Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
P.O. Box 1980
Hobbs, NM 88241

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: NMLC065249
6. If Indian, Allottee or Tribe Name:
7. If Unit or CA, Agreement Designation:

1. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other
2. Name of Operator: Reliance Operating Company
3. Address and Telephone No.: P O Box 10946, Midland TX 79702 915-683-4816
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 1120' FSL & 1420' FEL, Unit O
Section 31, T9S, R36E

8. Well Name and No.: Federal "D" #3
9. API Well No.: 30-025-34066
10. Field and Pool, or Exploratory Area: ~~Wildcat Atoka~~ Crossroads, West
11. County or Parish, State: Lea County, NM

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☒ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. 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.)*

1) Set CIBP @ 11,296' (8-17-98)
2) Perforated Atoka 11,133-160' 2SPF (56 holes) (8-19-98)
3) Set pkr @ 11,050'
4) Acidized w/1500 gals 15% NEFE (8-20-98)
5) Flowed well to clean up - SI for 72 hr buildup
6) 72 hr SIBHP 2909 psi (8-27-98)
7) Ran 4 point test - CAOF=1039 MCF (C-122 attached) (8-27-98)

ACCEPTED FOR RECORD
SEP 25 1998
BLM

(ORIG. SGD.) GARY GOURLEY

Orig-BLM Roswell xc: OCD-Santa Fe & Hobbs

14. I hereby certify that the foregoing is true and correct
Signed Mark Stiles Title Agent Date 9/11/98

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

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.

*See Instruction on Reverse Side

West

Appropriate District Office
See Rule 1 & Rule 1122

Revised 4-1-9

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator: Reliance Operating Co.					Lease or Unit Name: Fed "D"				
Type Test: [X] Initial [ ] Annual [ ] Special					Test Date: 8/27/98			Well No.: 3	
Completion Date: 8/20/98		Total Depth: 12,018'		Plug Back TD: 11296	Elevation: 4059' GR			Unit Ltr. - Sec. - TWP - Rge.: O 31 9S 36E	
Csg. Size: 5 1/2	Wt.: 20	d: 4.778	Set At: 12,003'	Perforations: From: 11,133	To: 11160			County: Lea	
Tbg. Size: 2 7/8	Wt.: 6.5	d: 2.441	Set At: 11,051'	Perforations: From:	To:			Pool: Crossroads West	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple: Single				Packer Set At: 11,050				Formation: Atoka	
Producing Thru: TBG	Reservoir Temp. °F	Mean Annual Temp. °F: 60		Baro. Press - P_a: 13.2				Connection: Air	
L: 11,050	H: 11,050	Gg: .836	% CO_2: .820	% N_2: 2.632	% H_2S: 0	Prover: 2"	Meter Run: None		Taps: N/A

FLOW DATA					TUBING DATA		CASING DATA		
NO.	Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					1500		pkr		72 hrs.
1.	2" X .500	15		95°	1390	84°	pkr		1 hr
2.	2" X 1.000	12		83°	840	84°	pkr		1hr
3.	2" X 1.000	26		58°	730	84°	pkr		1 hr
4.	2" X 1.250	16		60°	485	84°	pkr		1hr
5.									

RATE OF FLOW CALCULATIONS

NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor F_t	Gravity Factor F_g	Super Compress. Factor, F_{pv}	Rate of Flow Q, Mcfd
1.	4.279		28.2	.9680	1.094	1.078	137
2.	17.09		25.2	.9786	1.094	1.084	499
3.	17.09		39.2	1.002	1.094	1.092	801
4.	27.63		29.2	1.000	1.094	1.092	963
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	.83	555	1.29	.861
2.	.81	543	1.27	.851
3.	.77	518	1.21	.838
4.	.78	520	1.21	.838
5.				

P_c 1888.2 P_c^2 3565.3

Gas Liquid Hydrocarbon Ratio 12,500 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 59.3 Deg.
Specific Gravity Separator Gas .836 XXXXXXXXX
Specific Gravity Flowing Fluid N/A XXXXX
Critical Pressure 666 P.S.I.A. 657 P.S.I.A.
Critical Temperature 427 R 497 R

NO.	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1.	1969.0	1403.3	1969.2	1596.1
2.	728.0	855.1	731.2	2834.1
3.	552.3	749.0	561.0	3004.3
4.	248.2	511.7	261.8	3303.5
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.079$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.079$

$AOF = Q\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.039$

Absolute Open Flow 1.039 Mcfd @ 15.025 | Angle of Slope θ 45° | Slope, n 1.000

Remarks: *Calculated from known shut in bottom hole pressure
*Well made 8 BBLS of 59.3 API Gravity Condensate

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Pro Well Testing	M.B.	B.M.

RELIANCE OPERATING CO.

FED "D" #3