

Job Number: []	State/Country: []
Company: []	Declination: []
Lease/Well: []	Grid: []
Location: []	File name: D:\WINSERVE\JOBS\IP#5H.SVY
Rig Name: []	Date/Time: 17-Oct-11 / 19:17
RKB: []	Curve Name: Potts #5H As Drilled
G.L. or M.S.L.: []	

Scientific Drilling

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 348.85
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
108.00	.04	248.22	108.00	-.01	-.03	-.01	.04	248.23	.04
208.00	.08	268.31	208.00	-.03	-.14	.00	.14	258.07	.04
308.00	.14	324.27	308.00	.07	-.28	.12	.29	283.75	.12
408.00	.07	174.58	408.00	.11	-.34	.17	.36	287.21	.20
508.00	.16	288.27	508.00	.09	-.47	.18	.48	280.76	.20
608.00	.11	107.70	608.00	.10	-.51	.20	.52	281.49	.27
708.00	.06	244.14	708.00	.05	-.47	.14	.47	276.35	.16
808.00	.08	35.08	808.00	.09	-.47	.18	.48	280.31	.14
908.00	.14	164.83	908.00	.03	-.40	.10	.40	273.63	.20
1008.00	.05	261.83	1008.00	-.10	-.41	-.02	.43	256.59	.15
1108.00	.05	222.68	1108.00	-.14	-.49	-.04	.51	254.28	.03
1208.00	.50	296.27	1208.00	.02	-.91	.20	.91	271.53	.49
1308.00	.33	302.62	1308.00	.37	-1.54	.66	1.59	283.59	.18
1408.00	.56	293.94	1407.99	.73	-2.23	1.14	2.35	288.03	.24
1508.00	.78	303.24	1507.99	1.30	-3.25	1.90	3.50	291.79	.24
1608.00	1.50	312.58	1607.96	2.56	-4.78	3.43	5.42	298.14	.74
1708.00	1.76	310.71	1707.92	4.44	-6.91	5.70	8.21	302.75	.27
1808.00	2.00	308.74	1807.87	6.54	-9.43	8.24	11.48	304.72	.25
1908.00	1.81	322.65	1907.82	8.88	-11.75	10.99	14.73	307.09	.50
2008.00	1.93	328.73	2007.76	11.58	-13.58	13.99	17.85	310.45	.23
2108.00	2.21	332.86	2107.70	14.73	-15.34	17.42	21.27	313.85	.32
2208.00	2.24	332.02	2207.62	18.18	-17.13	21.15	24.98	316.69	.04
2308.00	2.21	321.88	2307.55	21.42	-19.24	24.74	28.79	318.07	.39
2408.00	2.34	322.20	2407.47	24.55	-21.68	28.28	32.75	318.55	.13

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
2508.00	2.55	322.53	2507.38	27.93	-24.29	32.10	37.01	318.99	.21
2608.00	2.98	314.96	2607.26	31.53	-27.48	36.25	41.82	318.93	.56
2708.00	1.96	310.27	2707.17	34.47	-30.62	39.74	46.11	318.38	1.04
2808.00	1.11	282.92	2807.13	35.79	-32.87	41.47	48.60	317.44	1.10
2908.00	.65	282.67	2907.12	36.13	-34.37	42.10	49.87	316.43	.46
3008.00	.56	279.77	3007.11	36.34	-35.41	42.50	50.74	315.75	.10
3108.00	.08	146.31	3107.11	36.37	-35.85	42.61	51.06	315.41	.62
3208.00	.90	108.92	3207.11	36.05	-35.07	42.15	50.29	315.80	.84
3308.00	2.10	75.88	3307.07	36.25	-32.55	41.86	48.71	318.08	1.43
3408.00	2.84	63.12	3406.98	37.81	-28.56	42.62	47.39	322.94	.92
3508.00	3.49	47.82	3506.83	40.98	-24.09	44.86	47.54	329.54	1.06
3608.00	4.40	46.69	3606.59	45.65	-19.05	48.47	49.47	337.35	.91
3708.00	4.92	47.07	3706.26	51.20	-13.12	52.77	52.86	345.63	.52
3808.00	5.12	45.97	3805.88	57.23	-6.77	57.46	57.63	353.25	.22
3908.00	5.24	43.56	3905.47	63.64	-.41	62.52	63.64	359.63	.25
4008.00	5.24	40.69	4005.05	70.41	5.71	67.98	70.64	4.64	.26
4108.00	5.21	43.95	4104.63	77.14	11.84	73.39	78.04	8.73	.30
4208.00	4.51	56.46	4204.28	82.58	18.27	77.49	84.58	12.47	1.27
4308.00	3.44	63.98	4304.04	86.07	24.24	79.76	89.42	15.73	1.19
4408.00	2.49	47.67	4403.90	88.85	28.54	81.65	93.32	17.81	1.26
4508.00	1.88	39.55	4503.83	91.58	31.19	83.82	96.74	18.81	.68
4608.00	1.04	55.03	4603.80	93.36	32.98	85.22	99.02	19.46	.92
4708.00	1.08	52.80	4703.78	94.45	34.48	86.00	100.55	20.05	.06
4808.00	1.01	56.07	4803.76	95.51	35.96	86.76	102.06	20.63	.09
4908.00	1.03	44.93	4903.75	96.64	37.32	87.60	103.60	21.12	.20
5008.00	.74	68.05	5003.74	97.52	38.56	88.22	104.86	21.57	.45
5108.00	.74	81.72	5103.73	97.85	39.79	88.31	105.64	22.13	.18
5208.00	.88	83.71	5203.72	98.03	41.20	88.21	106.34	22.79	.14
5308.00	.69	74.72	5303.71	98.27	42.54	88.19	107.09	23.41	.23
5408.00	.82	63.81	5403.70	98.75	43.76	88.42	108.01	23.90	.19
5479.87	.77	48.64	5475.56	99.29	44.59	88.80	108.85	24.18	.30
5520.00	.53	46.72	5515.69	99.60	44.93	89.03	109.26	24.28	.60
5552.00	.91	58.02	5547.69	99.84	45.25	89.20	109.61	24.38	1.26
5584.00	2.31	54.40	5579.67	100.35	45.99	89.56	110.38	24.62	4.38
5616.00	4.84	52.66	5611.61	101.54	47.59	90.42	112.14	25.11	7.91
5648.00	7.56	49.05	5643.42	103.74	50.25	92.06	115.27	25.85	8.58
5680.00	10.06	52.89	5675.04	106.81	54.07	94.33	119.71	26.85	8.02
5712.00	11.77	54.83	5706.46	110.37	58.97	96.89	125.14	28.11	5.46
5743.00	13.90	56.47	5736.68	114.25	64.66	99.59	131.28	29.51	6.97
5775.00	15.83	55.95	5767.61	118.82	71.48	102.75	138.66	31.03	6.05
5807.00	17.58	56.55	5798.26	123.93	79.13	106.28	147.03	32.56	5.50
5839.00	18.84	58.22	5828.66	129.31	87.55	109.94	156.16	34.10	4.26
Bottom Line									
5871.00	21.36	58.00	5858.70	135.12	96.89	113.83	166.27	35.64	7.88
5902.00	23.73	58.58	5887.33	141.37	107.00	118.01	177.29	37.12	7.68
5934.00	25.86	57.92	5916.38	148.43	118.41	122.73	189.87	38.58	6.71

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth			Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
				N-S FT	E-W FT		Distance FT	Direction Deg	
5966.00	27.46	56.74	5944.98	156.18	130.49	128.00	203.52	39.88	5.27
5998.00	30.03	55.44	5973.03	164.77	143.26	133.96	218.34	41.00	8.27
6030.00	32.30	56.30	6000.41	174.06	156.97	140.42	234.38	42.04	7.23
6062.00	34.36	55.94	6027.15	183.86	171.56	147.22	251.47	43.02	6.47
6094.00	35.89	56.76	6053.32	194.06	186.89	154.26	269.42	43.92	5.00
Bottom Line									
6125.00	37.70	56.13	6078.14	204.33	202.36	161.34	287.57	44.72	5.96
6157.00	39.37	56.07	6103.17	215.44	218.91	169.05	307.14	45.46	5.22
6189.00	41.47	56.14	6127.54	227.01	236.13	177.07	327.56	46.13	6.56
6220.00	42.05	53.54	6150.66	238.90	253.00	185.47	347.97	46.64	5.89
6252.00	42.28	48.91	6174.39	252.35	269.74	195.43	369.38	46.91	9.74
6284.00	43.14	43.99	6197.91	267.30	285.46	207.05	391.07	46.88	10.77
6316.00	43.53	40.49	6221.18	283.56	300.21	220.15	412.95	46.63	7.60
6347.00	43.94	37.14	6243.59	300.25	313.64	233.93	434.19	46.25	7.59
6379.00	44.63	34.87	6266.50	318.32	326.77	249.13	456.19	45.75	5.40
6410.00	45.70	32.85	6288.35	336.58	339.01	264.67	477.72	45.21	5.77
6442.00	47.12	30.10	6310.42	356.35	351.11	281.72	500.26	44.58	7.64
6473.00	48.30	27.58	6331.28	376.43	362.16	299.29	522.36	43.89	7.12
6505.00	49.44	24.62	6352.33	398.08	372.76	318.48	545.36	43.12	7.82
6537.00	49.95	21.93	6373.03	420.49	382.40	338.61	568.37	42.28	6.61
6569.00	50.90	18.80	6393.42	443.61	390.98	359.63	591.31	41.39	8.10
6600.00	52.09	16.31	6412.72	466.74	398.29	380.91	613.58	40.48	7.36
6631.00	53.56	14.23	6431.46	490.56	404.79	403.03	636.01	39.53	7.15
6662.00	55.71	13.75	6449.40	515.09	410.90	425.91	658.91	38.58	7.05
6693.00	58.06	13.89	6466.33	540.30	417.10	449.45	682.57	37.67	7.59
Bottom Line CK.									
6723.00	60.31	13.38	6481.70	565.34	423.17	472.84	706.18	36.82	7.64
6754.00	62.20	11.89	6496.61	591.86	429.11	497.71	731.05	35.94	7.41
6784.00	64.51	9.77	6510.06	618.19	434.15	522.57	755.41	35.08	9.96
6814.00	66.85	7.64	6522.42	645.21	438.28	548.28	779.99	34.19	10.13
6846.00	68.16	5.80	6534.66	674.57	441.73	576.42	806.34	33.22	6.71
6877.00	69.72	3.20	6545.80	703.41	444.00	604.27	831.82	32.26	9.30
6908.00	72.34	1.04	6555.88	732.70	445.08	632.80	857.29	31.28	10.72
6939.00	74.98	359.51	6564.60	762.45	445.22	661.96	882.92	30.28	9.74
6970.00	76.85	358.13	6572.14	792.51	444.60	691.57	908.70	29.29	7.42
7001.00	78.30	356.85	6578.82	822.75	443.27	721.50	934.56	28.31	6.18
7032.00	80.07	355.38	6584.63	853.13	441.21	751.70	960.46	27.35	7.37
7063.00	81.85	354.44	6589.50	883.62	438.49	782.14	986.44	26.39	6.48
7094.00	84.28	353.03	6593.25	914.20	435.13	812.80	1012.48	25.45	9.05
7125.00	87.31	351.21	6595.52	944.82	430.90	843.66	1038.44	24.52	11.39
7155.00	88.35	350.61	6596.65	974.43	426.16	873.62	1063.54	23.62	4.00
7186.00	88.89	350.64	6597.40	1005.00	421.11	904.60	1089.66	22.73	1.74
7216.00	89.29	349.15	6597.88	1034.53	415.85	934.59	1114.98	21.90	5.14
7278.00	89.97	347.38	6598.28	1095.23	403.24	996.58	1167.11	20.21	3.06
7340.00	90.77	345.98	6597.88	1155.56	388.96	1058.53	1219.27	18.60	2.60
7401.00	90.74	344.84	6597.07	1214.59	373.59	1119.42	1270.75	17.10	1.87
7462.00	91.11	343.24	6596.09	1273.23	356.82	1180.19	1322.28	15.66	2.69

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
7524.00	89.30	340.67	6595.87	1332.17	337.62	1241.74	1374.29	14.22	5.07
7586.00	89.16	339.97	6596.70	1390.54	316.74	1303.05	1426.16	12.83	1.15
Bottom Line CK.									
7647.00	89.83	340.03	6597.24	1447.86	295.88	1363.32	1477.78	11.55	1.10
7711.00	90.84	339.55	6596.86	1507.92	273.77	1426.52	1532.57	10.29	1.75
7775.00	91.98	339.07	6595.29	1567.77	251.16	1489.61	1587.76	9.10	1.93
7838.00	91.61	339.46	6593.32	1626.66	228.87	1551.70	1642.69	8.01	.85
7902.00	90.20	340.52	6592.30	1686.79	206.97	1614.93	1699.44	7.00	2.76
7965.00	90.54	341.09	6591.90	1746.29	186.26	1677.30	1756.19	6.09	1.05
8029.00	91.85	341.13	6590.56	1806.82	165.55	1740.71	1814.39	5.24	2.05
8093.00	91.55	341.28	6588.66	1867.38	144.94	1804.11	1873.00	4.44	.52
8157.00	89.50	341.17	6588.08	1927.97	124.34	1867.54	1931.98	3.69	3.21
8220.00	89.36	340.82	6588.70	1987.54	103.82	1929.94	1990.25	2.99	.60
8283.00	90.50	341.14	6588.78	2047.10	83.29	1992.35	2048.79	2.33	1.88
8347.00	90.03	341.49	6588.49	2107.72	62.79	2055.79	2108.66	1.71	.92
8411.00	89.73	341.77	6588.62	2168.46	42.62	2119.29	2168.88	1.13	.64
8475.00	90.91	341.61	6588.26	2229.22	22.52	2182.79	2229.33	.58	1.86
8539.00	90.34	341.81	6587.56	2289.98	2.43	2246.29	2289.98	.06	.94
8602.00	90.07	341.40	6587.34	2349.76	-17.45	2308.78	2349.83	359.57	.78
8666.00	91.95	341.93	6586.21	2410.50	-37.58	2372.27	2410.79	359.11	3.05
8730.00	91.78	342.40	6584.13	2471.39	-57.17	2435.80	2472.05	358.67	.78
8793.00	91.51	342.66	6582.32	2531.46	-76.07	2498.39	2532.60	358.28	.59
8857.00	90.67	343.08	6581.10	2592.61	-94.92	2562.03	2594.35	357.90	1.47
8920.00	90.47	342.59	6580.48	2652.80	-113.51	2624.68	2655.23	357.55	.84
8983.00	89.33	342.45	6580.59	2712.89	-132.44	2687.29	2716.12	357.21	1.82
9047.00	88.66	342.65	6581.71	2773.94	-151.62	2750.90	2778.08	356.87	1.09
9110.00	89.70	342.79	6582.61	2834.08	-170.34	2813.53	2839.20	356.56	1.67
9174.00	90.67	343.32	6582.40	2895.30	-188.99	2877.20	2901.47	356.27	1.73
9238.00	91.65	343.35	6581.11	2956.60	-207.34	2940.89	2963.86	355.99	1.53
9301.00	91.11	343.78	6579.59	3017.01	-225.16	3003.60	3025.40	355.73	1.10
9365.00	90.81	343.78	6578.52	3078.46	-243.03	3067.34	3088.03	355.49	.47
9428.00	91.81	343.12	6577.08	3138.83	-260.97	3130.05	3149.66	355.25	1.90
9492.00	90.67	342.66	6575.69	3199.98	-279.80	3193.68	3212.19	355.00	1.92
9555.00	90.47	342.40	6575.07	3260.07	-298.71	3256.30	3273.73	354.76	.52
Bottom Line CK.									
9619.00	91.75	342.44	6573.83	3321.07	-318.04	3319.88	3336.26	354.53	2.00
9683.00	90.34	342.30	6572.66	3382.05	-337.42	3383.46	3398.84	354.30	2.21
9747.00	90.10	341.58	6572.41	3442.90	-357.26	3447.00	3461.38	354.08	1.19
9811.00	90.74	340.17	6571.94	3503.36	-378.22	3510.37	3523.72	353.84	2.42
9874.00	89.56	341.15	6571.78	3562.80	-399.09	3572.73	3585.09	353.61	2.43
9938.00	89.40	341.49	6572.36	3623.43	-419.58	3636.17	3647.64	353.39	.59
10002.00	89.60	340.36	6572.92	3683.91	-440.50	3699.56	3710.16	353.18	1.79
10065.00	90.70	340.51	6572.75	3743.27	-461.59	3761.88	3771.63	352.97	1.76
10129.00	90.64	341.97	6572.00	3803.87	-482.18	3825.31	3834.31	352.78	2.28
10192.00	91.04	342.32	6571.08	3863.83	-501.49	3887.87	3896.24	352.60	.84
10256.00	89.53	342.30	6570.76	3924.80	-520.94	3951.45	3959.22	352.44	2.36
10320.00	89.43	342.66	6571.34	3985.83	-540.20	4015.06	4022.27	352.28	.58

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
10383.00	90.40	343.43	6571.44	4046.09	-558.57	4077.73	4084.46	352.14	1.97
10447.00	89.80	343.66	6571.33	4107.47	-576.70	4141.46	4147.75	352.01	1.00
10511.00	89.09	343.31	6571.95	4168.82	-594.89	4205.17	4211.05	351.88	1.24
10574.00	89.73	343.57	6572.59	4229.21	-612.85	4267.89	4273.38	351.75	1.10
10638.00	90.74	344.88	6572.33	4290.79	-630.25	4331.68	4336.83	351.64	2.58
10702.00	92.08	344.92	6570.76	4352.56	-646.91	4395.50	4400.38	351.55	2.09
10766.00	91.81	345.19	6568.58	4414.36	-663.41	4459.33	4463.93	351.45	.60
10830.00	90.07	344.55	6567.53	4476.13	-680.11	4523.16	4527.51	351.36	2.90
10893.00	89.60	344.88	6567.72	4536.90	-696.72	4586.00	4590.09	351.27	.91
10957.00	90.60	344.95	6567.60	4598.70	-713.38	4649.85	4653.70	351.18	1.57
11021.00	90.10	344.22	6567.21	4660.39	-730.39	4713.67	4717.28	351.09	1.38
11084.00	90.10	342.22	6567.10	4720.71	-748.57	4776.36	4779.69	350.99	3.17
11147.00	90.64	342.24	6566.70	4780.70	-767.80	4838.94	4841.96	350.88	.86
11210.00	89.03	342.10	6566.88	4840.67	-787.09	4901.51	4904.25	350.76	2.57
11274.00	89.06	342.11	6567.94	4901.57	-806.75	4965.06	4967.52	350.65	.05
11337.00	87.96	342.28	6569.58	4961.53	-826.01	5027.61	5029.82	350.55	1.77
11401.00	87.82	342.48	6571.94	5022.48	-845.37	5091.16	5093.13	350.45	.38
11465.00	88.45	342.54	6574.02	5083.49	-864.59	5154.73	5156.49	350.35	.99
11528.00	89.53	342.25	6575.13	5143.53	-883.65	5217.32	5218.88	350.25	1.77
11592.00	90.54	341.46	6575.09	5204.35	-903.58	5280.84	5282.21	350.15	2.00
11656.00	89.63	341.26	6575.00	5264.99	-924.03	5344.30	5345.46	350.05	1.46
11720.00	88.93	340.93	6575.80	5325.53	-944.77	5407.71	5408.69	349.94	1.21
11784.00	89.97	340.77	6576.42	5385.99	-965.76	5471.08	5471.89	349.83	1.64
11847.00	89.06	342.38	6576.95	5445.75	-985.67	5533.57	5534.24	349.74	2.94
11911.00	88.39	342.28	6578.37	5506.72	-1005.09	5597.14	5597.69	349.66	1.06
11974.00	88.99	342.92	6579.81	5566.82	-1023.93	5659.75	5660.20	349.58	1.39
12038.00	89.73	342.27	6580.53	5627.88	-1043.07	5723.36	5723.73	349.50	1.54
12102.00	90.91	343.93	6580.17	5689.12	-1061.67	5787.03	5787.33	349.43	3.18
12166.00	92.08	343.63	6578.50	5750.55	-1079.54	5850.76	5851.00	349.37	1.89
12229.00	90.71	344.07	6576.97	5811.04	-1097.06	5913.50	5913.69	349.31	2.28
12293.00	90.20	344.87	6576.46	5872.70	-1114.19	5977.31	5977.46	349.26	1.48
12357.00	91.54	345.35	6575.49	5934.54	-1130.64	6041.17	6041.29	349.21	2.22
12420.00	90.37	344.64	6574.44	5995.39	-1146.95	6104.01	6104.11	349.17	2.17
Bottom Line CK.									
12483.00	89.80	344.00	6574.35	6056.04	-1163.97	6166.82	6166.89	349.12	1.36
Straight Line Proj. To TD.									
12540.00	89.80	344.00	6574.54	6110.83	-1179.68	6223.61	6223.66	349.07	.00