Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: SF 078987

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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 ☐ GAS WELL ☒ OTHER

7. UNIT AGREEMENT NAME: Canyon Largo Unit

2. NAME OF OPERATOR: El Paso Natural Gas Company

8. FARM OR LEASE NAME: Canyon Largo Unit

3. ADDRESS OF OPERATOR: PO Box 990, Farmington, NM 87401

9. WELL NO.: 198

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1490'N, 1780'W

10. FIELD AND POOL, OR WILDCAT: Ballard Pictured Cliffs

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 34, T-25-N, R-7-W NMPM

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 7052'GL

12. COUNTY OR PARISH: Rio Arriba

13. STATE: NM

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)				(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.) *

8-7-73 Spudded well. Drilled surface hole.

8-8-73 Ran 4 joints 8 5/8", 24#, J-55 surface casing, 133' set at 133'GL. Cemented with 108 cu.ft. cement, circulated to surface. WOC 12 hours.

RECEIVED
AUG 15 1973
OIL CON. COM.
DIST. 3

RECEIVED
AUG 14 1973
U.S. GEOLOGICAL SURVEY
FARMINGTON, COLO.

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

SIGNED R. G. Hines TITLE Drilling Clerk DATE August 10, 1973

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

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 ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR
El Paso Natural Gas Company

3. ADDRESS OF OPERATOR
PO Box 990, Farmington, NM 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface 1490'N, 1780'W

5. LEASE DESIGNATION AND SERIAL NO.
SF 078987

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
Canyon Largo Unit

8. FARM OR LEASE NAME
Canyon Largo Unit

9. WELL NO.
198

10. FIELD AND POOL, OR WILDCAT
Ballard Pictured Cliffs

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 34, T-25-N, R-7-W NMPM

12. COUNTY OR PARISH
Rio Arriba

13. STATE
NM

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
7052'GL

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	X	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	X	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING		ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(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.) *

8-19-73 Tested surface casing, to 600#/30 minutes.

8-21-73 TD 2809'. Ran 88 joints 2 7/8", 6.4#, LSS production casing, 2799' set at 2809'. Baffle set at 2799'. Cemented with 264 cu.ft. cement. WOC 18 hours. Top of cement at 1350'.

9-26-73 PBTD 2799'. Tested casing to 4000#-OK. Perf'd 2642-56', 2666-82' and 2718-30' with 16 shots per zone. Frac'd with 46,000# 10/20 sand and 46,000 gallons treated water. Dropped two sets of 16 balls each. Flushed with 660 gallons water.

RECEIVED
OCT 4 1973
U. S. GEOLOGICAL SURVEY

RECEIVED
OCT 5 1973
OIL CON. COM.
DIST. 3

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

SIGNED [signature] TITLE Drilling Clerk DATE October 2, 1973

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

FORM 23-75 (12-65)

EL PASO NATURAL GAS COMPANY

OPEN FLOW TEST DATA

DATE October 15, 1973

Operator: El Paso Natural Gas Company		Lease: Canyon Largo Unit #198	
Location: 1490/N, 1780/W, Sec. 34, T-25N, R7W		County: Rio Arriba	State: New Mexico
Formation: Pictured Cliffs		Pool: Ballard	
Casing: Diameter: 2.875	Set At: Feet: 2809'	Tubing: Diameter: No Tubing	Set At: Feet:
Pay Zone: From: 2642	To: 2730'	Total Depth: 2809	Shut In: 9-28-73
Stimulation Method: Sandwater Frac		Flow Through Casing: X	Flow Through Tubing:

Choke Size, Inches: .750		Choke Constant: C: 12.365		Tubingless Completion	
Shut-In Pressure, Casing, PSIG: 309	+ 12 = PSIA: 321	Days Shut-In: 12	Shut-In Pressure, Tubing PSIG: No Tubing	+ 12 = PSIA:	
Flowing Pressure: P PSIG: 173	+ 12 = PSIA: 185		Working Pressure: P_w PSIG: Calculated	+ 12 = PSIA: 229	
Temperature: T= 62 °F Ft= .9981	n = .85		Fpv (From Tables): 1.021	Gravity: .700 Fg=.9258	

CHOKE VOLUME = $Q = C \times P_t \times F_t \times F_g \times F_{pv}$

$Q = (12.365)(185)(.9981)(.9258)(1.021) = 2158$ MCF/D

OPEN FLOW = $Aof = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$

$Aof = Q \left(\frac{103041}{50600} \right)^n = 2158\ (2.0364)^{.85} = 2158\ (1.8303)$

Aof = 3950 MCF/D Note: Blew Dry Gas.

RECEIVED
OCT 18 1973
OIL CON. COM.
DIST. 3

TESTED BY R. Hardy

WITNESSED BY _____

William D. Welch

William D. Welch
Well Test Engineer