



Gyroscopic Survey Report
for
K P KAUFFMAN COMPANY INC.

Well Location	WELD, CO
Well Name	VINCENT ROLLIE J#3
Rig Number	FMC HD 0325
Survey Date	12/9/2014
Latitude	40.1470310°N
Longitude	104.8366590°W
North Reference	True North
Grid Correction	None
Depth Reference	GROUND LEVEL (0.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 259.08Azim (deg)
Definitive Survey	ROLLIE VINCENT J#3 INRUN
Operator(s)	B. BURMAN

Well Notes

API-05-123-12556

Survey Report

Well Name: VINCENT ROLLIE J#3
Survey: ROLLIE VINCENT J#3 INRUN
Survey Date: 12/9/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
25.00	0.08	334.79	25.00	0.00	0.02	-0.01	0.32	0.02	334.79
50.00	0.16	335.02	50.00	0.02	0.06	-0.03	0.31	0.07	334.91
75.00	0.09	346.77	75.00	0.03	0.11	-0.05	0.30	0.12	336.79
100.00	0.17	329.57	100.00	0.04	0.16	-0.07	0.35	0.18	336.38
125.00	0.13	330.87	125.00	0.06	0.22	-0.10	0.14	0.24	334.71
150.00	0.16	329.32	150.00	0.08	0.28	-0.14	0.10	0.31	333.75
175.00	0.15	328.62	175.00	0.10	0.33	-0.17	0.02	0.37	332.89
200.00	0.14	330.42	200.00	0.13	0.39	-0.20	0.07	0.44	332.40
225.00	0.15	328.53	225.00	0.15	0.44	-0.23	0.06	0.50	332.03
250.00	0.14	329.81	250.00	0.17	0.50	-0.27	0.05	0.56	331.70
275.00	0.14	329.59	275.00	0.19	0.55	-0.30	0.02	0.62	331.51
300.00	0.18	256.18	300.00	0.24	0.57	-0.35	0.78	0.67	328.13
325.00	0.16	258.36	325.00	0.31	0.55	-0.42	0.10	0.69	322.37
350.00	0.17	258.29	350.00	0.38	0.54	-0.49	0.04	0.73	317.37
375.00	0.16	255.23	375.00	0.45	0.52	-0.56	0.04	0.77	312.70
400.00	0.22	255.45	400.00	0.54	0.50	-0.64	0.23	0.81	307.76
425.00	0.20	252.47	425.00	0.63	0.47	-0.73	0.09	0.87	302.91
450.00	0.16	263.95	450.00	0.71	0.46	-0.81	0.20	0.93	299.44
475.00	0.15	254.94	475.00	0.77	0.44	-0.87	0.12	0.98	296.92
500.00	0.22	255.29	500.00	0.85	0.42	-0.95	0.31	1.04	293.98
525.00	0.19	273.04	525.00	0.94	0.41	-1.04	0.28	1.12	291.68
550.00	0.16	270.75	550.00	1.02	0.42	-1.12	0.13	1.19	290.45
575.00	0.24	275.25	575.00	1.10	0.42	-1.20	0.31	1.27	289.32
600.00	0.22	279.45	600.00	1.19	0.43	-1.30	0.09	1.37	288.46
625.00	0.27	296.20	625.00	1.29	0.47	-1.40	0.35	1.48	288.48
650.00	0.27	311.39	650.00	1.37	0.53	-1.50	0.29	1.59	289.59
675.00	0.31	296.21	675.00	1.46	0.60	-1.60	0.35	1.71	290.59
700.00	0.30	285.33	700.00	1.57	0.65	-1.73	0.24	1.84	290.61
725.00	0.25	301.27	725.00	1.67	0.69	-1.84	0.36	1.96	290.73
750.00	0.26	301.91	750.00	1.75	0.75	-1.93	0.03	2.07	291.31
775.00	0.26	325.30	775.00	1.82	0.83	-2.01	0.42	2.17	292.42
800.00	0.27	281.49	800.00	1.89	0.89	-2.10	0.79	2.28	292.91
825.00	0.24	296.78	825.00	1.99	0.92	-2.20	0.30	2.39	292.71
850.00	0.24	295.42	849.99	2.07	0.97	-2.30	0.02	2.49	292.85
875.00	0.24	297.25	874.99	2.16	1.01	-2.39	0.03	2.60	292.99

Survey Report

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Survey: ROLLIE VINCENT J#3 INRUN
Survey Date: 12/9/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
900.00	0.28	289.86	899.99	2.25	1.06	-2.49	0.19	2.71	293.01
925.00	0.26	289.12	924.99	2.35	1.10	-2.60	0.06	2.83	292.86
950.00	0.30	287.52	949.99	2.46	1.14	-2.72	0.15	2.95	292.67
975.00	0.35	279.56	974.99	2.59	1.17	-2.86	0.29	3.09	292.24
1000.00	0.27	286.06	999.99	2.71	1.20	-2.99	0.38	3.22	291.83
1025.00	0.26	302.86	1024.99	2.80	1.24	-3.09	0.31	3.33	291.91
1050.00	0.28	297.07	1049.99	2.89	1.30	-3.19	0.13	3.45	292.18
1075.00	0.36	264.89	1074.99	3.02	1.32	-3.33	0.78	3.58	291.69
1100.00	0.30	274.61	1099.99	3.16	1.32	-3.47	0.32	3.71	290.84
1125.00	0.26	283.14	1124.99	3.27	1.34	-3.59	0.24	3.83	290.45
1150.00	0.30	282.82	1149.99	3.38	1.37	-3.71	0.15	3.95	290.22
1175.00	0.30	280.53	1174.99	3.50	1.39	-3.84	0.05	4.08	289.95
1200.00	0.31	285.26	1199.99	3.62	1.42	-3.96	0.11	4.21	289.73
1225.00	0.26	295.49	1224.99	3.73	1.46	-4.08	0.29	4.33	289.74
1250.00	0.28	282.70	1249.99	3.83	1.50	-4.19	0.25	4.45	289.72
1275.00	0.30	282.77	1274.99	3.95	1.53	-4.31	0.11	4.58	289.52
1300.00	0.28	283.85	1299.99	4.06	1.56	-4.44	0.09	4.70	289.35
1325.00	0.22	305.72	1324.99	4.15	1.60	-4.54	0.45	4.81	289.44
1350.00	0.25	292.04	1349.99	4.23	1.65	-4.63	0.24	4.91	289.63
1375.00	0.24	308.47	1374.99	4.31	1.70	-4.72	0.28	5.02	289.85
1400.00	0.30	291.28	1399.99	4.40	1.76	-4.82	0.40	5.13	290.06
1425.00	0.29	292.45	1424.99	4.51	1.81	-4.94	0.04	5.26	290.10
1450.00	0.27	293.62	1449.99	4.61	1.86	-5.05	0.11	5.38	290.17
1475.00	0.25	297.44	1474.99	4.70	1.90	-5.15	0.10	5.50	290.28
1500.00	0.23	303.50	1499.99	4.78	1.96	-5.24	0.13	5.60	290.46
1525.00	0.34	286.21	1524.99	4.88	2.01	-5.36	0.54	5.72	290.52
1550.00	0.33	285.49	1549.99	5.01	2.04	-5.50	0.03	5.86	290.41
1575.00	0.22	305.86	1574.99	5.11	2.09	-5.60	0.59	5.98	290.47
1600.00	0.29	291.77	1599.99	5.19	2.14	-5.70	0.38	6.09	290.60
1625.00	0.28	302.90	1624.99	5.29	2.20	-5.81	0.23	6.21	290.73
1650.00	0.33	283.21	1649.99	5.40	2.25	-5.93	0.46	6.34	290.76
1675.00	0.21	309.18	1674.99	5.49	2.29	-6.04	0.67	6.46	290.80
1700.00	0.18	310.59	1699.98	5.55	2.35	-6.10	0.10	6.54	291.05
1725.00	0.26	291.52	1724.98	5.62	2.39	-6.18	0.41	6.63	291.17
1750.00	0.21	308.61	1749.98	5.70	2.44	-6.27	0.34	6.73	291.29
1775.00	0.24	295.59	1774.98	5.77	2.50	-6.36	0.23	6.83	291.44



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 Survey: ROLLIE VINCENT J#3 INRUN
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MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
1800.00	0.17	325.42	1799.98	5.82	2.55	-6.42	0.50	6.91	291.63
1825.00	0.19	306.84	1824.98	5.87	2.60	-6.48	0.25	6.98	291.89
1850.00	0.22	310.69	1849.98	5.92	2.66	-6.55	0.15	7.07	292.10
1875.00	0.21	302.96	1874.98	5.99	2.72	-6.62	0.12	7.16	292.30
1900.00	0.09	2.50	1899.98	6.02	2.76	-6.66	0.75	7.21	292.51
1925.00	0.09	319.53	1924.98	6.02	2.79	-6.67	0.26	7.23	292.72
1950.00	0.16	299.00	1949.98	6.06	2.83	-6.72	0.32	7.29	292.82
1975.00	0.15	306.06	1974.98	6.11	2.86	-6.78	0.08	7.36	292.91
2000.00	0.07	303.60	1999.98	6.14	2.89	-6.82	0.34	7.40	292.99
2025.00	0.22	325.28	2024.98	6.17	2.94	-6.86	0.64	7.46	293.21
2050.00	0.27	323.24	2049.98	6.22	3.03	-6.92	0.18	7.55	293.63
2075.00	0.19	301.67	2074.98	6.28	3.10	-6.99	0.46	7.64	293.89
2100.00	0.12	313.86	2099.98	6.32	3.14	-7.04	0.29	7.71	294.00
2125.00	0.12	330.08	2124.98	6.35	3.18	-7.08	0.14	7.76	294.18
2150.00	0.16	290.35	2149.98	6.38	3.21	-7.12	0.41	7.81	294.27
2175.00	0.12	295.74	2174.98	6.43	3.23	-7.18	0.15	7.87	294.26
2200.00	0.10	293.07	2199.98	6.47	3.25	-7.22	0.10	7.92	294.26
2225.00	0.17	327.36	2224.98	6.50	3.29	-7.26	0.43	7.97	294.40
2250.00	0.15	281.11	2249.98	6.55	3.33	-7.31	0.51	8.04	294.50
2275.00	0.12	290.44	2274.98	6.60	3.35	-7.37	0.13	8.10	294.43
2300.00	0.11	293.11	2299.98	6.64	3.37	-7.42	0.08	8.15	294.41
2325.00	0.11	284.94	2324.98	6.68	3.38	-7.46	0.06	8.19	294.38
2350.00	0.07	309.88	2349.98	6.72	3.40	-7.49	0.22	8.23	294.38
2375.00	0.15	275.32	2374.98	6.76	3.41	-7.54	0.41	8.27	294.34
2400.00	0.12	264.37	2399.98	6.81	3.41	-7.60	0.17	8.33	294.18
2425.00	0.24	260.60	2424.98	6.89	3.40	-7.67	0.49	8.39	293.89
2450.00	0.32	255.57	2449.98	7.01	3.37	-7.79	0.34	8.49	293.41
2475.00	0.15	250.21	2474.98	7.11	3.35	-7.89	0.69	8.57	292.98
2500.00	0.27	238.87	2499.98	7.20	3.30	-7.97	0.51	8.63	292.52
2525.00	0.16	226.61	2524.98	7.28	3.25	-8.04	0.48	8.68	292.00
2550.00	0.26	237.65	2549.98	7.36	3.20	-8.12	0.43	8.72	291.50
2575.00	0.25	237.17	2574.98	7.46	3.14	-8.21	0.04	8.79	290.92
2600.00	0.34	238.93	2599.98	7.58	3.07	-8.32	0.36	8.86	290.27
2625.00	0.25	237.37	2624.98	7.70	3.00	-8.42	0.35	8.94	289.63
2650.00	0.46	244.98	2649.98	7.85	2.93	-8.56	0.86	9.05	288.91
2675.00	0.10	211.04	2674.98	7.96	2.87	-8.66	1.51	9.13	288.34

Survey Report

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Survey Date: 12/9/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
2700.00	0.39	245.80	2699.98	8.06	2.82	-8.75	1.24	9.19	287.85
2725.00	0.24	233.04	2724.98	8.19	2.75	-8.87	0.64	9.29	287.23
2750.00	0.18	236.75	2749.98	8.27	2.70	-8.95	0.27	9.34	286.78
2775.00	0.20	229.80	2774.98	8.35	2.65	-9.01	0.13	9.39	286.38
2800.00	0.31	240.42	2799.98	8.45	2.59	-9.10	0.49	9.46	285.86
2825.00	0.26	241.33	2824.98	8.57	2.53	-9.21	0.22	9.55	285.33
2850.00	0.19	232.89	2849.98	8.66	2.47	-9.30	0.32	9.62	284.90
2875.00	0.25	236.98	2874.98	8.75	2.42	-9.37	0.28	9.68	284.47
2900.00	0.08	166.11	2899.98	8.80	2.37	-9.42	0.96	9.71	284.15
2925.00	0.39	245.50	2924.98	8.88	2.32	-9.49	1.54	9.77	283.75
2950.00	0.30	233.45	2949.98	9.02	2.25	-9.62	0.47	9.88	283.15
2975.00	0.37	248.15	2974.98	9.16	2.18	-9.75	0.46	9.99	282.60
3000.00	0.36	243.59	2999.98	9.31	2.11	-9.89	0.13	10.12	282.06
3025.00	0.38	248.79	3024.98	9.47	2.05	-10.04	0.15	10.25	281.54
3050.00	0.34	251.66	3049.97	9.62	2.00	-10.19	0.15	10.38	281.09
3075.00	0.31	246.39	3074.97	9.76	1.95	-10.32	0.19	10.50	280.68
3100.00	0.38	253.89	3099.97	9.91	1.90	-10.46	0.36	10.63	280.27
3125.00	0.42	255.90	3124.97	10.09	1.85	-10.63	0.14	10.79	279.88
3150.00	0.50	254.61	3149.97	10.29	1.80	-10.82	0.35	10.97	279.44
3175.00	0.47	261.67	3174.97	10.50	1.76	-11.03	0.28	11.17	279.04
3200.00	0.59	271.11	3199.97	10.73	1.74	-11.26	0.60	11.39	278.80
3225.00	0.60	277.43	3224.97	10.98	1.76	-11.52	0.26	11.65	278.70
3250.00	0.61	282.18	3249.97	11.22	1.81	-11.78	0.21	11.92	278.73
3275.00	0.64	286.42	3274.97	11.47	1.88	-12.04	0.22	12.19	278.85
3300.00	0.63	285.64	3299.96	11.72	1.95	-12.31	0.04	12.46	279.01
3325.00	0.78	277.19	3324.96	12.00	2.01	-12.61	0.72	12.77	279.06
3350.00	0.89	278.80	3349.96	12.35	2.06	-12.97	0.43	13.14	279.03
3375.00	0.88	289.01	3374.96	12.70	2.15	-13.35	0.63	13.52	279.17
3400.00	0.89	291.44	3399.95	13.03	2.29	-13.71	0.16	13.90	279.47
3425.00	0.85	286.85	3424.95	13.35	2.41	-14.07	0.32	14.27	279.73
3450.00	0.80	286.01	3449.95	13.67	2.51	-14.41	0.19	14.63	279.90
3475.00	0.86	282.20	3474.95	14.00	2.60	-14.76	0.30	14.99	280.00
3500.00	0.86	280.51	3499.94	14.35	2.68	-15.13	0.10	15.36	280.03
3525.00	0.89	277.93	3524.94	14.70	2.74	-15.50	0.20	15.74	280.01
3550.00	0.92	276.21	3549.94	15.08	2.78	-15.89	0.17	16.14	279.94
3575.00	0.91	275.46	3574.93	15.46	2.83	-16.29	0.05	16.54	279.84



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MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
3600.00	0.94	275.54	3599.93	15.85	2.86	-16.70	0.11	16.94	279.73
3625.00	0.87	270.59	3624.93	16.23	2.89	-17.09	0.41	17.33	279.58
3650.00	0.91	272.05	3649.92	16.62	2.89	-17.48	0.18	17.72	279.40
3675.00	0.91	273.06	3674.92	17.00	2.91	-17.88	0.06	18.11	279.25
3700.00	0.91	276.33	3699.92	17.39	2.94	-18.28	0.21	18.51	279.15
3725.00	0.97	273.98	3724.91	17.78	2.98	-18.68	0.27	18.92	279.07
3750.00	0.96	272.49	3749.91	18.19	3.01	-19.10	0.11	19.34	278.94
3775.00	0.96	272.39	3774.91	18.60	3.02	-19.52	0.02	19.75	278.80
3800.00	1.01	272.06	3799.90	19.01	3.04	-19.95	0.20	20.18	278.66
3825.00	0.95	274.02	3824.90	19.43	3.06	-20.38	0.29	20.61	278.55
3850.00	1.04	272.01	3849.90	19.85	3.08	-20.81	0.38	21.04	278.43
3875.00	1.08	272.76	3874.89	20.30	3.10	-21.27	0.20	21.50	278.30
3900.00	1.11	272.76	3899.89	20.76	3.13	-21.75	0.11	21.97	278.18
3925.00	1.01	274.72	3924.88	21.21	3.16	-22.21	0.41	22.44	278.09
3950.00	0.97	274.09	3949.88	21.63	3.19	-22.64	0.17	22.87	278.02
3975.00	0.99	274.35	3974.88	22.04	3.22	-23.07	0.07	23.30	277.95
4000.00	0.95	273.34	3999.87	22.45	3.25	-23.49	0.17	23.72	277.88
4025.00	0.93	271.91	4024.87	22.85	3.27	-23.90	0.13	24.13	277.79
4050.00	0.98	271.17	4049.87	23.26	3.28	-24.32	0.21	24.54	277.68
4075.00	1.01	271.88	4074.86	23.68	3.29	-24.75	0.13	24.97	277.58
4100.00	1.16	270.76	4099.86	24.14	3.30	-25.22	0.63	25.44	277.46
4125.00	1.39	273.07	4124.85	24.68	3.32	-25.78	0.92	25.99	277.34
4150.00	1.13	284.85	4149.85	25.20	3.40	-26.32	1.44	26.54	277.36
4175.00	1.11	280.92	4174.84	25.65	3.51	-26.80	0.32	27.03	277.46
4200.00	1.27	274.39	4199.84	26.14	3.58	-27.31	0.82	27.55	277.46
4225.00	1.19	277.47	4224.83	26.65	3.63	-27.85	0.42	28.08	277.43
4250.00	1.25	273.50	4249.82	27.16	3.68	-28.37	0.42	28.61	277.40
4275.00	1.17	274.78	4274.82	27.67	3.72	-28.90	0.34	29.14	277.34
4300.00	1.26	273.98	4299.81	28.18	3.76	-29.43	0.39	29.67	277.28
4325.00	1.25	273.24	4324.81	28.71	3.80	-29.98	0.08	30.22	277.22
4350.00	1.35	271.75	4349.80	29.27	3.82	-30.54	0.42	30.78	277.13
4375.00	1.28	271.49	4374.79	29.83	3.84	-31.12	0.29	31.35	277.03
4400.00	1.34	272.18	4399.79	30.38	3.86	-31.69	0.25	31.92	276.94
4425.00	1.21	270.96	4424.78	30.93	3.87	-32.24	0.52	32.47	276.85
4450.00	1.16	273.66	4449.78	31.43	3.89	-32.76	0.31	32.99	276.77
4475.00	1.34	272.71	4474.77	31.96	3.92	-33.30	0.74	33.53	276.72

Well Name: VINCENT ROLLIE J#3
Survey: ROLLIE VINCENT J#3 INRUN
Survey Date: 12/9/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
4500.00	1.28	271.66	4499.76	32.51	3.94	-33.87	0.25	34.10	276.64
4525.00	1.29	272.18	4524.76	33.06	3.96	-34.44	0.06	34.66	276.56
4550.00	1.17	277.65	4549.75	33.58	4.01	-34.97	0.67	35.20	276.54
4575.00	1.17	277.19	4574.75	34.07	4.07	-35.48	0.04	35.71	276.55
4600.00	1.22	271.27	4599.74	34.57	4.11	-36.00	0.52	36.23	276.51
4625.00	1.38	274.36	4624.73	35.12	4.14	-36.57	0.71	36.80	276.46
4650.00	1.38	276.60	4649.73	35.70	4.20	-37.16	0.22	37.40	276.44
4675.00	1.27	279.95	4674.72	36.24	4.28	-37.73	0.53	37.98	276.47
4700.00	1.14	288.36	4699.71	36.72	4.41	-38.24	0.87	38.50	276.57
4725.00	1.36	283.62	4724.71	37.20	4.55	-38.77	0.96	39.03	276.70
4750.00	1.27	285.98	4749.70	37.72	4.70	-39.32	0.40	39.60	276.82
4775.00	1.15	288.96	4774.70	38.18	4.86	-39.83	0.54	40.12	276.95
4800.00	1.27	286.17	4799.69	38.65	5.02	-40.33	0.51	40.64	277.09
4825.00	1.30	286.17	4824.68	39.15	5.17	-40.87	0.15	41.19	277.21
4850.00	1.27	286.55	4849.68	39.65	5.33	-41.41	0.14	41.75	277.34
4875.00	1.24	289.26	4874.67	40.13	5.50	-41.93	0.27	42.29	277.47
4900.00	1.28	290.94	4899.67	40.60	5.69	-42.44	0.23	42.82	277.63
4925.00	1.21	293.79	4924.66	41.05	5.89	-42.94	0.39	43.35	277.81
4950.00	1.15	293.61	4949.65	41.47	6.10	-43.42	0.23	43.84	278.00
4975.00	1.23	290.91	4974.65	41.91	6.30	-43.90	0.40	44.35	278.16
5000.00	1.08	292.74	4999.64	42.33	6.48	-44.37	0.62	44.84	278.32
5025.00	1.14	288.39	5024.64	42.75	6.65	-44.82	0.41	45.31	278.44
5050.00	1.06	290.54	5049.63	43.16	6.81	-45.27	0.35	45.78	278.56
5075.00	0.97	277.89	5074.63	43.56	6.92	-45.70	0.97	46.22	278.62
5100.00	0.91	270.29	5099.63	43.96	6.95	-46.11	0.56	46.63	278.58
5125.00	0.83	268.17	5124.62	44.33	6.95	-46.49	0.36	47.00	278.50
5150.00	0.87	267.07	5149.62	44.69	6.93	-46.86	0.19	47.37	278.42
5175.00	0.76	256.90	5174.62	45.05	6.89	-47.21	0.72	47.71	278.30
5200.00	0.91	249.68	5199.62	45.41	6.78	-47.56	0.72	48.04	278.12
5225.00	0.93	244.96	5224.61	45.80	6.63	-47.92	0.31	48.38	277.87
5250.00	0.80	247.02	5249.61	46.17	6.47	-48.27	0.52	48.70	277.64
5275.00	0.85	241.56	5274.61	46.52	6.32	-48.59	0.38	49.00	277.41
5300.00	0.87	235.80	5299.61	46.87	6.12	-48.91	0.36	49.29	277.13
5325.00	0.90	235.85	5324.60	47.22	5.90	-49.23	0.10	49.59	276.84
5350.00	0.85	234.91	5349.60	47.57	5.69	-49.55	0.19	49.87	276.55
5375.00	0.81	232.90	5374.60	47.90	5.47	-49.84	0.21	50.14	276.27



Well Name: VINCENT ROLLIE J#3
 Survey: ROLLIE VINCENT J#3 INRUN
 Survey Date: 12/9/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
5400.00	0.90	238.35	5399.59	48.24	5.26	-50.15	0.48	50.42	275.99
5425.00	0.84	233.18	5424.59	48.59	5.05	-50.46	0.38	50.71	275.72
5450.00	0.84	233.37	5449.59	48.92	4.83	-50.76	0.02	50.99	275.44
5475.00	0.87	235.13	5474.59	49.26	4.61	-51.06	0.16	51.27	275.16
5500.00	0.67	227.65	5499.58	49.56	4.41	-51.32	0.88	51.51	274.91
5525.00	0.63	226.15	5524.58	49.80	4.21	-51.53	0.16	51.70	274.68
5550.00	0.60	222.23	5549.58	50.02	4.02	-51.71	0.22	51.87	274.45
5575.00	0.68	228.70	5574.58	50.25	3.83	-51.91	0.44	52.05	274.22
5600.00	0.69	226.34	5599.58	50.50	3.63	-52.13	0.12	52.26	273.98
5625.00	0.69	225.49	5624.58	50.75	3.42	-52.35	0.04	52.46	273.73
5650.00	0.68	230.09	5649.57	51.01	3.22	-52.57	0.22	52.67	273.50
5675.00	0.72	229.82	5674.57	51.28	3.02	-52.81	0.14	52.89	273.27
5700.00	0.74	239.47	5699.57	51.57	2.84	-53.06	0.49	53.14	273.06
5725.00	0.80	240.67	5724.57	51.88	2.67	-53.35	0.25	53.42	272.86
5750.00	0.81	245.14	5749.57	52.22	2.51	-53.67	0.26	53.72	272.68
5775.00	0.67	243.79	5774.56	52.53	2.37	-53.96	0.58	54.01	272.52
5800.00	0.67	243.86	5799.56	52.81	2.24	-54.22	0.00	54.27	272.37
5825.00	0.86	247.63	5824.56	53.14	2.11	-54.53	0.78	54.57	272.21
5850.00	0.98	243.63	5849.56	53.53	1.94	-54.89	0.53	54.92	272.02
5875.00	0.73	248.46	5874.55	53.89	1.79	-55.23	1.03	55.26	271.85
5900.00	0.97	252.67	5899.55	54.26	1.67	-55.58	1.00	55.60	271.72
5925.00	0.79	257.73	5924.55	54.64	1.57	-55.95	0.78	55.97	271.60
5950.00	0.86	257.95	5949.54	55.00	1.49	-56.30	0.27	56.32	271.52
5975.00	0.81	256.41	5974.54	55.36	1.41	-56.65	0.20	56.67	271.43
6000.00	0.88	256.43	5999.54	55.73	1.32	-57.01	0.26	57.03	271.33
6025.00	0.79	256.65	6024.54	56.09	1.24	-57.37	0.35	57.38	271.24
6050.00	0.83	259.04	6049.53	56.45	1.16	-57.71	0.21	57.72	271.16
6075.00	0.70	258.82	6074.53	56.78	1.10	-58.04	0.53	58.05	271.09
6100.00	0.87	254.87	6099.53	57.12	1.02	-58.37	0.74	58.38	271.00
6125.00	0.86	250.58	6124.53	57.50	0.91	-58.73	0.27	58.74	270.89
6150.00	0.71	243.10	6149.52	57.83	0.78	-59.05	0.73	59.05	270.75
6175.00	0.75	249.30	6174.52	58.14	0.65	-59.34	0.35	59.34	270.63
6200.00	0.77	249.36	6199.52	58.47	0.53	-59.65	0.11	59.65	270.51
6225.00	0.69	247.76	6224.52	58.78	0.42	-59.94	0.34	59.95	270.40
6250.00	0.77	245.74	6249.52	59.09	0.29	-60.24	0.32	60.24	270.28
6275.00	0.66	246.02	6274.51	59.40	0.16	-60.52	0.43	60.52	270.15

Survey Report

Well Name: VINCENT ROLLIE J#3
Survey: ROLLIE VINCENT J#3 INRUN
Survey Date: 12/9/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
6300.00	0.89	247.41	6299.51	59.73	0.03	-60.83	0.93	60.83	270.03
6325.00	0.75	238.99	6324.51	60.07	-0.13	-61.15	0.76	61.15	269.88
6350.00	0.60	225.49	6349.51	60.33	-0.31	-61.39	0.85	61.39	269.71
6375.00	0.70	225.67	6374.51	60.57	-0.51	-61.59	0.39	61.59	269.53
6400.00	0.68	227.21	6399.50	60.82	-0.71	-61.81	0.11	61.81	269.34
6425.00	0.80	232.12	6424.50	61.11	-0.92	-62.05	0.54	62.06	269.15
6450.00	0.92	232.46	6449.50	61.44	-1.15	-62.35	0.49	62.36	268.94
6475.00	0.88	233.90	6474.50	61.79	-1.38	-62.66	0.20	62.68	268.73
6500.00	0.66	222.18	6499.49	62.08	-1.60	-62.92	1.06	62.94	268.54
6525.00	0.85	224.27	6524.49	62.35	-1.84	-63.14	0.76	63.17	268.33
6550.00	0.88	216.37	6549.49	62.64	-2.13	-63.39	0.49	63.42	268.07
6575.00	0.98	217.87	6574.49	62.94	-2.45	-63.63	0.41	63.68	267.79
6600.00	0.88	211.06	6599.48	63.23	-2.79	-63.86	0.60	63.92	267.50
6625.00	0.99	217.21	6624.48	63.52	-3.12	-64.09	0.59	64.16	267.21
6650.00	1.02	219.83	6649.48	63.85	-3.46	-64.36	0.22	64.45	266.92
6675.00	0.84	206.07	6674.47	64.13	-3.80	-64.58	1.13	64.70	266.63
6700.00	0.96	218.35	6699.47	64.40	-4.13	-64.79	0.91	64.93	266.35
6725.00	0.91	211.77	6724.47	64.70	-4.46	-65.03	0.47	65.18	266.07
6750.00	0.94	208.06	6749.46	64.96	-4.81	-65.23	0.27	65.41	265.78
6775.00	1.01	211.13	6774.46	65.24	-5.19	-65.44	0.35	65.65	265.47
6800.00	0.92	209.94	6799.45	65.52	-5.55	-65.66	0.39	65.89	265.17
6825.00	1.24	219.79	6824.45	65.86	-5.93	-65.93	1.47	66.20	264.86
6850.00	1.30	221.97	6849.44	66.29	-6.35	-66.29	0.31	66.60	264.53
6875.00	1.23	217.26	6874.44	66.72	-6.77	-66.65	0.49	66.99	264.20
6900.00	1.16	213.81	6899.43	67.10	-7.20	-66.95	0.41	67.33	263.86
6925.00	1.32	217.32	6924.43	67.49	-7.64	-67.26	0.71	67.70	263.52
6950.00	1.47	223.78	6949.42	67.97	-8.10	-67.66	0.88	68.14	263.18
6975.00	1.26	214.58	6974.41	68.43	-8.56	-68.04	1.23	68.58	262.83
7000.00	1.42	216.00	6999.41	68.85	-9.03	-68.38	0.67	68.97	262.47
7025.00	1.41	217.45	7024.40	69.31	-9.53	-68.75	0.16	69.40	262.11
7050.00	1.35	215.45	7049.39	69.75	-10.01	-69.10	0.30	69.82	261.76
7075.00	1.32	215.94	7074.38	70.17	-10.48	-69.44	0.10	70.23	261.42
7100.00	1.33	216.31	7099.38	70.60	-10.95	-69.78	0.05	70.64	261.08
7125.00	1.40	218.70	7124.37	71.04	-11.42	-70.15	0.36	71.07	260.75
7150.00	1.53	222.90	7149.36	71.55	-11.91	-70.57	0.68	71.57	260.42
7175.00	1.42	223.61	7174.35	72.07	-12.38	-71.01	0.46	72.08	260.11



Well Name: VINCENT ROLLIE J#3
Survey: ROLLIE VINCENT J#3 INRUN
Survey Date: 12/9/2014

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Closure Distance ft	Closure Direction deg
7200.00	1.38	227.09	7199.35	72.58	-12.81	-71.44	0.37	72.58	259.84
7225.00	1.34	223.49	7224.34	73.07	-13.23	-71.87	0.39	73.07	259.57
7250.00	1.09	218.87	7249.33	73.49	-13.62	-72.22	1.04	73.49	259.32
7274.00	1.17	218.71	7273.33	73.85	-13.99	-72.51	0.33	73.85	259.08