

Pathfinder

Survey Report

Page 1
Job No: J-WT-0503-0031-WTWT
Date: 7/15/2005
Time: 11:12 am
Wellpath ID: ccd19_su
Date Created: 3/5/2005
Last Revision: 3/10/2005

Calculated using the Minimum Curvature Method
Computed using PDS VER2.2.6
Vertical Section Plane: 185.96 deg.

Survey Reference: WELLHEAD
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

PURE Resources
Cat Claw Draw Unit #19
Patterson UTI 629
Eddy County, NM
ccd19_surveys

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Course Length (ft)	Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
0.00	0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00@ 0.00	0.00
Azimuth Bad; Survey Taken In Casing								
479.00	5.28	126.61	478.32	11.25	13.15 S	17.70 E	22.06@126.61	1.10
Azimuth Bad; Survey Taken In Casing								
1042.00	6.07	222.49	1039.56	48.44	50.62 S	18.39 E	53.86@160.03	1.50
Azimuth Bad; Survey Taken In Casing								
1542.00	4.32	146.03	1537.84	86.17	37.94 S	12.51 E	88.82@171.90	1.37
First Good MWD Survey								
1902.00	3.52	0.48	1897.43	87.01	29.69 S	21.24 E	92.17@166.68	2.24
1965.00	3.17	1.10	1960.32	83.34	86.02 S	21.29 E	88.61@166.10	0.56
2090.00	2.81	357.58	2085.15	76.87	79.50 S	21.23 E	82.29@165.05	0.32
2215.00	2.55	351.69	2210.01	71.14	73.69 S	20.70 E	76.54@164.31	0.30
2339.00	2.55	347.56	2333.89	65.85	68.27 S	19.71 E	71.05@163.90	0.15
2463.00	2.55	350.90	2457.77	60.57	62.85 S	18.67 E	65.56@163.45	0.12
2586.00	2.64	348.97	2580.64	55.22	57.37 S	17.70 E	60.03@162.85	0.10
2711.00	2.64	332.97	2705.51	50.05	51.98 S	15.84 E	54.34@163.05	0.59
2836.00	2.46	326.73	2830.39	45.56	47.17 S	13.06 E	48.94@164.52	0.26
2961.00	2.37	324.01	2955.28	41.56	42.83 S	10.07 E	44.00@166.77	0.12
3086.00	2.46	316.71	3080.17	37.88	38.79 S	6.71 E	39.37@170.18	0.26
3180.00	2.11	317.15	3174.09	35.43	36.05 S	4.15 E	36.29@173.43	0.37
3305.00	0.70	327.70	3299.05	33.31	33.72 S	2.18 E	33.79@176.30	1.14
3399.00	0.44	322.34	3393.05	32.60	32.95 S	1.65 E	32.99@177.13	0.28
3494.00	0.62	315.57	3488.04	32.01	32.29 S	1.07 E	32.31@178.10	0.20
3588.00	0.53	310.91	3582.04	31.44	31.65 S	0.38 E	31.65@179.30	0.11
3682.00	0.53	319.26	3676.03	30.89	31.03 S	0.23 W	31.03@180.42	0.08
3776.00	0.18	298.96	3770.03	30.53	30.63 S	0.64 W	30.64@181.20	0.39
3870.00	0.09	286.48	3864.03	30.46	30.54 S	0.84 W	30.55@181.58	0.10
3963.00	0.18	292.45	3957.03	30.41	30.46 S	1.05 W	30.48@181.97	0.10
4057.00	0.35	318.65	4051.03	30.17	30.19 S	1.37 W	30.22@182.60	0.22
4151.00	0.35	306.96	4145.03	29.83	29.80 S	1.79 W	29.86@183.44	0.08
4244.00	0.26	140.05	4238.03	29.83	29.79 S	1.88 W	29.85@183.62	0.65
4338.00	0.70	189.54	4332.02	30.55	30.52 S	1.84 W	30.58@183.45	0.60
4432.00	0.88	202.89	4426.01	31.81	31.75 S	2.22 W	31.83@183.99	0.27
4525.00	0.78	188.48	4519.00	33.13	33.04 S	2.59 W	33.14@184.48	0.25

Pathfinder **Survey Report**

Page 2
Date: 7/15/2005
Wellpath ID: ccc19_su

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Vertical Section (ft)	T O T A L		Course Length (ft)	Closure		DLS (dg/100ft)
					Rectangular	Offsets		Dist.	Dir.	
					(ft)	(ft)		(ft)	(deg.)	
4619.00	0.79	170.55	4613.00	34.39	34.31 S	2.58W	94.00	34.41@	184.29	0.26
4713.00	0.70	180.66	4706.99	35.59	35.52 S	2.48W	94.00	35.61@	183.99	0.17
4807.00	0.35	186.63	4800.98	36.45	36.38 S	2.52W	94.00	36.47@	183.96	0.38
4901.00	0.35	214.32	4894.98	36.99	36.91 S	2.71W	94.00	37.00@	184.20	0.18
4995.00	0.44	252.55	4988.98	37.38	37.25 S	3.22W	94.00	37.39@	184.94	0.29
5058.00	0.35	248.86	5051.98	37.57	37.39 S	3.63W	63.00	37.57@	185.54	0.15
Projection To The Bit										
5108.00	0.35	248.86	5101.98	37.71	37.50 S	3.91W	50.00	37.71@	185.96	0.00