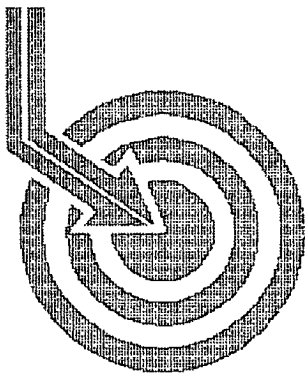


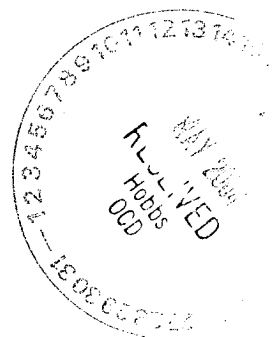


Scientific Drilling

SUR: M-1-18s-34e, 653/S & 20/W
BHL: O-2-18s-34e, 656/S & 2407/E
API # 30-025-36500

CHEVRONTEXACO

Field: Vacuum Glorietta San Andres
Site: Lea County, NM
Well: VGSAU #110H
Wellpath: DH - Job #32D0304204
Survey: 03/25/04-04/02/04

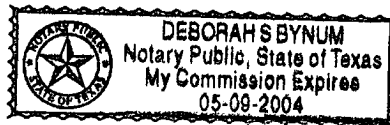


This survey is correct to the best of my knowledge
and is supported by actual field data.

David Moody Company Representative

Notorized this date 6th of May, 2004.

Deborah Sue Bynum
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling Survey Report

Company: CHEVRONTEXACO
Field: Vacuum Glorietta San Andres
Site: Lea County, NM
Well: VGSAU #110H
Wellpath: VH - Job #32K0304207

Date: 5/6/2004 Time: 12:04:22 Page: 1
Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North
Vertical (TV D) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,270.00Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 03/26/04
KSRG 0'-4275'
Company: Scientific Drilling
Tool: Keeper, Keeper Gyro

Start Date: 3/26/2004
Engineer: Gonzales/Stahl
Tied-to: From Surface

Survey

MD ft	Incl deg	Azim deg	TV D ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	Cl sD ft	Cl sA deg
0.0	0.00	359.50	0.0	0.0	0.0	0.0	0.00	0.0	0.00
100.0	0.74	236.19	100.0	0.5	-0.4	-0.5	0.74	0.6	236.19
200.0	0.95	240.91	200.0	1.8	-1.1	-1.8	0.22	2.1	238.03
300.0	0.80	233.54	300.0	3.1	-1.9	-3.1	0.19	3.6	237.83
400.0	0.95	233.10	400.0	4.3	-2.9	-4.3	0.15	5.2	236.49
500.0	0.97	238.47	499.9	5.7	-3.8	-5.7	0.09	6.8	236.33
600.0	1.02	240.81	599.9	7.2	-4.7	-7.2	0.06	8.6	237.00
700.0	0.95	235.88	699.9	8.7	-5.6	-8.7	0.11	10.3	237.24
800.0	0.74	238.93	799.9	9.9	-6.4	-9.9	0.21	11.8	237.24
900.0	0.76	240.05	899.9	11.0	-7.0	-11.0	0.02	13.1	237.46
1000.0	0.53	228.43	999.9	11.9	-7.7	-11.9	0.26	14.2	237.29
1100.0	0.41	244.79	1099.9	12.6	-8.1	-12.6	0.18	15.0	237.20
1200.0	0.33	240.25	1199.9	13.2	-8.4	-13.2	0.09	15.6	237.43
1300.0	0.27	232.90	1299.9	13.6	-8.7	-13.6	0.07	16.2	237.41
1400.0	0.45	246.29	1399.9	14.2	-9.0	-14.2	0.20	16.8	237.55
1500.0	0.47	239.40	1499.9	14.9	-9.4	-14.9	0.06	17.6	237.79
1600.0	0.20	169.88	1599.9	15.2	-9.8	-15.2	0.44	18.1	237.32
1700.0	0.31	69.66	1699.9	14.9	-9.8	-14.9	0.40	17.9	236.61
1800.0	0.41	73.54	1799.9	14.3	-9.6	-14.3	0.10	17.3	236.07
1900.0	0.56	70.74	1899.9	13.5	-9.4	-13.5	0.15	16.5	235.26
2000.0	0.77	81.43	1999.9	12.4	-9.1	-12.4	0.24	15.4	233.67
2100.0	0.88	81.76	2099.9	11.0	-8.9	-11.0	0.11	14.1	230.93
2200.0	1.00	86.18	2199.8	9.3	-8.7	-9.3	0.14	12.8	226.91
2300.0	0.87	73.45	2299.8	7.7	-8.5	-7.7	0.24	11.5	222.45
2400.0	0.78	55.76	2399.8	6.5	-7.9	-6.5	0.27	10.2	219.37
2500.0	1.27	38.61	2499.8	5.2	-6.6	-5.2	0.57	8.4	218.16
2600.0	1.56	38.52	2599.8	3.7	-4.7	-3.7	0.29	5.9	217.99
2700.0	1.96	43.53	2699.7	1.6	-2.4	-1.6	0.43	2.9	214.46
2800.0	1.94	36.07	2799.7	-0.5	0.2	0.5	0.25	0.6	67.02
2900.0	2.32	39.70	2899.6	-2.8	3.2	2.8	0.40	4.2	41.91
3000.0	2.35	37.56	2999.5	-5.4	6.3	5.4	0.09	8.3	40.30
3100.0	2.51	30.10	3099.4	-7.7	9.9	7.7	0.35	12.5	38.08
3200.0	2.53	30.06	3199.3	-9.9	13.7	9.9	0.02	16.9	36.00
3300.0	2.39	26.76	3299.2	-12.0	17.4	12.0	0.20	21.1	34.47
3400.0	2.73	24.23	3399.1	-13.9	21.5	13.9	0.36	25.6	32.90
3500.0	2.66	26.77	3499.0	-15.9	25.7	15.9	0.14	30.2	31.75
3600.0	2.94	27.11	3598.9	-18.1	30.1	18.1	0.28	35.1	31.08
3700.0	2.98	30.11	3698.8	-20.6	34.6	20.6	0.16	40.3	30.77
3800.0	3.63	29.11	3798.6	-23.4	39.6	23.4	0.65	46.0	30.61
3900.0	3.71	28.23	3898.4	-26.5	45.2	26.5	0.10	52.4	30.38
4000.0	3.71	24.23	3998.2	-29.4	51.0	29.4	0.26	58.9	29.92
4100.0	3.59	20.60	4098.0	-31.8	56.9	31.8	0.26	65.2	29.19
4200.0	4.05	21.49	4197.8	-34.2	63.1	34.2	0.46	71.8	28.44
4275.0	3.62	19.97	4272.6	-36.0	67.8	36.0	0.59	76.8	27.94



Scientific
Drilling

Scientific Drilling Survey Report

Company: CHEVRONTEXACO	Date: 5/6/2004	Time: 12:12:52	Page: 1
Field: Vacuum Glorietta San Andres	Co-ordinate(NE) Reference:	Site: Lea County, NM, Grid North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: VGSAU #110H	Section (VS) Reference:	Well (0.00N,0.00E,270.00Azi)	
Wellpath: DH - Job #32D0304204	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 03/25/04-04/02/04 MWD4279'-6840'	Start Date: 3/25/2004
Company: Scientific Drilling	Engineer: Lamb/Melendez/Hendrix
Tool: MWD,MWD	Tied-to: From: Definitive Path

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4275.0	3.62	19.97	4272.6	-36.0	67.8	36.0	0.00	76.8	27.94
4279.0	3.62	19.97	4276.6	-36.1	68.1	36.1	0.00	77.0	27.92
4336.0	22.16	263.13	4332.2	-25.9	68.5	25.9	42.11	73.2	20.69
4366.0	36.23	270.25	4358.4	-11.3	67.8	11.3	48.23	68.8	9.45
4398.0	51.27	274.11	4381.4	10.7	68.8	-10.7	47.72	69.6	351.12
4428.0	65.25	273.59	4397.2	36.1	70.5	-36.1	46.62	79.2	332.85
4459.0	75.97	272.97	4407.4	65.3	72.1	-65.3	34.63	97.3	317.85
4490.0	83.10	272.53	4413.1	95.7	73.6	-95.7	23.04	120.7	307.55
4521.0	83.80	267.78	4416.6	126.5	73.7	-126.5	15.39	146.4	300.21
4553.0	83.89	267.78	4420.0	158.3	72.4	-158.3	0.28	174.1	294.59
4584.0	83.62	267.08	4423.4	189.1	71.1	-189.1	2.41	202.0	290.60
4615.0	82.83	266.11	4427.1	219.8	69.2	-219.8	4.02	230.5	287.48
4646.0	85.47	267.52	4430.2	250.6	67.5	-250.6	9.64	259.5	285.08
4678.0	84.86	266.55	4432.9	282.4	65.9	-282.4	3.57	290.0	283.13
4709.0	84.50	265.68	4435.8	313.2	63.8	-313.2	3.03	319.7	281.51
4741.0	84.86	264.62	4438.8	345.0	61.1	-345.0	3.48	350.4	280.04
4772.0	86.79	268.05	4441.0	375.8	59.1	-375.8	12.67	380.5	278.94
4804.0	85.56	266.55	4443.2	407.7	57.6	-407.7	6.05	411.8	278.04
4835.0	86.00	265.59	4445.4	438.6	55.5	-438.6	3.40	442.1	277.21
4866.0	86.09	267.43	4447.6	469.4	53.6	-469.4	5.93	472.5	276.51
4898.0	87.41	266.99	4449.4	501.3	52.0	-501.3	4.35	504.0	275.93
4929.0	89.16	266.47	4450.3	532.3	50.3	-532.3	5.89	534.7	275.40
4960.0	88.02	268.58	4451.1	563.2	48.9	-563.2	7.73	565.4	274.97
4991.0	88.29	269.28	4452.1	594.2	48.4	-594.2	2.42	596.2	274.65
5023.0	82.83	269.54	4454.6	626.1	48.0	-626.1	17.08	627.9	274.39
5054.0	82.83	268.84	4458.4	656.9	47.6	-656.9	2.24	658.6	274.14
5085.0	84.06	268.84	4462.0	687.7	47.0	-687.7	3.97	689.3	273.91
5117.0	82.22	268.84	4465.8	719.4	46.3	-719.4	5.75	720.9	273.69
5148.0	75.45	268.49	4471.8	749.8	45.6	-749.8	21.87	751.2	273.48
5180.0	75.36	267.35	4479.9	780.8	44.5	-780.8	3.46	782.0	273.26
5211.0	76.85	268.22	4487.3	810.8	43.3	-810.8	5.52	812.0	273.06
5243.0	78.17	268.84	4494.2	842.1	42.5	-842.1	4.54	843.1	272.89
5274.0	79.05	270.25	4500.3	872.4	42.3	-872.4	5.29	873.5	272.78
5306.0	76.85	268.93	4507.0	903.7	42.1	-903.7	7.97	904.7	272.67
5337.0	77.73	270.25	4513.8	934.0	41.9	-934.0	5.03	934.9	272.57
5369.0	74.66	267.43	4521.5	965.0	41.2	-965.0	12.86	965.9	272.45
5400.0	75.10	267.43	4529.6	994.9	39.9	-994.9	1.42	995.7	272.30
5463.0	80.99	266.73	4542.6	1056.5	36.8	-1056.5	9.41	1057.1	271.99
5495.0	81.16	266.82	4547.6	1088.0	35.0	-1088.0	0.60	1088.6	271.84
5527.0	85.38	268.75	4551.3	1119.8	33.7	-1119.8	14.48	1120.3	271.73
5558.0	85.47	269.54	4553.8	1150.7	33.3	-1150.7	2.56	1151.1	271.66
5589.0	85.12	270.16	4556.3	1181.6	33.2	-1181.6	2.29	1182.0	271.61
5621.0	84.94	270.77	4559.1	1213.4	33.5	-1213.4	1.98	1213.9	271.58
5652.0	84.50	271.12	4562.0	1244.3	34.0	-1244.3	1.81	1244.8	271.56
5685.0	85.65	267.52	4564.8	1277.2	33.6	-1277.2	11.41	1277.6	271.51
5716.0	86.09	267.08	4567.0	1308.1	32.1	-1308.1	2.00	1308.4	271.41
5747.0	88.37	267.78	4568.5	1339.0	30.7	-1339.0	7.69	1339.3	271.32
5779.0	87.32	267.97	4569.7	1370.9	29.6	-1370.9	3.33	1371.3	271.23
5809.0	86.09	267.78	4571.5	1400.9	28.4	-1400.9	4.15	1401.2	271.16



Scientific
Drilling

Scientific Drilling Survey Report

Company: CHEVRONTXACO
Field: Vacuum Glorietta San Andres
Site: Lea County, NM
Well: VGSAU #110H
Wellpath: DH - Job #32D0304204

Date: 5/6/2004 Time: 12:12:52 Page: 2
Co-ordinate(NE) Reference: Site: Lea County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,270.00Azi)
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
5841.0	85.12	267.81	4573.9	1432.7	27.2	-1432.7	3.03	1433.0	271.09
5872.0	85.03	267.78	4576.6	1463.6	26.0	-1463.6	0.31	1463.8	271.02
5904.0	83.45	267.78	4579.8	1495.4	24.8	-1495.4	4.94	1495.6	270.95
5935.0	83.19	267.78	4583.4	1526.2	23.6	-1526.2	0.84	1526.4	270.89
5967.0	85.30	268.40	4586.6	1558.0	22.5	-1558.0	6.87	1558.2	270.83
5998.0	86.44	268.49	4588.8	1588.9	21.7	-1588.9	3.69	1589.1	270.78
6030.0	87.14	269.19	4590.6	1620.9	21.1	-1620.9	3.09	1621.0	270.74
6061.0	87.23	269.45	4592.1	1651.8	20.7	-1651.8	0.89	1652.0	270.72
6093.0	87.58	269.72	4593.6	1683.8	20.5	-1683.8	1.38	1683.9	270.70
6124.0	86.88	269.63	4595.1	1714.8	20.3	-1714.8	2.28	1714.9	270.68
6156.0	86.17	269.89	4597.0	1746.7	20.1	-1746.7	2.36	1746.8	270.66
6187.0	86.53	270.16	4599.0	1777.6	20.2	-1777.6	1.45	1777.7	270.65
6219.0	85.38	269.37	4601.3	1809.5	20.0	-1809.5	4.36	1809.7	270.63
6250.0	86.17	269.37	4603.5	1840.5	19.7	-1840.5	2.55	1840.6	270.61
6282.0	86.70	269.98	4605.5	1872.4	19.5	-1872.4	2.52	1872.5	270.60
6313.0	84.06	269.89	4608.0	1903.3	19.5	-1903.3	8.52	1903.4	270.59
6343.0	83.89	270.16	4611.2	1933.1	19.5	-1933.1	1.06	1933.2	270.58
6375.0	84.15	270.60	4614.5	1965.0	19.7	-1965.0	1.59	1965.1	270.57
6407.0	83.71	269.37	4617.9	1996.8	19.7	-1996.8	4.06	1996.9	270.56
6439.0	82.75	267.96	4621.7	2028.5	18.9	-2028.5	5.31	2028.6	270.54
6470.0	82.66	267.96	4625.6	2059.3	17.9	-2059.3	0.29	2059.3	270.50
6502.0	82.39	267.96	4629.8	2091.0	16.7	-2091.0	0.84	2091.0	270.46
6534.0	82.31	267.35	4634.0	2122.7	15.4	-2122.7	1.91	2122.7	270.42
6565.0	82.82	268.22	4638.0	2153.4	14.2	-2153.4	3.23	2153.4	270.38
6597.0	82.83	267.35	4642.0	2185.1	13.0	-2185.1	2.70	2185.1	270.34
6628.0	84.42	267.35	4645.5	2215.9	11.6	-2215.9	5.13	2215.9	270.30
6660.0	85.03	267.26	4648.4	2247.7	10.1	-2247.7	1.93	2247.7	270.26
6691.0	85.65	267.52	4650.9	2278.6	8.7	-2278.6	2.17	2278.6	270.22
6722.0	85.74	267.70	4653.3	2309.5	7.4	-2309.5	0.65	2309.5	270.18
6753.0	85.62	267.52	4655.6	2340.3	6.1	-2340.3	0.70	2340.4	270.15
6785.0	85.30	268.40	4658.1	2372.2	5.0	-2372.2	2.92	2372.2	270.12
6840.0	85.30	268.40	4662.6	2427.0	3.4	-2427.0	0.00	2427.0	270.08



**Scientific
Drilling**

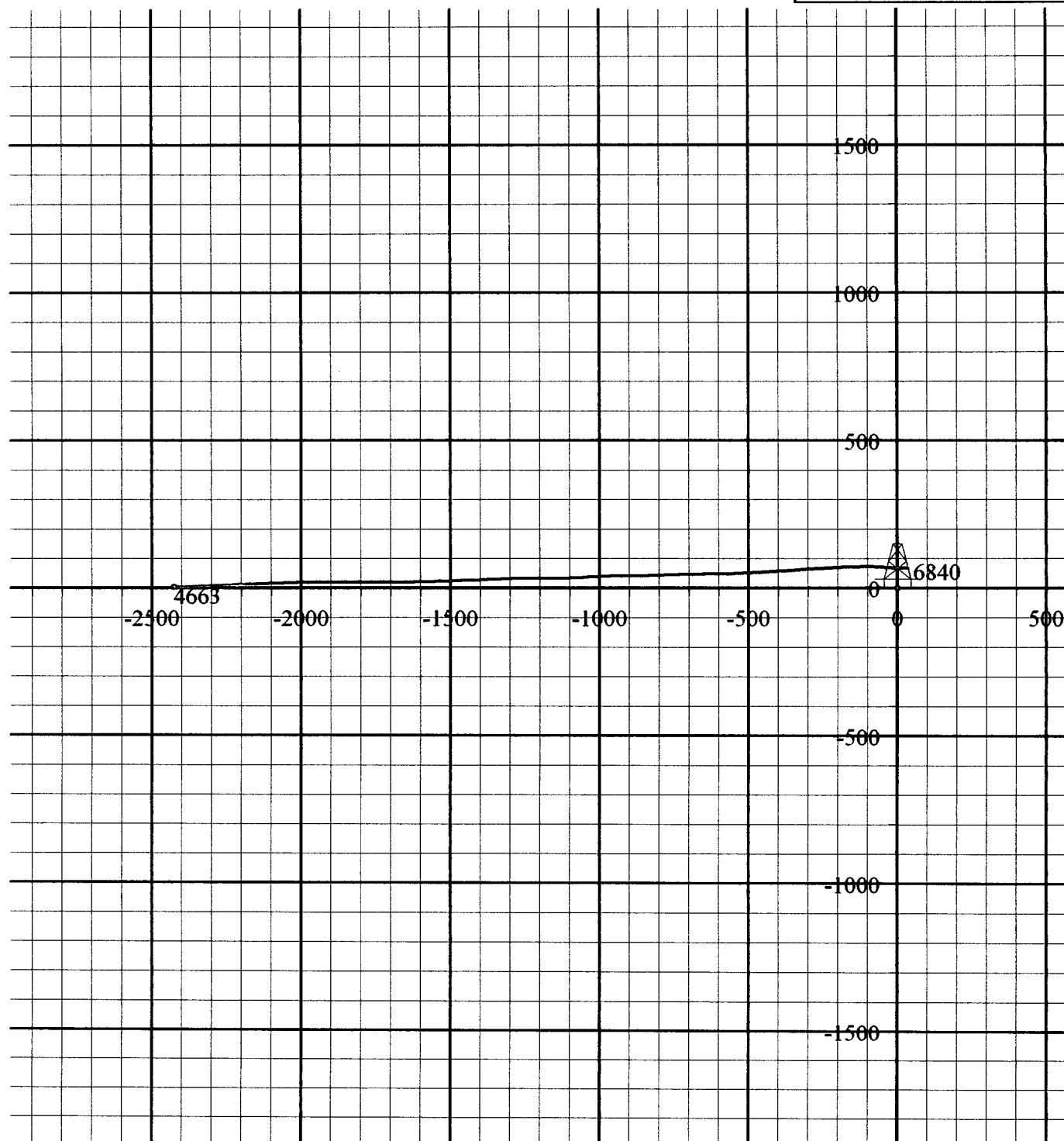
Field: Vacuum Glorietta San Andres
Site: Lea County, NM
Well: VGSAU #110H
Wellpath: DH - Job #32D0304204
Survey: 03/25/04-04/02/04



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

Magnetic Field
Strength: 0nT
Dip Angle: 0.00°
Date: 5/6/2004
Model: igrf2000

South(-)/North(+) [500ft/in]



West(-)/East(+) [500ft/in]