



Scientific Drilling

Gyroscopic Survey Report
for

CONOCOPHILLIPS

30-059-30255

Well Location	RIO ARRIBA
Well Name	SJ 30-5 #78N
Rig Name	
Survey Date	10/16/2007
Latitude	36.82 deg
North Reference	True North
Grid Correction	0.00 deg
Depth Reference	RKB 16'
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 0.00Azim (deg)
Definitive Survey	Computed from CP932.BIN's HighSpeed: InRun
Operator	CHRIS RICHEY

Comments

SURVEY FROM SURFACE TO 7730' MD IN 4 1/2" CASING.

Surface 675/S 2075/E 7730 md
BHL 959/S 2121/E 7713 Tvd



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MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft	Closure Distance ft	Closure Angle deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
100.00	0.14	2.50	100.00	0.12	0.12	0.01	0.14	0.12	2.50
200.00	0.27	2.50	200.00	0.48	0.48	0.02	0.14	0.48	2.50
300.00	0.41	2.50	300.00	1.08	1.08	0.05	0.14	1.08	2.50
400.00	0.47	358.70	399.99	1.85	1.85	0.05	0.07	1.85	1.65
500.00	0.53	354.75	499.99	2.72	2.72	0.00	0.07	2.72	0.04
600.00	0.60	15.61	599.99	3.68	3.68	0.10	0.22	3.68	1.57
700.00	0.58	32.92	699.98	4.62	4.62	0.52	0.18	4.64	6.41
800.00	0.79	37.85	799.97	5.59	5.59	1.22	0.22	5.72	12.31
900.00	0.93	31.24	899.96	6.83	6.83	2.07	0.17	7.14	16.83
1000.00	1.20	29.75	999.94	8.43	8.43	3.01	0.27	8.95	19.62
1100.00	1.24	37.34	1099.92	10.21	10.21	4.19	0.17	11.03	22.30
1200.00	1.80	38.51	1199.89	12.30	12.30	5.82	0.55	13.61	25.33
1300.00	1.92	31.90	1299.83	14.95	14.95	7.68	0.25	16.81	27.20
1400.00	1.74	18.44	1399.78	17.81	17.81	9.05	0.46	19.98	26.93
1500.00	1.84	21.29	1499.73	20.75	20.75	10.11	0.13	23.08	25.98
1600.00	2.56	7.32	1599.66	24.46	24.46	10.98	0.89	26.81	24.18
1700.00	2.97	3.64	1699.54	29.26	29.26	11.43	0.45	31.41	21.34
1800.00	3.50	358.17	1799.38	34.89	34.89	11.50	0.61	36.74	18.24
1900.00	4.36	356.44	1899.15	41.73	41.73	11.16	0.87	43.20	14.98
2000.00	4.56	356.31	1998.85	49.49	49.49	10.67	0.20	50.63	12.17
2100.00	4.80	353.15	2098.51	57.61	57.61	9.92	0.36	58.46	9.77
2200.00	4.50	354.45	2198.18	65.67	65.67	9.04	0.32	66.29	7.84
2300.00	4.42	351.83	2297.88	73.39	73.39	8.11	0.22	73.84	6.31
2400.00	4.77	350.92	2397.56	81.31	81.31	6.91	0.35	81.60	4.86
2500.00	5.66	348.66	2497.15	90.24	90.24	5.28	0.91	90.40	3.35
2600.00	6.71	346.24	2596.56	100.75	100.75	2.92	1.09	100.79	1.66
2700.00	7.25	347.53	2695.82	112.58	112.58	0.17	0.56	112.58	0.09
2800.00	7.83	345.67	2794.96	125.34	125.34	-2.88	0.63	125.37	358.69
2900.00	8.55	352.17	2893.94	139.30	139.30	-5.57	1.17	139.41	357.71
3000.00	8.62	353.88	2992.82	154.11	154.11	-7.38	0.27	154.29	357.26
3100.00	9.06	354.84	3091.63	169.40	169.40	-8.89	0.47	169.63	357.00
3200.00	10.17	353.43	3190.23	186.01	186.01	-10.61	1.13	186.32	356.74
3300.00	10.79	354.04	3288.56	204.09	204.09	-12.59	0.62	204.48	356.47
3400.00	11.27	354.17	3386.71	223.12	223.12	-14.56	0.49	223.60	356.27
3500.00	9.73	353.67	3485.03	241.24	241.24	-16.48	1.55	241.81	356.09
3600.00	6.45	353.86	3584.02	255.23	255.23	-18.01	3.28	255.86	355.96
3700.00	3.45	350.74	3683.64	263.78	263.78	-19.10	3.01	264.47	355.86
3800.00	2.04	353.43	3783.52	268.52	268.52	-19.79	1.41	269.25	355.79



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MD	Inc	Azim	TVD	VS	Northing	Easting	DLS	Closure Distance	Closure Angle	
ft	deg	deg	ft	ft	ft	ft	deg/100ft	ft	deg	
3900.00	1.26	344.82	3883.48	271.35	271.35	-20.28	0.82	272.11	355.73	
4000.00	0.95	331.31	3983.46	273.14	273.14	-20.96	0.40	273.94	355.61	
4100.00	0.59	335.21	4083.45	274.33	274.33	-21.58	0.36	275.18	355.50	
4200.00	0.35	294.86	4183.45	274.93	274.93	-22.07	0.39	275.81	355.41	
4300.00	0.27	284.09	4283.45	275.11	275.11	-22.58	0.11	276.04	355.31	
4400.00	0.35	297.39	4383.45	275.31	275.31	-23.07	0.11	276.27	355.21	
4500.00	0.25	275.72	4483.45	275.47	275.47	-23.56	0.14	276.48	355.11	
4600.00	0.31	283.59	4583.44	275.56	275.56	-24.04	0.07	276.60	355.01	
4700.00	0.20	295.43	4683.44	275.70	275.70	-24.47	0.12	276.78	354.93	
4800.00	0.45	16.63	4783.44	276.14	276.14	-24.51	0.46	277.23	354.93	
4900.00	0.44	311.55	4883.44	276.77	276.77	-24.69	0.48	277.87	354.90	
5000.00	0.32	325.18	4983.44	277.25	277.25	-25.14	0.15	278.39	354.82	
5100.00	0.40	317.35	5083.44	277.74	277.74	-25.53	0.10	278.91	354.75	
5200.00	0.43	302.27	5183.43	278.20	278.20	-26.09	0.11	279.42	354.64	
5300.00	0.53	296.94	5283.43	278.60	278.60	-26.81	0.11	279.89	354.50	
5400.00	0.90	279.42	5383.42	278.94	278.94	-28.00	0.43	280.34	354.27	
5500.00	0.79	265.02	5483.41	279.01	279.01	-29.46	0.24	280.56	353.97	
5600.00	0.57	244.74	5583.40	278.74	278.74	-30.59	0.32	280.41	353.74	
5700.00	0.61	249.04	5683.40	278.34	278.34	-31.54	0.06	280.12	353.54	
5800.00	0.52	245.89	5783.39	277.96	277.96	-32.45	0.10	279.85	353.34	
5900.00	0.55	246.36	5883.39	277.58	277.58	-33.30	0.03	279.57	353.16	
6000.00	0.48	261.03	5983.39	277.33	277.33	-34.14	0.15	279.42	352.98	
6100.00	0.39	285.98	6083.38	277.36	277.36	-34.88	0.21	279.54	352.83	
6200.00	0.28	285.62	6183.38	277.52	277.52	-35.44	0.10	279.77	352.72	
6300.00	0.15	334.98	6283.38	277.70	277.70	-35.74	0.22	279.99	352.67	
6400.00	0.22	342.65	6383.38	278.00	278.00	-35.85	0.08	280.30	352.65	
6500.00	0.25	340.51	6483.38	278.40	278.40	-35.98	0.03	280.71	352.64	
6600.00	0.31	309.45	6583.38	278.78	278.78	-36.26	0.16	281.13	352.59	
6700.00	0.17	324.45	6683.38	279.07	279.07	-36.56	0.16	281.45	352.54	
6800.00	0.21	290.74	6783.38	279.25	279.25	-36.81	0.12	281.67	352.49	
6900.00	0.29	304.49	6883.38	279.46	279.46	-37.19	0.10	281.92	352.42	
7000.00	0.43	301.54	6983.37	279.80	279.80	-37.72	0.13	282.33	352.32	
7100.00	0.96	276.99	7083.37	280.09	280.09	-38.87	0.60	282.78	352.10	
7200.00	1.08	275.51	7183.35	280.29	280.29	-40.64	0.12	283.22	351.75	
7300.00	1.83	263.00	7283.32	280.18	280.18	-43.16	0.82	283.49	351.24	
7400.00	0.71	331.07	7383.30	280.53	280.53	-45.05	1.70	284.12	350.88	
7500.00	0.61	350.01	7483.29	281.59	281.59	-45.44	0.24	285.24	350.83	
7600.00	0.59	358.95	7583.28	282.63	282.63	-45.54	0.10	286.28	350.85	



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ft	deg	deg	ft	ft	ft	ft	deg/100ft	ft	deg
7700.00	0.27	356.75	7683.28	283.38	283.38	-45 56	0.32	287.01	350 87
7730.00	0.58	352.02	7713.28	283.60	283.60	-45 59	1.06	287.24	350.87