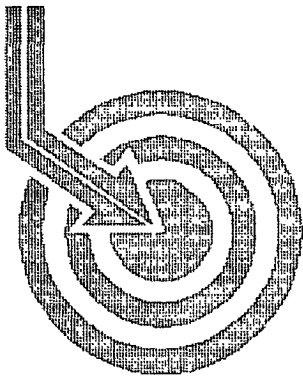




Scientific Drilling

CONOCOPHILLIPS

Field: Vacuum Abo
Site: Lea County, NM
Well: Vacuum Abo #13-10
Wellpath: VH - Job #32K12081036
Survey: 12/31/08

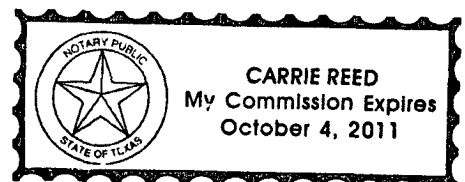
This survey is correct to the best of my knowledge
and is supported by actual field data.

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

Notorized this date 12th of January, 2009.

Carrie Reed

Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: CONOCOPHILLIPS
Field: Vacuum Abo
Site: Lea County, NM
Well: Vacuum Abo #13-10
Wellpath: VH - Job #32K12081036

Date: 01/02/2009 Time: 15:02:47 Page: 1
Co-ordinate(NE) Reference: Site: Lea County, NM, True North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,329.14Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 12/31/08 Start Date: 12/31/2008
KSRG 0'-8414'
Company: Scientific Drilling Internatio Engineer: Madrid w/Schlumberger
Tool: Keeper;Keeper Gyro Tied-to: From Surface

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	0.14	95.58	100.00	-0.07	-0.01	0.12	0.14	0.12	95.58
200.00	0.12	99.76	200.00	-0.21	-0.04	0.35	0.02	0.35	96.83
300.00	0.16	162.70	300.00	-0.42	-0.19	0.49	0.15	0.53	111.41
400.00	0.14	193.58	400.00	-0.64	-0.44	0.50	0.08	0.67	131.42
500.00	0.08	178.33	500.00	-0.79	-0.63	0.48	0.07	0.79	142.99
600.00	0.02	164.18	600.00	-0.87	-0.72	0.48	0.06	0.87	146.08
700.00	0.03	149.77	700.00	-0.91	-0.76	0.50	0.01	0.91	146.52
800.00	0.11	139.84	800.00	-1.03	-0.86	0.58	0.08	1.03	145.99
900.00	0.19	71.59	900.00	-1.16	-0.88	0.80	0.18	1.18	137.73
1000.00	0.21	320.32	1000.00	-1.02	-0.68	0.84	0.33	1.08	129.22
1100.00	0.19	275.49	1100.00	-0.74	-0.53	0.55	0.15	0.76	133.48
1200.00	0.05	181.88	1200.00	-0.67	-0.55	0.39	0.20	0.68	144.97
1300.00	0.08	182.37	1300.00	-0.77	-0.67	0.38	0.03	0.77	150.08
1400.00	0.21	169.27	1400.00	-1.00	-0.92	0.42	0.13	1.01	155.64
1500.00	0.41	173.61	1500.00	-1.50	-1.45	0.49	0.20	1.53	161.39
1600.00	0.37	176.71	1599.99	-2.11	-2.13	0.55	0.05	2.20	165.59
1700.00	0.30	176.06	1699.99	-2.63	-2.71	0.58	0.07	2.78	167.86
1800.00	0.38	171.70	1799.99	-3.17	-3.30	0.65	0.08	3.37	168.87
1900.00	0.28	193.26	1899.99	-3.65	-3.87	0.64	0.16	3.92	170.59
2000.00	0.38	198.23	1999.99	-4.04	-4.42	0.48	0.10	4.45	173.78
2100.00	0.47	198.72	2099.98	-4.53	-5.13	0.25	0.09	5.13	177.25
2200.00	0.39	197.39	2199.98	-5.02	-5.84	0.01	0.08	5.84	179.87
2300.00	0.37	185.24	2299.98	-5.51	-6.48	-0.12	0.08	6.49	181.04
2400.00	0.36	178.00	2399.98	-6.04	-7.12	-0.14	0.05	7.12	181.10
2500.00	0.35	170.46	2499.97	-6.60	-7.74	-0.08	0.05	7.74	180.56
2600.00	0.34	156.13	2599.97	-7.18	-8.31	0.10	0.09	8.31	179.34
2700.00	0.34	145.68	2699.97	-7.77	-8.82	0.38	0.06	8.83	177.52
2800.00	0.41	128.35	2799.97	-8.40	-9.29	0.83	0.13	9.33	174.89
2900.00	0.42	114.49	2899.97	-9.04	-9.67	1.44	0.10	9.77	171.50
3000.00	0.54	100.49	2999.96	-9.65	-9.90	2.24	0.17	10.15	167.24
3100.00	0.42	79.53	3099.96	-10.09	-9.92	3.07	0.21	10.39	162.83
3200.00	0.37	64.80	3199.96	-10.25	-9.72	3.72	0.11	10.41	159.06
3300.00	0.29	72.23	3299.96	-10.34	-9.50	4.25	0.09	10.41	155.90
3400.00	0.23	85.57	3399.95	-10.49	-9.41	4.69	0.08	10.52	153.50
3500.00	0.24	61.53	3499.95	-10.58	-9.30	5.08	0.10	10.59	151.36
3600.00	0.35	41.16	3599.95	-10.50	-8.97	5.46	0.15	10.50	148.65
3700.00	0.63	10.37	3699.95	-9.99	-8.19	5.76	0.37	10.02	144.89
3800.00	0.69	355.87	3799.94	-9.04	-7.05	5.82	0.18	9.14	140.49
3900.00	0.82	352.97	3899.93	-7.85	-5.74	5.69	0.14	8.08	135.28
4000.00	0.87	351.26	3999.92	-6.49	-4.28	5.48	0.06	6.96	127.99
4100.00	0.99	353.37	4099.91	-5.00	-2.67	5.27	0.12	5.91	116.91
4200.00	1.36	354.31	4199.89	-3.14	-0.63	5.05	0.37	5.09	97.16
4300.00	1.38	354.24	4299.86	-0.97	1.74	4.81	0.02	5.12	70.08
4400.00	1.38	353.51	4399.83	1.22	4.14	4.56	0.02	6.15	47.75
4500.00	1.26	353.43	4499.80	3.32	6.43	4.29	0.12	7.73	33.74
4600.00	1.26	350.51	4599.78	5.34	8.60	3.99	0.06	9.48	24.86
4700.00	1.02	343.72	4699.76	7.23	10.54	3.56	0.28	11.13	18.64
4800.00	0.86	339.67	4799.75	8.83	12.10	3.05	0.17	12.48	14.13



Scientific Drilling International Survey Report

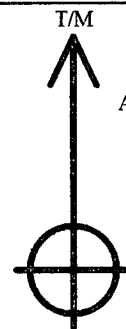
Company: CONOCOPHILLIPS	Date: 01/02/2009	Time: 15:02:47	Page: 2
Field: Vacuum Abo	Co-ordinate(NE) Reference:	Site: Lea County, NM, True North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Vacuum Abo #13-10	Section (VS) Reference:	Well (0.00N,0.00E,329.14Azi)	
Wellpath: VH - Job #32K12081036	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	0.78	325.03	4899.74	10.24	13.36	2.39	0.22	13.58	10.16
5000.00	0.83	316.88	4999.73	11.63	14.45	1.51	0.12	14.53	5.96
5100.00	1.11	292.17	5099.71	13.11	15.34	0.12	0.50	15.34	0.44
5200.00	1.27	269.73	5199.69	14.45	15.70	-1.89	0.49	15.82	353.15
5300.00	1.18	260.47	5299.67	15.39	15.53	-4.01	0.22	16.04	345.51
5400.00	1.06	260.58	5399.65	16.10	15.21	-5.94	0.12	16.32	338.66
5500.00	0.91	278.16	5499.64	16.94	15.17	-7.64	0.34	16.98	333.27
5600.00	1.04	281.32	5599.62	18.05	15.46	-9.31	0.14	18.05	328.93
5700.00	0.76	275.67	5699.61	19.05	15.70	-10.86	0.29	19.09	325.32
5800.00	0.71	273.89	5799.60	19.80	15.81	-12.14	0.05	19.93	322.47
5900.00	0.46	274.30	5899.59	20.38	15.88	-13.16	0.25	20.63	320.35
6000.00	0.14	290.49	5999.59	20.71	15.95	-13.67	0.33	21.01	319.40
6100.00	0.22	343.22	6099.59	20.99	16.18	-13.84	0.18	21.30	319.45
6200.00	0.26	279.88	6199.59	21.33	16.40	-14.12	0.25	21.65	319.27
6300.00	0.25	231.77	6299.59	21.45	16.31	-14.52	0.21	21.83	318.32
6400.00	0.36	257.45	6399.59	21.52	16.10	-15.00	0.17	22.01	317.04
6500.00	0.35	248.59	6499.59	21.67	15.92	-15.59	0.06	22.28	315.61
6600.00	0.56	220.12	6599.58	21.56	15.44	-16.19	0.30	22.37	313.65
6700.00	0.96	199.34	6699.58	20.86	14.28	-16.78	0.48	22.03	310.39
6800.00	0.94	199.26	6799.56	19.80	12.71	-17.33	0.02	21.49	306.26
6900.00	0.81	203.69	6899.55	18.86	11.29	-17.88	0.15	21.15	302.26
7000.00	0.66	209.52	6999.54	18.17	10.14	-18.45	0.17	21.05	298.79
7100.00	0.65	218.37	7099.54	17.68	9.19	-19.09	0.10	21.18	295.72
7200.00	0.58	217.51	7199.53	17.29	8.35	-19.75	0.07	21.44	292.92
7300.00	0.51	216.98	7299.53	16.94	7.59	-20.32	0.07	21.69	290.48
7400.00	0.27	220.14	7399.52	16.70	7.06	-20.74	0.24	21.91	288.79
7500.00	0.15	263.33	7499.52	16.67	6.86	-21.02	0.19	22.11	288.07
7600.00	0.30	271.45	7599.52	16.87	6.85	-21.41	0.15	22.48	287.74
7700.00	0.14	16.28	7699.52	17.09	6.98	-21.64	0.36	22.74	287.86
7800.00	0.59	42.36	7799.52	17.32	7.47	-21.26	0.47	22.54	289.37
7900.00	0.77	27.53	7899.51	17.82	8.45	-20.60	0.25	22.27	292.30
8000.00	2.18	6.73	7999.48	19.68	10.93	-20.07	1.49	22.86	298.58
8100.00	2.55	13.09	8099.39	22.79	14.99	-19.34	0.45	24.47	307.77
8200.00	2.29	10.49	8199.30	25.89	19.12	-18.48	0.28	26.59	315.98
8300.00	2.42	10.47	8299.22	28.98	23.16	-17.73	0.13	29.17	322.57
8400.00	2.56	12.09	8399.12	32.20	27.42	-16.88	0.16	32.20	328.39
8414.00	2.50	12.68	8413.11	32.65	28.03	-16.74	0.47	32.65	329.14



Field: Vacuum Abo
Site: Lea County, NM
Well: Vacuum Abo #13-10
Wellpath: VH - Job #32K12081036
Survey: 12/31/08



Azimuths to True North
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 01/02/2009
Model: igrf2000

