



Job Number: 12223
 Company: Unit Petroleum
 Lease/Well: Debes # 1-29H
 Location: Reno County
 Rig Name: Unit # 331
 RKB: 14
 G.L. or M.S.L.: 1784

State/Country: Kansas
 Declination: 4.80
 Grid: -0.02
 File name: P:\SURVEYS\UNIT\12223R3.SVY
 Date/Time: 10-Dec-12 / 07:53
 Curve Name: As Drilled

Inwell Inc

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 180.00
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

<i>Measured Depth FT</i>	<i>Incl Angle Deg</i>	<i>Drift Direction Deg</i>	<i>True Vertical Depth</i>	<i>N-S FT</i>	<i>E-W FT</i>	<i>Vertical Section FT</i>	<i>Dogleg Severity Deg/100</i>
3237.00	.50	162.30	3236.91	-4.55	-9.84	4.55	.00
3282.00	.50	144.00	3281.91	-4.90	-9.66	4.90	.35
3313.00	1.20	168.50	3312.90	-5.32	-9.52	5.32	2.49
3344.00	3.00	184.20	3343.88	-6.45	-9.52	6.45	6.04
3376.00	5.70	191.10	3375.79	-8.85	-9.88	8.85	8.58
3407.00	8.40	193.90	3406.55	-12.55	-10.72	12.55	8.78
3438.00	11.40	193.00	3437.09	-17.74	-11.96	17.74	9.69
3470.00	13.90	193.50	3468.31	-24.56	-13.57	24.56	7.82
3502.00	16.40	193.40	3499.19	-32.69	-15.51	32.69	7.81
3534.00	19.20	193.50	3529.66	-42.21	-17.79	42.21	8.75
3566.00	22.40	193.00	3559.57	-53.27	-20.39	53.27	10.02
3598.00	25.50	192.90	3588.81	-65.92	-23.30	65.92	9.69
3629.00	29.00	192.20	3616.36	-79.78	-26.38	79.78	11.34

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
3661.00	32.10	191.70	3643.92	-95.69	-29.74	95.69	9.72
3693.00	35.50	190.80	3670.51	-113.15	-33.21	113.15	10.74
3724.00	38.90	190.10	3695.20	-131.58	-36.60	131.58	11.05
3756.00	42.40	189.80	3719.47	-152.11	-40.20	152.11	10.95
3787.00	45.90	189.10	3741.71	-173.40	-43.74	173.40	11.40
3818.00	49.50	188.20	3762.57	-196.07	-47.18	196.07	11.81
3850.00	52.00	188.10	3782.82	-220.60	-50.70	220.60	7.82
3881.00	52.50	187.90	3801.79	-244.87	-54.11	244.87	1.69
3913.00	52.80	187.40	3821.21	-270.08	-57.49	270.08	1.56
3944.00	52.90	186.30	3839.93	-294.61	-60.44	294.61	2.85
3976.00	53.10	186.10	3859.19	-320.02	-63.20	320.02	.80
4008.00	53.80	185.70	3878.24	-345.59	-65.84	345.59	2.41
4040.00	56.30	185.63	3896.57	-371.69	-68.43	371.69	7.81
4071.00	59.80	186.00	3912.98	-397.85	-71.10	397.85	11.34
4102.00	63.40	186.00	3927.72	-424.97	-73.95	424.97	11.61
4134.00	66.70	185.60	3941.21	-453.83	-76.88	453.83	10.37
4166.00	70.00	185.20	3953.02	-483.43	-79.67	483.43	10.38
4197.00	73.20	184.90	3962.80	-512.73	-82.26	512.73	10.36
4229.00	75.30	184.90	3971.49	-543.42	-84.89	543.42	6.56
4260.00	77.70	184.50	3978.72	-573.46	-87.36	573.46	7.84
4292.00	80.40	184.50	3984.80	-604.77	-89.83	604.77	8.44
4324.00	81.80	184.50	3989.75	-636.29	-92.31	636.29	4.37
4356.00	83.20	184.50	3993.93	-667.92	-94.80	667.92	4.37
4427.00	85.20	184.70	4001.10	-738.32	-100.46	738.32	2.83
4457.00	86.10	184.30	4003.38	-768.14	-102.81	768.14	3.28
4488.00	86.90	184.20	4005.27	-799.00	-105.10	799.00	2.60
4518.00	88.00	184.10	4006.61	-828.89	-107.27	828.89	3.68
4549.00	88.90	183.60	4007.45	-859.81	-109.35	859.81	3.32
4580.00	89.70	183.90	4007.82	-890.74	-111.38	890.74	2.76
4612.00	90.10	183.90	4007.88	-922.67	-113.55	922.67	1.25
4642.00	90.10	183.30	4007.83	-952.61	-115.44	952.61	2.00
4673.00	90.50	182.80	4007.67	-983.56	-117.09	983.56	2.07
4703.00	89.70	182.00	4007.61	-1013.54	-118.34	1013.54	3.77
4733.00	89.90	181.80	4007.72	-1043.52	-119.34	1043.52	.94

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
4764.00	90.60	181.90	4007.58	-1074.50	-120.34	1074.50	2.28
4795.00	90.40	181.60	4007.31	-1105.49	-121.29	1105.49	1.16
4826.00	90.40	181.30	4007.10	-1136.48	-122.07	1136.48	.97
4857.00	90.30	180.70	4006.91	-1167.47	-122.61	1167.47	1.96
4887.00	90.80	180.60	4006.62	-1197.47	-122.95	1197.47	1.70
4918.00	91.20	180.60	4006.08	-1228.46	-123.28	1228.46	1.29
4950.00	90.50	180.30	4005.60	-1260.46	-123.53	1260.46	2.38
4981.00	90.70	179.90	4005.28	-1291.45	-123.58	1291.45	1.44
5012.00	90.20	179.80	4005.03	-1322.45	-123.50	1322.45	1.64
5042.00	89.90	179.80	4005.01	-1352.45	-123.40	1352.45	1.00
5073.00	89.00	179.50	4005.31	-1383.45	-123.21	1383.45	3.06
5103.00	89.60	179.40	4005.67	-1413.45	-122.92	1413.45	2.03
5134.00	89.50	179.10	4005.92	-1444.44	-122.51	1444.44	1.02
5165.00	89.80	179.10	4006.11	-1475.44	-122.03	1475.44	.97
5196.00	90.00	179.10	4006.16	-1506.44	-121.54	1506.44	.65
5228.00	89.20	179.00	4006.38	-1538.43	-121.01	1538.43	2.52
5259.00	89.20	179.00	4006.82	-1569.42	-120.47	1569.42	.00
5290.00	89.40	179.10	4007.19	-1600.42	-119.95	1600.42	.72
5320.00	89.50	179.20	4007.48	-1630.41	-119.51	1630.41	.47
5351.00	89.70	179.10	4007.70	-1661.41	-119.05	1661.41	.72
5383.00	90.00	178.70	4007.78	-1693.40	-118.43	1693.40	1.56
5413.00	89.30	178.20	4007.97	-1723.39	-117.62	1723.39	2.87
5444.00	88.90	178.00	4008.45	-1754.37	-116.59	1754.37	1.44
5475.00	88.50	177.30	4009.16	-1785.33	-115.32	1785.33	2.60
5506.00	88.70	177.60	4009.91	-1816.29	-113.95	1816.29	1.16
5537.00	88.90	177.60	4010.56	-1847.26	-112.65	1847.26	.65
5568.00	89.00	177.50	4011.13	-1878.23	-111.32	1878.23	.46
5599.00	89.20	177.40	4011.62	-1909.19	-109.94	1909.19	.72
5630.00	89.70	178.00	4011.92	-1940.16	-108.70	1940.16	2.52
5661.00	89.60	177.50	4012.10	-1971.14	-107.48	1971.14	1.64
5692.00	90.40	178.00	4012.10	-2002.12	-106.27	2002.12	3.04
5723.00	90.30	178.20	4011.92	-2033.10	-105.24	2033.10	.72
5754.00	90.70	177.80	4011.64	-2064.08	-104.16	2064.08	1.82
5785.00	90.30	178.30	4011.37	-2095.06	-103.10	2095.06	2.07

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
5816.00	89.60	178.40	4011.40	-2126.05	-102.21	2126.05	2.28
5848.00	90.50	179.80	4011.37	-2158.04	-101.71	2158.04	5.20
5879.00	90.80	180.30	4011.02	-2189.04	-101.73	2189.04	1.88
5910.00	90.20	179.90	4010.75	-2220.04	-101.79	2220.04	2.33
5941.00	90.50	179.80	4010.56	-2251.04	-101.71	2251.04	1.02
5972.00	89.80	178.90	4010.48	-2282.03	-101.35	2282.03	3.68
6003.00	90.00	179.00	4010.53	-2313.03	-100.79	2313.03	.72
6034.00	90.60	178.70	4010.37	-2344.02	-100.16	2344.02	2.16
6065.00	89.90	178.20	4010.24	-2375.01	-99.33	2375.01	2.77
6097.00	90.30	177.80	4010.18	-2406.99	-98.21	2406.99	1.77
6128.00	89.30	177.30	4010.29	-2437.96	-96.88	2437.96	3.61
6159.00	89.70	177.00	4010.56	-2468.92	-95.34	2468.92	1.61
6190.00	90.60	177.60	4010.48	-2499.89	-93.88	2499.89	3.49
6221.00	90.90	177.30	4010.07	-2530.85	-92.50	2530.85	1.37
6252.00	90.20	176.70	4009.78	-2561.81	-90.88	2561.81	2.97
6283.00	89.90	176.70	4009.75	-2592.76	-89.10	2592.76	.97
6314.00	90.10	176.60	4009.75	-2623.70	-87.28	2623.70	.72
6346.00	89.30	176.60	4009.92	-2655.65	-85.39	2655.65	2.50
6376.00	89.40	176.20	4010.26	-2685.59	-83.50	2685.59	1.37
6408.00	88.90	176.70	4010.73	-2717.52	-81.52	2717.52	2.21
6439.00	88.90	176.60	4011.33	-2748.46	-79.71	2748.46	.32
6471.00	88.80	176.90	4011.97	-2780.40	-77.90	2780.40	.99
6502.00	89.00	176.70	4012.56	-2811.35	-76.17	2811.35	.91
6534.00	89.40	176.30	4013.01	-2843.29	-74.21	2843.29	1.77
6566.00	90.00	176.50	4013.18	-2875.22	-72.20	2875.22	1.98
6597.00	90.80	176.20	4012.96	-2906.16	-70.23	2906.16	2.76
6629.00	90.00	176.00	4012.74	-2938.08	-68.05	2938.08	2.58
6660.00	90.50	175.80	4012.60	-2969.00	-65.84	2969.00	1.74
6691.00	89.80	176.00	4012.52	-2999.93	-63.62	2999.93	2.35
6723.00	90.00	175.60	4012.58	-3031.84	-61.28	3031.84	1.40
6755.00	89.30	175.80	4012.77	-3063.75	-58.88	3063.75	2.28
6786.00	89.10	175.10	4013.21	-3094.65	-56.42	3094.65	2.35
6818.00	89.50	174.90	4013.60	-3126.52	-53.63	3126.52	1.40
6849.00	90.20	175.20	4013.68	-3157.41	-50.96	3157.41	2.46

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
6881.00	90.60	175.10	4013.45	-3189.29	-48.25	3189.29	1.29
6912.00	89.50	174.90	4013.43	-3220.17	-45.55	3220.17	3.61
6944.00	89.70	175.10	4013.65	-3252.05	-42.76	3252.05	.88
6975.00	89.70	174.80	4013.81	-3282.93	-40.03	3282.93	.97
7007.00	89.80	174.70	4013.95	-3314.80	-37.10	3314.80	.44
7038.00	90.10	174.70	4013.98	-3345.66	-34.24	3345.66	.97
7070.00	89.20	175.30	4014.18	-3377.54	-31.45	3377.54	3.38
7101.00	89.20	175.40	4014.61	-3408.43	-28.94	3408.43	.32
7133.00	89.50	175.20	4014.97	-3440.33	-26.32	3440.33	1.13
7165.00	89.90	174.80	4015.14	-3472.20	-23.53	3472.20	1.77
7197.00	90.00	174.50	4015.17	-3504.06	-20.54	3504.06	.99
7228.00	89.70	174.90	4015.25	-3534.93	-17.68	3534.93	1.61
7260.00	89.30	175.30	4015.53	-3566.81	-14.95	3566.81	1.77
7292.00	89.30	175.20	4015.92	-3598.70	-12.30	3598.70	.31
7323.00	89.60	175.40	4016.22	-3629.59	-9.76	3629.59	1.16
7354.00	90.40	174.90	4016.22	-3660.48	-7.14	3660.48	3.04
7386.00	91.10	174.80	4015.80	-3692.35	-4.26	3692.35	2.21
7417.00	90.30	174.40	4015.42	-3723.21	-1.35	3723.21	2.89
7449.00	89.90	174.70	4015.36	-3755.07	1.69	3755.07	1.56
7480.00	90.50	174.50	4015.25	-3785.93	4.61	3785.93	2.04
7511.00	91.20	174.10	4014.79	-3816.77	7.69	3816.77	2.60
7543.00	92.00	174.70	4013.90	-3848.61	10.81	3848.61	3.12
7574.00	93.50	175.60	4012.41	-3879.46	13.43	3879.46	5.64
7606.00	93.30	176.10	4010.52	-3911.32	15.74	3911.32	1.68
7638.00	92.60	176.20	4008.87	-3943.20	17.89	3943.20	2.21
7669.00	92.10	176.00	4007.60	-3974.10	19.99	3974.10	1.74
7701.00	92.60	176.20	4006.29	-4006.00	22.17	4006.00	1.68
7733.00	91.00	176.10	4005.28	-4037.91	24.31	4037.91	5.01
7765.00	89.30	176.00	4005.20	-4069.84	26.52	4069.84	5.32
7796.00	89.30	175.50	4005.58	-4100.75	28.82	4100.75	1.61
7827.00	89.40	175.60	4005.93	-4131.65	31.22	4131.65	.46
7859.00	89.60	175.20	4006.21	-4163.55	33.79	4163.55	1.40
7890.00	90.00	175.10	4006.31	-4194.44	36.41	4194.44	1.33
7922.00	90.20	174.60	4006.26	-4226.31	39.28	4226.31	1.68

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	Dogleg Severity Deg/100
7953.00	90.40	174.40	4006.10	-4257.17	42.25	4257.17	.91
7985.00	90.50	173.80	4005.84	-4289.00	45.54	4289.00	1.90
8016.00	90.50	174.00	4005.57	-4319.82	48.83	4319.82	.65
8048.00	90.70	173.40	4005.24	-4351.62	52.35	4351.62	1.98
8080.00	91.10	173.60	4004.74	-4383.41	55.97	4383.41	1.40
8111.00	91.40	173.60	4004.06	-4414.21	59.42	4414.21	.97
Projected to TD @ 8164' MD							
8164.00	91.40	173.60	4002.77	-4466.87	65.33	4466.87	.00