

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-045-21083

5. LEASE DESIGNATION AND SERIAL NO.

SF 078096

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mudge

9. WELL NO.

37

10. FIELD AND POOL, OR WILDCAT

Blanco PC Ext.

11. SEC., T., R., M., OR B.L.K.
AND SURVEY OR AREASec. 23, T-31-N, R-11-W
NMPM

12. COUNTY OR PARISH

San Juan

13. STATE

New Mexico

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL WELL ☐GAS WELL ☒

OTHER

SINGLE ZONE ☒MULTIPLE ZONE ☐

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.*)

At surface

1700'S, 1510'W

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

19. PROPOSED DEPTH

2585'

20. ROTARY OR CABLE TOOLS

Rotary

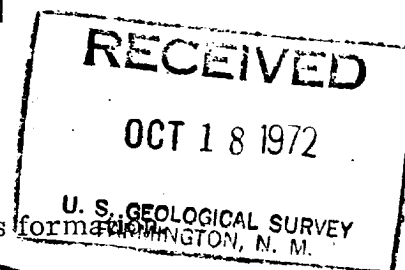
21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5782'GR

23.

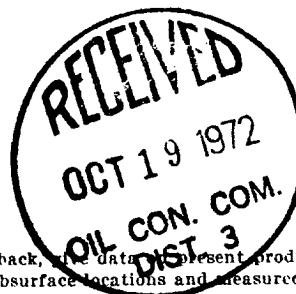
PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24.0#	120'	107 cu. ft. to circulate
6 3/4"	2 7/8"	6.4#	2585'	551 cu. ft. to cover Ojo Alamo

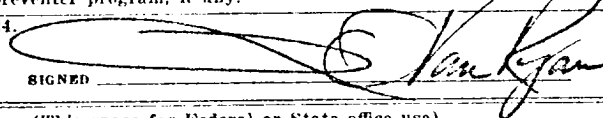


Selectively perforate and sandwater fracture the Pictured Cliffs formation

The SW/4 of Section 23 is dedicated to this well.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.  TITLE Petroleum Engineer DATE October 18, 1972

SIGNED

TITLE

DATE

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Supersedes C-128
Effective 12-1-69

All distances must be from the outer boundaries of the section.

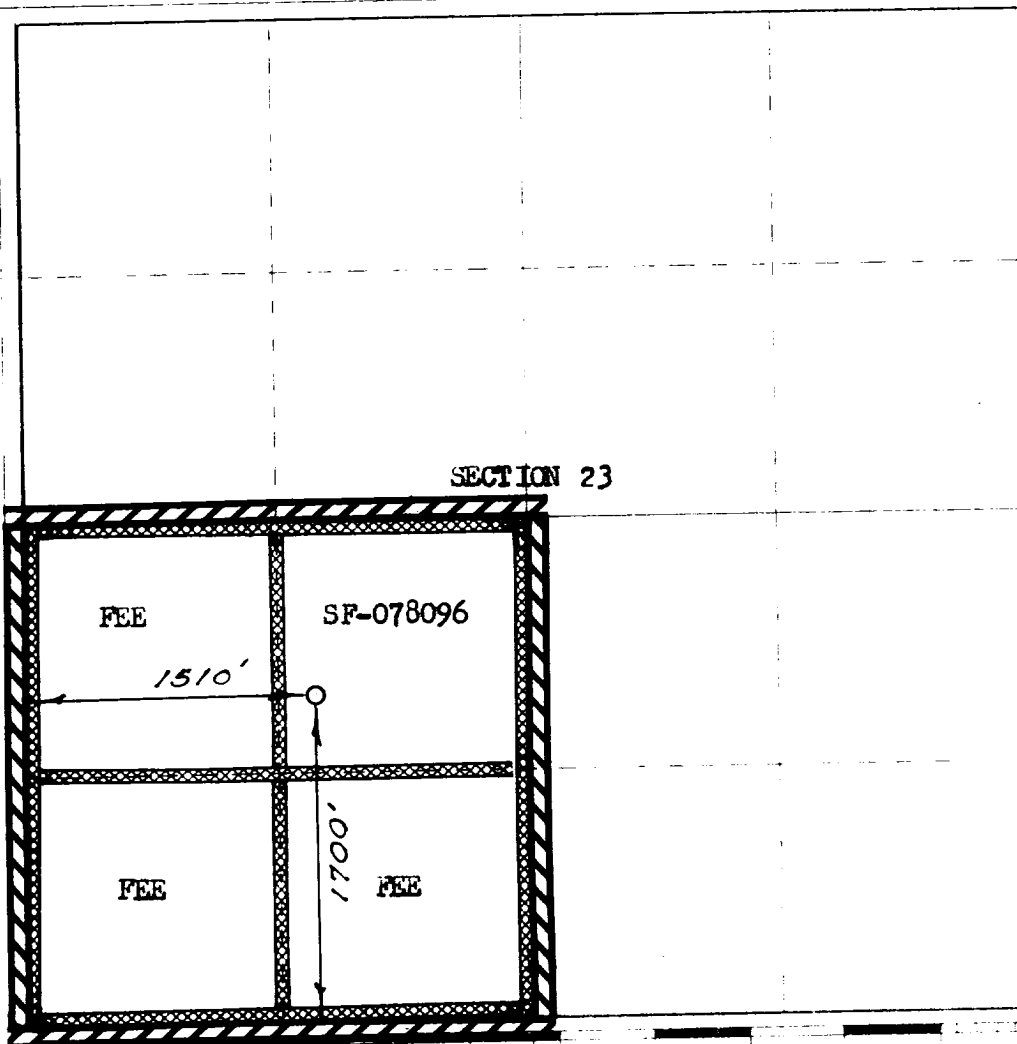
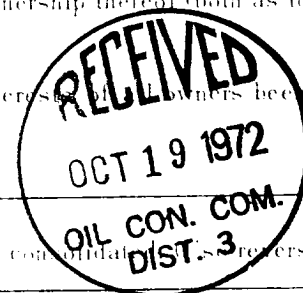
EL PASO NATURAL GAS COMPANY		MUDGE		(SF-078096)	37
K	23	31-N	11-W	SAN JUAN	
1700	SOUTH		1510	WEST	
5783	PICTURED CLIFFS		BLANCO PICTURED CLIFFS EXT.	160.00	

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interests of the owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated on the reverse side of this form if necessary. _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Original Signed By:

L. O. Van Ryan

Petroleum Engineer

El Paso Natural Gas Company

October 18, 1972

I hereby certify that the well location shown on this plat was located from field notes of actual survey made by me or under my supervision and that the same is true and correct to the best of my knowledge and belief.

SEPTEMBER 19, 1972

Paul W. Blum
1760

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

SF 078096

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mudge

9. WELL NO.

37

10. FIELD AND POOL, OR WILDCAT

Blanco Pictured Cliffs Ext.

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 23, T-31-N, R-11-W
NMPM

12. COUNTY OR PARISH 13. STATE

San Juan New Mexico

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 1700'S, 1510'W

14. PERMIT NO.

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

5783'GL

16.

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

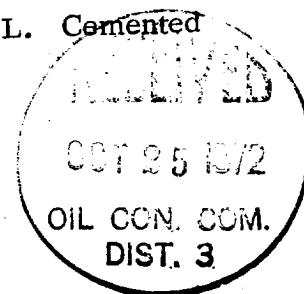
ABANDONMENT*

(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.)*

10-20-72 Spudded well. Drilled surface hole.

10-21-72 Ran 4 joints 8 5/8", 24#, KS surface casing, 129' set at 129'GL. Cemented with 107 cu. ft. cement, circulated to surface.



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

SIGNED

H. Wood

TITLE Petroleum Engineer

DATE October 23, 1972

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

SF 078096

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mudge

9. WELL NO.

37

10. FIELD AND POOL, OR WILDCAT

Blanco Pictured Cliffs Ext

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 23, T-31-N, R-11-W

NMPM

12. COUNTY OR PARISH

San Juan

13. STATE

New Mexico

1. OIL ☐ GAS ☒
WELL 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 1700'S, 1510'W

14. PERMIT NO.

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

5783'GL

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

(Other) ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

ABANDON* ☐

CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☒

FRACTURE TREATMENT ☒

SHOOTING OR ACIDIZING ☐

(Other) ☐

REPAIRING WELL ☐

ALTERING CASING ☐

ABANDONMENT* ☐

(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.) *

10-29-72 T.D. 2567'. Ran 84 joints 2 7/8", 6.4#, JS production casing, 2557' set at 2567'. Baffle set at 2556'. Cemented with 551 cu.ft. cement. WOC 18 hours. Top of cement at 1440'.

11-17-72 PBT^D 2556'. Perf'd 2424-30' and 2440-50' with 24 shots per zone, and 2494-2506' with 19 shots per zone. Frac'd with 32,000# 10/20 sand and 32,220 gallons water. Dropped one set of 24 balls. Flushed with 900 gallons.



NOV 21 1972

U. S. GEOLOGICAL SURVEY
WASHINGTON, D. C.

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

SIGNED

TITLE > Petroleum Engineer

DATE November 21, 1972

(This space for Federal or State office use)

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

OCC

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA

DATE 11-27-72

Operator EL PASO NATURAL GAS COMPANY		Lease Mudge Well #37	
Location 1700'S, 1510'W, Sec. 23, T31N, R11W		County San Juan	State NM
Formation Pictured Cliffs		Pool Ballard	
Casing: Diameter 2.875	Set At: Feet 2567	Tubing: Diameter No tubing	Set At: Feet
Pay Zone: From 2424	To 2506	Total Depth: 2567	Shut In 11/19/72
Stimulation Method SWF		Flow Through Casing X	Flow Through Tubing

Choke Size, Inches .750		Choke Constant: C 12.365			
Shut-In Pressure, Casing, PSIG 822	+ 12 = PSIA 834	Days Shut-In 8	Shut-In Pressure, Tubing PSIG	+ 12 = PSIA	
Flowing Pressure: P PSIG 100	+ 12 = PSIA 112	Working Pressure: P _w PSIG	Calculated	+ 12 = PSIA	136
Temperature: T = 63 °F	n = .85	F _{pv} (From Tables)	1.010	Gravity	.635 F _g = .9721

$$\text{CHOKE VOLUME} = Q = C \times P_i \times F_i \times F_g \times F_{pv}$$

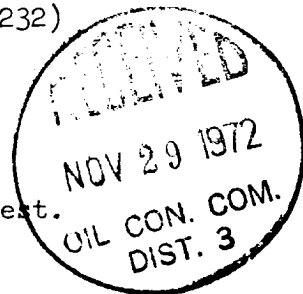
$$Q = (12.365)(112)(.9971)(.9721)(1.010) = \underline{1356} \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{695556}{677060} \right)^n = 1356 (1.0273)^{.85} = (1356)(1.0232)$$

$$Aof = \underline{1387} \text{ MCF/D}$$

NOTE: Blew dry gas thru test.

TESTED BY Hardy

WITNESSED BY _____

William D. Welch
William D. Welch
Well Test Engineer

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.

SF 078096

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Mudge

9. WELL NO.

37

10. FIELD AND POOL, OR WILDCAT

Blanco Pictured Cliffs Ext.

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 23, T-31-N, R-11-W
NMPM

12. COUNTY OR PARISH

San Juan

13. STATE

New Mexico

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ 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)*

At surface

1700'S, 1510'W

At top prod. interval reported below

At total depth

14. PERMIT NO.

DATE ISSUED

15. DATE SPUDDED 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (DF, REB, RT, GR, ETC.)* 19. ELEV. CASINGHEAD

10-20-72

10-29-72

11-27-72

5783'GL

20. TOTAL DEPTH, MD & TVD 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 25. WAS DIRECTIONAL SURVEY MADE

2567'

2556'

0-2567'

2424-2506' (Pictured Cliffs)

no

26. TYPE ELECTRIC AND OTHER LOGS RUN

FDC-GR, IES, Temp. Survey

27. WAS WELL CORED

no

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24.0#	129'	12 1/4"	107 cu. ft.	
2 7/8"	6.4#	2567'	6 3/4"	551 cu. ft.	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					tubingless		

31. PERFORATION RECORD (Interval, size and number)

2424-30' and 2440-50' with 24 shots per zone.
2494-2506' with 19 shots per zone.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED
2424-2506' 32,000#sand, 32,220 gal. water

33.* PRODUCTION

DATE FIRST PRODUCTION PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) WELL STATUS (Producing or shut-in)

flowing

shut in

DATE OF TEST HOURS TESTED CHOKE SIZE PROD'N. FOR TEST PERIOD OIL—BBL. GAS—MCF. WATER—BBL. GAS-OIL RATIO

11-27-72

3

3/4"

→

OIL—BBL.

GAS—MCF.

WATER—BBL.

GAS-OIL RATIO

FLOW. TUBING PRESS. CASING PRESSURE CALCULATED 24-HOUR RATE OIL—BBL. GAS—MCF. WATER—BBL. OIL GRAVITY-API (CORR.)

tubingless

SI 834

→

1387 AOF

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

R. Hardy

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

RECEIVED
DEC - 4 1972
OIL CON. COM.
DIST. 3
Petroroleum Engineer

DATE November 30, 1972

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. **Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. **Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES			38. GEOLOGIC MARKERS			
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TRUE VERT. DEPTH
				Pictured Cliffs	2420'	