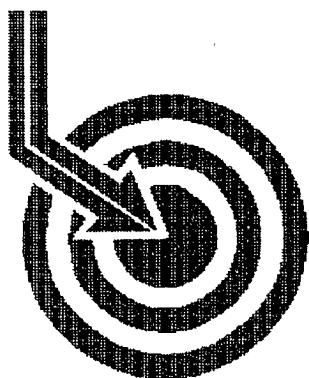


VLT



Scientific Drilling

BOPCO

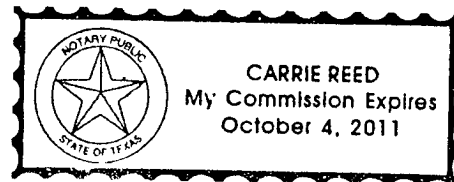
Field: Quahada Ridge
Site: Eddy County, NM
Well: James Ranch Unit #105H
Wellpath: VH - Job #32K0609228
Survey: 06/24/09

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

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

Notorized this date 7th of July, 2009.

Carrie Reed
Notary Signature
County of Midland
State of Texas



Handwritten signature



Scientific Drilling International Survey Report

Company: BOPCO	Date: 06/30/2009	Time: 08:49:15	Page: 1
Field: Quahada Ridge	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: James Ranch Unit #105H	Section (VS) Reference:	Well (0.00N,0.00E,275.53Azi)	
Wellpath: VH - Job #32K0609228	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: 06/24/09	Start Date: 06/24/2009
Company: KSRG 0'-6720'	
Tool: Scientific Drilling Internatio	Engineer: Madrid/Guebara/Paredes
Tool: KSRG;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	359.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.39	175.52	100.00	-0.06	-0.34	0.03	0.39	0.34	175.52
200.00	0.34	185.70	200.00	-0.12	-0.97	0.02	0.08	0.97	178.61
300.00	0.55	199.29	299.99	0.00	-1.72	-0.16	0.23	1.73	185.45
400.00	0.80	203.29	399.99	0.32	-2.82	-0.60	0.25	2.88	192.01
500.00	0.88	207.14	499.98	0.82	-4.14	-1.23	0.10	4.32	196.48
600.00	0.99	199.81	599.96	1.32	-5.64	-1.87	0.16	5.94	198.34
700.00	0.97	198.08	699.95	1.71	-7.25	-2.42	0.04	7.65	198.47
800.00	0.93	188.06	799.93	1.93	-8.86	-2.80	0.17	9.29	197.53
900.00	0.93	171.19	899.92	1.77	-10.47	-2.79	0.27	10.83	194.92
1000.00	1.05	171.10	999.91	1.34	-12.18	-2.52	0.12	12.43	191.71
1100.00	1.10	167.70	1099.89	0.82	-14.02	-2.18	0.08	14.19	188.83
1200.00	1.18	169.78	1199.87	0.24	-15.97	-1.79	0.09	16.07	186.40
1300.00	1.24	170.03	1299.85	-0.33	-18.05	-1.42	0.06	18.10	184.50
1400.00	1.18	165.33	1399.82	-0.97	-20.11	-0.97	0.12	20.13	182.77
1500.00	1.23	167.60	1499.80	-1.66	-22.15	-0.48	0.07	22.16	181.24
1600.00	1.19	164.72	1599.78	-2.36	-24.20	0.02	0.07	24.20	179.95
1700.00	1.20	166.41	1699.76	-3.07	-26.22	0.54	0.04	26.23	178.81
1800.00	1.14	172.59	1799.74	-3.63	-28.23	0.92	0.14	28.24	178.14
1900.00	1.24	162.94	1899.72	-4.27	-30.25	1.36	0.22	30.28	177.42
2000.00	1.02	159.18	1999.70	-5.08	-32.12	2.00	0.23	32.18	176.44
2100.00	0.93	165.68	2099.68	-5.75	-33.73	2.51	0.14	33.83	175.74
2200.00	1.00	157.77	2199.67	-6.44	-35.33	3.04	0.15	35.46	175.07
2300.00	0.78	172.42	2299.66	-7.00	-36.81	3.46	0.31	36.97	174.62
2400.00	0.82	176.31	2399.65	-7.26	-38.20	3.60	0.07	38.37	174.62
2500.00	0.83	197.58	2499.64	-7.23	-39.60	3.43	0.30	39.75	175.05
2600.00	0.94	195.03	2599.62	-6.94	-41.09	3.00	0.12	41.20	175.83
2700.00	0.89	196.98	2699.61	-6.65	-42.62	2.56	0.06	42.70	176.57
2800.00	0.77	194.10	2799.60	-6.40	-44.02	2.17	0.13	44.07	177.18
2900.00	1.23	147.57	2899.59	-6.96	-45.57	2.58	0.90	45.65	176.76
3000.00	2.55	136.69	2999.53	-9.29	-48.10	4.68	1.36	48.33	174.44
3100.00	2.80	135.02	3099.42	-12.85	-51.44	7.93	0.26	52.05	171.23
3200.00	2.21	132.11	3199.33	-16.29	-54.47	11.09	0.60	55.58	168.49
3300.00	2.21	131.72	3299.25	-19.39	-57.04	13.96	0.02	58.72	166.25
3400.00	1.99	129.40	3399.18	-22.39	-59.43	16.74	0.24	61.74	164.27
3500.00	1.96	129.56	3499.12	-25.25	-61.62	19.40	0.03	64.60	162.52
3600.00	1.44	125.69	3599.08	-27.75	-63.44	21.74	0.53	67.06	161.09
3700.00	0.92	124.11	3699.06	-29.54	-64.62	23.42	0.52	68.74	160.08
3800.00	0.87	139.95	3799.05	-30.79	-65.65	24.58	0.25	70.10	159.48
3900.00	0.80	143.80	3899.04	-31.80	-66.80	25.48	0.09	71.49	159.12
4000.00	0.82	140.52	3999.03	-32.77	-67.91	26.34	0.05	72.85	158.80
4100.00	0.84	142.89	4099.02	-33.77	-69.05	27.24	0.04	74.23	158.47
4200.00	0.87	136.27	4199.00	-34.84	-70.18	28.21	0.10	75.64	158.10
4300.00	0.78	140.97	4298.99	-35.89	-71.26	29.16	0.11	77.00	157.74
4400.00	0.79	139.73	4398.99	-36.87	-72.32	30.04	0.02	78.31	157.44
4500.00	0.77	140.83	4498.98	-37.83	-73.36	30.91	0.02	79.61	157.16
4600.00	0.55	165.51	4598.97	-38.47	-74.35	31.45	0.35	80.73	157.07
4700.00	0.49	172.33	4698.97	-38.73	-75.24	31.63	0.09	81.62	157.20
4800.00	0.49	184.40	4798.96	-38.84	-76.09	31.65	0.10	82.41	157.41



Scientific Drilling International

Survey Report

Company: BOPCO Date: 06/30/2009 Time: 08:49:15 Page: 2
Field: Quahada Ridge Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Site: Eddy County, NM Vertical (TVD) Reference: SITE 0.0
Well: James Ranch Unit #105H Section (VS) Reference: Well (0.00N,0.00E,275.53Azi)
Wellpath: VH - Job #32K0609228 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

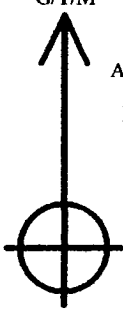
MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	0.48	189.90	4898.96	-38.81	-76.93	31.55	0.05	83.14	157.70
5000.00	0.41	196.50	4998.96	-38.71	-77.68	31.37	0.09	83.78	158.01
5100.00	0.51	164.95	5098.95	-38.80	-78.46	31.39	0.27	84.50	158.19
5200.00	0.46	207.39	5198.95	-38.81	-79.24	31.32	0.35	85.21	158.43
5300.00	0.43	195.83	5298.95	-38.59	-79.96	31.03	0.09	85.77	158.79
5400.00	0.46	203.61	5398.94	-38.40	-80.69	30.77	0.07	86.36	159.13
5500.00	0.22	208.40	5498.94	-38.20	-81.22	30.52	0.24	86.77	159.41
5600.00	0.12	228.13	5598.94	-38.06	-81.46	30.35	0.11	86.93	159.57
5700.00	0.15	222.00	5698.94	-37.91	-81.63	30.18	0.03	87.03	159.71
5800.00	0.15	213.73	5798.94	-37.77	-81.84	30.02	0.02	87.17	159.85
5900.00	0.18	214.64	5898.94	-37.63	-82.07	29.86	0.03	87.34	160.01
6000.00	0.30	298.20	5998.94	-37.31	-82.08	29.54	0.33	87.23	160.21
6100.00	0.23	305.86	6098.94	-36.90	-81.84	29.15	0.08	86.87	160.40
6200.00	0.11	305.54	6198.94	-36.64	-81.67	28.91	0.12	86.63	160.51
6300.00	0.28	168.24	6298.94	-36.63	-81.85	28.88	0.37	86.79	160.57
6400.00	0.58	145.35	6398.93	-37.03	-82.50	29.21	0.34	87.52	160.50
6500.00	0.50	202.27	6498.93	-37.23	-83.32	29.34	0.52	88.34	160.60
6600.00	0.64	189.72	6598.93	-37.06	-84.28	29.08	0.19	89.15	160.96
6700.00	0.85	184.99	6698.92	-37.03	-85.57	28.92	0.22	90.32	161.33
6720.00	1.02	186.08	6718.91	-37.03	-85.89	28.89	0.85	90.62	161.41



Scientific
Drilling

Field: Quahada Ridge
Site: Eddy County, NM
Well: James Ranch Unit #105H
Wellpath: VH - Job #32K0609228
Survey: 06/24/09

G/T/M



Azimuths to Grid North
True North: 0.00°
Magnetic North: 0.00°

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 06/30/2009
Model: igrf2000

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

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

