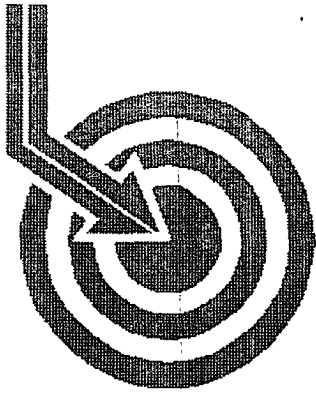




Scientific Drilling

AUG 25 2006

MIDLAND

POGO

Field: Pierce Crossing
Site: Eddy County, NM
Well: Harroun 15 #17
Wellpath: VH - Job #32K0706584
Survey: 07/22/06

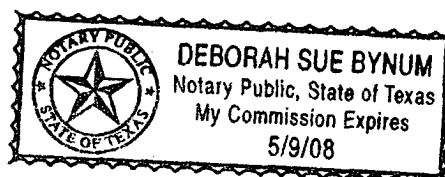
CONFIDENTIAL

This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*R. Wharton*..... Company Representative

Notorized this date 22nd of August, 2006.

Deborah Sue Bynum
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International

Survey Report

Company: POGO
Field: Pierce Crossing
Site: Eddy County, NM
Well: Harroun 15 #17
Wellpath: VH - Job #32K0706584

Date: 08/22/2006 Time: 14:01:43 Page: 1
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,216.89Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 07/22/06

Start Date: 07/22/2006

KSRG 0'-6667'

Company: Scientific Drilling Internatio

Engineer:

Madrid/Rehders

Tool: Keeper;Keeper Gyro

Tied-to:

From Surface

CONFIDENTIAL

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.34	203.26	100.00	0.29	-0.27	-0.12	0.34	0.30	203.26
200.00	0.18	192.29	200.00	0.72	-0.70	-0.27	0.17	0.75	200.97
300.00	0.97	215.73	299.99	1.71	-1.54	-0.80	0.81	1.73	207.33
400.00	0.63	218.98	399.98	3.10	-2.65	-1.64	0.34	3.12	211.65
500.00	0.74	225.84	499.98	4.29	-3.53	-2.44	0.14	4.29	214.70
600.00	0.42	178.34	599.97	5.22	-4.35	-2.90	0.55	5.22	213.68
700.00	0.67	236.11	699.97	6.05	-5.04	-3.37	0.57	6.06	213.79
800.00	0.64	231.60	799.96	7.15	-5.71	-4.30	0.06	7.15	216.94
900.00	0.71	236.98	899.95	8.27	-6.40	-5.25	0.09	8.28	219.39
1000.00	0.72	234.68	999.95	9.45	-7.10	-6.28	0.03	9.48	221.52
1100.00	0.88	243.19	1099.94	10.74	-7.81	-7.48	0.20	10.81	223.78
1200.00	1.02	247.40	1199.92	12.19	-8.50	-8.99	0.16	12.37	226.62
1300.00	1.08	261.55	1299.91	13.63	-8.98	-10.74	0.27	14.00	230.12
1400.00	1.47	262.23	1399.88	15.20	-9.29	-12.95	0.39	15.93	234.34
1500.00	1.62	258.92	1499.84	17.15	-9.73	-15.60	0.17	18.39	238.05
1600.00	1.03	247.28	1599.82	18.98	-10.35	-17.82	0.65	20.61	239.85
1700.00	0.80	223.43	1699.80	20.45	-11.21	-19.13	0.44	22.17	239.64
1800.00	0.35	228.36	1799.80	21.44	-11.92	-19.84	0.45	23.14	239.01
1900.00	0.47	227.75	1899.80	22.14	-12.40	-20.37	0.12	23.84	238.68
2000.00	0.51	221.04	1999.79	22.99	-13.01	-20.97	0.07	24.67	238.19
2100.00	0.54	177.47	2099.79	23.80	-13.81	-21.24	0.39	25.33	236.96
2200.00	0.55	171.60	2199.78	24.50	-14.76	-21.15	0.06	25.79	235.09
2300.00	1.11	131.25	2299.77	24.91	-15.87	-20.35	0.78	25.81	232.04
2400.00	1.38	130.90	2399.75	25.07	-17.30	-18.71	0.27	25.48	227.24
2500.00	1.63	138.90	2499.72	25.45	-19.16	-16.86	0.33	25.52	221.36
2600.00	2.15	140.39	2599.66	26.18	-21.68	-14.73	0.52	26.21	214.20
2700.00	2.34	136.47	2699.59	26.96	-24.60	-12.13	0.24	27.43	206.25
2800.00	2.13	138.51	2799.51	27.67	-27.47	-9.49	0.22	29.07	199.06
2900.00	1.35	140.43	2899.46	28.32	-29.77	-7.51	0.78	30.71	194.16
3000.00	0.73	122.31	2999.45	28.55	-31.02	-6.22	0.69	31.64	191.34
3100.00	0.40	136.66	3099.44	28.56	-31.62	-5.45	0.36	32.08	189.77
3200.00	0.36	109.68	3199.44	28.52	-31.98	-4.91	0.18	32.35	188.73
3300.00	0.51	53.25	3299.44	28.00	-31.82	-4.26	0.43	32.10	187.62
3400.00	0.45	45.96	3399.43	27.19	-31.28	-3.62	0.09	31.49	186.60
3500.00	0.60	64.83	3499.43	26.34	-30.78	-2.86	0.23	30.91	185.31
3600.00	0.49	68.51	3599.42	25.51	-30.40	-1.99	0.12	30.47	183.75
3700.00	0.45	74.33	3699.42	24.83	-30.14	-1.22	0.06	30.16	182.31
3800.00	0.46	125.17	3799.42	24.51	-30.26	-0.51	0.39	30.27	180.96
3900.00	0.25	114.23	3899.42	24.45	-30.58	0.02	0.22	30.58	179.97
4000.00	0.23	93.50	3999.41	24.29	-30.69	0.42	0.09	30.69	179.22
4100.00	0.28	85.75	4099.41	24.02	-30.68	0.86	0.06	30.69	178.39
4200.00	0.34	126.09	4199.41	23.86	-30.84	1.34	0.22	30.87	177.50
4300.00	0.41	141.01	4299.41	23.94	-31.29	1.81	0.12	31.34	176.69
4400.00	0.22	175.55	4399.41	24.17	-31.76	2.05	0.26	31.83	176.31
4500.00	0.16	278.09	4499.41	24.38	-31.93	1.93	0.30	31.99	176.55
4600.00	0.17	113.31	4599.41	24.41	-31.97	1.92	0.33	32.03	176.56
4700.00	0.32	237.78	4699.41	24.64	-32.18	1.82	0.44	32.23	176.76
4800.00	0.55	255.88	4799.40	25.27	-32.44	1.12	0.27	32.46	178.02



Scientific Drilling International Survey Report

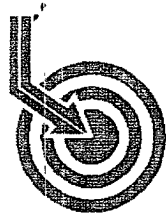
Company: POGO
Field: Pierce Crossing
Site: Eddy County, NM
Well: Harroun 15 #17
Wellpath: VH - Job #32K0706584

Date: 08/22/2006 Time: 14:01:43 Page: 2
Co-ordinate(N/E) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,216.89Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

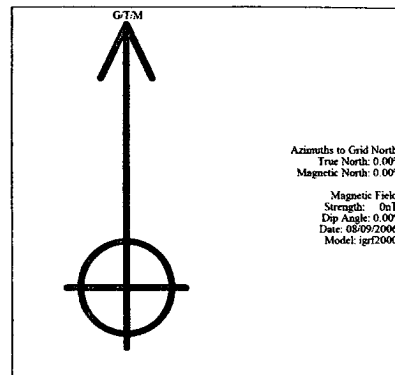
MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	0.75	270.25	4899.40	26.04	-32.56	0.00	0.26	32.56	180.00
5000.00	0.96	256.88	4999.39	27.07	-32.75	-1.47	0.29	32.78	182.57
5100.00	1.08	226.43	5099.37	28.64	-33.59	-2.97	0.55	33.72	185.05
5200.00	1.22	233.28	5199.35	30.59	-34.87	-4.50	0.20	35.16	187.36
5300.00	1.75	253.96	5299.32	32.83	-35.93	-6.82	0.75	36.57	190.75
5400.00	1.66	252.93	5399.27	35.22	-36.78	-9.68	0.10	38.03	194.74
5500.00	1.71	256.39	5499.23	37.54	-37.55	-12.51	0.11	39.58	198.42
5600.00	1.70	251.04	5599.19	39.92	-38.39	-15.36	0.16	41.35	201.81
5700.00	1.83	251.01	5699.14	42.47	-39.39	-18.28	0.13	43.42	204.89
5800.00	1.85	251.65	5799.09	45.12	-40.42	-21.32	0.03	45.69	207.81
5900.00	1.77	254.75	5899.04	47.67	-41.33	-24.34	0.13	47.96	210.49
6000.00	1.61	240.70	5999.00	50.17	-42.42	-27.05	0.44	50.32	212.53
6100.00	1.84	239.81	6098.95	52.93	-43.92	-29.67	0.23	53.00	214.04
6200.00	1.91	226.34	6198.90	56.06	-45.88	-32.26	0.45	56.08	215.12
6300.00	1.97	218.26	6298.84	59.42	-48.38	-34.53	0.28	59.44	215.52
6400.00	1.77	221.01	6398.79	62.68	-50.89	-36.61	0.22	62.69	215.73
6500.00	1.61	225.64	6498.74	65.61	-53.04	-38.63	0.21	65.61	216.06
6600.00	1.39	234.40	6598.71	68.15	-54.73	-40.62	0.32	68.15	216.58
6667.00	0.29	350.49	6665.70	68.81	-55.03	-41.31	2.30	68.81	216.89

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Scientific
Drilling

Field: Pierce Crossing
Site: Eddy County, NM
Well: Harroun 15 #17
Wellpath: VH - Job #32K0706584
Survey: 07/22/06



West(-)/East(+) [10ft/in]

South(-)/North(+) [10ft/in]

