

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTMonth - Year
APR 1 8 2007
OCD - ARTESIA, NMFORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other		5. Lease Serial No. LC-028480A							
b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr., Other _____		6. If Indian, Allottee or Tribe Name ---							
2. Name of Operator COG Operating LLC		7. Unit or CA Agreement Name and No. ---							
3. Address 550 W. Texas, Suite 1300, Midland, TX 79701		8. Lease Name and Well No. Western Federal #8							
3a. Phone No. (include area code) 432-685-4340		9. AFI Well No. 30-015-34815							
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface 2040' FNL & 330' FEL, Unit H At top prod. interval reported below At total depth 1673' FNL & 350' FEL, Unit H		10. Field and Pool, or Exploratory Empire Yeso 96210							
14. Date Spudded 01/09/2007		11. Sec., T., R., M., on Block and Survey or Area Sec 30, T17S, R29E							
15. Date T.D. Reached 01/20/2007		12. County or Parish Eddy							
16. Date Completed 12/22/2006 ☐ D & A ☒ Ready to Prod.		13. State NM							
17. Elevations (DF, RKB, RT, GL)* 3621' GL									
18. Total Depth: MD 5775' TVD		19. Plug Back T.D.: MD 4900' TVD							
20. Depth Bridge Plug Set: MD 5310' & 4900' TVD									
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CN / HNGS, Micro CFL / HNGS		22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit report) Directional Survey? ☒ No ☐ Yes (Submit copy)							
23. Casing and Liner Record (Report all strings set in well)									
Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2	13-3/8	48		379		448 sx Cl C		Surface	
12-1/4	8-5/8	24		910		650 sx Cl C		Surface	
7-7/8	5-1/2	17		5768		1355 sx Cl C		Surface	
24. Tubing Record									
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	
2-7/8	4109								
25. Producing Intervals				26. Perforation Record					
Formation		Top	Bottom	Perforated Interval		Size	No. Holes	Perf. Status	
A) Yeso				3933' - 4093'		1 SPF	28	Plugged	
B) Yeso				4951' - 5228'		2 SPF	60	Plugged	
C) Yeso				5368' - 5736'		2 SPF	34	Plugged	
D) Yeso				5331' - 5572'		2 SPF	60	Open	
27. Acid, Fracture, Treatment, Cement Squeeze, etc.									
Depth Interval		Amount and Type of Material							
3933' - 4093'		Acidize w/ 2500 gals acid. Frac w/ 93,500 gals gel, 8000# LiteProp, & 90,140# 16/30 sand.							
4951' - 5228'		Acidize w/ 2500 gals acid.							
5368' - 5736'		Acidize w/ 2000 gals acid							
5331' - 5572'		Acidize w/ 2500 gals acid.							
28. Production - Interval A									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
04/01/2007	04/07/2007	24	→	50	82	176	38.8		Pumping
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→					Producing	
28a. Production - Interval B									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

*(See instructions and spaces for additional data on page 2)

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Yates	778				
7 Rivers	1041				
Queen	1643				
Grayburg	2041				
San Andres	2352				
Glorieta	3825				
Yeso	3921				

32. Additional remarks (include plugging procedure):

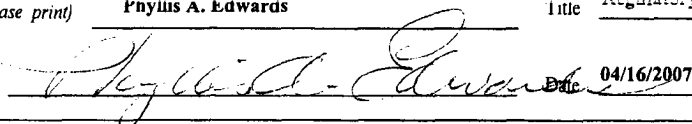
33. Indicate which itmes have been attached by placing a check in the appropriate boxes:

- ☐ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ Geologic Report
 ☐ DST Report
 ☐ Directional Survey
☐ Sundry Notice for plugging and cement verification
☐ Core Analysis
☒ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) **Phyllis A. Edwards**Title **Regulatory Analyst**

Signature


Date **04/16/2007**

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

OCD COPY



PO Box 1370
Artesia, NM 88211-1370
(505) 748-1288

January 26, 2007

COG, LLC
Fasken Center, Tower II
550 West Texas Ave, Suite 1300
Midland, TX 79701



RE: Western Federal #8
2040' FNL & 330' FEL
Sec. 30, T17S, R29E
Eddy County, New Mexico

Dear Sir,

The following is the Deviation Survey for the above captioned well.

<u>DEPTH</u>	<u>DEVIATION</u>	<u>DEPTH</u>	<u>DEVIATION</u>
133'	1/2°	612'	1 3/4°
342'	3/4°	793'	1 1/4°

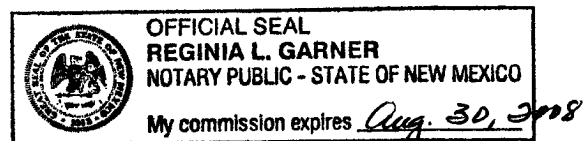
Remainder of well drilled directionally, deviations provided separately.

Very truly yours,

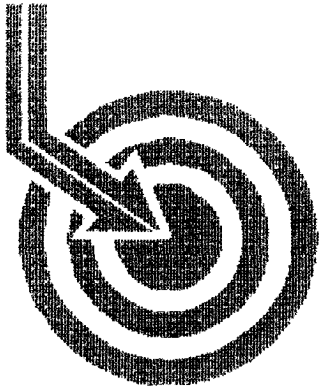
Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 26th day of January, 2007.

Notary Public

OCD COPY



**Scientific
Drilling**

S



MACK ENERGY

Field: Empire
Site: Eddy County, NM
Well: Western Federal #8
Wellpath: DH - Job #32D0107038
Survey: 01/12/07-01/20/07

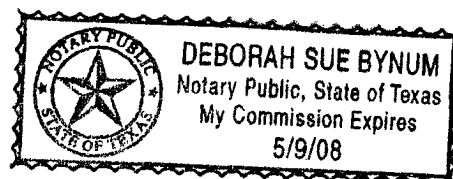
This survey is correct to the best of my knowledge
and is supported by actual field data.

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

Notorized this date 21st of February, 2007.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas





Scientific Drilling International

Survey Report

Company: MACK ENERGY
Field: Empire
Site: Eddy County, NM
Well: Western Federal #8
Wellpath: VH - Job #32K0107046

Date: 02/19/2007 Time: 19:22:38 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,356.08Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 01/13/07
KSRG 0'-883'
Company: Scientific Drilling Internatio
Tool: Keeper;Keeper Gyro

Start Date: 01/13/2007
Engineer: Rehders/Rando
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	359.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.02	274.11	100.00	0.00	0.00	-0.02	0.02	0.02	274.11
150.00	0.13	135.03	150.00	-0.04	-0.04	0.01	0.29	0.04	159.93
200.00	0.34	133.30	200.00	-0.19	-0.18	0.16	0.42	0.24	138.03
250.00	0.24	123.38	250.00	-0.36	-0.34	0.36	0.22	0.49	133.52
300.00	0.35	135.83	300.00	-0.54	-0.51	0.55	0.25	0.75	132.58
350.00	0.48	121.60	350.00	-0.78	-0.73	0.84	0.33	1.11	130.97
400.00	0.52	131.12	399.99	-1.06	-0.98	1.19	0.18	1.54	129.72
450.00	0.82	132.37	449.99	-1.48	-1.38	1.62	0.60	2.13	130.32
500.00	0.99	127.53	499.99	-2.03	-1.88	2.23	0.37	2.91	130.16
550.00	1.05	128.84	549.98	-2.62	-2.43	2.93	0.13	3.80	129.70
600.00	1.24	125.47	599.97	-3.28	-3.03	3.72	0.40	4.80	129.14
650.00	1.31	115.52	649.96	-3.90	-3.59	4.68	0.46	5.90	127.50
700.00	1.08	108.76	699.94	-4.37	-3.99	5.64	0.54	6.91	125.26
750.00	0.95	108.14	749.94	-4.70	-4.27	6.48	0.26	7.76	123.37
800.00	1.01	109.53	799.93	-5.03	-4.55	7.29	0.13	8.59	121.94
850.00	0.79	98.45	849.92	-5.28	-4.74	8.05	0.56	9.34	120.52
883.00	0.54	94.73	882.92	-5.36	-4.79	8.43	0.77	9.69	119.61



Scientific Drilling International Survey Report

Company: MACK ENERGY Date: 02/19/2007 Time: 19:27:33 Page: 1
Field: Empire Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North
Site: Eddy County, NM Vertical (TVD) Reference: SITE 0.0
Well: Western Federal #8 Section (VS) Reference: Well (0.00N,0.00E,356.08Azi)
Wellpath: DH - Job #32D0107038 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 01/12/07-01/20/07 Start Date: 01/12/2007
MWD 943'-5775'
Company: Scientific Drilling Internatio Engineer: Calvert/Boyd
Tool: MWD;MWD Tied-to: From: Definitive Path

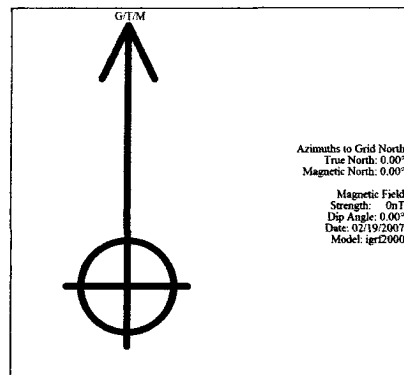
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
883.00	0.54	94.73	882.92	-5.36	-4.79	8.43	0.00	9.69	119.61
943.00	0.61	103.60	942.92	-5.49	-4.89	9.02	0.19	10.26	118.46
1067.00	2.53	17.58	1066.87	-3.15	-2.43	10.49	2.07	10.77	103.07
1159.00	3.51	8.76	1158.75	1.49	2.28	11.53	1.18	11.76	78.79
1254.00	4.78	358.60	1253.50	8.28	9.12	11.88	1.54	14.97	52.49
1348.00	5.20	2.02	1347.14	16.43	17.29	11.93	0.55	21.01	34.61
1439.00	5.09	354.40	1437.77	24.57	25.43	11.68	0.76	27.98	24.68
1533.00	3.77	349.20	1531.49	31.81	32.61	10.70	1.47	34.32	18.16
1627.00	4.87	348.94	1625.22	38.83	39.57	9.35	1.17	40.66	13.30
1720.00	4.72	352.82	1717.90	46.57	47.24	8.12	0.38	47.93	9.75
1813.00	4.94	353.40	1810.57	54.39	55.01	7.18	0.24	55.48	7.43
1904.00	5.00	352.43	1901.23	62.26	62.83	6.21	0.11	63.14	5.64
2031.00	4.43	352.53	2027.80	72.68	73.18	4.84	0.45	73.34	3.78
2125.00	4.42	352.05	2121.52	79.92	80.37	3.87	0.04	80.46	2.75
2219.00	4.58	352.90	2215.23	87.28	87.68	2.90	0.18	87.73	1.90
2313.00	4.33	356.76	2308.94	94.57	94.95	2.24	0.42	94.97	1.35
2408.00	4.42	357.54	2403.67	101.82	102.19	1.88	0.11	102.20	1.05
2502.00	5.03	356.07	2497.35	109.56	109.92	1.44	0.66	109.93	0.75
2597.00	4.36	352.90	2592.03	117.33	117.65	0.71	0.76	117.66	0.34
2659.00	4.79	352.93	2653.83	122.27	122.56	0.10	0.69	122.56	0.05
2753.00	4.65	354.79	2747.51	130.00	130.25	-0.73	0.22	130.25	359.68
2848.00	4.80	355.16	2842.19	137.82	138.05	-1.42	0.16	138.05	359.41
2941.00	4.95	359.74	2934.85	145.72	145.94	-1.76	0.45	145.95	359.31
3035.00	4.45	352.83	3028.54	153.40	153.61	-2.24	0.80	153.63	359.17
3129.00	4.63	350.96	3122.24	160.82	160.97	-3.29	0.25	161.01	358.83
3254.00	4.68	349.81	3246.83	170.92	170.98	-4.98	0.08	171.05	358.33
3413.00	4.82	354.40	3405.28	184.04	184.01	-6.78	0.25	184.13	357.89
3570.00	4.25	344.94	3561.79	196.34	196.19	-8.94	0.60	196.39	357.39
3664.00	3.55	358.51	3655.58	202.67	202.46	-9.92	1.23	202.71	357.20
3758.00	4.68	356.72	3749.33	209.41	209.20	-10.21	1.21	209.45	357.21
3851.00	4.71	354.41	3842.02	217.02	216.79	-10.80	0.21	217.06	357.15
4014.00	4.87	358.87	4004.45	230.62	230.37	-11.59	0.25	230.66	357.12
4158.00	4.33	357.69	4147.99	242.16	241.91	-11.93	0.38	242.20	357.18
4261.00	4.56	357.10	4250.68	250.14	249.88	-12.29	0.23	250.19	357.18
4405.00	4.55	0.83	4394.22	261.56	261.31	-12.50	0.21	261.61	357.26
4528.00	5.38	348.90	4516.76	272.14	271.85	-13.54	1.07	272.19	357.15
4685.00	4.39	347.50	4673.19	285.38	284.94	-16.26	0.64	285.40	356.73
4838.00	4.81	348.10	4825.70	297.53	296.93	-18.85	0.28	297.53	356.37
4933.00	4.40	354.00	4920.39	305.11	304.45	-20.05	0.66	305.11	356.23
5059.00	4.92	350.09	5045.98	315.32	314.58	-21.49	0.48	315.32	356.09
5214.00	4.72	8.99	5200.44	328.14	327.43	-21.63	1.03	328.15	356.22
5368.00	3.88	12.86	5354.00	339.31	338.77	-19.48	0.58	339.33	356.71
5464.00	4.58	359.50	5449.74	346.24	345.77	-18.79	1.25	346.28	356.89
5558.00	4.06	353.36	5543.48	353.32	352.83	-19.21	0.74	353.35	356.88
5724.00	3.56	357.20	5709.11	364.34	363.81	-20.14	0.34	364.37	356.83
5775.00	3.56	357.20	5760.01	367.50	366.98	-20.30	0.00	367.54	356.83

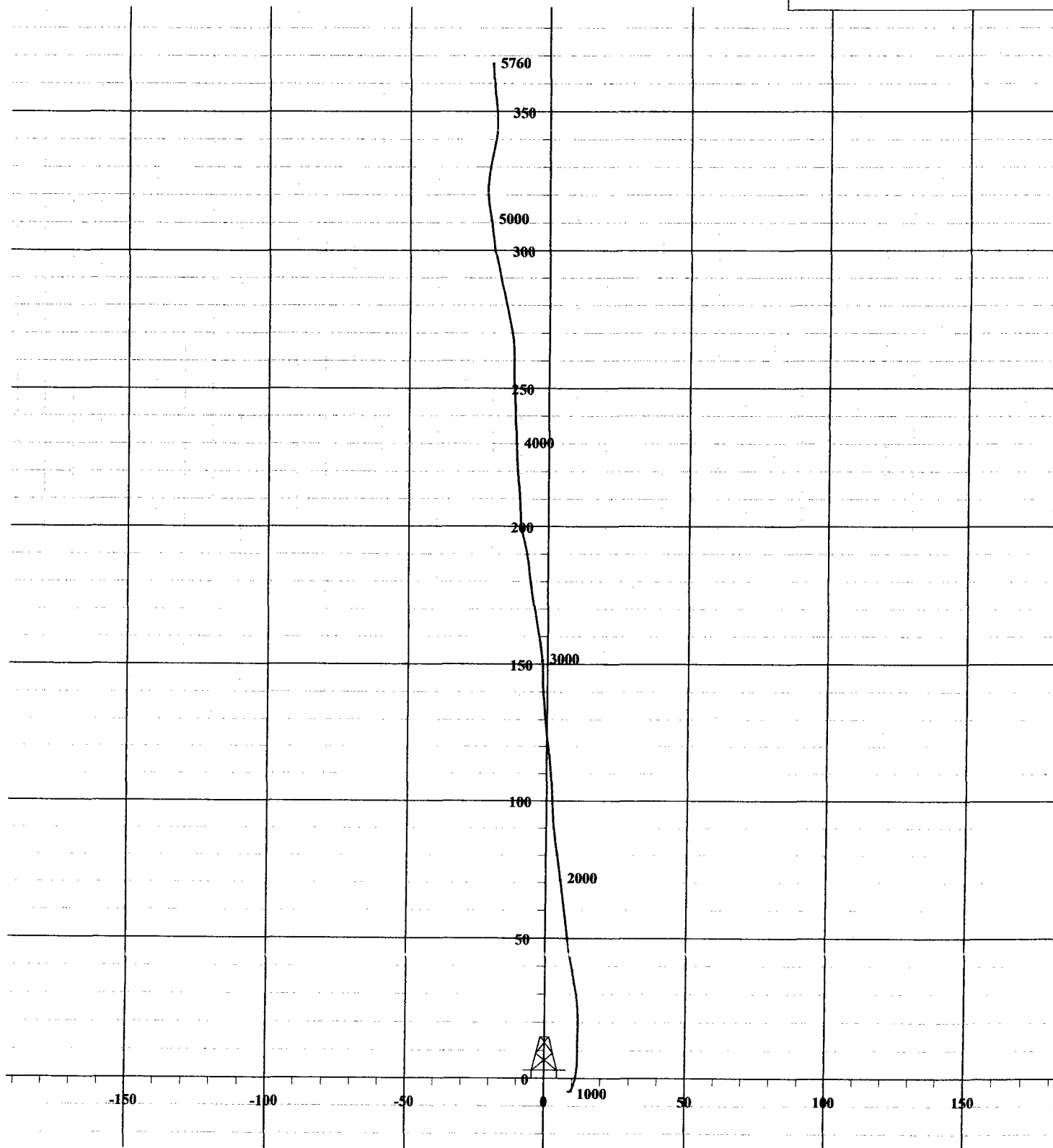


**Scientific
Drilling**

**Field: Empire
Site: Eddy County, NM
Well: Western Federal #8
Wellpath: DH - Job #32D0107038
Survey: 01/12/07-01/20/07**



South(-)/North(+) [50ft/in]



West(-)/East(+) [50ft/in]