Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

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 "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR: Merrion Oil & Gas Corp.

3. ADDRESS OF OPERATOR: P. O. Box 840, Farmington, New Mexico 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 330' FSL and 2310' FWL

5. LEASE DESIGNATION AND SERIAL NO.: NM 5980

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Federal 21

9. WELL NO.: 4

10. FIELD AND POOL, OR WILDCAT: Ojo Encino

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 21, T20N, R5W

12. COUNTY OR PARISH: McKinley | 13. STATE: New Mexico

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 6,785' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Completion history			[X]
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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.)*

Completion history is attached, as well as copies of logs.

RECEIVED
JUL 11 1988
OIL CON. DIV.
DIST. 3

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

SIGNED _____ TITLE Operations Manager DATE 6/24/88

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ACCEPTED FOR RECORD
JUL 28 1988
FARMINGTON RESOURCE AREA
BY _____

MOCC

*See Instructions 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.

FEDERAL NO. 21-4
Completion History

May 13, 1988
MIRU RAM Service Company rig with reverse circulating equipment. Hauled 199 jts. of new 2-7/8" EUE tubing form Lybrook yard. Installed wellhead and BOP. PU 6-1/2" rock bit and Baker casing scraper on 2-7/8" EUE tubing. Tagged 1st stage tool @ 3007' KB. Drilled out stage tool, circulated clean. Shut well in. SDON. (CCM)

May 14, 1988
Pick up pipe and tally in hole to drill out 2nd stage tool at 5145' KB. Pick up pipe, tally in hole to clean out 3' to float collar @ 5954' KB. Circulate hole. Clean. TOH with 2-7/8" tbg., bit, and scraper. SDOWE. (CCM)

May 17, 1988
Rigged up Petro wireline. Ran temperature log from 3900' KB to 5952' KB. Ran CBL w/GR correlation collar log from 5952' KB, PBTD, to 2500' KB. Attempt to pressure test casing to 3000# psi. Got up to 2800# psi and pressure broke back to 1800# psi @ approximately 1 BPM. Shut down. ISIP 500# psi. Pumped in again @ 1500# psi approximately 1.5 BPM. Shut down. ISIP 500# psi after 15 min. Later casing went on slight vacuum. Shut well in. Rig down loggers. SDON. (CCM)

May 18, 1988
TIH w/ Baker fullbore packer and determined we were pumping through float and shoe joint @ 1500# psi, 2 BPM. TOH w/ packer. TIH w/ bit and scraper. Drilled out float @ 5954' KB. Cleaned out to 5995'KB TD. Circulated casing clean. TOH with bit and scraper. SDON. (CCM)

May 19, 1988
TIH w/ cement retainer on 2-7/8" EUE tbg. Set retainer @ 5970' KB. Pressure test tbg. to 2000 psi. Held good. Sting out of retainer and fill hole. Sting in and establish injection rate w/ water of .2 BPM @ 800 psi building pressure at this rate. Shut down. Sting out. Mixed and pumped 25 sx Class 'G' cement with 1.3% fluid loss additive, 1% CaCl, and 3% retarder @ 15.8 lb/gal 1.15 cu.ft./sk 5 Bbls slurry. Displaced with 28.5 Bbls water. Shut down. Stung into retainer and squeeze 2 Bbls @ .25 BPM @ 800 psi. Got tight at this point w/ cement reaching bottom of shoe. Squeezed away .25 Bbls @ 850-950 psi. Staging at almost no rate. Shut down. Stung out of retainer, reversed clean. Got 2 Bbls of good cement back to surface. Rigged down Dowell. TOH w/ tbg. and stinger. SDON. (CCM)

May 20, 1988
Rigged up Petro Wireline and ran 2 CBLs, one without pressure and one w/ 1000 psi on csg. Determine squeeze job on shoe increased bond from 5890' KB to TD @ 5972' KB, from avg. of 65% bond to avg. of 85% bond. Perforated 3 holes in poor bond @ 5897' KB, 5905' KB, and 5922' KB. Rigged down Petro. TIH with 2-7/8" EUE tbg. open ended to 5937' KB. Rigged up Dowell Cementers. Got circulation w/ water. Mixed and pumped 30 sx Class 'G' cement w/ 1.3% FLA, 1% CaCl, and 3% retarder. 6 Bbls slurry and displaced to balance. Pull tubing to 5806' KB. Reverse clean. Got 1 Bbl cement back. Pulled another 64'. Shut tubing in and squeeze down casing with 1 Bbl, pressure @ 840 psi and locked up. Pressure @ 810 psi in 10 minutes. Shut well in. Rigged down Dowell. SDON. (CCM)

May 23, 1988
TOH w/ 2-7/8" tbg. TIH w/ reconditioned 6-1/8" bit and Baker csg scraper. Tagged cement @ 5800' KB. Drilled good hard cement to 5951' KB and fell through. Circulated clean to cement retainer at 5972' KB. Pressure tested casing to 1000 psi. Held good. TOH w/ tbg, bit and scraper. SDOWE. (CCM)

May 24, 1988
Rig up Petro wireline. Ran cement bond log from PBTD to 5700' KB. No bond increase visible over last bond log. Pressured casing to 1000 psi. Reran log. Still no bond improvement. Average bond ~85% across upper Entrada. Perforated 4 treating holes @ 5944'-48' KB per density log w/ 4" casing gun. Rig down wireline. Load hole with water. Unable to pump in @ 1300 psig. Pressure holding steady. Found casing gun used for perf full of cementy water. TIH w/ 2-7/8" tubing to PBTD. Circulated bottoms up. Returning cement and cement cut water w/ LCM from bottom. Circulate 40 minutes before well cleaned up. Pull above perfs. SDON. (SSD)

May 25, 1988
Reverse circulated to check for fill overnight. Recovered 2 Bbls cement water & LCM off bottom and cleaned up. Attempted to pump in with rig pump. Held 2000 psi solid. Bled off pressure. Rig up Western Co., Mixed 5 Bbls 15% acetic acid and spotted across perfs from 5964' KB. Let soak 5 minutes. Unable to pump in @ 1000 psi. Pressure up to 1400 psi. Started pumping in @ 1400 psi, .25 BPM. Increase rate to .5 BPM @ 1450 psi. Shut down. Pressure dropped and changed bleed off rate @ 1200 psi. Reversed remaining acid out with water . Mix and pump 35 sx Class 'H' cement w/ 3% flac, 1.3% retarder, and 1% $CaCl_2$ @ 1.2 cu.ft./sk, total of 42 cu.ft. slurry, and displaced to spot @ 5964' KB. Pulled tubing to 5775' KB. Reversed tubing clean. Recovered est. 1.0 Bbls cement. Squeezed down casing @ .25 BPM. Displaced .75 Bbls and started building pressure to 1500 psi, then 2000 psi. Total displacement 1.75 Bbls. Shut down 30 minutes. Pressure

May 25, 1988 (continued)
@ 1550 psi. Pump .25 Bbls. Pressure up to 2000 psi solid. Bled pressure to 1000 psi. Shut well in. SDON. (CCM)

May 26, 1988
TOH w/ 2-7/8" EUE tbg. TIH w/ reconditioned 6-1/8" tooth bit on Baker csg. scraper. Tagged cement @ 5805' KB, 30' below where we reversed clean. Drilled out fairly hard cement and cleaned out to retainer @ 5972' KB. Reversed clean and TOH w/ tbg., bit, and scraper. Pressure tested csg. to 1000 psi. Held good. Rigged up Petro wireline. Ran cement bond log from 5972' KB PBTD to 5700' KB. Showed bond improvement from 5880' KB to 5950' KB to between 80% and 95% bonded pipe. Perforated Todilto w/ 5 holes from 5897' KB to 5901' KB. Rigged down Petro and SDON. (CCM)

May 27, 1988
TIH w/ Baker fullbore packer and unloader set @ 5846' KB with SN @ 5814' KB. Testing Todilto perfs from 5897' - 5901' KB. 33.6 Bbls tubing capacity to SN. Made 15 swab runs. Recovered 54 Bbls fluid. Made another run in 30 minutes- dry. Made last run after 1 hour - dry. No oil show in samples. SDON. (CCM)

May 28, 1988
Made 3 swab runs this morning. 1st run tagged 200' of fluid. Got out w/ 100', 100% water. 1 Bbl entry in 15 hours. 2nd and 3rd runs mist and dry. Unset packer and swabbed fluid level to 4500' KB. SDOWE. (CCM)

June 1, 1988
Rigged up Petro Wireline. Perforated 5944' - 48' KB, 4 holes. TIH w/ fullbore packer. Set @ 5928' KB. and broke down perfs at 2500 psi, pumping in with rig pump, as follows:

BPM	PRESSURE
3.0	1950 psi
2.0	1950 psi
1.5	1800 psi
.75	1650 psi
.50	1550 psi

ISIP - 1100 psi.

Bled to below 100 psi in 3 minutes. No communication to backside. Hole was loaded with clean Entrada water. TOH with tubing and packer. Rigged up Petro and ran wireline set cement retainer and set @ 5934' KB. TIH w/ 2-7/8" tubing and stinger. Left stung into retainer. SDON. (CCM)

Federal 21-4 Completion History

June 2, 1988
Shut-in. Waiting for equipment to pump polymer treatment. (SSD)

June 3, 1988
Shut-in. Waiting on equipment to pump polymer treatment. (SSD)

June 4, 1988
MIRU Dowell. Established rate into Entrada perfs (5944-48') at 1 BPM and 1250 psig. Brought rate to 2 BPM @ 1350 psig and 3 BPM @ 1450 psig. Pumped channel block treatment at an average rate of 1 BPM and 1100 psig as follows:

Stage	Volume	Gals J433
1	4200/100	10
2	8400/200	30
3	8400/200	45

SDOWE. (TGM)

June 7, 1988
Rigged up Dowell. Continue 4th stage. Pumped 2 Bbls and caught pressure - 790 psi. Pumped 5th stage @ 780 psi. Finish channel block treatment. Pumped 10 Bbls water spacer- 810 psi. Total job @ 1 BPM.

Start cement job. Mixed and pumped 20 sx Class 'G' cement. Displace 1 BPM 500 psi cement on formation. Pressure up to 800 psi. Squeezed away 3 Bbls of cement. Pressure @ 1000 psi. Pressure bled to 950 psi in 2 minutes. Stung out of retainer. Reversed with 48 Bbls water. Got back approximately 1.5 Bbls cement and some red and brown colored water. Shut down. Pulled 2 jts tbg and started swabbing down to perforate main Entrada. Recovered 36 Bbls water. SDON. (CCM)

June 8, 1988
Swabbed fluid level down to approximately 4500' KB. TOH with 2-7/8" tubing and retainer stinger. SDON. (CCM)

June 9, 1988
Rigged up Petro Wireline. Went in the hole and tagged fluid level @ 4715' KB. Perforate 1 hole @ 5908' KB. Came up and checked fluid level. No detectable fluid level change. Select fire gun malfunction. Laid down gun and repair. Went back in with same gun. Still no fluid level change. Perforated 1 hole at 5909' KB. Pulled and checked fluid level. Found increase of 20' in first 5 minutes. Wait 10 minutes. Fluid level increase to 4675' KB for total fluid entry of 40' in 15 minutes. Perforate 2 more holes @ 5909' KB. Rig down

June 9, 1988 (continued)
loggers. TIH with Baker fullbore packer and unloader on 2-7/8" EUE tubing and set @ 5846' KB. Started swabbing to test Entrada. 1st run - fluid level @ 3500' KB. 2nd run-pulled from SN. Recovered 18 Bbls in 2 runs. Made 3 runs, 20 min/run. Entry rate of 200' every 20 minutes. Fluid level 5600' KB. Wait 30 minutes - fluid level @ 5100' KB. Pulled from SN. Wait 30 minutes - fluid level @ 5100; KB. Pulled from SN. Getting average fluid entry of 675' every 30 minutes or 5 Bbls/hr. Caught a sample the last run. Let settle out @ 60% water, 30% oil, 10% BS. Total fluid recovered 30 Bbls. SDON. (CCM)

SUMMARY: Perforated Entrada. Swabbed 30 Bbls fluid. Last sample showed 10 % BS, 60% water, 30% oil.

June 10, 1988
Started swabbing. Initial fluid level @ 600' KB. Pulled from 2000' KB. Swabbed all day. Swabbed down to stabilize fluid level at 5000' KB. 700-800' of fluid entry every 30 minutes or 9 Bbls/hr. Shook out sample of the last run: 50% BS&W, 50% oil. Total fluid recovered today - 91 Bbls. (CCM)

June 11-13, 1988
SDOWE. (CCM)

June 14, 1988
Released packer. TOH with 2-7/8" tubing and Baker fullbore packer. TIH with tubing pumping string:

1	30' MA
1	4' perf. sub
1	1' SN
182	jts. new 2-7/8" EUE 6.5 #/ft. tubing

Bottom of mud anchor @ 5,887.13' KB. Ran 1-1/2" RHAC pump from Service Pump Co. and started running rods. SDON. (CCM)

June 15, 1988
Finished running rods and spaced out 2-1/2" x 1-1/2" x 20' RHAC pump from Service Pump. Rod string:

155	3/4" plain
76	7/8" plain
1	6' 7/8" pony
1	2' 7/8" pony

Installed stuffing box and polish rod. Clamped off and shut well in. RDMO. (CCM)

June 16, 1988
Waiting on pumping unit installation. (CCM)

June 17, 1988
Building surface flow lines. (CCM)

June 20, 1988
Moved Lufkin 456 from Federal 21-1 to 21-4. Set pumping unit. (CCM)

June 21, 1988
Removed Scania diesel engine from pumping unit and installed Waukesha. Tied in 2-1/2" flowline. (CCM)

June 22, 1988
Finish flowline tie-in and gas line tie-in. Start unit. Fluid to separator. Open to oil tank and water tank. Leave running, 8 SPM x 120". Engine has slight knock. (Fizz)

Produced 142 Bbls fluid in 15 hours pumping. Good oil show at wellhead. (DM)

June 23, 1988
Produced 80 Bbls oil and 125 Bbls H_2O in 24 hours pumping 8 SPM x 120". (DM)