

DATADRIL

WINTERSHALL ENERGY COMPANY
 UTE MOUNTAIN 428-14 HORIZONTAL
 SECTION-28-T31N-R14W
 SAN JUAN COUNTY NEW MEXICO

File Name: WINUT2814S

*** RECORD OF SURVEY ***

Calculated by DATADRIL's CADDS System

Radius of Curvature Method

All Angles are Decimal

Vertical Section Plane: 99.67 Degs

TYPE OF SURVEY	MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T AZIMUTH (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	DOGLEG SEVERITY (DEG/100')
	0.00	0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
MMS	293.00	.33	246.25	293.00	293.00	.34 S	.77 W	-1.70	.11
MMS	384.00	.33	289.26	91.00	384.00	.36 S	1.28 W	-1.21	.27
MMS	446.00	.11	355.95	62.00	446.00	.18 S	1.42 W	-1.37	.49
MMS	540.00	.22	15.79	94.00	540.00	.09 N	1.39 W	-1.39	.13
MMS	633.00	.49	359.70	93.00	632.99	.56 N	1.32 W	-1.41	.31
MMS	726.00	.36	15.68	93.00	725.99	1.74 N	1.17 W	-1.44	.44
MMS	818.00	1.18	17.94	92.00	817.97	3.31 N	.70 W	-1.24	.35
MMS	910.00	1.35	14.46	92.00	909.95	5.26 N	.13 W	-1.01	.20
MMS	1004.00	1.50	16.56	94.00	1003.92	7.51 N	.50 E	-.77	.17
MMS	1096.00	1.63	15.09	92.00	1095.89	9.93 N	1.18 E	-.50	.15
MMS	1189.00	1.92	16.21	93.00	1188.94	12.70 N	1.96 E	-.20	.31
MMS	1280.00	2.43	17.71	91.00	1279.78	16.00 N	2.97 E	.124	.56
MMS	1372.00	2.90	16.04	92.00	1371.58	20.10 N	4.21 E	.77	.52
MMS	1466.00	3.07	16.51	94.00	1465.55	24.79 N	5.58 E	1.33	.18
MMS	1559.00	3.15	15.17	93.00	1558.41	29.65 N	6.96 E	1.38	.12
MMS	1651.00	3.13	15.95	92.00	1650.27	34.50 N	8.31 E	2.39	.05
MMS	1741.00	3.21	15.11	90.00	1740.14	39.30 N	9.64 E	2.90	.10
MMS	1834.00	3.19	15.62	93.00	1832.99	44.30 N	11.02 E	3.42	.04
MMS	1927.00	3.50	13.48	93.00	1925.83	49.56 N	12.38 E	3.88	.36
MMS	2020.00	3.61	12.99	93.00	2018.65	55.17 N	13.70 E	4.24	.12

DATADRIIL

WINTERSHALL ENERGY COMPANY
JTC MOUNTAIN #28-14 HORIZONTAL

SECTION-28-131N-R14W
SAN JUAN COUNTY NEW MEXICO

TYPE OF SURVEY	MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T AZIMUTH (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	LOGS SEVERITY (DEG/100')
MMS	2112.00	3.68	12.39	92.00	2110.47	60.87 N	15.01 E	4.58	.09
MMS	2201.00	3.79	11.24	89.00	2199.28	66.54 N	16.23 E	4.92	.18
MMS	2297.00	4.00	11.70	96.00	2295.06	72.93 N	17.53 E	5.33	.22
MMS	2390.00	4.06	10.37	93.00	2387.83	79.34 N	18.81 E	5.62	.38
MMS	2480.00	4.35	10.37	90.00	2477.58	85.81 N	20.07 E	5.37	.32
MMS	2572.00	4.51	9.83	92.00	2569.31	92.30 N	21.35 E	5.46	.20
MMS	2666.00	4.74	9.40	94.00	2663.00	100.28 N	22.62 E	5.45	.25
MMS	2757.00	4.99	6.56	91.00	2753.68	107.92 N	23.69 E	5.62	.38
MMS	2849.00	5.07	7.90	92.00	2845.32	115.92 N	24.70 E	4.38	.15

(N.L.S.S.,E.S.I. MULTISHOT 0 TO 2849 FT.)

MWD	3007.00	5.25	4.00	158.00	3002.68	130.05 N	26.18 E	3.96	.25
MWD	3099.00	5.75	8.00	92.00	3094.26	138.32 N	27.10 E	3.39	.68
MWD	3195.00	5.75	8.00	96.00	3189.77	148.34 N	28.44 E	3.11	0.00
MWD	3289.00	5.75	11.00	94.00	3283.30	157.63 N	29.99 E	3.09	.32
MWD	3381.00	5.50	9.00	92.00	3374.36	166.51 N	31.56 E	3.14	.35
MWD	3475.00	6.25	14.00	94.00	3468.36	175.34 N	33.47 E	3.45	.97
MWD	3567.00	6.50	10.00	92.00	3559.79	185.93 N	35.60 E	3.96	.55
MWD	3660.00	7.00	10.00	33.00	3652.15	196.69 N	37.50 E	3.92	.54
MWD	3696.00	7.38	10.50	36.00	3687.37	201.13 N	38.30 E	3.97	1.07

KOP = 3725 MD. (12-1/4" HOLE)

MWD	3727.00	8.25	21.50	31.00	3718.58	205.17 N	39.46 E	4.43	5.57
MWD	3758.00	9.50	37.50	31.00	3749.21	209.32 N	41.80 E	6.05	8.89
MWD	3789.00	11.63	48.50	31.00	3779.68	213.47 N	45.67 E	9.17	9.43
MWD	3820.00	14.50	53.50	31.00	3809.87	217.88 N	51.12 E	13.79	9.94
MWD	3851.00	17.35	57.00	31.00	3839.68	222.73 N	58.11 E	19.37	9.70
MWD	3882.00	20.38	59.00	31.00	3869.01	228.04 N	66.60 E	27.35	9.99
MWD	3913.00	22.88	64.00	31.00	3897.83	233.49 N	76.64 E	36.33	10.01
MWD	3943.00	25.38	65.00	30.00	3925.20	238.77 N	87.71 E	46.36	8.44
MWD	3974.00	28.62	63.50	31.00	3952.32	244.88 N	100.39 E	57.33	10.68
MWD	4004.00	29.62	66.50	30.00	3979.03	251.05 N	113.61 E	69.83	5.90

DATADRIIL

WINTERSHALL ENERGY COMPANY
UTE MOUNTAIN #29-14 HORIZONTAL

SECTION-29-131N-R14W
SAN JUAN COUNTY NEW MEXICO

TYPE OF SURVEY	MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T AZIMUTH (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	DOGLEG SEVERITY (DEG/100')
MWD	4035.00	30.50	72.00	31.00	4065.86	256.55 N	128.13 E	85.12	9.33
MWD	4066.00	32.00	76.00	31.00	4092.36	260.39 N	143.59 E	97.71	9.36
MWD	4098.00	34.25	79.50	32.00	4059.16	254.69 N	160.67 E	113.33	9.23
MWD	4123.00	35.13	83.50	30.00	4093.67	267.24 N	177.77 E	130.55	9.91
MWD	4153.00	36.38	88.00	30.00	4107.79	268.57 N	195.56 E	147.67	9.27
MWD	4188.00	38.50	91.50	30.00	4131.53	268.55 N	213.90 E	165.73	8.94
MWD	4219.00	40.38	93.50	31.00	4155.53	267.78 N	233.67 E	185.37	8.71
MWD	4251.00	43.75	94.00	32.00	4179.04	266.37 N	255.17 E	206.30	9.03
MWD	4287.00	46.62	95.50	35.00	4204.41	264.26 N	280.61 E	232.24	8.50
MWD	4318.00	47.50	96.00	31.00	4225.53	261.99 N	303.19 E	254.38	3.07
MWD	4349.00	47.25	96.00	31.00	4246.52	259.60 N	325.88 E	277.64	.81
MWD	4369.00	46.75	95.00	20.00	4260.16	258.00 N	340.44 E	292.23	4.43

9-5/8 CASING SET AT 4435 MD.
8-3/4 INCH HOLE (AIR MIST)

MWD	4474.00	46.00	94.50	105.00	4332.61	251.31 N	416.18 E	367.36	.79
MWD	4505.00	45.75	94.50	31.00	4354.19	250.16 N	438.37 E	390.12	.91
MWD	4530.00	45.63	94.50	25.00	4371.65	248.76 N	456.20 E	407.93	.48
MWD	4561.00	45.63	94.00	31.00	4393.33	247.11 N	478.30 E	429.39	1.15
MWD	4594.00	45.38	97.00	33.00	4416.46	244.36 N	501.73 E	453.47	6.53
MWD	4625.00	48.75	96.00	31.00	4437.57	242.29 N	524.27 E	476.13	11.12
MWD	4656.00	54.00	98.00	31.00	4456.31	239.34 N	548.30 E	500.31	17.67
MWD	4686.00	58.75	98.50	30.00	4473.52	235.76 N	573.02 E	525.27	15.89
MWD	4715.00	63.38	98.00	29.00	4487.55	232.12 N	598.13 E	550.64	16.04
MWD	4747.00	68.13	96.00	32.00	4500.69	228.56 N	627.08 E	579.78	15.90
MWD	4776.00	73.63	94.00	29.00	4510.18	226.17 N	654.36 E	607.97	20.05
MWD	4807.00	78.25	93.50	31.00	4517.71	224.21 N	684.36 E	636.98	14.99
MWD	4839.00	80.88	94.50	32.00	4523.51	222.31 N	715.75 E	668.29	8.77
MWD	4870.00	81.75	95.00	31.00	4528.19	219.47 N	746.29 E	698.82	3.23
MWD	4901.00	82.13	95.50	31.00	4532.53	216.67 N	776.86 E	729.42	2.01

TOP OF G-5 AT 4930 MD.

MWD	4932.00	83.25	95.50	31.00	4536.48	213.72 N	807.46 E	760.09	3.61
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DATADRIIL

WINTERSHALL ENERGY COMPANY
SIE MOUNTAIN #28-14 HORIZONTALSECTION-28-TS1N-R14J
SAN JUAN COUNTY NEW MEXICO

TYPE OF SURVEY	MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T AZIMUTH (DEG)	COURSE LENGTH (FT)	TOTAL VERTICAL DEPTH	T O T A L RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	BOGLES SEVERITY (DEG/100')
MWD	4961.00	95.00	95.50	29.00	4539.45	210.95 N	836.17 E	788.86	6.03
MWD	4993.00	97.00	95.00	32.00	4541.58	208.03 N	867.96 E	820.68	6.44
MWD	5024.00	99.13	95.50	31.00	4542.72	205.20 N	898.31 E	851.57	7.06
MWD	5055.00	99.88	95.50	31.00	4542.99	202.23 N	929.67 E	882.49	2.42
MWD	5081.00	99.38	95.50	26.00	4543.05	199.74 N	955.55 E	908.42	0.00
MWD	5111.00	90.50	95.00	30.00	4542.35	196.39 N	985.42 E	938.33	2.65
MWD	5175.00	90.00	95.50	64.00	4542.67	191.13 N	1049.15 E	1002.14	1.10
MWD	5205.00	89.75	95.50	30.00	4542.73	188.26 N	1079.01 E	1032.36	.93
MWD	5236.00	89.75	95.50	31.00	4542.87	185.29 N	1109.87 E	1062.98	0.00
MWD	5268.00	89.38	96.00	32.00	4543.11	182.09 N	1141.71 E	1094.90	1.94
MWD	5299.00	89.60	95.50	31.00	4543.55	178.98 N	1172.55 E	1125.33	2.03
MWD	5330.00	88.38	95.50	31.00	4544.26	176.01 N	1203.40 E	1156.74	2.00
MWD	5361.00	87.75	96.00	31.00	4545.31	172.90 N	1234.22 E	1187.55	2.59
MWD	5393.00	88.63	95.50	32.00	4546.32	169.70 N	1266.05 E	1219.55	3.16
MWD	5423.00	89.13	96.00	30.00	4546.90	166.59 N	1295.99 E	1249.48	2.36
MWD	5454.00	89.38	95.50	31.00	4547.31	163.59 N	1326.73 E	1280.40	1.30
MWD	5485.00	88.75	95.00	31.00	4547.81	160.75 N	1357.60 E	1311.31	2.59
MWD	5516.00	88.38	95.00	31.00	4548.45	158.05 N	1388.47 E	1342.20	.42
MWD	5548.00	87.38	94.50	32.00	4549.36	155.40 N	1420.35 E	1374.07	3.49
MWD	5577.00	88.25	94.50	29.00	4550.34	153.13 N	1449.24 E	1402.93	1.28

STATION AT 5678 = TO. (PROJECTED)

PROJ	5678.00	87.25	94.00	101.00	4554.30	145.65 N	1549.89 E	1503.40	1.11
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BOTTOM HOLE CLOSURE: 1556.72 Feet at 84.63 Degrees

***** CURRENT BOTTOM HOLE LOCATION *****
Calculated by DATADRILL's CADDIS System
* Vertical Section Plane: 99.67 Degrees
Radius of Curvature Method

WINTERSHALL ENERGY COMPANY
UTE MOUNTAIN #28-14 HORIZONTAL

SECTION-28-T31N-R14W
SAN JUAN COUNTY NEW MEXICO

-- CURRENT SURVEY --

Measure Depth:	5678.00 Feet	TVD (Vert Depth):	4554.30 Feet
Inclination:	87.25 Degr	* Vertical Section:	1503.40 Feet
Azimuth:	94.00 Degr		
		Total N/S Coord:	145.65 Feet
D.L.S.:	1.11 Degr/100 Feet	Total E/W Coord:	1549.89 Feet

BOTTOM HOLE CLOSURE: 1556.72 Feet @ 84.63 Degrees