656558.98	506560.34
6448.00	24.30	292.10	6441.46	6.41S	7.36W	15.57	5.46	656548.29	506564.75
6480.00	28.90	290.00	6470.06	1.29S	20.73W	14.67	19.70	656534.90	506569.81
6511.00	32.20	286.50	6496.76	3.62N	35.69W	12.09	35.42	656519.91	506574.65
6543.00	35.50	284.40	6523.33	8.36N	52.87W	10.94	53.24	656502.71	506579.30
6575.00	38.50	284.00	6548.88	13.08N	71.54W	9.41	72.50	656484.02	506583.94
6605.00	41.10	284.40	6571.93	17.79N	90.16W	8.71	91.70	656465.39	506588.56
6637.00	44.40	284.70	6595.42	23.25N	111.18W	10.33	113.41	656444.34	506593.92
6670.00	47.70	284.70	6618.32	29.27N	134.16W	10.00	137.17	656421.34	506599.84
6700.00	50.70	285.10	6637.92	35.12N	156.10W	10.05	159.88	656399.37	506605.57
6765.00	56.60	286.50	6676.44	49.39N	206.44W	9.24	212.20	656348.96	506619.60
6796.00	58.80	286.50	6693.00	56.83N	231.56W	7.10	238.39	656323.80	506626.93
6827.00	61.20	286.20	6708.50	64.38N	257.32W	7.79	265.22	656298.01	506634.36
6860.00	63.30	286.20	6723.86	72.53N	285.37W	6.36	294.42	656269.93	506642.37
6892.00	65.70	286.20	6737.64	80.59N	313.10W	7.50	323.29	656242.16	506650.30
6922.00	69.20	285.80	6749.14	88.22N	339.73W	11.73	350.99	656215.50	506657.81
6956.00	73.30	285.50	6760.07	96.91N	370.73W	12.09	383.18	656184.46	506666.34
6988.00	76.90	284.70	6768.29	104.96N	400.58W	11.51	414.10	656154.57	506674.25
7020.00	80.40	284.40	6774.59	112.84N	430.94W	10.98	445.46	656124.18	506681.99
7047.00	83.40	284.40	6778.40	119.49N	456.83W	11.11	472.19	656098.26	506688.51

7086.00	88.20	284.70	6781.25	129.25N	494.47W	12.33	511.07	656060.58	506698.10
7118.00	91.30	284.40	6781.39	137.29N	525.43W	9.73	543.07	656029.57	506705.99
7149.00	92.50	284.40	6780.36	145.00N	555.44W	3.87	574.05	655999.53	506713.55
7181.00	92.50	284.40	6778.97	152.95N	586.41W	0.00	606.02	655968.53	506721.36
7213.00	92.50	284.70	6777.57	160.98N	617.35W	0.94	637.99	655937.55	506729.24
7308.00	91.60	284.00	6774.17	184.51N	709.33W	1.20	732.92	655845.47	506752.33
7404.00	91.30	284.00	6771.74	207.73N	802.45W	0.31	828.88	655752.25	506775.11
7435.00	91.40	284.40	6771.01	215.33N	832.49W	1.33	859.86	655722.17	506782.56
7467.00	91.40	284.00	6770.23	223.18N	863.50W	1.25	891.85	655691.12	506790.26
7530.00	91.30	283.70	6768.75	238.25N	924.66W	0.50	954.82	655629.90	506805.05
7562.00	91.20	283.70	6768.05	245.83N	955.74W	0.31	986.81	655598.79	506812.48

All data in feet unless otherwise stated. Calculation uses minimum curvature method.

Coordinates from structure and TVD from rotary table.

Bottom hole distance is 2467.70 on azimuth 284.64 degrees from wellhead.

Vertical section is from N 0.00 E 0.00 on azimuth 284.93 degrees.

Grid is mercator - New Mexico East (3001).

Grid coordinates in FEET and computed using the Clarke - 1866 spheroid

Presented by Baker Hughes INTEQ

DEVON ENERGY
Apache 13 Federal 8H, slot #1
DELAWARE, EDDY COUNTY, NM.

SURVEY LISTING Page 3
Your ref : MWD
Last revised : 5-Oct-2005

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect	G R I D C O O R D S Easting Northing	
7625.00	91.00	283.00	6766.84	260.37N	1017.02W	1.16	1049.77	655537.44	506826.73
7657.00	90.50	281.90	6766.42	267.27N	1048.27W	3.78	1081.74	655506.16	506833.48
7721.00	89.70	281.60	6766.31	280.30N	1110.93W	1.33	1145.64	655443.45	506846.22
7753.00	89.00	280.90	6766.67	286.55N	1142.31W	3.09	1177.57	655412.04	506852.31
7816.00	88.40	281.20	6768.10	298.62N	1204.13W	1.06	1240.41	655350.17	506864.09
7911.00	89.80	283.30	6769.59	318.77N	1296.94W	2.66	1335.29	655257.26	506883.80
8007.00	89.80	283.70	6769.93	341.18N	1390.29W	0.42	1431.26	655163.82	506905.76
8103.00	90.20	284.40	6769.93	364.49N	1483.42W	0.84	1527.25	655070.58	506928.63
8197.00	90.10	284.40	6769.68	387.86N	1574.46W	0.11	1621.24	654979.43	506951.57
8292.00	89.80	284.70	6769.77	411.73N	1666.42W	0.45	1716.24	654887.37	506975.00
8387.00	89.00	284.40	6770.76	435.60N	1758.36W	0.90	1811.23	654795.32	506998.43
8480.00	89.30	284.70	6772.14	458.96N	1848.37W	0.46	1904.22	654705.21	507021.36
8575.00	89.30	285.80	6773.30	483.94N	1940.02W	1.16	1999.21	654613.45	507045.91
8669.00	90.50	287.90	6773.46	511.19N	2029.98W	2.57	2093.15	654523.37	507072.72
8763.00	92.20	287.20	6771.25	539.52N	2119.57W	1.96	2187.02	654433.65	507100.63
8856.00	92.10	287.20	6767.76	567.01N	2208.35W	0.11	2279.88	654344.75	507127.69
8950.00	89.80	287.60	6766.20	595.11N	2298.03W	2.48	2373.77	654254.94	507155.37
9044.00	89.80	287.80	6766.53	623.69N	2387.58W	0.21	2467.66	654165.26	507183.52

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from structure and TVD from rotary table.
Bottom hole distance is 2467.70 on azimuth 284.64 degrees from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 284.93 degrees.
Grid is mercator - New Mexico East (3001).
Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
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DEVON ENERGY
Apache 13 Federal 8H, slot #1
DELAWARE, EDDY COUNTY, NM.

SURVEY LISTING Page 4
Your ref : MWD
Last revised : 5-Oct-2005

Targets associated with this wellpath
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Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised
KOF		6302.50	0.00S 0.00W	2-Sep-2005
End of curve		6780.00	125.14N 469.34W	2-Sep-2005
TD		6730.00	880.00N 3300.00W	2-Sep-2005



INTEQ

DEVON ENERGY

Structure : Apache 13 Federal 8H

Slot : slot #1

Field : DELAWARE

Location : EDDY COUNTY, NM.



Created by oscarg

Date plotted : 11-Nov-2005

Plot Reference is Plan3.

Coordinates are in feet reference structure

True Vertical Depths are reference structure.

--- Baker Hughes INTEQ ---

