Form 3160-4
(October 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE (See other instructions on reverse side)

FOR APPROVED
OMB NO. 1004-0137
Expires: December 31, 1991

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

5. LEASE DESIGNATION AND SERIAL NO.: SF-078481A
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME:
8. FARM OR LEASE NAME, WELL NO.: Graham #98
9. API WELL NO.: 30-045-29916
10. FIELD AND POOL, OR WILDCAT: Basin Fruitland Coal
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 4, T27N R8W

1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: M&G Drilling Company, Inc. c/o KM Production Company

3. ADDRESS AND TELEPHONE NO.: P.O. Box 2406 Farmington, NM 87499-2406 (505) 325-6900

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1305 FNL & 990 FEL
At top prod. interval reported below
At total depth

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
		San Juan	New Mexico

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, FE, ETC.)*	19. ELEV. CASINGHEAD
6/15/1999	6/22/1999	7/2/1999	5890 GR	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
2250 Ft	2212 Ft			XX	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*: 2024 - 2111 Fruitland Coal

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual Induction - GR - Density

27. WAS WELL CORED: No

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
7"	23 #/Ft	121 Ft	8 3/4"	65sx (77 ft3) Class B W/4% CaCl, Cement Circulated	
4 1/2"	10.5 #/Ft	2265 Ft	6 1/4"	180sx (371 ft3) Class B W/2% Econolite, tailed with	
				95sx (112 ft3) Class B, Cement Circulated	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
None				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	2110 Ft	None

31. PERFORATION RECORD (Interval, size and number)
2024 - 2040 with 33 - .34" diameter holes
2069 - 2077 with 17 - .34" diameter holes
2081 - 2083 with 5 - .34" diameter holes
2086 - 2091 with 11 - .34" diameter holes
2093 - 2111 with 37 - .34" diameter holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
2024 - 2111	750 gal 15% HCl acid
	45,000 gal 70 quality foam, 110,000 Lbs 20/40 san

33.* PRODUCTION

DATE OF FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump)	WELL STATUS (Producing or shut-in)
7/2/1999	Flowing	Shut-in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS - OIL RATIO
7/2/1999	3 Hrs.	3/4"			No flow		

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)
0 psi	80 psi			No flow		

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): Shut-in waiting on gas connection

TEST WITNESSED BY: Albert Aranda

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED [signature] TITLE Petroleum Engineer DATE 7/6/99

ACCEPTED FOR RECORD
JUL 16 1999
FARMINGTON FIELD OFFICE
BY

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the

NMOCD

RECEIVED
99 JUL 12 PM 4:25
070 FARMINGTON, NM

RECEIVED
JUL - 8 1999
OIL CON. DIV.
DIST. 3

RECEIVED
JUL 19 1999
OIL CON. DIV.
DIST. 3

37. SUMMARY OF POROUS ZONES: (Show all important zones or 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):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Ojo Alamo	1218	1336	Sandstone
Kirtland Shale	1336	1856	Sandstone, shale, siltstone
Fruitland	1856	2121	Sandstone, siltstone, shale Coal, natural gas & water
Pictured Cliffs	2121	TD	Sandstone

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
		VERT. DEPTH
Ojo Alamo	1218	1218
Kirtland	1336	1336
Fruitland	1856	1856
Pictured Cliffs	2121	2121

M&G DRILLING COMPANY
GRAHAM #98
1305 FNL & 990 FEL (NENE)
SECTION 4, T27N, R8W

COMPLETION REPORT

6-30-99 Move in and rig up JC Well Service completion rig. Nipple up wellhead and BOP. Rigged up Blue Jet Wireline. Ran GR-CLL-CBL (under 500 psi) from 2212 ft RKB PBTD to 1200 ft. Good cement bond throughout completion interval. Pressure tested casing to 3000 psi, held OK. Perforated the Fruitland Coal interval with 3 1/8" casing gun at 2 JSPF as follows:

2024 - 2040 ft	16 ft	33 holes	
2069 - 2077 ft	8 ft	17 holes	
2081 - 2083 ft	2 ft	5 holes	
2086 - 2091 ft	5 ft	11 holes	
2093 - 2111 ft	18 ft	37 holes	
Total	49 ft	103 holes	.34" diameter

Shut down for the night.

7-1-99 Pick up Arrow Completion packer and 2 3/8" tubing. Trip packer and tubing to 2111 ft. Rigged up Dowell. Spot 250 gallons of 7 ½% HCl acid across perforation interval. Move tubing and packer to 2053 ft and set packer (between upper and lower Fruitland Coal perforation intervals). Broke down the lower Fruitland Coal intervals (2069-2111) down the tubing at 1200 psi. Established an injection rate of 4.2 BPM @ 1200 psi, ISIP of 400 psi (0.62 frac gradient). Broke down the upper Fruitland Coal interval (2024-2040) down the annulus immediately. Established an injection rate of 4.0 BPM @ 700 psi, ISIP of 500 psi (0.68 frac gradient). Moved tubing and packer to 1891 ft and set packer (above both sets of Fruitland Coal perforations). Acidized the entire Fruitland Coal interval with 500 gallons of 7.5% DI weighted HCL acid containing 155 1.1 sg RCN ball sealers down the tubing at 4.0 BPM @ 1000 psi. Saw some ball action and balled off casing to 4000 psi. Tried unsuccessfully to surge balls off perforations. Tripped tubing and packer to PBTD to knock ball sealers off of perforations. Trip tubing and packer out of hole. Fracture stimulated the Fruitland Coal interval with 45,000 gallons of 70 quality foam using 30# linear gelled fluid containing 110,000 lbs of 20-40 mesh Arizona sand as follows:

10,000 gals of 70 qual foam pad	30 BPM @ 1550 psi
5,000 gals of 70 qual foam with 1 ppg 20-40 sand	30 BPM @ 1650 psi
5,000 gals of 70 qual foam with 2 ppg 20-40 sand	30 BPM @ 1650 psi
10,000 gals of 70 qual foam with 3 ppg 20-40 sand	30 BPM @ 1750 psi
10,000 gals of 70 qual foam with 4 ppg 20-40 sand	30 BPM @ 1900 psi
5,000 gals of 70 qual foam with 5 ppg 20-40 sand	30 BPM @ 2000-2200 psi
1,200 gals of 70 qual foam flush	30 BPM @ 2200 psi

ISIP = 1950 psi decreasing to 1550 psi after 15 minutes. All water contained 2% KCL, ½ gal/1000 clay stabilization agent, and bacteriacide. Sand contained multiple radioactive tracer material as follows: 5 mc Sb-124 in 1 and 2 ppg sand stages, 30 mc Ir-192 in 3 and 4 ppg sand stages, 10 mc Sc-46 in 5 ppg sand stage. Average rate 30 BPM, average pressure 1750 psi, maximum pressure 2250 psi, minimum pressure 1400 psi, average nitrogen rate 10,500 scfm, total nitrogen pumped 427,500 scf, total fluid to recover 385 bbls. Shut well in for 3 hours. Blow well back to pit through a 1/4" inline choke. Well flowing to cleanup. Shut down for the night.

7-2-99 Well is still flowing to the pit this morning. Killed well. Trip in hole with tubing and tagged sand fill at 2207 ft (96 ft below bottom perforation and 5 ft above PBTD). Moved tubing up hole and landed as follows:

Description	Length	Depth
KB to landing point	3.00	0-3
65 jts of 2 3/8" 4.7#/ft J55 EUE yellow band used tubing	2074.47	3-2077
1 seating nipple	1.10	2077-2078
1 jt of 2 3/8" used tubing	31.80	2078-2110
	2110.37	

Nipple down BOP and nipple up wellhead. Rigged to swab. Made 2 swab run and well started flowing. Left well flowing to pit to cleanup. Released rig. End of Report.