



Scientific Drilling

Gyroscopic Survey Report
for
Energen Resources

30-39-30164

Well Location	Jicarilla 94 #4C
Well Name	Jicarilla 94 #4C
Rig Name	Basin #104
Survey Date	6/22/2009
Latitude	36.56 deg
North Reference	True North
Grid Correction	0.00 deg
Depth Reference	RKB 15'
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 186.86Azim (deg)
Definitive Survey	Computed from R2JIC94#.BIN's HighSpeed: OutRun
Operator	B. Willhight

Comments

Survey from RKB to 6082 in 4.5" casing. Tagged up at 6082'

RCVD JUL 1 '09

OIL CONS. DIV.

DIST. 3



Scientific Drilling

Survey Report

Well Name:		Jicarilla 94 #4C							
Survey:		Computed from R2JIC94#.BIN's HighSpeed: OutRun							
Survey Date:		6/22/2009							
MD	Inc	Azim	TVD	VS	Northing	Easting	DLS	Closure Distance	Closure Angle
ft	deg	deg	ft	ft	ft	ft	deg/100ft	ft	deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	invalid	0.00	0.00
100.00	0.29	97.96	100.00	0.00	-0.03	0.25	0.29	0.25	97.96
200.00	0.27	92.99	200.00	-0.01	-0.08	0.73	0.03	0.74	96.37
300.00	0.30	119.05	300.00	0.08	-0.22	1.20	0.13	1.22	100.45
400.00	0.34	138.95	400.00	0.37	-0.57	1.62	0.12	1.72	109.42
500.00	0.44	219.72	499.99	0.90	-1.09	1.57	0.51	1.91	124.84
600.00	0.52	232.17	599.99	1.54	-1.67	0.96	0.13	1.92	150.08
700.00	0.59	247.99	699.99	2.11	-2.14	0.12	0.17	2.15	176.83
800.00	0.66	262.20	799.98	2.51	-2.41	-0.94	0.17	2.59	201.17
900.00	0.68	263.56	899.97	2.79	-2.56	-2.10	0.03	3.31	219.39
1000.00	0.63	264.27	999.97	3.05	-2.68	-3.24	0.06	4.21	230.40
1100.00	0.48	257.14	1099.96	3.31	-2.83	-4.20	0.16	5.07	236.03
1200.00	0.44	269.67	1199.96	3.50	-2.93	-5.00	0.11	5.80	239.66
1300.00	0.35	270.93	1299.96	3.58	-2.92	-5.70	0.10	6.40	242.82
1400.00	0.22	250.85	1399.95	3.70	-2.98	-6.19	0.16	6.87	244.25
1500.00	0.27	218.96	1499.95	3.99	-3.23	-6.52	0.14	7.27	243.64
1600.00	0.39	235.19	1599.95	4.41	-3.61	-6.95	0.15	7.83	242.56
1700.00	0.39	241.96	1699.95	4.83	-3.96	-7.53	0.05	8.50	242.24
1800.00	0.48	226.16	1799.95	5.35	-4.41	-8.13	0.15	9.25	241.51
1900.00	0.63	228.88	1899.94	6.09	-5.07	-8.85	0.15	10.19	240.20
2000.00	0.65	241.28	1999.94	6.83	-5.70	-9.76	0.14	11.30	239.71
2100.00	0.54	252.59	2099.93	7.35	-6.11	-10.70	0.16	12.33	240.27
2200.00	0.51	247.14	2199.93	7.76	-6.43	-11.56	0.06	13.23	240.94
2300.00	0.67	208.74	2299.92	8.53	-7.11	-12.25	0.42	14.17	239.87
2400.00	0.67	203.02	2399.91	9.63	-8.17	-12.76	0.07	15.15	237.39
2500.00	0.68	211.22	2499.91	10.74	-9.21	-13.30	0.10	16.18	235.29
2600.00	0.49	234.10	2599.90	11.57	-9.97	-13.96	0.30	17.15	234.46
2700.00	0.53	255.43	2699.90	12.03	-10.34	-14.75	0.19	18.01	234.97
2800.00	0.52	271.31	2799.89	12.24	-10.44	-15.65	0.15	18.81	236.29
2900.00	0.31	269.77	2899.89	12.31	-10.43	-16.37	0.22	19.42	237.50
3000.00	0.23	282.03	2999.89	12.33	-10.39	-16.84	0.10	19.79	238.31
3100.00	0.06	338.24	3099.89	12.26	-10.30	-17.05	0.20	19.92	238.86
3200.00	0.10	183.68	3199.89	12.30	-10.34	-17.08	0.16	19.96	238.81
3300.00	0.35	143.81	3299.89	12.61	-10.67	-16.90	0.28	19.99	237.73
3400.00	0.10	181.50	3399.89	12.93	-11.01	-16.72	0.28	20.02	236.65
3500.00	0.24	135.20	3499.89	13.15	-11.25	-16.58	0.19	20.03	235.85
3600.00	0.45	117.73	3599.89	13.42	-11.58	-16.08	0.23	19.81	234.24
3700.00	0.44	130.32	3699.88	13.77	-12.01	-15.44	0.10	19.56	232.13
3800.00	0.47	132.07	3799.88	14.22	-12.53	-14.84	0.04	19.43	229.82



Survey Report

Well Name: Jicarilla 94 #4C

Survey: Computed from R2JIC94#.BIN's HighSpeed: OutRun

Survey Date: 6/22/2009

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft	Closure Distance ft	Closure Angle deg
3900.00	0.39	121.34	3899.88	14.60	-12.99	-14.25	0.12	19.28	227.65
4000.00	0.46	79.65	3999.87	14.62	-13.09	-13.56	0.31	18.85	226.01
4100.00	0.46	78.58	4099.87	14.37	-12.94	-12.77	0.01	18.18	224.63
4200.00	0.77	89.37	4199.87	14.16	-12.85	-11.70	0.33	17.38	222.32
4300.00	0.51	101.75	4299.86	14.11	-12.93	-10.59	0.30	16.72	219.32
4400.00	0.39	124.85	4399.86	14.30	-13.21	-9.88	0.21	16.50	216.79
4500.00	0.44	121.66	4499.85	14.62	-13.61	-9.28	0.06	16.47	214.30
4600.00	0.40	121.77	4599.85	14.93	-13.99	-8.66	0.04	16.46	211.74
4700.00	0.28	117.98	4699.85	15.17	-14.30	-8.14	0.12	16.45	209.66
4800.00	0.35	119.06	4799.85	15.37	-14.56	-7.66	0.07	16.45	207.74
4900.00	0.49	121.28	4899.85	15.66	-14.93	-7.03	0.14	16.50	205.20
5000.00	0.43	134.20	4999.84	16.06	-15.41	-6.39	0.12	16.68	202.54
5100.00	0.47	138.68	5099.84	16.57	-15.98	-5.85	0.06	17.02	200.11
5200.00	0.60	141.96	5199.83	17.21	-16.71	-5.26	0.13	17.51	197.46
5300.00	0.66	156.65	5299.83	18.09	-17.65	-4.70	0.17	18.27	194.92
5400.00	0.90	154.86	5399.82	19.25	-18.89	-4.14	0.24	19.34	192.36
5500.00	0.94	156.39	5499.81	20.62	-20.36	-3.48	0.05	20.65	189.69
5600.00	1.04	153.74	5599.79	22.09	-21.92	-2.75	0.10	22.09	187.15
5700.00	0.93	172.55	5699.78	23.63	-23.53	-2.24	0.34	23.64	185.45
5800.00	0.75	182.77	5799.77	25.06	-24.98	-2.17	0.23	25.08	184.97
5900.00	0.60	209.38	5899.76	26.20	-26.09	-2.46	0.34	26.21	185.38
6000.00	0.46	210.05	5999.76	27.05	-26.89	-2.91	0.14	27.05	186.19
6082.00	0.37	233.75	6081.75	27.53	-27.33	-3.29	0.23	27.53	186.86

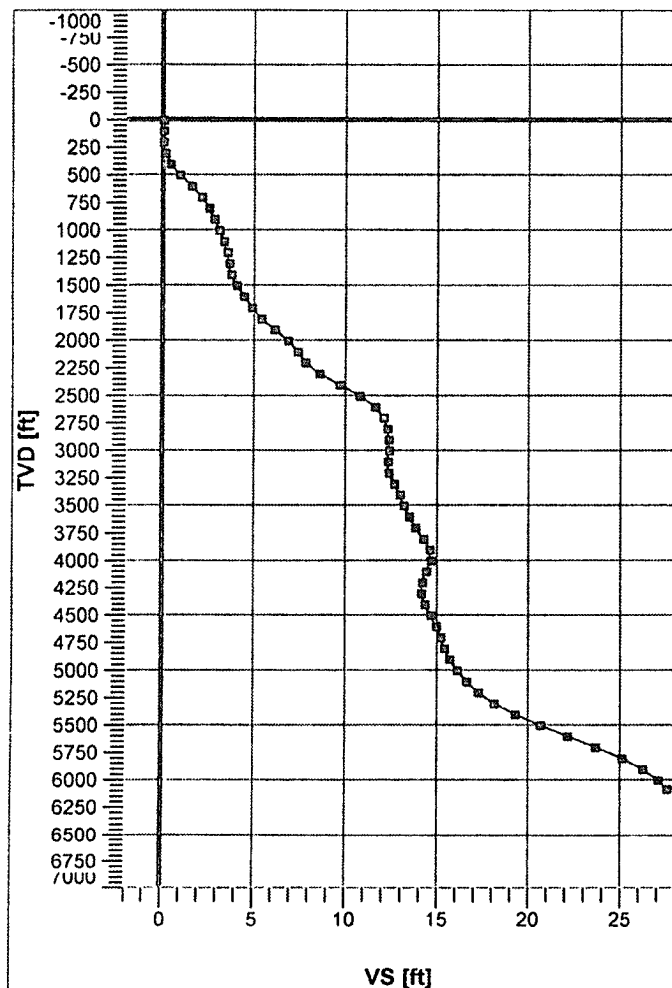


Scientific Drilling

Survey Graph Report

Name : Computed from R2JIC94#.BIN's HighSpeed. OutRun
Generated : 7/1/2009 11:08:41 Mountain Daylight Time

VS View



Plan View

