

DIST. 3
Form C-102

Revised October 12, 2005

DISTRICT I
1825 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Ave., Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29894		*Pool Code 72400		*Pool Name EAST BLANCO PICTURED CLIFFS	
*Property Code 22182		*Property Name JICARILLA 458-08			*Well Number 113
*GRID No. 013925		*Operator Name BLACK HILLS GAS RESOURCES			*Elevation 7151

¹⁰ Surface Location

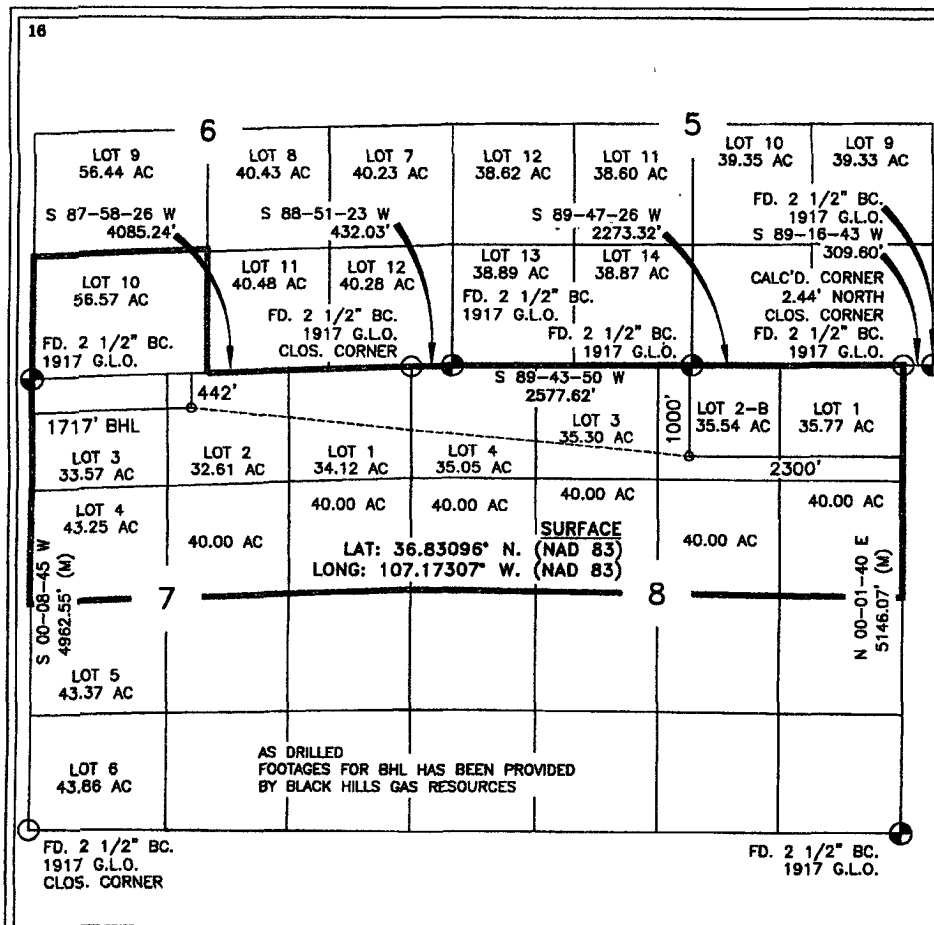
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2-B	8	30-N	3-W	2	1000	NORTH	2300	EAST	RIO ARRIBA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	7	30-N	3-W	2	442	NORTH	1717	WEST	RIO ARRIBA

¹² Dedicated Acres 583.43		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. R12707-INFILL	
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

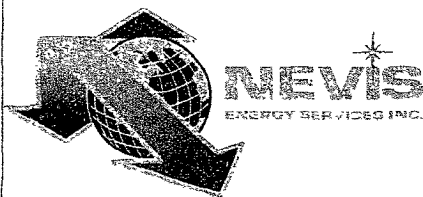
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unless mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or is a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Mike Pippin 12-20-07
Signature Date
MIKE PIPPIN
Printed Name

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

7-19-05
Date of Survey
Signature and Seal of Professional Surveyor:
8894
Certificate Number



Job Number: 71428
 Company: Black Hills Gas Resources
 Lease/Well: Jicarilla 458-08 #113
 Location: Rio Arriba County, NM
 Rig Name: Patt. 744
 RKB: 13'
 G.L. or M.S.L.: 7151'

State/Country: TX/USA
 Declination: 10.51934
 Grid: -0.33
 File name: Z:\BLACKH-1\71428J-1\45808113.SVY
 Date/Time: 30-Nov-07 / 10:24
 Curve Name: Jic 458-08 #113 surveys

30-039-29894

Surface 1000/W 2300/E Sec 8
 Bit 1 entry 929/W 2038/W Sec 8 md 4251 TVd 3774
 Bit 2 end of lat. 442/W 1777/W Sec 9 md 8754 TVd 3830

RCVD DEC 24 '07
 OIL CONS. DIV.
 DIST. 3

12-26-07

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 275.83
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
Surface									
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
First Nevis MWD Survey									
372.00	.10	215.60	372.00	.16	-.26	-.19	.32	215.60	.03
563.00	.40	181.50	563.00	.19	-1.07	-.30	1.11	195.89	.17
753.00	1.10	182.00	752.98	.02	-3.55	-.38	3.57	186.18	.37
942.00	1.60	181.20	941.93	-.31	-8.00	-.50	8.02	183.60	.26
1132.00	1.90	180.30	1131.84	-.83	-13.80	-.58	13.82	182.39	.16
1321.00	2.10	178.10	1320.72	-1.60	-20.40	-.48	20.40	181.34	.11
1502.00	2.50	174.20	1501.58	-2.84	-27.64	.03	27.64	179.93	.24
1684.00	2.30	178.50	1683.42	-4.11	-35.24	.53	35.24	179.14	.15
1863.00	2.00	177.30	1862.29	-5.03	-41.95	.77	41.96	178.95	.17
2044.00	2.10	175.10	2043.18	-6.11	-48.41	1.20	48.42	178.58	.07
2226.00	1.80	170.70	2225.07	-7.48	-54.55	1.95	54.59	177.95	.18
2406.00	1.70	177.10	2404.99	-8.62	-60.01	2.54	60.06	177.58	.12
2583.00	2.20	191.60	2581.88	-8.68	-65.96	1.99	65.99	178.27	.39
2762.00	2.40	199.50	2760.74	-7.45	-72.86	.05	72.86	179.96	.21
2863.00	2.30	197.10	2861.66	-6.55	-76.79	-1.25	76.80	180.94	.14
2895.00	2.70	212.70	2893.63	-6.09	-78.04	-1.85	78.06	181.36	2.46
2927.00	3.30	234.10	2925.58	-5.06	-79.21	-3.00	79.27	182.17	3.94
2959.00	5.10	254.10	2957.50	-3.05	-80.14	-5.12	80.30	183.65	7.17
2991.00	7.70	268.80	2989.30	.40	-80.58	-8.63	81.04	186.11	9.54
3022.00	10.10	275.50	3019.92	5.18	-80.36	-13.41	81.47	189.48	8.42
3054.00	12.60	281.30	3051.29	11.46	-79.41	-19.63	81.80	193.88	8.58

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3085.00	14.70	282.30	3081.42	18.74	-77.90	-26.79	82.38	198.98	6.82
3117.00	16.80	281.90	3112.21	27.37	-76.09	-35.28	83.87	204.88	6.57
3149.00	19.00	281.40	3142.66	37.15	-74.10	-44.91	86.65	211.22	6.89
3178.00	21.30	288.40	3169.89	47.00	-71.51	-54.54	89.93	217.33	11.48
3208.00	24.30	279.70	3197.55	58.48	-68.74	-65.80	95.16	223.75	15.02
3240.00	27.10	278.80	3226.38	72.33	-66.52	-79.50	103.66	230.08	8.83
3271.00	29.40	278.10	3253.69	86.99	-64.37	-94.01	113.93	235.60	7.50
3303.00	31.60	277.50	3281.26	103.22	-62.17	-110.10	126.44	240.55	6.94
3335.00	34.00	276.80	3308.16	120.55	-60.01	-127.30	140.74	244.76	7.59
3367.00	36.80	276.90	3334.24	139.08	-57.80	-145.70	156.75	248.36	8.75
3399.00	39.40	278.20	3359.42	158.81	-55.20	-165.27	174.25	251.53	8.50
3431.00	41.50	279.30	3383.77	179.54	-52.04	-185.79	192.94	254.35	6.93
3463.00	43.40	279.70	3407.38	201.10	-48.47	-207.09	212.69	256.83	6.00
3495.00	45.20	279.50	3430.28	223.40	-44.75	-229.13	233.45	258.95	5.64
3526.00	47.70	279.70	3451.64	245.81	-41.00	-251.28	254.60	260.73	8.08
3558.00	49.80	280.10	3472.73	269.81	-36.86	-274.98	277.44	262.37	6.63
3590.00	51.00	280.00	3493.13	294.40	-32.56	-299.25	301.02	263.79	3.76
3622.00	51.80	280.00	3513.10	319.34	-28.22	-323.88	325.11	265.02	2.50
3653.00	51.80	279.70	3532.27	343.64	-24.05	-347.89	348.72	266.05	.76
3685.00	51.80	279.30	3552.06	368.74	-19.90	-372.69	373.22	266.94	.98
3717.00	53.10	279.60	3571.56	394.06	-15.73	-397.71	398.02	267.73	4.13
3747.00	54.70	280.00	3589.23	418.24	-11.61	-421.60	421.76	268.42	5.44
3779.00	56.90	280.20	3607.22	444.63	-6.96	-447.65	447.71	269.11	6.89
3810.00	59.30	280.40	3623.60	470.87	-2.26	-473.54	473.55	269.73	7.76
3841.00	61.50	280.20	3638.91	497.74	2.56	-500.06	500.07	270.29	7.12
3872.00	63.60	280.00	3653.20	525.17	7.38	-527.15	527.20	270.80	6.80
3904.00	65.90	280.10	3666.85	554.03	12.44	-555.64	555.78	271.28	7.19
3935.00	68.20	279.40	3678.94	582.51	17.27	-583.77	584.03	271.69	7.71
3961.00	69.90	280.20	3688.23	606.73	21.40	-607.70	608.08	272.02	7.14
3998.00	70.60	280.10	3700.73	641.45	27.54	-641.98	642.57	272.46	1.91
4029.00	70.60	280.10	3711.03	670.61	32.67	-670.76	671.56	272.79	.00
4061.00	70.60	280.10	3721.66	700.71	37.96	-700.48	701.51	273.10	.00
4092.00	70.70	279.80	3731.93	729.89	43.01	-729.29	730.56	273.38	.97
4125.00	71.10	279.50	3742.73	761.00	48.24	-760.03	761.56	273.63	1.49
4156.00	73.10	280.00	3752.26	790.43	53.24	-789.10	790.90	273.86	6.63
4188.00	75.60	281.20	3760.89	821.13	58.91	-819.39	821.50	274.11	8.61
4219.00	78.10	281.40	3767.94	851.18	64.82	-848.99	851.46	274.37	8.09
4251.00	80.20	281.80	3773.97	882.45	71.14	-879.77	882.64	274.62	6.68
4283.00	82.70	282.20	3778.72	913.90	77.72	-910.72	914.03	274.88	7.91
4314.00	84.10	282.80	3782.29	944.49	84.38	-940.78	944.56	275.13	4.91
4346.00	85.10	281.80	3785.30	976.14	91.17	-971.91	976.18	275.36	4.41
4378.00	85.40	281.60	3787.95	1007.87	97.64	-1003.14	1007.88	275.56	1.13
4408.00	85.40	281.40	3790.35	1037.62	103.60	-1032.44	1037.63	275.73	.66
4440.00	85.60	281.50	3792.86	1069.37	109.93	-1063.71	1069.37	275.90	.70
4471.00	85.80	281.60	3795.19	1100.13	116.12	-1093.99	1100.14	276.06	.72

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
4502.00	85.90	281.60	3797.43	1130.89	122.34	-1124.28	1130.92	276.21	.32
4593.00	85.90	279.50	3803.94	1221.35	138.96	-1213.51	1221.44	276.53	2.30
4623.00	86.10	280.00	3806.03	1251.20	144.02	-1243.00	1251.32	276.61	1.79
4652.00	86.50	280.40	3807.90	1280.06	149.15	-1271.49	1280.20	276.69	1.95
4682.00	86.60	280.73	3809.71	1309.90	154.64	-1300.92	1310.08	276.78	1.15
4712.00	86.60	280.80	3811.49	1339.74	160.23	-1330.34	1339.96	276.87	.23
4743.00	88.10	280.50	3812.92	1370.60	165.96	-1360.78	1370.86	276.95	4.93
4772.00	90.40	279.30	3813.30	1399.52	170.94	-1389.34	1399.82	277.01	8.95
4802.00	91.80	277.90	3812.72	1429.48	175.43	-1419.00	1429.80	277.05	6.60
4833.00	92.00	277.60	3811.70	1460.44	179.60	-1449.70	1460.78	277.06	1.16
4863.00	92.20	277.80	3810.60	1490.40	183.62	-1479.40	1490.76	277.08	.94
4923.00	92.30	278.10	3808.24	1550.32	191.91	-1538.78	1550.70	277.11	.53
4953.00	92.10	277.10	3807.09	1580.28	195.88	-1568.50	1580.68	277.12	3.40
4983.00	92.10	277.00	3805.99	1610.25	199.56	-1598.25	1610.66	277.12	.33
5013.00	92.10	276.85	3804.89	1640.23	203.17	-1628.01	1640.64	277.11	.50
5043.00	92.50	277.40	3803.69	1670.20	206.89	-1657.75	1670.61	277.11	2.27
5073.00	91.90	276.90	3802.54	1700.17	210.62	-1687.50	1700.59	277.11	2.60
5103.00	92.20	276.90	3801.46	1730.14	214.22	-1717.26	1730.57	277.11	1.00
5133.00	91.20	276.60	3800.57	1760.12	217.75	-1747.04	1760.56	277.10	3.48
5162.00	89.40	275.20	3800.42	1789.12	220.73	-1775.89	1789.55	277.09	7.86
5192.00	89.10	275.10	3800.81	1819.12	223.42	-1805.76	1819.53	277.05	1.05
5253.00	89.50	275.30	3801.56	1880.11	228.95	-1866.51	1880.50	276.99	.73
5314.00	90.00	275.70	3801.82	1941.11	234.80	-1927.22	1941.47	276.95	1.05
5344.00	90.70	276.20	3801.64	1971.11	237.91	-1957.06	1971.47	276.93	2.87
5374.00	91.10	276.50	3801.17	2001.10	241.22	-1986.87	2001.46	276.92	1.67
5404.00	89.50	275.30	3801.01	2031.10	244.31	-2016.71	2031.46	276.91	6.67
5435.00	89.40	275.20	3801.31	2062.10	247.14	-2047.58	2062.44	276.88	.46
5465.00	89.50	275.20	3801.60	2092.09	249.86	-2077.46	2092.43	276.86	.33
5495.00	89.90	275.50	3801.76	2122.09	252.66	-2107.33	2122.42	276.84	1.67
5525.00	90.30	275.50	3801.70	2152.09	255.53	-2137.19	2152.41	276.82	1.33
5556.00	88.20	274.70	3802.11	2183.08	258.29	-2168.06	2183.39	276.79	7.25
5586.00	87.70	274.40	3803.18	2213.06	260.67	-2197.95	2213.35	276.76	1.94
5616.00	87.70	274.30	3804.39	2243.02	262.94	-2227.84	2243.30	276.73	.33
5647.00	87.90	274.70	3805.58	2273.99	265.37	-2258.72	2274.25	276.70	1.44
5679.00	87.90	274.80	3806.75	2305.96	268.02	-2290.59	2306.21	276.67	.31
5710.00	87.80	274.80	3807.91	2336.94	270.61	-2321.46	2337.18	276.65	.32
5742.00	88.20	274.90	3809.03	2368.91	273.32	-2353.32	2369.14	276.62	1.29
5774.00	88.50	275.00	3809.95	2400.89	276.08	-2385.19	2401.11	276.60	.99
5805.00	88.70	275.40	3810.71	2431.88	278.89	-2416.05	2432.09	276.58	1.44
5868.00	88.80	275.30	3812.08	2494.87	284.76	-2478.76	2495.07	276.55	.22
5900.00	88.80	275.00	3812.75	2526.86	287.63	-2510.63	2527.05	276.54	.94
5931.00	89.20	275.40	3813.29	2557.85	290.44	-2541.49	2558.04	276.52	1.82
5963.00	89.50	275.60	3813.66	2589.85	293.51	-2573.34	2590.03	276.51	1.13
5994.00	89.60	275.40	3813.90	2620.85	296.48	-2604.20	2621.02	276.49	.72
6026.00	89.90	275.60	3814.04	2652.85	299.54	-2636.05	2653.02	276.48	1.13

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
6057.00	89.90	275.40	3814.09	2683.84	302.52	-2666.91	2684.01	276.47	.65
6089.00	90.10	275.70	3814.09	2715.84	305.61	-2698.76	2716.01	276.46	1.13
6121.00	90.10	275.70	3814.04	2747.84	308.79	-2730.60	2748.01	276.45	.00
6184.00	90.10	275.70	3813.93	2810.84	315.05	-2793.29	2811.00	276.43	.00
6216.00	90.90	275.60	3813.65	2842.84	318.20	-2825.13	2843.00	276.43	2.52
6247.00	91.20	275.80	3813.08	2873.84	321.27	-2855.98	2873.99	276.42	1.16
6278.00	91.50	275.80	3812.35	2904.83	324.41	-2886.81	2904.98	276.41	.97
6309.00	91.70	275.70	3811.48	2935.82	327.51	-2917.64	2935.96	276.40	.72
6340.00	90.30	274.90	3810.94	2966.81	330.37	-2948.50	2966.95	276.39	5.20
6371.00	90.30	274.90	3810.78	2997.80	333.02	-2979.39	2997.94	276.38	.00
6402.00	89.90	275.20	3810.73	3028.80	335.75	-3010.27	3028.93	276.36	1.61
6435.00	89.90	274.90	3810.78	3061.80	338.66	-3043.14	3061.92	276.35	.91
6467.00	88.10	274.70	3811.34	3093.79	341.33	-3075.02	3093.91	276.33	5.66
6499.00	87.70	274.20	3812.52	3125.76	343.81	-3106.90	3125.87	276.31	2.00
6531.00	87.90	274.60	3813.74	3157.72	346.27	-3138.78	3157.83	276.30	1.40
6562.00	88.30	274.30	3814.77	3188.70	348.67	-3169.67	3188.79	276.28	1.61
6594.00	88.70	274.60	3815.61	3220.68	351.15	-3201.57	3220.77	276.26	1.56
6625.00	89.00	274.70	3816.23	3251.66	353.67	-3232.46	3251.75	276.24	1.02
6657.00	89.10	274.60	3816.76	3283.65	356.26	-3264.35	3283.73	276.23	.44
6688.00	89.30	274.50	3817.19	3314.64	358.72	-3295.25	3314.72	276.21	.72
6720.00	89.50	274.60	3817.53	3346.63	361.26	-3327.15	3346.70	276.20	.70
6751.00	89.90	274.70	3817.69	3377.62	363.77	-3358.04	3377.69	276.18	1.33
6783.00	90.20	274.70	3817.66	3409.62	366.39	-3389.94	3409.68	276.17	.94
6814.00	90.30	274.60	3817.53	3440.61	368.90	-3420.83	3440.67	276.16	.46
6846.00	90.50	274.80	3817.31	3472.60	371.53	-3452.72	3472.66	276.14	.88
6878.00	90.50	274.70	3817.03	3504.60	374.18	-3484.61	3504.65	276.13	.31
6909.00	90.60	274.70	3816.73	3535.59	376.72	-3515.51	3535.63	276.12	.32
6941.00	90.70	274.70	3816.37	3567.58	379.34	-3547.40	3567.62	276.10	.31
6972.00	91.20	275.10	3815.85	3598.57	381.99	-3578.28	3598.61	276.09	2.07
7003.00	91.10	274.80	3815.23	3629.56	384.66	-3609.16	3629.60	276.08	1.02
7034.00	91.40	274.90	3814.55	3660.55	387.28	-3640.04	3660.58	276.07	1.02
7065.00	91.70	275.00	3813.71	3691.54	389.95	-3670.91	3691.57	276.06	1.02
7065.00	91.70	275.00	3813.71	3691.54	389.95	-3670.91	3691.57	276.06	256.23
7098.00	91.80	274.60	3812.71	3724.52	392.71	-3703.78	3724.54	276.05	1.25
7130.00	90.10	275.40	3812.18	3756.51	395.50	-3735.65	3756.53	276.04	5.87
7162.00	90.20	276.00	3812.09	3788.51	398.68	-3767.50	3788.53	276.04	1.90
7194.00	89.90	275.60	3812.06	3820.51	401.91	-3799.33	3820.53	276.04	1.56
7225.00	90.30	275.80	3812.01	3851.51	404.99	-3830.18	3851.53	276.04	1.44
7257.00	90.30	275.50	3811.84	3883.51	408.14	-3862.02	3883.53	276.03	.94
7288.00	90.60	275.50	3811.60	3914.50	411.12	-3892.88	3914.53	276.03	.97
7320.00	90.70	275.30	3811.24	3946.50	414.13	-3924.73	3946.52	276.02	.70
7351.00	91.10	275.50	3810.75	3977.50	417.04	-3955.59	3977.52	276.02	1.44
7383.00	89.20	276.00	3810.67	4009.49	420.25	-3987.43	4009.52	276.02	6.14
7414.00	88.80	276.00	3811.21	4040.49	423.49	-4018.26	4040.51	276.02	1.29
7456.00	88.90	277.00	3812.05	4082.48	428.24	-4059.98	4082.50	276.02	2.39

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
7486.00	89.00	277.00	3812.60	4112.47	431.90	-4089.75	4112.49	276.03	.33
7577.00	88.90	276.60	3814.27	4203.44	442.67	-4180.09	4203.47	276.05	.45
7647.00	89.00	276.50	3815.55	4273.42	450.65	-4249.62	4273.45	276.05	.20
7678.00	89.00	276.30	3816.09	4304.41	454.11	-4280.43	4304.45	276.06	.65
7708.00	88.90	276.10	3816.64	4334.41	457.35	-4310.25	4334.44	276.06	.75
7768.00	88.70	275.80	3817.90	4394.39	463.57	-4369.91	4394.43	276.06	.60
7829.00	88.80	276.00	3819.23	4455.38	469.84	-4430.57	4455.41	276.05	.37
7890.00	88.70	276.00	3820.56	4516.37	476.21	-4491.22	4516.40	276.05	.16
7952.00	88.70	276.10	3821.97	4578.35	482.74	-4552.86	4578.38	276.05	.16
8015.00	88.30	275.50	3823.61	4641.33	489.11	-4615.52	4641.36	276.05	1.14
8078.00	88.00	275.10	3825.65	4704.29	494.92	-4678.22	4704.32	276.04	.79
8142.00	89.90	275.80	3826.82	4768.28	501.00	-4741.91	4768.31	276.03	3.16
8204.00	89.80	275.20	3826.98	4830.27	506.94	-4803.63	4830.30	276.02	.98
8267.00	90.20	275.50	3826.98	4893.27	512.82	-4866.35	4893.30	276.02	.79
8328.00	90.10	275.20	3826.82	4954.27	518.51	-4927.09	4954.29	276.01	.52
8391.00	90.20	275.70	3826.66	5017.27	524.49	-4989.80	5017.29	276.00	.81
8454.00	89.90	275.70	3826.60	5080.27	530.75	-5052.49	5080.29	276.00	.48
8515.00	89.70	275.50	3826.82	5141.27	536.70	-5113.20	5141.29	275.99	.46
8581.00	89.40	274.70	3827.33	5207.26	542.57	-5178.93	5207.28	275.98	1.29
Last MWD Survey									
8644.00	89.20	275.00	3828.10	5270.24	547.89	-5241.70	5270.26	275.97	.57
Survey Projected to TD									
8754.00	88.90	275.50	3829.93	5380.22	557.96	-5351.23	5380.24	275.95	.53