Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☒ other Old well workover
2. NAME OF OPERATOR: Oxoco Production Corp.
3. ADDRESS OF OPERATOR: P.O. Box 255, Farmington, N.M. 87401
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.) 1560 ft. fNl, 830 ft. fEl
   AT SURFACE: same
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH: same
5. LEASE: NM-33055
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: None
7. UNIT AGREEMENT NAME: None
8. FARM OR LEASE NAME: Trail Canyon
9. WELL NO.: 2
10. FIELD OR WILDCAT NAME: Trail Canyon-Gallup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 18, T32N-R8W, NMPM
12. COUNTY OR PARISH: San Juan
13. STATE: N.M.
14. API NO.: 30-045-24590
15. ELEVATIONS (SHOW DF, KDB, AND WD): 6720' Gr, 6733 RDB
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	☐	☒
FRACTURE TREAT	☐	☒
SHOOT OR ACIDIZE	☐	☒
REPAIR WELL	☐	☒
PULL OR ALTER CASING	☐	☐
MULTIPLE COMPLETE	☐	☐
CHANGE ZONES	☐	☒
ABANDON*	☐	☐
(other)		

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FARMINGTON, N. M.

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well was worked over and a gas completion was made in the Mesaverde formation by perforating, acidizing and fracture stimulating in accordance with the attached chronological drilling summary. Intent is to complete well as a Mesaverde gas producer with the Gallup formation temporarily shut in until pressure and production data can be obtained on the Mesaverde for a possible dual or co-mingled completion.

Need Completion Report for Mesaverde Completion

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Wm R. Speer TITLE Agent DATE July 1, 1983

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

ACCEPTED FOR RECORD
JUL 05 1983
FARMINGTON

*See Instructions on Reverse Side

NMOCC

WILLIAM R. SPEER CONSULTING GEOLOGIST

DAILY DRILLING SUMMARY
OLD WELL WORKOVER

Oxoco Production Corp.
Trail Canyon #2
NE/4, Sec. 18, T32N-R8W
San Juan Co., New Mexico

5-20-83 Move in Well Tech Rig 209. Check shut-in casing pressure at 470 psi. Open casing to atmosphere with strong gas blow for 20 min. Well began to mist water with continued strong blow, no gage. Allowed well to flow 1 3/4 hrs. while rigging up. Flow continued strong with water decreasiing to slight mist. Killed annulus with 50 bbl. KCl water. Open tubing and blew down immediately. Install B.O.P. Lower 2 3/8" tubing 24' to tag up. Strap 2 3/8" tubing out of hole. Top of fill in open hole 7569'. Closed well in for night.

5-21-83 Open casing to atmosphere w/ strong blow. Kill well with 50 bbl. KCl water. Ran in hole with Baker Lock-set Production Packer with "FWG" plug in profile on top of packer. Set packer at 7500'. Loaded hole with 1% KCl water by conventional circulation. Pressured casing to 2500 psi. and isolated well bore from pump. Pressure decreased from 2500 psi. to 75 psi. in 15 min. Pulled tubing and layed down packer on-off tool. Dumped 15 gal. 20-40 sand down 4½" casing. Closed well in for weekend.

5-23-83 Pick up Baker Fullbore 4½" packer and model "C" Bridge plug and run in hole on 2 3/8" EUE tubing. Isolate squeeze hole at 4200' and tested to 2500 psi. with no leak. Isolate squeeze hole at 5650' and tested to 2500 psi. with no leak. Isolate squeeze hole at 6350' and test 500 psi. in 10 min. Isolate hole at 6800' and held O.K. at 2500 psi. Pressure tested annulus to 2500 psi with packer set at 6738'. Lost 250psi. in 5 min. and then had 500 psi. loss in next 5 min. Pulled tubing to straddle squeeze hole at 6350'. Bridge plug would not set. Attempted to test by pressuring annulus but packer would not hold pressure and had communication to tubing. Pulled out of hole and layed down 100 jts. of worn 2 3/8" tubing. Shut in for night.

5-24-'83 Continued laying down bad tubing. Pulled Baker fullbore packer and found Model C bridge plug missing. Picked up bridge plug retrieving head on new string of 2 3/8" tbg. Ran in hole and found bridge plug at 6931'. Retrieved plug and pulled out of hole. Rigged up Halliburton and pressure tested casing to 2500 psi,decreased 500 psi in 10 min. Will squeeze tomorrow.

Daily Drilling Summary--Oxoco #2 Trail Canyon Workover

5-25-'83 Picked up Baker fullbore 4½" packer and model "C" bridge plug on 2 3/8" tubing. Set bridge plug at 6927', held O.K. Pressure tested annulus to 2500 psi, and lost 250 psi in 13 min. Pulled packer to 6326' (above squeeze holes at 6350') and pressured annulus, held O.K. Released packer and retrieved plug. Continued down hole to tag sand on top of production packer at 7477', hung packer and bridge plug in hole without setting either. Pressured tubing and annulus to 2500 psi and had 100 psi leak off in 15 min. Pulled packer and bridge plug and found packing element on packer damaged. Ran 2 3/8" tubing in hole open ended, tagged sand at 7482' and cleaned out to top of production packer at 7492'. Pressure tested casing to 2500 psi with no leaks. Pulled tubing out of hole. Shut down for night.

5-26-'83 Ran in hole with Baker fullbore packer on 2 3/8" tubing Set packer at 6391' (below squeeze hole at 6350') Pressured tubing to 2500 psi, held O.K. Spotted 150 gal. 15% HCl at bottom of packer and pulled packer to 6326'. Pressured tubing to 1400 psi when hole broke and established injection rate of 2 BMP at 1900 psi, isip 650 psi. Reversed hole clean. Pulled tubing and packer after testing annulus to 2500 psi and dropping 10 gal. 20-40 sand on production packer at 7492'. Ran Baker Model K-1 cement retainer on 2 3/8" tubing and set at 6129'. Pressured annulus to 1000 psi and established pumping rate down tubing at 3 BPM and 1900 psi. Mixed 100 sks. (120 cu. ft.) Class H cement with 10% salt and 0.6% HALAD 9 into hole at 6350' and obtained 300 psi squeeze with no leak-off. Pulled out of retainer and reversed cement from tubing. Pulled out of hole. Shut in for night.

5-27-83 Picked up Smith 3 7/8" Rockbit & 4½" csg. scraper. Tripped in hole with 191 jts. 2 3/8" tbg. Tagged cement retainer 6126'. Picked up off retainer & pressure tested csg. to 2000 psi. Held O.K. 15 min. Drilled out retainer in 5 hrs. Drilled 130' (4 jts.) of medium hard cement below cement retainer to 6260'. Circulated hole clean. Picked up 30' off bottom & S.W.I.F. night.

5-28-83 Continue drilling on hard cement from 6290' to 6355'. Circulated hole clean. Pressure tested casing to 2500 psi. Held O.K. Lower tubing to 6527' and found no restrictions. Pulled tubing, casing scraper and bit. Shut in for night.

Daily Drilling Summary--Oxoco #2 Trail Canyon Workover

5-29-83 Rigged up Dresser Atlas and ran Cement Bond Log-VDL-CCL logs from 6500' to 3900', correlated to Schlumberger TDT log of 4-6-81. Ran 226 jts. 2 3/8" tbg. in hole open ended to 7253'. Installed well head. Rigged down Well Tech #209 and moved to Rattlesnake Canyon #1.

6-9-'83 Moved Well Tech rig no. 209 on location from #1 Rattlesnake Canyon and rigged up. Installed B.O.P. and attempted to pressure test casing, but rams failed to hold at 2500 psi (volume of leaking consistent with pressure loss). Circulated hole with 1% KCl water. Pulled tubing and found 68 jts. to have interior plastic coating which was peeling off in strips in some cases. All plastic coated tubing was layed down for replacement. Shut down for overnight.

6-10-83 Dresser Atlas perforated Point Lookout Ss. section of Mesaverde Fm. (as correlated to cased hole TDT log) with forty 0.32" jet shots as follows: 5990,-92,-94,-96, 6003, -05,-07,-09,-10,-12,-14,-16,-17,-19,-21,-22,-24,-26,-28, -29,-31,-33,-35,-36,-38,-40,-41,-43,-45,-47; 6097,-99,6101, -03; 6122,-24,-26,-28; 6133,-35. Picked up 4½" Baker full-bore packer and model "C"bridge plug on 2 3/8" tubing. Strapped tubing into hole. Isolated perfs from 6122' to 6135'. Pumped in with water, breaking down at 1250 psi with immediate communication with set of perfs from 6097' to 6130'. Moved packer to 6080' and established pumping rate with water of 7 BPM at 2000 psi; ISIP on vacuum. Acidized perfs 6097' to 6135' with 600 gals. 15% HCl acid containing 20 7/8" RCN ball sealers. Obtained complete ball-off at 2400 psi max. pressure. Isolated perfs from 5990' to 6047'. Established injection rate of 8 BPM at 2500 psi after break down at 1300 psi. Obtained complete ball-off at 2500 psi max. pressure. Pulled tubing with packer and bridge plug.On pulling packer from hole found bridge plug missing. Ran in hole with bridge plug retrieving head and recovered plug.Rigged up Halliburton and pumped 26,000 gal. 1% KCl water with 25 lb. per 1,000 gal. fluid loss additive and 2.5 lb. per 1,000 gal. friction reducer at 58 BPM rate at 2300 psi. Blowout preventer started to leak badly in body between blind and pipe rams. Attempted to tighten with no success. Suspended operations overnight.

6-11-83 Installed new BOP. Rigged up Halliburton and established injection rate of 60 BPM at 2400 psi. Rate began to drop as pressure rose steadily. Pumped 21,210 gal. pad and rate had decreased to 39 BPM at 2500 psi. Shut down and had

6-11-83 (cont'd.) 300 psi ISIP. Rigged down Halliburton. Ran Baker fullbore packer and bridge plug on 2 3/8" tubing. Isolated perfs from 6122' to 6135', unable to load hole as holes taking fluid, pumped into perfs with KCl water at 7.5 BPM rate at 2400 psi. Moved packer up hole and isolated entire perforated interval from 6097' to 6135'. Acidized with 600 gal. 15% HCl acid and fifteen ball sealers. Had pressure increase from 1100 to 1700 psi at 5 BPM, but did not ball off completely, ISIP on vacuum. Isolated perfs from 5990' to 6047' and established pump rate of 7 BPM at 2400 psi. Acidized with 2000 gal. 15% HCl acid and forty-five ball sealers. Obtained complete ball-off at 2400 psi. Pulled tubing with packer and bridge plug out of hole. Rigged up Halliburton, fractured Pt. Lookout perforations from 5990 to 6135' with 95,000 gal. 1% KCl water containing 2.5 lb. per 1000 gal friction reducer and carrying 72,300 lbs. 20-40 sand as follows:

20,000 gal. pad at 50 BPM at 2400 psi.
5,400 gal. with ½ lb/gal. sand at 51 BPM at 2300 psi
69,600 gal. with 1 lb/gal. sand at 51 BPM at 2400 psi
4,000 gal. flush at 52 BPM at 2450 psi.

ISIP 300 psi, decreasing to vacuum in 30 min. Average injection rate 51 BPM at 2400 psi. Total load water=3786 bbls. Opened well to atmosphere and found on vacuum. Left well open over weekend and shut down for Sunday.

6-12-83 Shut down for Sunday.

6-13-83 Found well dead on arrival at location. Dresser Atlas ran 4¼" wireline-set tubing retrievable Baker bridge plug and set at 5950'. Pressure tested casing to 2500 psi, held O.K. Perforated Cliff House and Menefee sections of Mesaverde with thirty-four 0.32" jet shotss as follows: 5697',-98,-99,5703,-05,-07; 5722,-23,-24,-25,-26; 5756, -57,-58,-59,-60,-61; 5768,-70,-72,-76,-77,-79,-83,-85, -87,-91,-93; 5816',-18,-21,-22,-23,-24.
Ran Baker fullbore packer and model "C" bridge plug on 2 3/8" tubing and isolated perfs from 5816 to 5824'. Broke down with KCl water at 2300 psi and had immediate communication to annulus. Raised packer to isolate perfs from 5756 to 5824'. Acidized with 1450 gal. 15% HCl acid containing 46 ball sealers, obtaining complete ball-off. Isolated perfs 5722 to 5726' and broke down with KCl water at 2300 psi, having instant communication with annulus.Pulled packer up hole and isolated perfs from 5697 to 5726'. Acidized with 1100 gal 15% HCl acid containing 22 ball sealers and obtained complete ball-off. Pulled tubing with packer and bridge plug. Rigged up Halliburton and fractured Cliff House and Menefee perfs from 5697 to 5824' with 60,400 gal. 1% KCl water containing 2.5 lb/1,000 gal. friction reducer and carrying 63,000 lbs. 20-40 sand as follows:

15,000 gal. pad w/25 lb/1,000 gal fluid-loss

6-13-'83 (cont'd.)

additive at 51 BPM at 1,800 psi
21,000 gal. w/ 1 lb/gal 20-40 sand at 51 BPM at 1600 psi
16,300 gal. w/ 2 lb/gal 20-40 sand at 53 BPM at 2400 psi
1,810 gal. flush at 14 BPM at 2500 psi.
Well sanded off. Pressure decreased from 2500 psi to 110 psi in 20 min. Average injection rate 51 BPM at 1600 psi. Load to recover 1,678 bbls.
Opened well to atmosphere 30 min. after treatment was completed with small stream of water returning. Left well open overnight.

6-14-83 Checked well dead. Ran retrieving head for Baker bridge plug on 2 3/8" tubing. Tagged sand at 5161'. Rigged up to reverse circulate with KCl water and clean out sand from 5161' to bridge plug at 5950'. Lost approx. 300 bbls. fluid to perfs while cleaning out. Pulled tubing with bridge plug. Ran 2 3/8" tubing open-ended in hole with seating nipple one joint off bottom to 3477' when tubing tongs broke down. Will replace and continue in hole to swab well in. Shut down overnight.

6-15-83 Continued in hole with tubing. Checked casing clear to 6340'. Pulled tubing up hole and landed in wellhead with 186 joints at 6013' (perfs at 5697 to 6135'). Installed Christmas tree and rigged up to swab. Initial fluid level at 2600', initial casing pressure zero. Made four swab runs, recovering large amounts of sand in returning fluid, endangering swabbing. Rigged up BOP. Pulled tubing above perfs and picked up additional tubing to clean out to production packer at 7500'. Plan on cleaning out with nitrogen. Shut well in overnight.

6-16-83 Checked casing pressure at 425 psi. Opened well to atmosphere and blew down in 10 min. Lowered 2 3/8" tubing and tagged sand at 7127' Rigged up Halliburton Nitrogen service and cleaned out sand with conventional circulation from 7127' to 7490' (production packer at 7500'). Pulled tubing to 5992' and landed in tubing hanger. Installed Christmas tree. Well continued to unload fluid in slugs out the annulus while preparing to land tubing. Blew well clear of fluid with nitrogen. Opened tubing to atmosphere and left open to flow and clean-up overnight.
cost $106,141.

6-17-83 Checked well dead on arrival at location. Swabbed well 3 times and well began to flow gas and water. Initial casing pressure 1150 psi, initial fluid level 2350'. Final flowing pressure 950 psi in 2 hrs. Left well open to flow and clean up.

Daily Drilling Summary--Oxoco #2 Trail Canyon workover (cont'd.) page 6

6-18 to 6-30-'83 Continued alternately blowing and shutting in well cleaning up sand and recovering load water. Ran bottom-hole pressure survey on the Mesaverde fm. on May 27th after well had been shut in 65 hrs. Had bottom hole pressure of 1130 psi. Shut in well at 11:30 a.m., 7/1, for seven day build-up and official back pressure test for calculated open flow.