

TMBR/SHARP DRILLING INC.
HILBURN #3

slot #1

LEA COUNTY, NEW MEXICO

SURVEY LISTING

by
Baker Hughes INTEQ

Your ref : MWD
Our ref : svy1863
License :

BHL #1
SUR: D-13-16s-36e, 510/N & 250/W
SIDE TRACK 1
BHL: D-13-16s-36e, 675/N & 599/W
API # 30-025-35596

Date printed : 16-Jan-2002
Date created : 10-Dec-2001
Last revised : 16-Jan-2002

Field is centred on n32 58 13.000,w103 14 15
Structure is centred on n32 58 13.000,w103 14 15

Slot location is n32 58 13.000,w103 14 15.000
Slot Grid coordinates are N 718448.687, E 836085.155
Slot local coordinates are 0.00 N 0.00 E

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

Reference North is Grid North

SURFACE 510' FNL + 250' FNL

BHL #1 @

11627 MD

11583.76' TVd

674.57' FNL + 598.83' FNL

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	0.00	0.00	0.00N	0.00E	0.00	0.00	836085.15	718448.69
100.00	0.20	240.68	100.00	0.09S	0.15W	0.20	-0.11	836085.00	718448.60
200.00	0.35	224.93	200.00	0.39S	0.52W	0.17	-0.33	836084.63	718448.30
300.00	0.40	231.87	300.00	0.82S	1.01W	0.07	-0.61	836084.14	718447.87
400.00	0.50	252.07	399.99	1.17S	1.70W	0.19	-1.11	836083.45	718447.52
500.00	0.25	201.37	499.99	1.51S	2.19W	0.39	-1.44	836082.96	718447.18
600.00	0.30	192.82	599.99	1.96S	2.33W	0.06	-1.38	836082.82	718446.72
700.00	0.32	181.87	699.99	2.50S	2.40W	0.06	-1.24	836082.76	718446.19
800.00	0.25	168.63	799.99	2.99S	2.37W	0.10	-1.01	836082.79	718445.70
900.00	0.23	175.60	899.99	3.41S	2.31W	0.04	-0.80	836082.85	718445.28
1000.00	0.25	210.08	999.99	3.79S	2.40W	0.14	-0.74	836082.75	718444.89
1100.00	0.27	202.72	1099.98	4.20S	2.60W	0.04	-0.76	836082.55	718444.49
1200.00	0.32	206.33	1199.98	4.67S	2.82W	0.05	-0.78	836082.34	718444.02
1300.00	0.58	216.43	1299.98	5.33S	3.24W	0.27	-0.91	836081.91	718443.36
1400.00	0.75	222.87	1399.97	6.21S	3.99W	0.19	-1.25	836081.17	718442.47
1500.00	0.88	227.32	1499.96	7.21S	5.00W	0.14	-1.80	836080.16	718441.47
1600.00	0.78	227.65	1599.95	8.19S	6.06W	0.10	-2.40	836079.09	718440.49
1700.00	0.78	228.97	1699.94	9.10S	7.08W	0.02	-2.98	836078.07	718439.59
1800.00	0.63	228.93	1799.94	9.91S	8.01W	0.15	-3.52	836077.15	718438.78
1900.00	0.75	241.08	1899.93	10.58S	9.00W	0.19	-4.17	836076.16	718438.10
2000.00	0.85	244.57	1999.92	11.22S	10.24W	0.11	-5.07	836074.92	718437.47
2100.00	1.07	255.68	2099.91	11.77S	11.81W	0.29	-6.30	836073.34	718436.92
2200.00	1.10	241.68	2199.89	12.45S	13.56W	0.27	-7.65	836071.59	718436.23
2300.00	0.67	208.97	2299.88	13.42S	14.69W	0.65	-8.31	836070.46	718435.27
2400.00	0.70	195.48	2399.87	14.52S	15.14W	0.16	-8.29	836070.02	718434.17

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 385.71 on azimuth 115.26 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 112.90 degrees.

Grid is mercator - New Mexico East (3001).

Grid coordinates in FEET and computed using the Clarke - 1866 spheroid
Presented by Baker Hughes INTEQ

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
2500.00	0.62	145.25	2499.86	15.55S	14.99W	0.56	-7.76	836070.16	718433.13
2600.00	0.80	109.32	2599.86	16.23S	14.02W	0.47	-6.60	836071.13	718432.46
2700.00	0.98	95.37	2699.84	16.54S	12.51W	0.28	-5.09	836072.64	718432.15
2800.00	1.03	67.98	2799.83	16.28S	10.83W	0.48	-3.64	836074.32	718432.40
2900.00	1.10	50.53	2899.81	15.34S	9.26W	0.33	-2.56	836075.90	718433.35
3000.00	1.27	40.18	2999.79	13.88S	7.80W	0.27	-1.78	836077.36	718434.81
3100.00	1.38	41.87	3099.76	12.14S	6.28W	0.12	-1.06	836078.87	718436.55
3200.00	1.58	68.68	3199.73	10.74S	4.19W	0.71	0.32	836080.96	718437.95
3300.00	1.40	81.53	3299.70	10.06S	1.70W	0.38	2.35	836083.45	718438.63
3400.00	0.95	106.18	3399.68	10.11S	0.30E	0.67	4.21	836085.46	718438.58
3500.00	1.08	112.42	3499.66	10.70S	1.97E	0.17	5.98	836087.13	718437.99
3600.00	1.42	85.03	3599.64	10.95S	4.08E	0.68	8.02	836089.23	718437.74
3700.00	1.40	76.60	3699.61	10.56S	6.50E	0.21	10.10	836091.65	718438.13
3800.00	1.68	77.03	3799.57	9.95S	9.12E	0.28	12.27	836094.27	718438.74
3900.00	1.65	81.10	3899.53	9.40S	11.97E	0.12	14.68	836097.12	718439.29
4000.00	1.48	82.05	3999.49	9.00S	14.67E	0.17	17.01	836099.82	718439.69
4100.00	1.52	72.43	4099.46	8.42S	17.21E	0.25	19.13	836102.37	718440.27
4200.00	1.35	60.02	4199.43	7.43S	19.50E	0.35	20.85	836104.65	718441.26
4300.00	1.42	50.58	4299.40	6.05S	21.47E	0.24	22.14	836106.63	718442.64
4400.00	1.47	45.62	4399.37	4.37S	23.35E	0.13	23.21	836108.50	718444.32
4500.00	1.10	35.15	4499.34	2.69S	24.82E	0.44	23.91	836109.97	718446.00
4600.00	1.15	29.32	4599.32	1.03S	25.86E	0.12	24.22	836111.02	718447.66
4700.00	1.17	19.53	4699.30	0.81N	26.69E	0.20	24.28	836111.85	718449.50
4800.00	1.05	26.80	4799.28	2.59N	27.45E	0.18	24.28	836112.60	718451.28
4900.00	1.00	41.07	4899.27	4.07N	28.44E	0.26	24.61	836113.59	718452.75

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

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 385.71 on azimuth 115.26 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 112.90 degrees.

Grid is mercator - New Mexico East (3001).

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

Presented by Baker Hughes INTEQ

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
5000.00	1.00	45.67	4999.25	5.33N	29.63E	0.08	25.22	836114.79	718454.02
5100.00	0.90	52.80	5099.24	6.42N	30.88E	0.15	25.95	836116.04	718455.11
5200.00	0.97	54.23	5199.22	7.39N	32.20E	0.07	26.78	836117.35	718456.08
5300.00	1.02	55.37	5299.21	8.39N	33.61E	0.05	27.70	836118.77	718457.08
5400.00	1.10	53.58	5399.19	9.46N	35.12E	0.09	28.67	836120.27	718458.15
5500.00	1.32	56.78	5499.17	10.67N	36.86E	0.23	29.80	836122.01	718459.35
5600.00	1.03	51.02	5599.15	11.86N	38.52E	0.31	30.87	836123.67	718460.55
5700.00	1.13	50.05	5699.13	13.06N	39.97E	0.10	31.74	836125.13	718461.75
5800.00	1.25	52.75	5799.11	14.35N	41.60E	0.13	32.73	836126.75	718463.04
5900.00	1.07	54.13	5899.09	15.56N	43.22E	0.18	33.76	836128.38	718464.25
6000.00	1.00	51.65	5999.07	16.65N	44.66E	0.08	34.66	836129.82	718465.34
6100.00	0.82	47.33	6099.06	17.68N	45.87E	0.19	35.38	836131.03	718466.36
6200.00	0.68	51.32	6199.05	18.53N	46.86E	0.15	35.96	836132.02	718467.22
6300.00	0.57	64.32	6299.05	19.12N	47.77E	0.18	36.57	836132.93	718467.81
6400.00	0.57	67.78	6399.04	19.52N	48.68E	0.03	37.25	836133.84	718468.21
6500.00	0.50	76.35	6499.04	19.81N	49.57E	0.11	37.95	836134.72	718468.50
6600.00	0.48	69.03	6599.03	20.07N	50.38E	0.07	38.60	836135.54	718468.75
6700.00	0.48	82.00	6699.03	20.27N	51.19E	0.11	39.26	836136.34	718468.96
6800.00	0.40	94.37	6799.03	20.31N	51.95E	0.12	39.95	836137.11	718468.99
6900.00	0.53	97.35	6899.02	20.22N	52.76E	0.13	40.73	836137.91	718468.91
7000.00	0.50	99.15	6999.02	20.09N	53.65E	0.03	41.60	836138.80	718468.78
7100.00	0.53	117.92	7099.02	19.81N	54.49E	0.17	42.49	836139.64	718468.49
7200.00	0.52	112.27	7199.01	19.42N	55.31E	0.05	43.40	836140.47	718468.10
7300.00	0.73	120.40	7299.01	18.92N	56.28E	0.23	44.48	836141.44	718467.61
7400.00	0.80	129.52	7399.00	18.16N	57.37E	0.14	45.79	836142.53	718466.84

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

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 385.71 on azimuth 115.26 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 112.90 degrees.

Grid is mercator - New Mexico East (3001).

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

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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
7500.00	1.12	144.22	7498.98	16.92N	58.48E	0.40	47.29	836143.64	718465.61
7600.00	1.07	169.27	7598.96	15.21N	59.23E	0.48	48.64	836144.38	718463.90
7700.00	1.17	208.87	7698.95	13.40N	58.91E	0.76	49.05	836144.06	718462.08
7800.00	1.15	215.62	7798.93	11.69N	57.83E	0.14	48.73	836142.99	718460.37
7900.00	1.30	226.17	7898.90	10.09N	56.43E	0.27	48.06	836141.58	718458.77
8000.00	1.32	229.13	7998.88	8.55N	54.74E	0.07	47.10	836139.89	718457.23
8100.00	1.17	231.92	8098.85	7.16N	53.06E	0.16	46.09	836138.22	718455.85
8200.00	1.05	226.60	8198.84	5.90N	51.59E	0.16	45.23	836136.75	718454.59
8300.00	0.60	208.40	8298.82	4.81N	50.68E	0.52	44.81	836135.83	718453.50
8400.00	0.52	176.15	8398.82	3.90N	50.46E	0.32	44.97	836135.62	718452.59
8500.00	0.63	165.22	8498.82	2.92N	50.63E	0.15	45.51	836135.79	718451.60
8600.00	0.72	161.60	8598.81	1.79N	50.97E	0.10	46.26	836136.13	718450.48
8700.00	0.65	158.98	8698.80	0.66N	51.37E	0.08	47.07	836136.53	718449.35
8800.00	0.65	164.25	8798.79	0.41S	51.73E	0.06	47.81	836136.88	718448.27
8900.00	0.60	161.47	8898.79	1.45S	52.05E	0.06	48.51	836137.20	718447.23
9000.00	0.53	170.52	8998.78	2.41S	52.29E	0.11	49.11	836137.45	718446.28
9100.00	0.58	177.45	9098.78	3.37S	52.39E	0.08	49.57	836137.55	718445.32
9200.00	0.60	168.80	9198.77	4.39S	52.52E	0.09	50.08	836137.67	718444.30
9300.00	0.82	184.87	9298.77	5.61S	52.56E	0.29	50.60	836137.71	718443.07
9400.00	0.77	201.58	9398.76	6.95S	52.25E	0.24	50.84	836137.40	718441.73
9500.00	1.02	198.88	9498.74	8.42S	51.71E	0.25	50.91	836136.87	718440.27
9600.00	0.83	197.08	9598.73	9.95S	51.21E	0.19	51.05	836136.37	718438.73
9700.00	0.73	189.53	9698.72	11.27S	50.89E	0.14	51.27	836136.05	718437.41
9800.00	0.83	181.28	9798.71	12.63S	50.77E	0.15	51.69	836135.93	718436.06
9900.00	1.13	179.00	9898.70	14.34S	50.77E	0.30	52.35	836135.93	718434.35

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

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 385.71 on azimuth 115.26 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 112.90 degrees.

Grid is mercator - New Mexico East (3001).

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

Presented by Baker Hughes INTEQ

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
9934.00	1.15	180.10	9932.69	15.01S	50.78E	0.09	52.62	836135.93	718433.67
<i>2nd Ko</i> 9970.00	0.80	168.30	9968.69	15.62S	50.83E	1.12	52.90	836135.98	718433.07
10001.00	1.70	172.20	9999.68	16.29S	50.94E	2.91	53.26	836136.09	718432.40
10032.00	2.50	165.20	10030.66	17.40S	51.17E	2.71	53.91	836136.33	718431.29
10063.00	2.60	159.50	10061.63	18.71S	51.59E	0.88	54.80	836136.74	718429.98
10094.00	3.08	151.50	10092.59	20.10S	52.23E	2.00	55.94	836137.39	718428.59
10125.00	3.96	150.70	10123.53	21.77S	53.15E	2.84	57.44	836138.31	718426.92
10156.00	4.66	140.90	10154.44	23.68S	54.47E	3.27	59.39	836139.63	718425.01
10188.00	5.10	146.20	10186.33	25.87S	56.08E	1.97	61.73	836141.24	718422.82
10219.00	5.70	153.90	10217.19	28.39S	57.53E	3.03	64.04	836142.68	718420.29
10250.00	6.20	147.30	10248.02	31.19S	59.11E	2.73	66.59	836144.26	718417.50
10282.00	6.60	141.60	10279.82	34.08S	61.19E	2.34	69.63	836146.34	718414.61
10313.00	7.00	133.10	10310.61	36.77S	63.67E	3.49	72.96	836148.83	718411.92
10344.00	8.00	126.70	10341.34	39.35S	66.78E	4.20	76.83	836151.93	718409.34
10375.00	8.80	122.60	10372.01	41.92S	70.51E	3.22	81.26	836155.66	718406.77
10407.00	9.40	120.20	10403.61	44.55S	74.83E	2.22	86.27	836159.98	718404.14
10438.00	9.70	119.10	10434.18	47.09S	79.30E	1.13	91.37	836164.45	718401.60
10469.00	10.40	118.80	10464.70	49.71S	84.03E	2.26	96.75	836169.19	718398.98
10501.00	11.00	118.40	10496.14	52.55S	89.25E	1.89	102.66	836174.40	718396.13
10532.00	11.40	116.60	10526.55	55.33S	94.59E	1.71	108.67	836179.74	718393.35
10563.00	11.50	116.00	10556.94	58.06S	100.11E	0.50	114.81	836185.26	718390.63
10595.00	11.60	117.70	10588.29	60.95S	105.82E	1.11	121.20	836190.98	718387.73
10626.00	11.90	117.30	10618.64	63.87S	111.42E	1.00	127.49	836196.58	718384.82
10657.00	12.40	118.40	10648.94	66.92S	117.19E	1.78	133.99	836202.34	718381.77
10689.00	12.70	119.80	10680.18	70.30S	123.26E	1.34	140.90	836208.42	718378.39

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

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 385.71 on azimuth 115.26 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 112.90 degrees.

Grid is mercator - New Mexico East (3001).

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

Presented by Baker Hughes INTEQ

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
10719.00	13.40	120.90	10709.40	73.72S	129.11E	2.48	147.62	836214.26	718374.96
10750.00	13.50	123.30	10739.55	77.55S	135.22E	1.83	154.74	836220.37	718371.13
10781.00	14.20	125.10	10769.65	81.73S	141.35E	2.65	162.01	836226.51	718366.96
10813.00	14.70	125.80	10800.64	86.36S	147.86E	1.66	169.81	836233.01	718362.33
10844.00	15.10	127.50	10830.60	91.12S	154.25E	1.91	177.55	836239.40	718357.57
10876.00	15.40	128.90	10861.47	96.32S	160.86E	1.48	185.67	836246.02	718352.36
10907.00	15.60	130.40	10891.34	101.61S	167.24E	1.45	193.60	836252.39	718347.08
10939.00	15.70	128.90	10922.16	107.12S	173.89E	1.30	201.86	836259.04	718341.57
10978.00	16.30	131.10	10959.65	114.03S	182.12E	2.19	212.14	836267.27	718334.66
11010.00	16.10	129.70	10990.38	119.82S	188.92E	1.37	220.65	836274.07	718328.87
11041.00	16.00	126.10	11020.17	125.08S	195.67E	3.23	228.92	836280.83	718323.61
11072.00	16.30	122.60	11049.95	129.94S	202.79E	3.29	237.37	836287.95	718318.75
11104.00	16.30	121.20	11080.66	134.69S	210.42E	1.23	246.24	836295.57	718314.00
11136.00	16.70	117.70	11111.34	139.15S	218.33E	3.35	255.27	836303.48	718309.54
11167.00	16.30	113.80	11141.07	142.97S	226.25E	3.80	264.06	836311.41	718305.71
11199.00	15.90	110.30	11171.81	146.31S	234.47E	3.28	272.92	836319.63	718302.38
11231.00	15.90	106.80	11202.59	149.10S	242.78E	3.00	281.66	836327.93	718299.59
11262.00	15.80	104.00	11232.41	151.34S	250.94E	2.49	290.05	836336.09	718297.34
11294.00	16.40	99.90	11263.16	153.17S	259.62E	4.02	298.76	836344.77	718295.51
11325.00	16.00	97.70	11292.93	154.50S	268.16E	2.36	307.15	836353.32	718294.19
11357.00	15.90	95.90	11323.70	155.54S	276.89E	1.58	315.60	836362.05	718293.15
11388.00	15.90	96.30	11353.51	156.44S	285.34E	0.35	323.73	836370.49	718292.24
11419.00	16.08	96.70	11383.31	157.41S	293.82E	0.68	331.92	836378.98	718291.28
11451.00	16.00	96.30	11414.06	158.41S	302.61E	0.43	340.40	836387.76	718290.28
11482.00	15.80	95.90	11443.88	159.31S	311.05E	0.74	348.53	836396.21	718289.37

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

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 385.71 on azimuth 115.26 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 112.90 degrees.

Grid is mercator - New Mexico East (3001).

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

Presented by Baker Hughes INTEQ

TMBR/SHARP DRILLING INC.
HILBURN #3,slot #1
,LEA COUNTY, NEW MEXICO

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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
11514.00	15.90	95.90	11474.66	160.21S	319.75E	0.31	356.89	836404.90 718288.47
11545.00	15.50	96.70	11504.51	161.13S	328.08E	1.47	364.93	836413.24 718287.56
11577.00	15.00	98.80	11535.38	162.26S	336.42E	2.33	373.05	836421.58 718286.42
11627.00	14.26	102.37	11583.76	164.57S	348.83E	2.33	385.38	836433.99 718284.11

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

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 385.71 on azimuth 115.26 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 112.90 degrees.

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MD	TVD	Rectangular Coords.	Comments in wellpath =====
			Comment
11627.00	11583.76	164.57S 348.83E	PROJ TO BIT

NO Targets associated with this wellpath