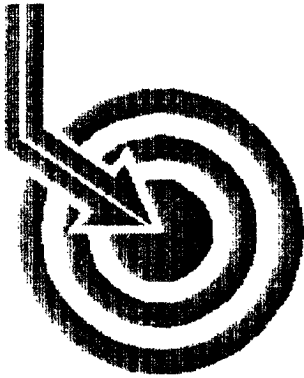


30-015-34417



Scientific Drilling

E.O.G.

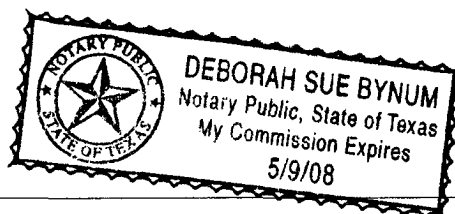
Field: Ranger
Site: Eddy County, NM
Well: Ranger 7 Fed #3H
Wellpath: VH - Job #32K12061052
Survey: 12/26/06

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

.....*Robert*.....Company Representative

Notorized this date 16th of January, 2007.

Deborah Sue Bynum
Notary Signature
County of Midland
State of Texas





Scientific Drilling International Survey Report

Company: E.O.G.	Date: 01/16/2007	Time: 12:26:42	Page: 1
Field: Ranger	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: Ranger 7 Fed #3H	Section (VS) Reference:	Well (0.00N,0.00E,179.80Azi)	
Wellpath: VH - Job #32K12061052	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 12/26/06	Start Date: 12/26/2006
Company: Scientific Drilling Internatio	Engineer: Gonzales w/GeoGyro
Tool: Keeper;Keeper Surface Readout 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	359.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.04	162.69	100.00	0.03	-0.03	0.01	0.04	0.03	162.69
200.00	0.11	117.83	200.00	0.11	-0.11	0.11	0.09	0.15	136.53
300.00	0.30	122.64	300.00	0.30	-0.30	0.41	0.19	0.51	125.90
400.00	0.57	142.93	400.00	0.84	-0.84	0.93	0.31	1.25	131.90
500.00	0.55	136.38	499.99	1.59	-1.58	1.56	0.07	2.22	135.32
600.00	0.77	135.59	599.98	2.42	-2.41	2.36	0.22	3.37	135.53
700.00	0.78	126.95	699.98	3.31	-3.30	3.38	0.12	4.72	134.30
800.00	0.67	129.95	799.97	4.10	-4.08	4.37	0.12	5.98	133.04
900.00	0.74	129.90	899.96	4.89	-4.87	5.31	0.07	7.21	132.51
1000.00	0.83	124.58	999.95	5.72	-5.70	6.41	0.12	8.57	131.65
1100.00	1.03	113.78	1099.94	6.50	-6.47	7.82	0.27	10.15	129.59
1200.00	1.05	114.94	1199.92	7.25	-7.22	9.48	0.03	11.91	127.29
1300.00	1.07	113.31	1299.90	8.01	-7.97	11.17	0.04	13.72	125.53
1400.00	0.80	117.37	1399.89	8.71	-8.66	12.64	0.28	15.33	124.42
1500.00	0.75	128.51	1499.88	9.44	-9.39	13.78	0.16	16.67	124.29
1600.00	0.76	131.73	1599.87	10.29	-10.24	14.78	0.04	17.98	124.72
1700.00	0.87	135.76	1699.86	11.28	-11.23	15.81	0.12	19.39	125.39
1800.00	0.79	135.78	1799.85	12.32	-12.27	16.82	0.08	20.81	126.10
1900.00	0.86	148.90	1899.84	13.46	-13.40	17.69	0.20	22.19	127.15
2000.00	0.79	155.68	1999.83	14.74	-14.67	18.36	0.12	23.50	128.63
2100.00	0.82	174.94	2099.82	16.08	-16.01	18.70	0.27	24.62	130.57
2200.00	0.78	174.94	2199.81	17.47	-17.40	18.83	0.04	25.64	132.75
2300.00	0.84	179.94	2299.80	18.88	-18.82	18.89	0.09	26.66	134.89
2400.00	0.91	187.97	2399.79	20.40	-20.33	18.78	0.14	27.68	137.28
2500.00	0.96	185.70	2499.78	22.02	-21.95	18.59	0.06	28.77	139.75
2600.00	0.98	196.14	2599.76	23.67	-23.61	18.26	0.18	29.85	142.27
2700.00	1.02	191.21	2699.75	25.37	-25.30	17.85	0.09	30.97	144.79
2800.00	1.07	192.92	2799.73	27.15	-27.09	17.47	0.06	32.23	147.18
2900.00	1.07	196.81	2899.71	28.95	-28.89	16.99	0.07	33.52	149.54
3000.00	1.14	197.53	2999.70	30.79	-30.73	16.42	0.07	34.85	151.88
3100.00	1.20	201.43	3099.67	32.71	-32.66	15.74	0.10	36.25	154.26
3200.00	1.13	209.80	3199.65	34.54	-34.49	14.87	0.18	37.56	156.68
3300.00	1.11	214.95	3299.63	36.19	-36.14	13.82	0.10	38.69	159.07
3400.00	1.30	221.64	3399.61	37.82	-37.78	12.52	0.24	39.80	161.67
3500.00	1.51	225.75	3499.58	39.58	-39.55	10.82	0.23	41.00	164.70
3600.00	1.56	225.75	3599.55	41.45	-41.42	8.90	0.05	42.36	167.87
3700.00	1.56	231.62	3699.51	43.23	-43.21	6.86	0.16	43.75	170.98
3800.00	1.74	233.83	3799.47	44.97	-44.95	4.56	0.19	45.18	174.20
3900.00	1.88	235.32	3899.42	46.79	-46.78	1.99	0.15	46.82	177.56
4000.00	1.73	233.68	3999.37	48.61	-48.61	-0.58	0.16	48.61	180.68
4100.00	1.67	237.21	4099.32	50.28	-50.29	-3.02	0.12	50.38	183.43
4200.00	1.80	243.73	4199.28	51.76	-51.78	-5.65	0.24	52.08	186.23
4300.00	1.84	246.55	4299.23	53.08	-53.11	-8.53	0.10	53.79	189.13
4400.00	1.84	247.90	4399.18	54.31	-54.35	-11.49	0.04	55.55	191.94
4500.00	1.82	245.70	4499.13	55.56	-55.61	-14.43	0.07	57.45	194.54
4600.00	1.85	247.03	4599.07	56.83	-56.89	-17.36	0.05	59.48	196.97
4700.00	1.84	247.70	4699.02	58.06	-58.13	-20.33	0.02	61.59	199.28
4800.00	1.72	256.78	4798.97	59.00	-59.08	-23.28	0.31	63.50	201.50



Scientific Drilling International Survey Report

Company: E.O.G.
Field: Ranger
Site: Eddy County, NM
Well: Ranger 7 Fed #3H
Wellpath: VH - Job #32K12061052

Date: 01/16/2007 Time: 12:28:42 Page: 2
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,179.80Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

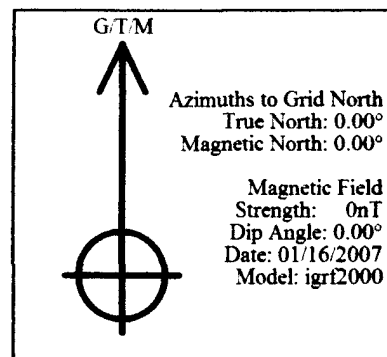
Survey

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	1.74	263.41	4898.93	59.51	-59.60	-26.25	0.20	65.13	203.77
5000.00	1.71	266.62	4998.88	59.76	-59.86	-29.24	0.10	66.63	206.04
5100.00	1.73	267.22	5098.84	59.91	-60.03	-32.24	0.03	68.14	208.24
5200.00	1.87	272.13	5198.79	59.91	-60.04	-35.38	0.21	69.69	210.51
5300.00	1.94	269.31	5298.73	59.86	-60.00	-38.70	0.12	71.40	212.82
5400.00	1.97	268.01	5398.68	59.93	-60.08	-42.11	0.05	73.37	215.03
5500.00	2.09	275.80	5498.61	59.79	-59.95	-45.64	0.30	75.35	217.28
5600.00	2.04	272.12	5598.55	59.53	-59.70	-49.24	0.14	77.39	219.51
5700.00	2.26	274.61	5698.48	59.29	-59.48	-52.98	0.24	79.65	221.69
5800.00	2.09	273.34	5798.41	59.02	-59.21	-56.77	0.18	82.03	223.79
5900.00	2.06	267.87	5898.34	58.96	-59.17	-60.38	0.20	84.54	225.58
6000.00	1.95	273.17	5998.28	58.92	-59.15	-63.88	0.22	87.06	227.20
6100.00	1.56	280.79	6098.23	58.56	-58.80	-66.91	0.45	89.08	228.69
6200.00	1.42	291.09	6198.20	57.86	-58.10	-69.41	0.30	90.51	230.07
6300.00	1.54	302.08	6298.17	56.69	-56.94	-71.70	0.31	91.56	231.55
6400.00	1.71	322.48	6398.13	54.78	-55.04	-73.75	0.60	92.02	233.26
6500.00	1.93	320.45	6498.08	52.29	-52.56	-75.73	0.23	92.18	235.24
6600.00	2.05	321.01	6598.02	49.60	-49.87	-77.93	0.12	92.52	237.38
6700.00	2.40	306.00	6697.94	46.97	-47.25	-80.75	0.68	93.56	239.67
6800.00	2.17	305.58	6797.86	44.62	-44.92	-83.98	0.23	95.24	241.86
6900.00	1.96	306.27	6897.80	42.50	-42.80	-86.90	0.21	96.87	243.78
7000.00	1.93	306.40	6997.74	40.48	-40.79	-89.63	0.03	98.48	245.53
7100.00	1.86	307.43	7097.68	38.49	-38.81	-92.28	0.08	100.11	247.19
7200.00	1.50	314.54	7197.64	36.57	-36.90	-94.50	0.42	101.45	248.67
7300.00	1.46	316.65	7297.61	34.72	-35.06	-96.31	0.07	102.49	250.00
7305.00	1.46	313.58	7302.61	34.63	-34.97	-96.40	1.56	102.54	250.06



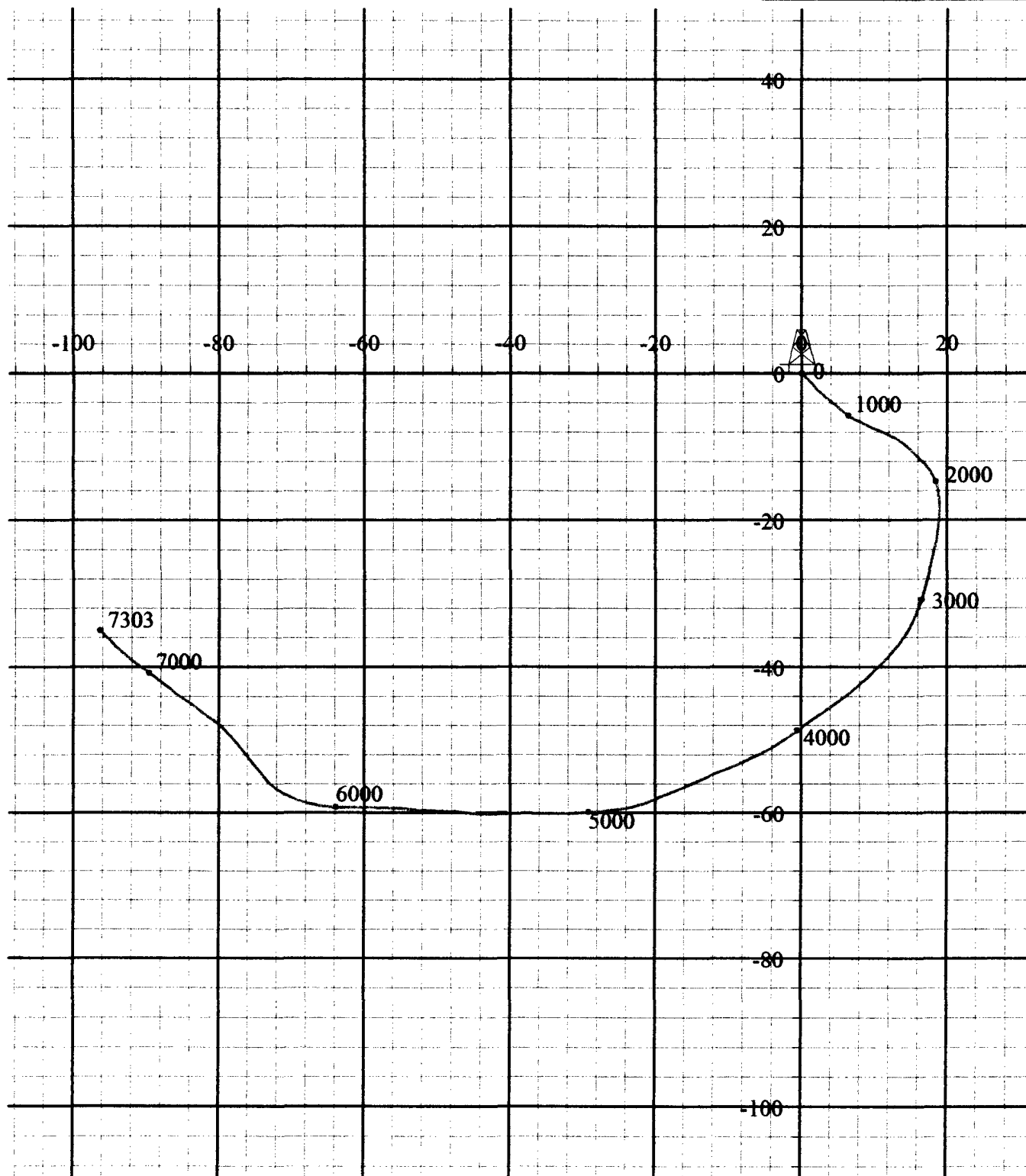
**Scientific
Drilling**

Field: Ranger
Site: Eddy County, NM
Well: Ranger 7 Fed #3H
Wellpath: VH - Job #32K12061052
Survey: 12/26/06



West(-)/East(+) [20ft/in]

South(-)/North(+) [20ft/in]



Ranger 7 Fed #3H Final Surveys.txt

~Version Information

VERS. 2.00: PATHFINDER ENERGY SERVICES LAS - Version 2.00
 WRAP. NO: One line per depth step

~Well Information

STRT.FT 7373.9995:
 STOP.FT 9642.0020:
 STEP.FT 0.0000:
 NULL. -999.25:
 COMP. EOG RESOURCES: COMPANY
 WELL. RANGER-7: WELL
 FLD. SAND TANK BONE SPRING: FLD
 SRVC. Pathfinder Energy Services: SERVICE COMPANY
 LOC. : LOCATION
 DATE. 01-Jan-07: LOG DATE
 UWI. 30-015-34417: API NUMBER
 APD .FT 19.00: ELEVATION ABOVE PERMANENT DATUM
 CNTY. EDDY: COUNTY
 CTRY. USA: COUNTRY
 DMF. KELLY BUSHINGS: DRILLING-LOG MEASURED FROM
 EPD .FT 3513.00: ELEVATION OF PERMANENT DATUM
 FL1. LAT;32^45'40"N LON;104^0'31": WELL LOCATION 1
 FL2. 2310'FSL 1980'FEL: WELL LOCATION 2
 PDAM. GROUND LEVEL - MEAN SEA LEVEL: ELEVATION OF PERMANENT DATUM REF
 PDAT. GROUND LEVEL: PERMANENT DATUM
 RANG. 30 EAST: RANGE
 SECT. 7: SECTION
 STAT. NM: STATE
 TOWN. 18 SOUTH: TOWNSHIP

~Curve Information

DEPT.FT : MWD Tool Measurement Depth
 MTVD.FT : MWD Tool Measurement TVD
 GRC .DEG : Inclination
 GRW .DEG : Azimuth
 ROP .FT : Section
 GRFE.FT : Rectangular Co-ordinates North
 ROPT.FT : Rectangular Co-ordinates East
 DLSE.DG/H : Dog-leg Severity

#	DEPT FT	MTVD FT	GRC DEG	GRW DEG	ROP FT	GRFE FT	ROPT FT	DLSE DG/H
#								
#								
#								
#	Re-log Number	0	0	0	0	0	0	0
#								

~ASCII Data

7374.00	7371.58	1.49	317.03	33.42	-33.71	-97.65	0.14
7406.00	7403.57	1.49	312.02	32.83	-33.12	-98.24	0.41
7437.00	7434.56	1.23	234.15	32.75	-33.05	-98.82	5.57
7468.00	7465.53	3.87	192.13	33.97	-34.26	-99.31	9.89
7500.00	7497.37	7.30	183.96	37.05	-37.35	-99.67	10.97
7531.00	7527.98	10.82	181.06	41.92	-42.22	-99.86	11.44
7562.00	7558.26	13.89	183.43	48.55	-48.85	-100.14	10.06
7593.00	7588.15	16.88	188.18	56.72	-57.02	-101.00	10.46
7624.00	7617.57	19.79	187.39	66.38	-66.68	-102.32	9.40
7656.00	7647.36	23.04	185.90	77.97	-78.28	-103.66	10.31
7687.00	7675.50	26.47	185.81	90.88	-91.19	-104.98	11.06
7718.00	7702.88	29.46	185.81	105.34	-105.65	-106.45	9.64
7749.00	7729.42	32.80	185.37	121.28	-121.60	-108.01	10.80
7780.00	7754.86	36.84	186.07	138.88	-139.21	-109.78	13.11
7811.00	7778.90	41.42	187.12	158.30	-158.64	-112.03	14.91
7842.00	7801.31	45.99	188.71	179.50	-179.84	-115.00	15.17
7873.00	7821.88	50.83	188.97	202.39	-202.74	-118.56	15.61
7905.00	7841.10	55.31	188.88	227.64	-228.01	-122.53	14.02
7936.00	7857.67	60.06	188.00	253.54	-253.92	-126.37	15.50
7967.00	7871.93	65.16	187.57	280.79	-281.18	-130.09	16.50

Ranger 7 Fed #3H Final Surveys.txt

7998.00	7883.70	70.17	187.92	309.18	-309.58	-133.95	16.20
8029.00	7892.88	75.36	188.18	338.48	-338.89	-138.10	16.75
8069.00	7900.87	81.60	188.27	377.23	-377.66	-143.70	15.61
8100.00	7904.55	84.77	186.60	407.74	-408.18	-147.68	11.53
8131.00	7906.78	86.97	185.63	438.47	-438.92	-150.97	7.74
8161.00	7908.39	86.88	185.02	468.29	-468.75	-153.75	2.07
8192.00	7910.15	86.61	184.58	499.12	-499.59	-156.34	1.65
8254.00	7914.14	86.00	183.96	560.81	-561.29	-160.95	1.40
8317.00	7918.83	85.47	183.35	623.49	-623.98	-164.95	1.28
8379.00	7923.35	86.17	182.20	685.24	-685.74	-167.94	2.16
8442.00	7927.40	86.44	181.41	748.07	-748.58	-169.93	1.32
8504.00	7931.44	86.09	181.76	809.91	-810.43	-171.64	0.80
8567.00	7936.08	85.47	180.71	872.72	-873.24	-173.00	1.93
8630.00	7941.06	85.47	178.25	935.52	-936.04	-172.43	3.89
8693.00	7946.51	84.59	176.40	998.22	-998.73	-169.50	3.23
8757.00	7952.74	84.24	174.82	1061.74	-1062.23	-164.62	2.52
8820.00	7958.49	85.30	173.77	1124.18	-1124.66	-158.39	2.36
8884.00	7963.59	85.56	173.33	1187.60	-1188.05	-151.21	0.80
8948.00	7968.74	85.21	173.15	1250.97	-1251.40	-143.70	0.61
9012.00	7974.28	84.86	172.89	1314.28	-1314.69	-135.95	0.69
9076.00	7980.22	84.50	172.45	1377.50	-1377.89	-127.82	0.88
9140.00	7986.00	85.12	172.01	1440.68	-1441.04	-119.20	1.18
9236.00	7994.46	84.77	172.01	1535.42	-1535.74	-105.91	0.37
9332.00	8002.85	85.21	170.78	1630.01	-1630.29	-91.60	1.36
9428.00	8010.80	85.30	170.07	1724.40	-1724.63	-75.68	0.74
9556.00	8021.30	85.30	169.81	1850.07	-1850.24	-53.41	0.21
9586.00	8023.92	84.68	169.99	1879.51	-1879.66	-48.17	2.13