

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

|                                                                                                                                                                                                                                                    |                    |                                                                                          |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------|---------------|
| 1a. TYPE OF WELL:<br>OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER <input type="checkbox"/>                                                                                    |                    | 5. LEASE DESIGNATION AND SERIAL NO.<br>SF-078496                                         |               |
| b. TYPE OF COMPLETION:<br>NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER <input type="checkbox"/> |                    | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME                                                     |               |
| 2. NAME OF OPERATOR<br>AMOCO PRODUCTION COMPANY                                                                                                                                                                                                    |                    | 7. UNIT AGREEMENT NAME<br>SAN JUAN 28-7 UNIT /DK/                                        |               |
| 3. ADDRESS AND TELEPHONE NO.<br>P.O. Box 800, Denver, Colorado 80201                                                                                                                                                                               |                    | 8. FARM OR LEASE NAME, WELL NO.<br>#181M                                                 |               |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirement)<br>At surface 1080 FNL 810 FWL<br>At top prod. interval reported below<br>At total depth                                                                |                    | 9. API WELL NO.<br>3003925355                                                            |               |
| 14. PERMIT NO.<br>OIL CON. DIV. DIST. 3                                                                                                                                                                                                            |                    | 10. FIELD AND POOL, OR WILDCAT<br>BASIN DAKOTA                                           |               |
| 15. DATE SPUDDED<br>03/22/94                                                                                                                                                                                                                       |                    | 11. SEC., T., R., M., OR BLOCK. AND SURVEY OR AREA<br>Section 3<br>Township 27N Range 7W |               |
| 16. DATE T.D. REACHED<br>03/31/94                                                                                                                                                                                                                  |                    | 12. COUNTY OR PARISH<br>RIO ARRIBA                                                       |               |
| 17. DATE COMPL. (Ready to prod.)<br>04/19/94                                                                                                                                                                                                       |                    | 13. STATE<br>NM                                                                          |               |
| 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*<br>6799' GR                                                                                                                                                                                                |                    | 19. ELEV. CASINGHEAD                                                                     |               |
| 20. TOTAL DEPTH, MD & TVD<br>7875                                                                                                                                                                                                                  |                    | 21. PLUG, BACK T.D., MD & TVD<br>7808                                                    |               |
| 22. IF MULTIPLE COMPL., HOW MANY*<br>TWO                                                                                                                                                                                                           |                    | 23. INTERVALS DRILLED BY<br>ROTARY TOOLS YES<br>CABLE TOOLS NO                           |               |
| 24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*<br>7615-7840 SEE ATTACHED DETAIL DAKOTA                                                                                                                            |                    | 25. WAS DIRECTIONAL SURVEY MADE<br>YES                                                   |               |
| 26. TYPE ELECTRIC AND OTHER LOGS RUN<br>CBL, VDL, GR, CCL                                                                                                                                                                                          |                    | 27. WAS WELL CORED<br>N                                                                  |               |
| 28. CASING RECORD (Report all strings set in well)                                                                                                                                                                                                 |                    |                                                                                          |               |
| CASING SIZE/GRADE                                                                                                                                                                                                                                  | WEIGHT, LB./FT.    | DEPTH SET (MD)                                                                           | HOLE SIZE     |
| 11.75 H40                                                                                                                                                                                                                                          | 42                 | 423                                                                                      | 14.75         |
| 8.625 J55                                                                                                                                                                                                                                          | 32                 | 3606                                                                                     | 10.625        |
| 5.5 N80                                                                                                                                                                                                                                            | 17                 | 7875                                                                                     | 7.875         |
| 29. LINER RECORD                                                                                                                                                                                                                                   |                    |                                                                                          |               |
| SIZE                                                                                                                                                                                                                                               | TOP (MD)           | BOTTOM (MD)                                                                              | SACKS CEMENT* |
|                                                                                                                                                                                                                                                    |                    |                                                                                          |               |
| 30. TUBING RECORD                                                                                                                                                                                                                                  |                    |                                                                                          |               |
| SIZE                                                                                                                                                                                                                                               | DEPTH SET (MD)     | PACKER SET (MD)                                                                          |               |
| 2-1/16                                                                                                                                                                                                                                             | 7836               | 6056                                                                                     |               |
| 31. PERFORATION RECORD (Interval, size and number)<br>7615, 7631, 7641, 7736, 7742, 7770, 7794, 7815, 7820, 7840<br>USING 3-1/8" GUN W/ 1 SPF, 16 GRAM CHG W/ .38" HOLE                                                                            |                    |                                                                                          |               |
| 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.                                                                                                                                                                                                     |                    |                                                                                          |               |
| DEPTH INTERVAL (MD)                                                                                                                                                                                                                                |                    | AMOUNT AND KIND OF MATERIAL USED                                                         |               |
| 7615 7840                                                                                                                                                                                                                                          | 161M# 20/40 OTTAWA |                                                                                          |               |
|                                                                                                                                                                                                                                                    | CLEAN VOL 780 BBLS |                                                                                          |               |
|                                                                                                                                                                                                                                                    | N2 2,362,953 SCF   |                                                                                          |               |
|                                                                                                                                                                                                                                                    | SEE ATTACHED       |                                                                                          |               |
| 33.* PRODUCTION                                                                                                                                                                                                                                    |                    |                                                                                          |               |
| DATE FIRST PRODUCTION                                                                                                                                                                                                                              |                    | PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump)                   |               |
|                                                                                                                                                                                                                                                    |                    | FLOWING                                                                                  |               |
| DATE OF TEST<br>06 26 1919                                                                                                                                                                                                                         |                    | HOURS TESTED<br>24                                                                       |               |
| CHOKE SIZE<br>SEPERATOR                                                                                                                                                                                                                            |                    | PROD'N FOR TEST PERIOD                                                                   |               |
| FLOW TUBING PRESS<br>155                                                                                                                                                                                                                           |                    | CASING PRESSURE<br>N/A                                                                   |               |
| CALCULATED 24-HOUR RATE                                                                                                                                                                                                                            |                    | OIL - BBL<br>GAS - MCF.<br>WATER - BBL.                                                  |               |
|                                                                                                                                                                                                                                                    |                    | OIL GRAVITY - API (CORR.)                                                                |               |
| 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)<br>TO BE SOLD                                                                                                                                                                           |                    | TEST WITNESSED BY                                                                        |               |
| 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 A. Wayne Branam TITLE BUSINESS ANALYST DATE 06-27-1994

\*(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 United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

BY Sum

37. SUMMARY OF POROUS ZONES: (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):  
 San Juan 28-7 Unit Well #181 /M/ API # 30039253550

| FORMATION | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC. | GEOLOGIC MARKERS |             |                            |
|-----------|-----|--------|-----------------------------|------------------|-------------|----------------------------|
|           |     |        |                             | NAME             | MEAS. DEPTH | TOP<br>TRUE<br>VERT. DEPTH |
|           |     |        |                             | Ojo A            | 2500        |                            |
|           |     |        |                             | Kirtland         | 2663        |                            |
|           |     |        |                             | Fruitland        | 3068        |                            |
|           |     |        |                             | Pictured Cliffs  | 3380        |                            |
|           |     |        |                             | Lewis            | 3530        |                            |
|           |     |        |                             | Cliffhouse       | 5020        |                            |
|           |     |        |                             | Menefee          | 5146        |                            |
|           |     |        |                             | Pt. Lookout      | 5613        |                            |
|           |     |        |                             | Mancos           | 6013        |                            |
|           |     |        |                             | Gallup           | 6785        |                            |
|           |     |        |                             | Greenhorn        | 7517        |                            |
|           |     |        |                             | Graneros         | 7580        |                            |
|           |     |        |                             | Dakota           | 7600        |                            |

# **SAN JUAN 28-7 UNIT #181M COMPLETION REPORT ATTACHMENT**

## **DAKOTA PERF**

7615, 7631, 7641, 7736, 7742, 7770, 7794, 7815, 7820, 7840 USING 3-1/8" GUN W/ 1 SPF, 16 GRAM CHG W/ .38" HOLE

## **MESAVERDE (POINT LOOKOUT) PERF**

5708, 5859, 5709, 5860, 5710, 5878, 5818, 5879 USING 3-1/8" GUN W/ 1 SPF, 19.5 GRAM CHG W/ .45" HOLE

## **MESAVERDE (CLIFFHOUSE AND MENELEE) PERF**

5029-5033, 5044-5054, 5059-5065, 5070-5078, 5086-5090, 5094-5103, 5118-5120, 5126-5146, 5266-5270, 5414-5424, 5447-5450 USING 3-1/8" GUN W/ 2 SPF, 19.5 GRAM CHG, W/ .45" HOLE

## **DAKOTA FRAC**

### **STAGE ONE**

PMP 200 BBLs CLEAN FLUID; AVE PRESS 4990 PSI; AVE FOAM RATE 25.2 BPM; USED 485236 SCF N<sub>2</sub>.

### **STAGE TWO**

PMP 70 BBLs CLEAN FLUID; 1 PPG 20/40 OTTAWA SAND; AVE PRESS 4990 PSI; AVE FOAM RATE 24.3 BPM; USED 279893 SCF N<sub>2</sub>.

### **STAGE THREE**

PMP 90 BBLs CLEAN FLUID; 2 PPG 20/40 OTTAWA SAND; AVE PRESS 4580 PSI; AVE FOAM RATE 25.1 BPM; USED 328187 SCF N<sub>2</sub>.

### **STAGE FOUR**

PMP 92 BBLs CLEAN FLUID; 2-1/2 PPG 20/40 OTTAWA SAND; AVE PRESS 4532 PSI; AVE FOAM RATE 26.2 BPM; USED 325183 SCF N<sub>2</sub>.

### **STAGE FIVE**

PMP 94 BBLs CLEAN FLUID; 3 PPG 20/40 OTTAWA SAND; AVE PRESS 4368 PSI; AVE FOAM RATE 24.9 BPM; USED 326664 SCF N<sub>2</sub>.

### **STAGE SIX**

PMP 77 BBLs CLEAN FLUID; 4 PPG 20/40 OTTAWA SAND; AVE PRESS 4317 PSI; AVE FOAM RATE 24.7 BPM; USED 249785 SCF N<sub>2</sub>.

### **STAGE SEVEN**

PMP 61 BBLs CLEAN FLUID; 5 PPG 20/40 OTTAWA + ACTIVATOR; AVE PRESS 4100 PSI; AVE FOAM RATE 24.6 BPM; USED 203514 SCF N<sub>2</sub>.

### **STAGE SEVEN (FOAM FLUSH)**

PMP 92 BBLs CLEAN FLUID; AVE PRESS 4240 PSI; AVE FOAM RATE 26 BPM; USED 163581 SCF N<sub>2</sub>.

## **SUMMARY**

AVE PRESS 4322 PSI; AVE FOAM RATE 23.86 BPM; CLEAN VOL 780 BBLs; HOLD 1000 PSI ON INTERMEDIATE CSG; USED 2,362,953 SCF N<sub>2</sub>; SAND IN FORMATION 161,000 # 20/40 OTTAWA ISIP 3850 PSI.

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## **MESAVERDE (POINT LOOKOUT) FRAC**

### **STAGE ONE**

PMP 138 BBLs CLEAN FLUID; AVE PRESS 907 PSI; AVE FOAM RATE 49.5 BPM; USED 147318 SCF N<sub>2</sub>.

### **STAGE TWO**

1 PPG 12/20 BRADY SAND; PMP 77 BBLs CLEAN FLUID; AVE PRESS 2059 PSI; AVE FOAM RATE 58 BPM; USED 167648 SCF N<sub>2</sub>.

### **STAGE THREE**

2 PPG 12/20 BRADY SAND; PMP 82 BBLs CLEAN FLUID; AVE PRESS 1805 PSI; AVE FOAM RATE 53.5 BPM; USED 134221 SCF N<sub>2</sub>.

### **STAGE FOUR**

3 PPG 12/20 BRADY SAND; PMP 89 BBLs CLEAN FLUID; AVE PRESS 1764 PSI; AVE FOAM RATE 55 BPM; USED 125671 SCF N<sub>2</sub>.

### **STAGE FIVE**

4 PPG 12/20 BRADY SAND; PMP 109 BBLs CLEAN FLUID; AVE PRESS 1853 PSI; AVE FOAM RATE 55.6 BPM; USED 175001 SCF N<sub>2</sub>.

### **STAGE SIX**

5 PPG 12/20 BRADY SAND; PMP 54 BBLs CLEAN FLUID; AVE PRESS 1935 PSI; AVE FOAM RATE 57 BPM; USED 88843 SCF N<sub>2</sub>.

### **STAGE SEVEN**

PMP 128 BBLs CLEAN FLUID; AVE PRESS 1121 PSI; AVE RATE 41 BPM.

### **SUMMARY**

AVE PRESS 1455 PSI; AVE FOAM RATE 48.8 BPM; SAND IN FORMATION 150,000# 12/20 BRADY; CLEAN FLUID VOL 971 BBLs; USED 841,435 SCF N<sub>2</sub>.

## **MESAVERDE (CLIFFHOUSE AND MENELEE) FRAC**

### **STAGE ONE**

PMP 193 BBLs CLEAN FLUID; AVE PRESS 1861 PSI; AVE FOAM RATE 52.2 BPM; USED 295182 SCF N<sub>2</sub>.

### **STAGE TWO**

1 PPG 16/30 BRADY SAND; AVE PRESS 2820 PSI; PMP 96 BBLs CLEAN FLUID; AVE FOAM RATE 61.4 BPM; USED 236322 SCF N<sub>2</sub>.

### **STAGE THREE**

2 PPG 16/30 BRADY SAND; AVE PRESS 2878 PSI; PMP 102 BBLs CLEAN FLUID; AVE FOAM RATE 64 BPM, USED 238788 SCF N<sub>2</sub>.

### **STAGE FOUR**

3 PPG 16/30 BRADY SAND; AVE PRESS 2942 PSI; PMP 107 BBLs CLEAN FLUID; AVE FOAM RATE 65 BPM; USED 249450 SCF N<sub>2</sub>.

### **STAGE FIVE**

4 PPG 16/30 BRADY SAND; AVE PRESS 3023 PSI; PMP 112 BBLs CLEAN FLUID; AVE FOAM RATE 65 BPM; USED 268921 SCF N<sub>2</sub>.

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STAGE SIX  
5 PPG 16/30 BRADY SAND; AVE PRESS 31111 PSI; PMP 67 BBLS CLEAN FLUID; AVE FOAM RATE 66 BPM;USED 1631181 SCF N2.

STAGE SEVEN  
(FOAM FLUSH) AVE PRESS 3070 PSI; PMP 52 BBLS CLEAN FLUID; AVE FOAM RATE 66 BPM; USED 76068 SCF N2.

SUMMARY  
AVE PRESS 2641 PSI; AVE FOAM RATE 59.6 BPM; SAND IN FORMATION 180,000# 16/30 BRADY SAND; LAST 30, 000# RESIN 16/30; 905 BBLS CLEAN FLUID; TOTAL N2 1,688,091 SCF; ISIP 2360 PSI;

CASING RECORD

| CASING<br>SIZE/GRADE | WEIGHT | DEPTH SET | HOLE<br>SIZE | CEMENT<br>RECORD                                                                                                                                                                                                                                                                                          |
|----------------------|--------|-----------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11.75", H40          | 42#    | 425       | 14.75"       | 300SX CL B, W/ 2% CACL2, .25# FLOCELE                                                                                                                                                                                                                                                                     |
| 8.625", J55          | 32#    | 3228      | 10.625"      | STAGE ONE                                                                                                                                                                                                                                                                                                 |
| 8.625", J55          | 24#    |           |              | 210SX CL B, W/<br>4% HALAD-344, .4% CFR-3,<br>2% MICROBOND, 5#<br>STAGE TWO<br>GILSONITE, .25# FLOCELE<br>470SX HALLIBURTON LIGHT<br>W/7# SALT, 5% CALSEAL, 2%<br>MICROBOND, .375# FLOCELE<br>STAGE THREE<br>100SX CL B W/ .4% HALAD-<br>344, .4% CFR-3, 2% MICRO-<br>BOND, 5# GILSONITE, .25#<br>FLOCELE |
| 5.5" N80             | 17#    | 7875      | 7.875"       | 950SX 50/50 POZ "A", W/<br>2% GEL, 5# GILSONITE,<br>5% MICROBOND, .2% VERA-<br>SET, .6% HALAD-344, .3%<br>SCR-100, .25SX FLOCELE                                                                                                                                                                          |