Form 3160-4 (October 1990)

UNITED STATES

(See other instructions on

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

DEPARTMENT OF THE INTERIOR 5. LEASE DESIGNATION AND SERIAL NO. **BUREAU OF LAND MANAGEMENT** SF-080597 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG* 1a. TYPE OF WELL: OIL X 7. UNIT AGREEMENT NAME b. TYPE OF COMPLETION: DIFF. RESVR. DEEP-**PLUG** WORK OTHERU/ B. FARM OR LEASE NAME, WELL NO. 2. NAME OF OPERATOR Attention Arnold Federal A 1 Kelly Stearns Amoco Production Company 9. API WELL NO. 3. ADDRESS AND TELEPHONE NO. 3004528959 (303) 830-4457 P.O. Box 800, Denver, Colorado 80201 10. FIELD AND POOL, OR WILDCAT 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) Basin Dakota At surface 960 FNL 1190FWL 11. SEC., T., R., M., OR BLOCK. AND SURVEY OR AREA At top prod. interval reported below Section 27 Township Range At total depth 30N 8W 12. COUNTY OR PARISH 13. STATE DATE ISSUED 14. PERMIT NO. **New Mexico** San Juan 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 19. ELEV. CASINGHEAD 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 15. DATE SPUDDED ∵ 5879"GŔ 09/21/93 07/06/93 08/04/93 20. TOTAL DEPTH, MD & TVD 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPLETED HOW MANY 23 INTERVALS DRILLED BY CABLE TOOLS ROTARY TOOLS YES NO 7280 25. WAS DIRECTIONAL SURVEY MADE 24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TYP) 7 2 3 1943 7076'- 7232' Dakota 27. WAS WELL CORED 26. TYPE ELECTRIC AND OTHER LOGS RUN Spectral Density Dual Spaced Neutron DIL,CAL,NGT,GR,FDC,CNL,MICROLOG,DSI,GPIT,CBL,CCL,WELLOG,DUAL INDUCTION SHORT GUARD CASING RECORD (Report all strings set in well) 28. TOP OF CEMENT, CEMENTING RECORD AMOUNT PULLED HOLE SIZE DEPTH SET (MD) CASING SIZE/GRADE WEIGHT, LB./FT. 17 1/2" 465 sx CI B 402 K55 68# 13 3/8' 12 1/4" 2927 1st Stage: 260 sx CI B 9 5/8" K55 36# 2nd Stage:615 sx CI B, tail w/100 sx CI B ist Stg: 530 sx Ci B, 2nd Stg:300 sx Ci B 6860 8 3/4" 23# K55 TUBING RECORD LINER RECORD 29 PACKER SET (MD) SACKS CEMENT* SCREEN (MD) SIZE DEPTH SET (MD) BOTTOM (MD) SIZE TOP (MD) 7161 Retainer @ 7242' 2 3/8" 160 sx CI G 6665 7304 4 1/2" ACID. SHOT, FRACTURE, CEMENT SQUEEZE, ETC. 31. PERFORATION RECORD (Interval, size and number) AMOUNT AND KIND OF MATERIAL USED DEPTH INTERVAL (MD) SEE ATTACHED. SEE ATTACHED. 7076' -71891 PRODUCTION WELL STATUS (Producing or shut-in) PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump) DATE FIRST PRODUCTION Shut In **FLOWING** 09 23 1993 WATER - BBL. GAS-OIL RATIO PROD'N FOR TEST PERIOD OIL - BBL. GAS - MCF. HOURS TESTED CHOKE SIZE DATE OF TEST 79 18/64 09 28 1993 WATER - BBL OIL GRAVITY - API (CORR.) OIL - BBL GAS - MCF. FLOW TUBING PRESS CASING PRESSURE CALCULATED 24-HOUR RATE 20 0 79 1360 TEST WITNESSED BY 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) To Be Sold. CCEPTED (C. 35. LIST OF ATTACHMENTS

> DATE **Business Analyst** TITLE

It has not yet been determined if this well will be a commercial producer.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records 72

FORMATION TOP BOTTOM DESCRIPTION, CONTENTS, ETC.
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MIRUSU 8/12/93. NDWH. NUBOP. TAGGED CMT @ 6255'. DRILL CMT TO LINER TOP OF 6665'. DRILLED 15' OF CMT IN LINER TOP. PRESSURE TEST TO 1000PSI. HELD. TIH AND TAGGED CMT @ 7200'. DRILL CMT TO FLOAT COLLAR @ 7217'. DRILLED FLOAT COLLAR AND PRESSURE TEST TO 1000 PSI. HELD. DRILLED CMT TO 7280'. CIRC HOLE CLEAN AND PRESSURE TEST TO 1000 SPI. HELD. TOH. RU WLE. RAN CBL CCL GR FROM 7280' TO 2600'. EST. CMT TOP 3920'. RD WLE. RU WIRE LINE AND RAN LOG FROM 7200' TO SURFACE. TIH WITH TBG TO 6752'. RU N2 EQUIP AND UNLOAD HOLE WITH 147 K SCF N2. TOH WITH TBG.

PERF: RU WLE AND RIH AND PERF CSG @ 7252' WITH 4 JSPF .25 HOLE. RIH AND SET CMT RET @ 7242'. RD WLE. TIH WITH STINGER AND STING INTO CMT RET @ 7242'.STUNG OUT OF CMT RETAINER. PRESSURE TEST CSG TO 1500 PSI. HELD. TOH.ND BOP AND SET BAKER LOCKSET PKR @ 7080'. NUWH. PRESSURE TEST PKR AND SEAL TO 500 PSI. HELD. PERF DK FROM 7216-7220' AND 7228-7232' WITH 4 JSPF .51 HOLE. RELEASED PKR. TIH TO LINER TOP @ 6670' TAGGED. TIH TO CMT RET SET @ 7242'AND TOH. RU WLE AND RIH AND SET RBP @ 7213'. ROH AND PRESSURE TEST TO 1500 PSI. HELD. RIH AND DUMPED 1/2 SX SAND ON RBP. NDBOP. RIH AND PERF DK WITH 1 JSPF .34 HOLE. PERF FROM 7182-7189', 7152-7156', 7124-7132', 7102-7107', AND 7076-7078'.

ALL TBG HYDROTESTED TO 6500 PSI. SET PKR @ 6692' AND LAND DONUT. PRESSURE TEST BACKSIDE TO 1500 PSI. HELD. PRESSURE TEST SURFACE LINES TO 7400 PSI. HELD. PMP 143 BBLS GEL WATER TO OBTAIN ISIP.

FRAC 7076' TO 7189'. PUMP 120,877 GALLONS 50#/M LINEAR GEL AND 142,748 POUNDS 20/40 OTTAWA SAND. AIP 5660 PSI. AIR 21.8 BPM.

SCREENED OUT ON 5 PPG SAND. 141,135 BBLS SAND IN FORMATION. AVERAGE RATE OF 23 BPM AT 5750 PSI. ND FRAC VALVE. NUBOPS.

RELEASE PKR.MAKE UP RET HEAD FOR PLUG AND START IN HOLE ON 2 3/8" TBG. RUN 229 JNTS. TAG FILL 7136'. PULL 9 STAND TO CLEAR LINER. TIH WITH 9 STANDS. TAG FILL 7136'. RIG IN HES N2 UNITS. CLEAN OUT TO 7213' USING N2 AND FOAM. LATCH ONTO PLUG AND RELEASE SAME. TOH. RIG IN HES WIRELINE. TIH TO RUN AFTER FRAC LOG. RIG DOWN WIRELINE. TIH. TAG SAND FILL 7194'. TOH. MAKE UP BAILER AND TIH ON 2 3/8" TBG. CLEAN 48' TO DEPTH OF 7242'. TOH WITH BAILER. RIG IN HES WIRELINE. RUN AFTER FRAC DUAL ISOTOPE LOG. RIG DOWN WIRELINE. TIH WITH 1/2 MULESHOE, I JNT 2 3/8" TBG, SEATING NIPPLE WITH X-OVER AND 227 JNTS TBG. LAND TBG 7161'. NDBOPS. NUWH. 09/21/93.