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to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

OIL CONSERVATION DIVISION

2040 Pacheco St.
Santa Fe, NM 87505

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL API NO.

30-025-26757

Indicate Type of Lease

STATE ☒

FEE ☐

State Oil & Gas Lease No.

B-229

Lease Name or Unit Agreement Name

Arnott Ramsay (NCT-B)

Well No.

9

Pool name or Wildcat

Jalmat (T-Y-7R) Oil

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'
(FORM C-101) FOR SUCH PROPOSALS.)

Type of Well:
OIL ☒
WELL

GAS
WELL ☐

OTHER

Name of Operator

Doyle Hartman

Address of Operator

500 N. Main St., Midland, Texas 79701 (915) 684-4011

Well Location

Unit Letter K : 1980 Feet From The South Line and 1980 Feet From The West Line

32 Section

25S

Township

37E

Range

NMPM

Lea

County

Elevation (Show whether DF, RKB, RT, GR, etc.)

2996' RKB

11

Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐

ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐

PLUG AND ABANDONMENT ☐

CASING TEST AND SQUEEZE JOB ☒

OTHER: Details of recompletion of well to Jalmat Pool ☒

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

For Details of Completed Operations, please refer to pages 2 of 10, 3 of 10, 4 of 10, 5 of 10, 6 of 10, 7 of 10, 8 of 10, 9 of 10 and 10 of 10 attached hereto, and made a part hereof.



I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Steve Hartman

TITLE Engineer

DATE 10-03-01

TYPE OR PRINT NAME Steve Hartman

TELEPHONE NO. 915-684-4011

(This space for State Use)

APPROVED BY

Paula Langlie

TITLE

PETROLEUM ENGINEER

DATE

APR 19 2004

CONDITIONS OF APPROVAL, IF ANY:

2A Langlie Mattix GR-R-GB

Details of Completed Operations

1. Moved in and rigged up well service unit, on 7-10-01.

Pulled and laid down 2" x 1 1/2" x 12' RWBC pump, and 3/4" rod string. Nippled up BOP. Pulled 2 3/8" O.D. tubing.

2. Rigged up Schlumberger. Logged well, from 3100' to 3308', with DS-CNL-GR-CCL log and VDCBL-GR-CCL log. Found fluid level at 3109'.

Ran 2 3/8" O.D. tubing and Baker 5 1/2" Model "C" RBP. Set 5 1/2" Model "C" RBP, at 3280'. Loaded hole with 2% KCL water. Logged well, with DS-CNL-GR-CCL log and VDCBL-GR-CCL log, from 2550' to 3280'. Experienced difficulty logging, due to a continual loss of water.

Rigged down Schlumberger.

3. Ran 2 3/8" O.D. tubing and 5 1/2" Model "C" packer. Set 5 1/2" Model "C" packer, at 3255'. Pumped 15 bbls of water down 2 3/8" O.D. tubing, without catching pressure.

Raised 5 1/2" Model "C" RBP, to 3255', and 5 1/2" Model "C" packer, to 3214'. Pressure tested 5 1/2" Model "C" RBP, to 500 psi. Pressure held okay.

Raised 5 1/2" Model "C" packer, to 3147'. Pressure tested 5 1/2" O.D. casing, from 3147' to 3255', to 500 psi. Pressure held okay.

Lowered RBP to 3275', and packer to 3255'. Pressure tested 5 1/2" O.D. casing, to 500 psi. Pressure held okay. Pulled 5 1/2" Model "C" packer and 5 1/2" Model "C" RBP. While pulling out of hole, laid down old 2 3/8" O.D. tubing (106 joints).

4. Ran 102 joints of new 2 3/8" O.D., 4.7 lb/ft, J-55, EUE tubing and bottom-hole cleanout assembly, consisting of 4 3/4" bit and (4) 3 1/2" O.D. drill collars. Tagged top of fill, at 3308'.

Hooked up air unit. Cleaned out fill, from 3308' to 3427'. Blew well dry. Pulled bottom-hole assembly.

5. Ran Baker 5 1/2" Model "C" packer. Set 5 1/2" Model "C" packer, at 2295'.

Rigged up Halliburton. Tested lines and tubing, to 4000 psi. Pressure held okay.

Loaded and pressured 5 1/2" x 2 3/8" annulus, from 0' to 2295', to 1000 psi.

Established an injection rate down 2 3/8" O.D. tubing, using 35 bbls of 2% KCL water. Cemented perfs, from 3280' to 3330', with 200 sx of API Class "C" cement containing 2% CaCl₂. Displaced cement with 30.8 bbls of water. Performed hesitation squeeze, to a final wellhead pressure of 2660 psi.

Released packer. Pressure tested cement, and 5 1/2" O.D. casing, to 2600 psi. Pressure held okay.

Pulled 2 3/8" O.D. tubing. Laid down 5 1/2" Model "C" packer.

6. Ran 2 3/8" O.D. tubing and bottom-hole drilling assembly. Hooked up air unit. Commenced drilling cement, at 3227', at 7:15 PM. Drilled green cement, to 3262'.

Shut down for night, at 8:45 PM, CDT, 7-12-01, to provide additional time for cement to harden.

At 6:00 AM, CDT, 7-13-01, found tubing stuck. Pulled on tubing, to 65,000 lb. Also, simultaneously torqued tubing, with power swivel. Tubing came free. Circulated hole, with foam, for 30 minutes. Commenced drilling cement, at 3262', at 6:50 AM. Drilled out of bottom of cement, at 3333', at 9:10 AM.

Lowered bit, to 3427'. Blew hole dry. Pulled 2 3/8" O.D. tubing and bottom-hole drilling assembly. Ran 5 1/2" casing scraper, to total depth. Pulled scraper to 2300'. Re-scraped 5 1/2" O.D. casing, from 2300' to 3427'. Pulled and laid down casing scraper.

7. Nipped down BOP. Poured 25 sx of 20/40 frac sand down 5 1/2" O.D. casing. Pumped 1" stream of water, while pouring sand. After pouring last sack, pumped an additional 3 bbls down 5 1/2" O.D. casing.

Ran 2 3/8" O.D. tubing. Tagged sand, at 3198' (52' high). Rigged up air unit. Cleaned out sand, to 3250'. Pulled 2 3/8" O.D. tubing.

Rigged up Capitan Corporation wireline truck. Ran 3 1/8" O.D. perforating gun. Tagged apparent bridge, at 3225'. Pulled perforating gun up hole, and waited, for 15 minutes. Lowered tool. Tagged up, at 3211'. Pulled out of hole with 3 1/8" O.D. perforating gun. Shut down for night, to allow remaining sand to fall to bottom.

Ran 2 3/8" O.D. tubing. Tagged top of frac sand, at 3148'.

Rigged up air unit. Circulated hole with foam. Cleaned out frac sand, to 3251'. Circulated hole with air, for an additional 30 minutes. Pulled 2 3/8" O.D. tubing.

8. Rigged up Capitan Corporation. Perforated well, with (33) 0.38" x 19" holes, with one shot each, as follows:

2702	2737	2765	2796	2941	3009	3211
2706	2746	2769	2805	2945	3162	3217
2712	2752	2785	2922	2949	3169	3221
2715	2756	2791	2925	3002	3193	
2725	2761	2794	2934	3007	3197	

9. Ran 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP. Set 5 1/2" Model "C" RBP, at 3235'. Spotted acid across and above perfs, by pumping 550 gallons of 15% MCA acid, followed by 0.5 bbls of 2% KCL water. Allowed acid to fall and equalize.

Raised and set packer, at 2853'. Let acid soak, for 20 minutes.. Acidized perfs, from 2922' to 3221' (16 holes), with 5628 gallons of 15% MCA acid, and 21 ball sealers (1.31 balls per hole).

1st Stage Acid Job

Volume Pumped (BBLS)	Pump Rate (BPM)	Pump Pressure (psi)	Ball Sealers Dropped	Remarks
10	2.6	0		15% MCA acid
20	4.6	1236	3	
30	4.6	1260	9	
40	4.5	1330	15	
50	4.5	1360	21	
60	4.6	1390		
70	4.0	1853		Shut down for 5 minutes.
80	5.0	1420		
90	4.9	1430		
100	4.9	1440		
110	4.9	1445		
120	4.9	1460		
5	4.9	1390		Flush
10	4.9	1360		
15	4.9	1390		
21	4.9	1390		
	ISIP	291		
	5-min SIP	130		

Lowered 5 ½" Model "C" packer, to 3230'. Pumped 5 bbls of 2% KCL water down tubing, to flush remaining acid above bottom perf.

10. Raised and set 5 1/2" Model "C" RBP, at 2830'. Spotted acid across and above upper 17 holes, from 2702' to 2805', by pumping 250 gallons of 15% MCA acid, followed by 0.5 bbls of 2% KCL water. Allowed acid to fall and equalize.

Raised and set 5 1/2" Model "C" packer, at 2659'. Pumped an additional 300 gallons of 15% MCA acid down 2 3/8" O.D. tubing. Shut down and waited, for 2 hours, for delivery of additional acid. Acidized perfs, from 2702' to 2805' (17 holes), with an additional 3150 gallons (total of 3700 gallons) of 15% MCA acid, and 24 ball sealers.

2nd Stage Acid Job

Volume Pumped (BBLS)	Pump Rate (BPM)	Pump Pressure (psi)	Ball Sealers Dropped	Remarks
1		830		15% MCA acid
10		1186		
20		1191	5	
30		1203	11	
40		1620	16	
50		1780	21	
60		3000	24	
75				
5		Vac.		Flush
10		920		
20		920		
	ISIP	22		
	15-sec SIP	0		

11. Raised and set RBP, at 2695'. Opened packer by-pass valve. Hooked up air unit. Unloaded approximately 50 bbls of fluid from hole.

Lowered RBP to 2824'. Hooked up air unit. Circulated wellbore, with air, at a circulating pressure of 225 psi.

Raised RBP to 2664'. Left 5 1/2" Model "C" packer and 5 1/2" Model "C" RBP hanging free.

Shut down for night.

At 8:00 AM, CDT, 7-15-01, SICP = 45 psig. SITP = 41 psig.

Set 5 1/2" Model "C" RBP, at 2690'. Raised 5 1/2" Model "C" packer, to 2685'. Hooked up air unit. Circulated hole with air, with no fluid recovery.

12. Lowered tubing, to latch onto 5 1/2" Model "C" RBP. Could not latch onto RBP. Pulled 2 3/8" O.D. tubing. Discovered that 30 joints of 2 3/8" O.D. tubing, 5 1/2" Model "C" packer, and 5 1/2" Model "C" RBP were still in hole.

Ran 2 3/8" O.D. tubing. Screwed onto fish. Pulled 2 3/8" O.D. tubing, with an indicated additional 4000 lbs of weight, on weight indicator. Laid down 5 1/2" Model "C" packer and 5 1/2" Model "C" RBP.

13. Ran and landed 2 3/8" O.D. tubing, at 3220' RKB (30' above sand). Made up B&M Oil Tool 5 1/2" x 2 3/8" x 3 1/2" Type MR tubinghead. Ran 2" x 1 1/4" x 12' RHAC top-hold-down insert pump and 3/4" rod string.

Loaded tubing with 8.25 bbls of 2% KCL water. Commenced pumping and cleaning up well, at 4:15 PM, CDT, 7-15-01, at 6.3 spm x 44" x 1 1/4". Pressure tested tubing and pump, to 500 psi. Pressure held okay.

While running pump and rods, and after starting pumping unit, performed pressure buildup. 22.5-hr SICP = 46.5 psig.

14. Pulled rods and pump. Raised bottom of 2 3/8" O.D. tubing, to 2673' RKB. Installed carbide blast joint.

Installed 3 1/2" 5000-psi frac valves (with 3 1/2" EUE, 8Rd threads) on 5 1/2" x 2 3/8" casing-tubing annulus. Installed 2 3/8" 3000-psi full-opening gate valve.

Shut in well, at 1:30 PM, CDT, 7-16-01. Performed pressure buildup:

Pressure Buildup

<u>Date</u>	<u>Time (CDT)</u>	<u>Elapsed Time (hrs)</u>	<u>TP (psig)</u>	<u>CP (psig)</u>	<u>LP (psig)</u>	<u>Remarks</u>
7-16-01	1:30 PM	0		0		Shut in well.
7-16-01	2:00 PM	0.500		2.8		
7-16-01	3:30 PM	2.000		6.3		
7-16-01	4:30 PM	3.000		9.0		
7-16-01	5:30 PM	4.000		16.3		
7-16-01	6:30 PM	5.000		22.0		
7-16-01	7:00 PM	5.500		25.0		
7-16-01	8:00 PM	6.500		29.5		
7-16-01	9:00 PM	7.500		33.5		
7-16-01	10:00 PM	8.500		38.5		
7-16-01	11:00 PM	9.500		42.8		
7-17-01	12:00 AM	10.500		45.0		
7-17-01	1:00 AM	11.500		46.5		
7-17-01	2:00 AM	12.500		47.3		
7-17-01	3:00 AM	13.500		49.5		
7-17-01	4:00 AM	14.500		51.5		
7-17-01	5:00 AM	15.500		52.5		
7-17-01	6:00 AM	16.500		54.0		
7-17-01	7:00 AM	17.500		54.0		
7-17-01	8:00 AM	18.500		54.0		

15. Rigged up Halliburton, on 7-17-01. Performed CO₂ foam frac down casing-tubing annulus, with 221,689 gal of gelled water and CO₂, plus a combined total of 500,000 lbs of 20/40, 10/20, and 8/16 frac sand, at an average treating rate of 45.9 BPM and average WHCP of 2381 psi. Static

tubing pressure was 1003 psi.

Upon completion of frac, left well shut in, for one hour. Hooked up well to blowdown tank. Cleaned up well (overnight), to blowdown tank.

16. Killed well with 35 bbls of 2% KCL water. Removed 3 1/2" frac valves. Installed Balon 3" 1500-psi ball valves.

Lowered 2 3/8" O.D. tubing. Tagged top of frac sand, at 3179'. Hooked up air units. Cleaned out frac sand, to 3427' RKB. Circulated wellbore, with air, for an additional 3 hrs., at a circulating pressure of 400 psi.

Raised bottom of tubing, to 2687'. Installed 2" choke. Flowed well overnight, to blowdown tank.

Test Period: 13 hrs

Flow Path: Casing-tubing annulus

Test Results: FCP = 14 psi

FTP = 93 psi

Prod = 97.3 bbls

Rate = 179.6 BPD

Choke = 64/64

Lowered tubing. Found 12' of sand fill.

Cleaned out sand, to 3427' RKB. Raised and landed bottom of 2 3/8" O.D. tubing, at 3322' RKB (104 jts @ 31.69'/jt + 1.1' SN + 18' MA - 3' AGL + 10' KBC = 3321.86').

17. Ran 2" x 1 1/4" x 12' RHAC insert pump, and 3/4" rod string, consisting of (130) 3/4" x 25' Axelson S-87 API Class "KD" rods, (1) 3/4" x 2' rod sub, (1) 3/4" x 4' rod sub, (1) 3/4" x 8' rod sub.

Commenced pumping and cleaning up well, at 2:00 P.M., CDT, 7-19-01, at 10.3 spm x 64" x 1 1/4".

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NMOCD Form C-103 dated 10-03-01
Doyle Hartman
Arnott Ramsay No. 9
B-32-25S-37E
API No. 30-025-26757

18. Performed well test:

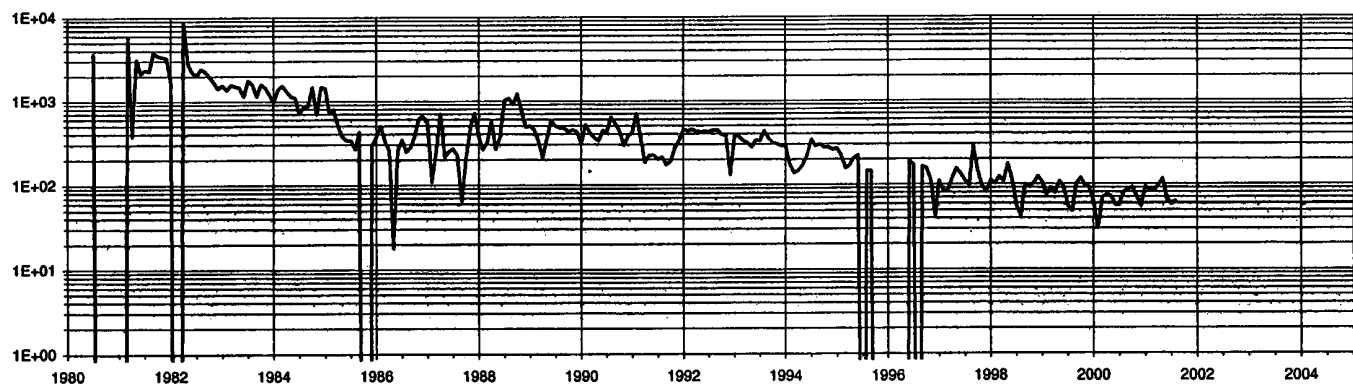
9-2-01

Test Period:	24 hrs
Choke =	26/128
Gas Rate =	262 MCFPD
Oil Rate =	5 BOPD
Water Rate =	10 BWPD
CP =	22.2 psig
LP=	14.8 psig

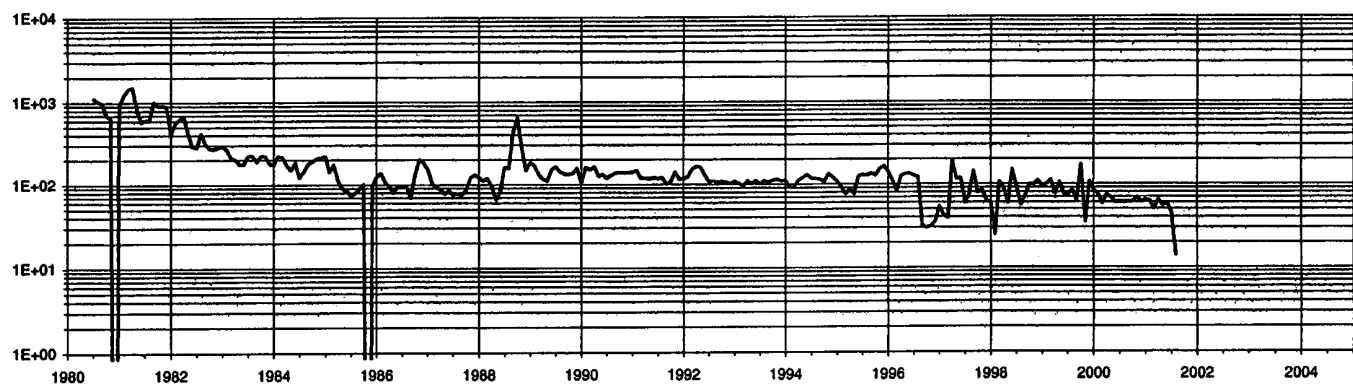
Well life has now been extended, and recoverable oil and gas reserves increased, by recompleting as an oil well, to the Jalmat Pool, from 2702' to 3221'.

ARNOTT RAMSAY NCT-B #9
LANGLIE-MATTIX
K 32 25S 37E
HARTMAN DOYLE

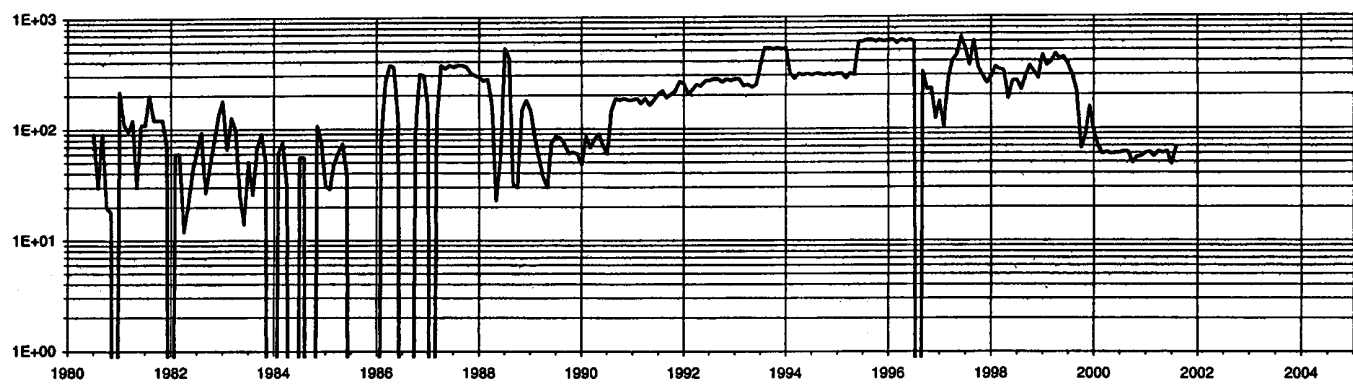
Gas Production (MCFPM)



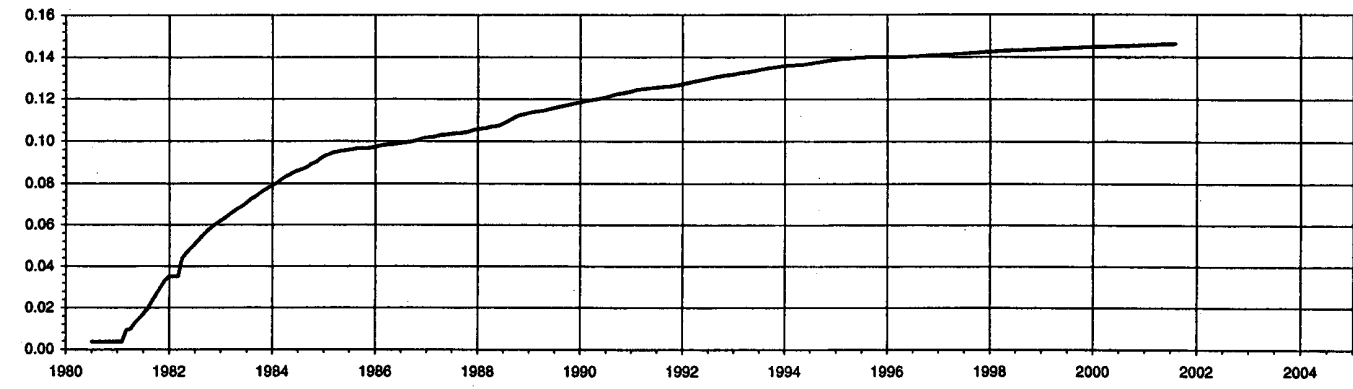
Oil Production (BPM)



Water Production (BPM)



Cumulative Gas Production (BCF)



Cumulative Oil Production (MBO)

