

Scientific Drilling

DEVON ENERGY

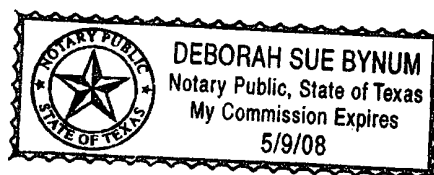
Field: Quahada Ridge, SE
Site: Eddy County, NM
Well: ~~Apache 24 Fed. #8~~
Wellpath: VH - Job #32K0405249
Survey: 04/04/05

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

David Moody Company Representative

Notorized this date 15th of April, 2005.

Deborah Sue Bynum
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: DEVON ENERGY	Date: 4/5/2005	Time: 08:29:26	Page: 1
Field: Quahada Ridge, SE	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Apache 24 Fed. #8	Section (VS) Reference:	Well (0.00N,0.00E,239.26Azi)	
Wellpath: VH - Job #32K0405249	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 04/04/05	Start Date: 4/4/2005
KSRG 0'-3865'	
Company: Scientific Drilling Internatio	Engineer: Carter w/P&M
Tool: Keeper;Keeper Gyro	Tied-to: From Surface

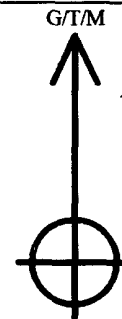
Survey

MD ft	Incl deg	Azlm deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.46	254.35	100.00	0.39	-0.11	-0.39	0.46	0.40	254.35
200.00	0.45	256.72	200.00	1.15	-0.31	-1.16	0.02	1.20	255.13
300.00	0.99	243.58	299.99	2.39	-0.78	-2.31	0.56	2.44	251.32
400.00	0.92	271.86	399.97	3.92	-1.14	-3.89	0.47	4.05	253.66
500.00	1.03	290.22	499.96	5.17	-0.80	-5.53	0.33	5.59	261.74
600.00	0.89	306.22	599.95	6.04	-0.03	-7.00	0.30	7.00	269.73
700.00	0.97	298.02	699.93	6.78	0.82	-8.38	0.16	8.42	275.61
800.00	1.00	267.25	799.92	7.99	1.18	-10.00	0.52	10.06	276.73
900.00	0.80	253.10	899.91	9.44	0.93	-11.54	0.30	11.57	274.63
1000.00	0.83	311.03	999.90	10.34	1.21	-12.75	0.79	12.81	275.41
1100.00	1.02	270.15	1099.89	11.33	1.68	-14.19	0.67	14.29	276.77
1200.00	1.03	264.81	1199.87	12.91	1.61	-15.97	0.10	16.05	275.74
1300.00	1.00	270.29	1299.85	14.47	1.53	-17.74	0.10	17.80	274.92
1400.00	0.93	267.76	1399.84	15.93	1.50	-19.42	0.08	19.48	274.42
1500.00	0.79	250.63	1499.83	17.32	1.24	-20.88	0.29	20.92	273.40
1600.00	0.62	329.66	1599.82	17.99	1.48	-21.81	0.91	21.86	273.88
1700.00	0.79	288.45	1699.82	18.43	2.16	-22.73	0.52	22.84	275.44
1800.00	0.79	228.39	1799.81	19.56	1.92	-23.90	0.79	23.98	274.60
1900.00	0.69	303.19	1899.80	20.50	1.80	-24.92	0.90	24.99	274.12
2000.00	0.71	189.47	1999.80	21.17	1.51	-25.53	1.17	25.57	273.40
2100.00	0.81	240.33	2099.79	22.28	0.55	-26.25	0.66	26.25	271.21
2200.00	0.48	41.94	2199.79	22.58	0.52	-26.58	1.27	26.58	271.11
2300.00	0.82	200.27	2299.79	22.74	0.16	-26.55	1.28	26.55	270.34
2400.00	0.64	150.71	2399.78	23.31	-1.00	-26.52	0.63	26.54	267.84
2500.00	0.68	246.07	2499.77	23.91	-1.73	-26.79	0.98	26.85	266.30
2600.00	0.82	213.81	2599.77	25.15	-2.57	-27.73	0.44	27.85	264.71
2700.00	0.74	171.34	2699.76	26.04	-3.80	-28.03	0.57	28.29	262.28
2800.00	0.39	98.09	2799.75	26.01	-4.48	-27.60	0.73	27.96	260.77
2900.00	0.83	205.92	2899.75	26.35	-5.18	-27.58	1.02	28.06	259.35
3000.00	0.47	97.31	2999.75	26.64	-5.89	-27.49	1.08	28.11	257.91
3100.00	0.38	105.95	3099.74	26.09	-6.03	-26.76	0.11	27.43	257.30
3200.00	0.46	105.46	3199.74	25.58	-6.23	-26.06	0.08	26.79	256.56
3300.00	0.51	116.77	3299.74	25.06	-6.54	-25.27	0.11	26.10	255.50
3400.00	0.62	107.14	3399.73	24.46	-6.90	-24.36	0.14	25.32	254.19
3500.00	0.82	119.01	3499.72	23.74	-7.40	-23.22	0.25	24.37	252.31
3600.00	0.84	118.00	3599.71	23.00	-8.09	-21.94	0.02	23.39	249.75
3700.00	1.25	121.68	3699.70	22.11	-9.01	-20.37	0.42	22.27	246.13
3800.00	1.19	107.86	3799.67	20.92	-9.90	-18.45	0.30	20.94	241.78
3865.00	0.93	110.65	3864.66	20.14	-10.30	-17.31	0.41	20.14	239.26



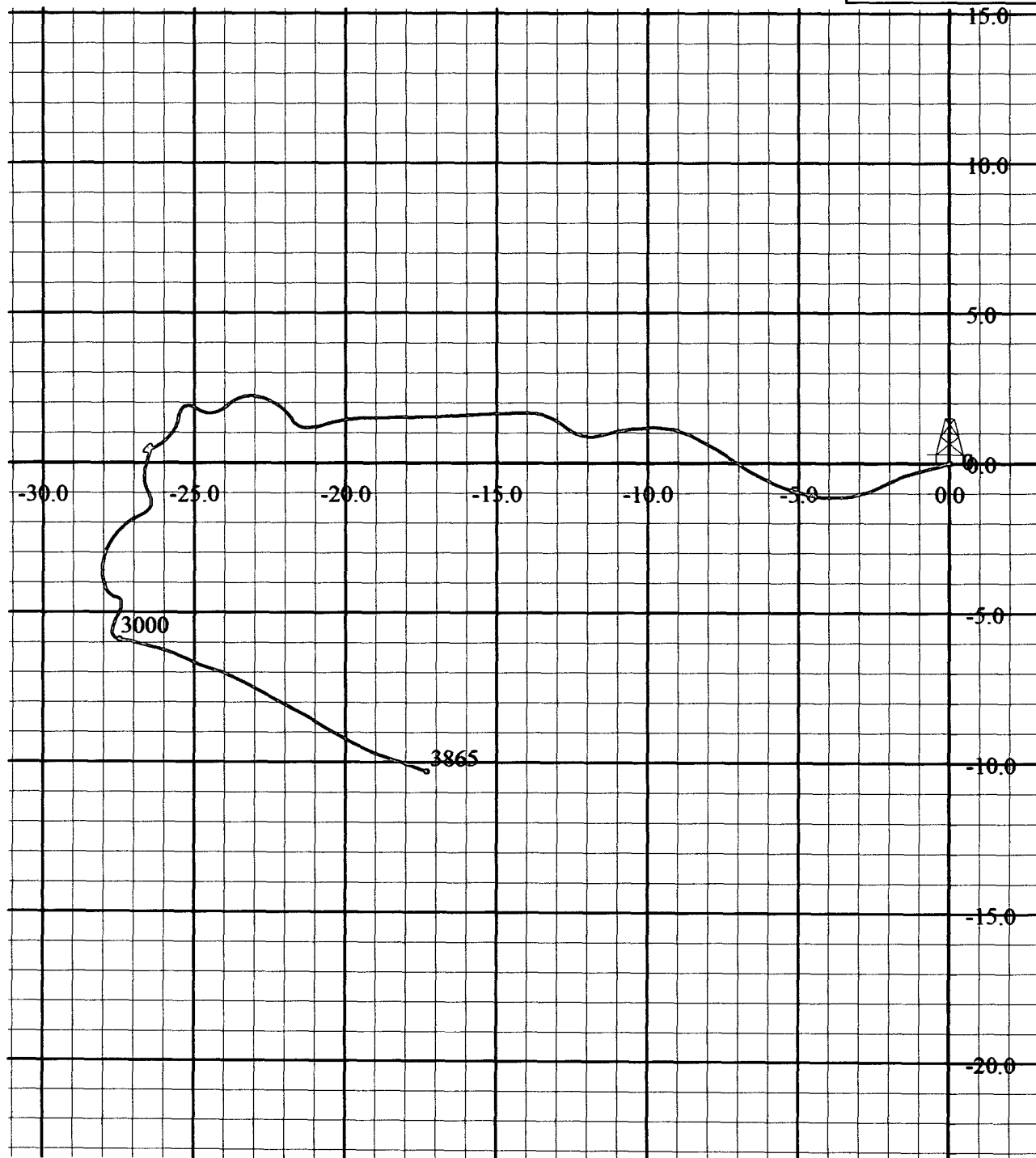
**Scientific
Drilling**

Field: Quahada Ridge, SE
Site: Eddy County, NM
Well: Apache 24 Fed. #8
Wellpath: VH - Job #32K0405249
Survey: 04/04/05



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

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 4/5/2005
Model: igrf2000



South(-)/North(+) [5ft/in]

West(-)/East(+) [5ft/in]

PathFinder

Survey Report

Company: Devon Energy		Date: 4/25/2005	Time: 08:10:49	Page: 1
Field: Apache, Section 24, T22-S, R30-E		Co-ordinate(NE) Reference:	Well: Apache 24 Fed. #8H, True North	
Site: Apache 24 Federal #8H		Vertical (TVD) Reference:	SITE 0.0	
Well: Apache 24 Fed. #8H		Section (VS) Reference:	Well (0.00N,0.00E,285.60Azi)	
Wellpath: Original Hole		Survey Calculation Method:	Minimum Curvature Db: Sybase	

Field: Apache, Section 24, T22-S, R30-E	
Map System: US State Plane Coordinate System 1927	Map Zone: New Mexico, Eastern Zone
Geo Datum: NAD27 (Clarke 1866)	Coordinate System: Well Centre
Sys Datum: Mean Sea Level	Geomagnetic Model: igrf2005

Site: Apache 24 Federal #8H	
Eddy County, New Mexico	
Site Position:	Northing: 498455.76 ft Latitude: 32 22 9.660 N
From: Map	Easting: 656591.52 ft Longitude: 103 49 34.140 W
Position Uncertainty: 0.00 ft	North Reference: True
Ground Level: 3383.00 ft	Grid Convergence: 0.27 deg

Well: Apache 24 Fed. #8H		Slot Name:	
Well Position: +N/-S 0.00 ft	Northing: 498455.76 ft	Latitude: 32 22 9.660 N	
+E/-W 0.00 ft	Easting: 656591.52 ft	Longitude: 103 49 34.140 W	
Position Uncertainty: 0.00 ft			

Wellpath: Original Hole		Drilled From: Surface	
Current Datum: SITE	Height 0.00 ft	Tie-on Depth: 0.00 ft	
Magnetic Data: 4/5/2005		Above System Datum: Mean Sea Level	
Field Strength: 49334 nT		Declination: 8.44 deg	
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 60.43 deg	
ft	ft	+E/-W	Direction
		ft	deg
0.00	0.00	0.00	285.60

Survey: PathFinder MWD Surveys	Start Date: 4/7/2005
Company: PathFinder Energy Services	Engineer: Ron McIntyre
Tool:	Tied-to: From: Definitive Path

Survey: PathFinder MWD Surveys										
MD ft	Incl deg	Azlm deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
3865.00	0.93	110.65	3864.66	-10.30	-17.31	13.91	0.00	0.00	0.00	Tie-In to Gyro Begin PathFinder MWD Sur
3906.00	0.97	140.71	3905.66	-10.68	-16.78	13.29	1.21	0.10	73.32	
3938.00	0.88	130.87	3937.65	-11.05	-16.43	12.85	0.57	-0.28	-30.75	
4034.00	0.18	139.66	4033.65	-11.65	-15.77	12.06	0.73	-0.73	9.16	
4130.00	0.09	227.64	4129.65	-11.81	-15.73	11.97	0.21	-0.09	91.65	
4225.00	0.09	97.21	4224.65	-11.87	-15.71	11.94	0.17	0.00	-137.29	
4416.00	0.09	230.45	4415.65	-11.99	-15.68	11.88	0.09	0.00	69.76	
4606.00	0.35	281.25	4605.65	-11.97	-16.36	12.54	0.16	0.14	26.74	
4797.00	0.26	315.09	4796.64	-11.55	-17.24	13.50	0.10	-0.05	17.72	
4988.00	0.53	313.95	4987.64	-10.63	-18.18	14.65	0.14	0.14	-0.60	
5178.00	0.35	288.99	5177.63	-9.83	-19.36	16.01	0.14	-0.09	-13.14	
5368.00	0.44	278.44	5367.63	-9.54	-20.63	17.31	0.06	0.05	-5.55	
5556.00	0.35	314.21	5555.63	-9.03	-21.76	18.53	0.14	-0.05	19.03	
5745.00	0.53	288.46	5744.62	-8.35	-23.00	19.91	0.14	0.10	-13.62	
5869.00	0.62	280.11	5868.61	-8.05	-24.21	21.15	0.10	0.07	-6.73	
5900.00	0.53	260.69	5899.61	-8.04	-24.51	21.45	0.69	-0.29	-62.65	
5932.00	1.23	275.63	5931.61	-8.03	-25.00	21.92	2.28	2.19	46.69	
5964.00	2.64	274.66	5963.59	-7.94	-26.08	22.98	4.41	4.41	-3.03	
5996.00	3.69	281.43	5995.54	-7.68	-27.82	24.73	3.48	3.28	21.16	
6027.00	5.36	290.30	6026.44	-6.98	-30.16	27.17	5.83	5.39	28.61	
6059.00	6.77	293.56	6058.26	-5.70	-33.29	30.53	4.53	4.41	10.19	
6089.00	7.56	294.00	6088.03	-4.19	-36.71	34.23	2.64	2.63	1.47	
6121.00	8.44	296.02	6119.72	-2.31	-40.74	38.62	2.89	2.75	6.31	
6153.00	8.62	294.70	6151.36	-0.28	-45.03	43.30	0.83	0.56	-4.12	

PathFinder

Survey Report

Company: Devon Energy
Field: Apache, Section 24, T22-S, R30-E
Site: Apache 24 Federal #8H
Well: Apache 24 Fed. #8H
Wellpath: Original Hole

Date: 4/25/2005 **Time:** 08:10:49 **Page:** 2
Co-ordinate(NE) Reference: Well: Apache 24 Fed. #8H, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,285.60Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey: PathFinder MWD Surveys

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
6184.00	8.62	295.32	6182.01	1.69	-49.24	47.88	0.30	0.00	2.00	
6216.00	8.79	294.26	6213.64	3.72	-53.64	52.67	0.73	0.53	-3.31	
6248.00	8.62	294.00	6245.28	5.70	-58.06	57.45	0.55	-0.53	-0.81	
6279.00	9.23	295.75	6275.90	7.72	-62.42	62.20	2.15	1.97	5.65	
6311.00	10.11	295.93	6307.44	10.07	-67.26	67.49	2.75	2.75	0.56	
6343.00	11.08	296.46	6338.90	12.66	-72.54	73.27	3.05	3.03	1.66	
6373.00	12.49	299.01	6368.27	15.52	-77.96	79.26	5.01	4.70	8.50	
6404.00	13.45	300.85	6398.47	19.00	-83.98	86.00	3.37	3.10	5.94	
6435.00	14.25	303.05	6428.57	22.93	-90.28	93.12	3.09	2.58	7.10	
6467.00	14.60	302.52	6459.56	27.24	-96.98	100.73	1.17	1.09	-1.66	
6499.00	15.21	301.38	6490.49	31.60	-103.96	108.63	2.11	1.91	-3.56	
6530.00	15.30	303.05	6520.40	35.95	-110.86	116.45	1.45	0.29	5.39	
6561.00	16.53	302.70	6550.21	40.56	-118.00	124.56	3.98	3.97	-1.13	
6594.00	17.59	301.29	6581.75	45.68	-126.22	133.85	3.45	3.21	-4.27	
6626.00	18.91	300.94	6612.14	50.86	-134.79	143.51	4.14	4.12	-1.09	
6657.00	20.14	301.91	6641.36	56.27	-143.63	153.47	4.10	3.97	3.13	
6688.00	21.90	301.91	6670.30	62.14	-153.07	164.15	5.68	5.68	0.00	
6719.00	23.04	302.61	6698.94	68.47	-163.09	175.50	3.78	3.68	2.26	
6781.00	24.01	301.29	6755.79	81.56	-184.09	199.24	1.78	1.56	-2.13	
6843.00	24.89	300.06	6812.23	94.65	-206.16	224.02	1.64	1.42	-1.98	
6906.00	25.50	300.59	6869.24	108.19	-229.31	249.96	1.03	0.97	0.84	
6967.00	26.47	300.33	6924.07	121.74	-252.35	275.79	1.60	1.59	-0.43	
7059.00	27.00	299.62	7006.23	142.41	-288.20	315.88	0.67	0.58	-0.77	
7153.00	27.00	300.06	7089.99	163.65	-325.22	357.25	0.21	0.00	0.47	
7247.00	26.47	300.15	7173.94	184.86	-361.80	398.18	0.57	-0.56	0.10	
7310.00	26.73	299.89	7230.27	198.97	-386.23	425.50	0.45	0.41	-0.41	
7403.00	27.35	300.24	7313.10	220.15	-422.82	466.44	0.69	0.67	0.38	
7465.00	29.02	301.38	7367.75	235.15	-447.96	494.70	2.83	2.69	1.84	
7519.00	30.60	301.38	7414.60	249.13	-470.88	520.53	2.93	2.93	0.00	
7550.00	32.01	300.68	7441.09	257.43	-484.68	536.06	4.70	4.55	-2.26	
7582.00	35.61	298.74	7467.68	266.24	-500.15	553.32	11.74	11.25	-6.06	
7612.00	39.92	297.16	7491.39	274.84	-516.38	571.27	14.72	14.37	-5.27	
7643.00	44.14	295.93	7514.41	284.11	-534.95	591.64	13.87	13.61	-3.97	
7675.00	47.48	295.58	7536.71	294.07	-555.61	614.22	10.47	10.44	-1.09	
7707.00	51.44	294.52	7557.51	304.36	-577.64	638.21	12.63	12.37	-3.31	
7738.00	55.22	292.77	7576.02	314.32	-600.41	662.82	13.01	12.19	-5.65	
7768.00	58.12	292.24	7592.50	323.91	-623.57	687.70	9.78	9.67	-1.77	
7830.00	67.27	291.01	7620.91	344.17	-674.74	742.44	14.86	14.76	-1.98	
7861.00	73.42	291.71	7631.33	354.80	-701.91	771.47	19.95	19.84	2.26	
7893.00	79.84	292.59	7638.73	366.54	-730.73	802.38	20.24	20.06	2.75	
7925.00	85.47	292.15	7642.82	378.61	-760.07	833.88	17.65	17.59	-1.37	
7957.00	88.20	292.24	7644.58	390.68	-789.65	865.62	8.54	8.53	0.28	
7976.00	89.87	292.85	7644.90	397.96	-807.19	884.48	9.36	8.79	3.21	
8034.00	91.10	290.39	7644.41	419.33	-861.10	942.15	4.74	2.12	-4.24	
8096.00	89.96	288.20	7643.84	439.82	-919.61	1004.01	3.98	-1.84	-3.53	
8128.00	89.25	287.32	7644.06	449.58	-950.09	1035.99	3.53	-2.22	-2.75	
8191.00	90.13	286.35	7644.40	467.82	-1010.39	1098.97	2.08	1.40	-1.54	
8255.00	89.08	284.07	7644.84	484.61	-1072.14	1162.96	3.92	-1.64	-3.56	
8318.00	90.75	283.10	7644.94	499.41	-1133.37	1225.92	3.07	2.65	-1.54	
8382.00	91.98	282.39	7643.41	513.52	-1195.78	1289.82	2.22	1.92	-1.11	
8444.00	92.07	281.25	7641.22	526.21	-1256.42	1351.65	1.84	0.15	-1.84	
8508.00	91.63	281.34	7639.15	538.74	-1319.15	1415.43	0.70	-0.69	0.14	
8571.00	90.31	280.90	7638.09	550.89	-1380.96	1478.23	2.21	-2.10	-0.70	

PathFinder

Survey Report

Company: Devon Energy
Field: Apache, Section 24, T22-S, R30-E
Site: Apache 24 Federal #8H
Well: Apache 24 Fed. #8H
Wellpath: Original Hole

Date: 4/25/2005 **Time:** 08:10:49 **Page:** 3
Co-ordinate(NE) Reference: Well: Apache 24 Fed. #8H, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,285.60Azi)
Survey Calculation Method: Minimum Curvature **Db:** Sybase

Survey: PathFinder MWD Surveys

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
8634.00	87.49	279.58	7639.30	562.09	-1442.93	1540.94	4.94	-4.48	-2.10	
8697.00	88.37	280.64	7641.57	573.14	-1504.91	1603.61	2.19	1.40	1.68	
8759.00	89.96	281.34	7642.48	584.96	-1565.77	1665.40	2.80	2.56	1.13	
8823.00	89.16	280.73	7642.97	597.21	-1628.58	1729.19	1.57	-1.25	-0.95	
8887.00	91.01	281.25	7642.87	609.41	-1691.41	1792.98	3.00	2.89	0.81	
8950.00	91.63	281.17	7641.42	621.65	-1753.19	1855.78	0.99	0.98	-0.13	
9013.00	89.25	280.99	7640.94	633.76	-1815.01	1918.58	3.79	-3.78	-0.29	
9077.00	89.60	281.69	7641.58	646.34	-1877.75	1982.40	1.22	0.55	1.09	
9141.00	90.48	282.04	7641.54	659.50	-1940.38	2046.26	1.48	1.37	0.55	
9205.00	91.36	282.04	7640.51	672.85	-2002.97	2110.13	1.37	1.37	0.00	
9269.00	90.57	281.69	7639.43	686.00	-2065.59	2173.98	1.35	-1.23	-0.55	
9332.00	90.04	282.04	7639.09	698.96	-2127.24	2236.85	1.01	-0.84	0.56	
9395.00	90.31	282.31	7638.90	712.24	-2188.83	2299.73	0.61	0.43	0.43	
9459.00	91.45	282.57	7637.92	726.03	-2251.32	2363.63	1.83	1.78	0.41	
9556.00	92.15	283.54	7634.87	747.93	-2345.76	2460.48	1.23	0.72	1.00	
9588.00	92.77	283.01	7633.50	755.27	-2376.88	2492.43	2.55	1.94	-1.66	
9652.00	91.89	282.39	7630.90	769.33	-2439.26	2556.29	1.68	-1.37	-0.97	
9716.00	92.24	283.01	7628.59	783.39	-2501.65	2620.17	1.11	0.55	0.97	
9780.00	91.28	282.31	7626.63	797.41	-2564.06	2684.05	1.86	-1.50	-1.09	
9843.00	91.10	282.22	7625.32	810.79	-2625.61	2746.93	0.32	-0.29	-0.14	
9908.00	91.19	282.66	7624.02	824.79	-2689.07	2811.82	0.69	0.14	0.68	
9944.00	90.13	282.48	7623.60	832.62	-2724.21	2847.76	2.99	-2.94	-0.50	
10038.00	89.34	283.10	7624.04	853.43	-2815.87	2941.65	1.07	-0.84	0.66	
10070.00	89.25	283.45	7624.43	860.78	-2847.02	2973.62	1.13	-0.28	1.09	
10134.00	88.20	283.54	7625.86	875.71	-2909.23	3037.56	1.65	-1.64	0.14	
10198.00	89.87	285.12	7626.93	891.55	-2971.23	3101.53	3.59	2.61	2.47	
10261.00	91.01	285.30	7626.45	908.08	-3032.02	3164.53	1.83	1.81	0.29	
10321.00	90.04	285.47	7625.90	923.99	-3089.87	3224.52	1.64	-1.62	0.28	
10386.00	92.86	285.73	7624.26	941.46	-3152.45	3289.50	4.36	4.34	0.40	
10449.00	92.15	285.56	7621.50	958.44	-3213.05	3352.44	1.16	-1.13	-0.27	
10513.00	91.45	285.82	7619.49	975.74	-3274.64	3416.40	1.17	-1.09	0.41	
10576.00	90.84	286.44	7618.23	993.24	-3335.14	3479.39	1.38	-0.97	0.98	
10640.00	91.98	287.23	7616.66	1011.77	-3396.38	3543.35	2.17	1.78	1.23	
10703.00	91.19	287.14	7614.92	1030.37	-3456.55	3606.30	1.26	-1.25	-0.14	
10767.00	90.40	286.96	7614.03	1049.14	-3517.73	3670.28	1.27	-1.23	-0.28	
10831.00	90.92	286.70	7613.29	1067.66	-3578.98	3734.26	0.91	0.81	-0.41	
10894.00	91.45	286.70	7611.99	1085.76	-3639.31	3797.23	0.84	0.84	0.00	
10958.00	92.15	287.05	7609.98	1104.33	-3700.52	3861.18	1.22	1.09	0.55	
11022.00	93.30	286.79	7606.93	1122.94	-3761.68	3925.09	1.84	1.80	-0.41	
11085.00	93.47	286.53	7603.21	1140.97	-3821.93	3987.97	0.49	0.27	-0.41	
11148.00	93.12	285.65	7599.59	1158.40	-3882.37	4050.86	1.50	-0.56	-1.40	
11211.00	92.51	283.98	7596.50	1174.49	-3943.19	4113.78	2.82	-0.97	-2.65	
11274.00	92.07	282.04	7593.98	1188.66	-4004.53	4176.66	3.16	-0.70	-3.08	
11370.00	90.48	279.49	7591.85	1206.58	-4098.80	4272.29	3.13	-1.66	-2.66	
11402.00	90.48	279.67	7591.58	1211.91	-4130.35	4304.11	0.56	0.00	0.56	
11466.00	91.36	280.11	7590.55	1222.90	-4193.39	4367.78	1.54	1.37	0.69	
11529.00	91.98	280.55	7588.71	1234.19	-4255.35	4430.49	1.21	0.98	0.70	
11592.00	90.04	279.41	7587.60	1245.11	-4317.38	4493.17	3.57	-3.08	-1.81	
11656.00	90.22	280.02	7587.46	1255.91	-4380.46	4556.83	0.99	0.28	0.95	
11720.00	90.66	280.73	7586.97	1267.43	-4443.41	4620.57	1.31	0.69	1.11	
11783.00	89.08	280.11	7587.11	1278.82	-4505.37	4683.31	2.69	-2.51	-0.98	
11847.00	88.37	280.37	7588.53	1290.20	-4568.34	4747.01	1.18	-1.11	0.41	
11911.00	88.29	280.73	7590.40	1301.91	-4631.23	4810.73	0.58	-0.12	0.56	

PathFinder

Survey Report

Company: Devon Energy	Date: 4/25/2005	Time: 08:10:49	Page: 4
Field: Apache, Section 24, T22-S, R30-E	Co-ordinate(NE) Reference:	Well: Apache 24 Fed. #8H, True North	
Site: Apache 24 Federal #8H	Vertical (TVD) Reference:	SITE 0.0	
Well: Apache 24 Fed. #8H	Section (VS) Reference:	Well (0.00N,0.00E,285.60Azi)	
Wellpath: Original Hole	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: PathFinder MWD Surveys

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
11945.00	88.11	281.17	7591.47	1308.37	-4664.59	4844.61	1.40	-0.53	1.29	Last PathFinder MWD Survey
11998.00	88.11	281.17	7593.21	1318.63	-4716.56	4897.42	0.00	0.00	0.00	Bit Projection / TD

Annotation

MD ft	TVD ft	
3865.00	3864.66	Tie-In to Gyro
3906.00	3905.66	Begin PathFinder MWD Surveys
11945.00	7591.47	Last PathFinder MWD Survey
11998.00	7593.21	Bit Projection / TD

Devon Energy

Apache '24' Federal #8H

Section 24, T22-S, R30-E

Eddy County, New Mexico

Final Plot

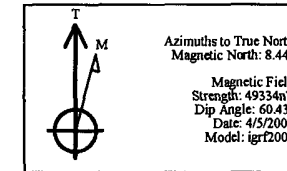
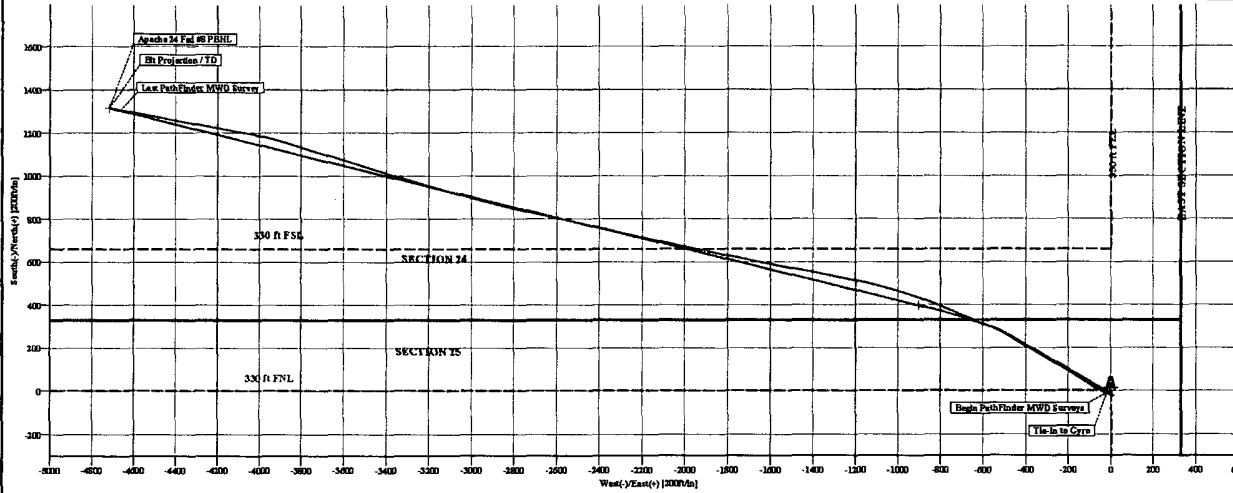
COMPANY DETAILS
 Devon Energy
 20 N. Broadway, Ste. 1500
 Oklahoma City, OK 73102
 Calculation Method: Minimum Curvature
 Error System: Systematic Ellipse
 Scan Method: Closest Approach 3D
 Error Surface: Elliptical Cone
 Warning Method: Error Ratio

SITE DETAILS
 Apache 24 Federal #8H
 Eddy County, New Mexico
 Site Centre Northing: 498455.76
 Easting: 656591.52
 Ground Level: 3383.00
 Positional Uncertainty: 0.00
 Convergence: 0.27

PATHFINDER

ENERGY SERVICES

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Apache 24 Fed. #8H	0.00	0.00	498455.76	656591.52	32°22'09.660N	103°49'34.140W	N/A



TARGET DETAILS				
Name	TVD	+N/-S	+E/-W	Shape
Apache 24 Fed #8 PBHL	7616.00	1317.00	-4717.00	Point
Target #1	7650.00	398.00	-905.00	Point

WELLPATH DETAILS				
Original Hole				
Rig:	McVay #7			
Ref. Datum:	SITE 0.00ft			
V.Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD	
285.60°	0.00	0.00	0.00	

ANNOTATIONS			
No.	TVD	MD	Annotation
1	3864.66	3865.00	Tie-In to Oyo
2	3905.66	3906.00	Begin Pathfinder MWD Surveys
3	7591.47	11945.00	Last Pathfinder MWD Survey
4	7593.21	11998.00	Bit Projection / TD

FIELD DETAILS	
Apache, Section 24, T22-S, R30-E	
Geodetic System:	US State Plane Coordinate System 1927
Ellipsoid:	NAD27 (Clarke 1866)
Zone:	New Mexico, Eastern Zone
Magnetic Model:	igr2005
System Datum:	Mean Sea Level
Local North:	True North

LEGEND	
—	Apache 24-F Plan 2 040105
—	Apache 24 Federal #8H, Apache 24 Fed. #8H, Original Hole
—	Pathfinder MWD Surveys

