

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE August 24, 1973

Operator <u>El Paso Natural Gas Company</u>		Lease <u>San Juan 28-7 Unit #187</u>	
Location <u>900/N, 900/E, Sec. 24 T-28-N, R-7W</u>		County <u>Rio Arriba</u>	State <u>New Mexico</u>
Formation <u>DAKOTA</u>		Pool <u>Basin</u>	
Casing: Diameter <u>4.500</u>	Set At: Feet <u>7857'</u>	Tubing: Diameter <u>1 1/2"</u>	Set At: Feet <u>7797'</u>
Pay Zone: From <u>7578'</u>	To <u>7834'</u>	Total Depth: <u>7857'</u>	Shut In <u>8-9-73</u>
Stimulation Method <u>Sand Water Frac</u>		Flow Through Casing <u>X</u>	Flow Through Tubing

Choke Size, Inches <u>.750</u>		Choke Constant: C <u>12.365</u>			
Shut-In Pressure, Casing, PSIG <u>2735</u>	+ 12 = PSIA <u>2747</u>	Days Shut-In <u>14</u>	Shut-In Pressure, Tubing PSIG <u>2154</u>	+ 12 = PSIA <u>2166</u>	
Flowing Pressure: P PSIG <u>187</u>	+ 12 = PSIA <u>199</u>		Working Pressure: P _w PSIG <u>410</u>	+ 12 = PSIA <u>422</u>	
Temperature: T = <u>63</u> °F	n = <u>.9971</u>		F _{pv} (From Tables) <u>1.019</u>	Gravity <u>.650</u>	F _g = <u>.9608</u>

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

$$Q = (12.365) (199) (.9971) (.9608) (1.019) = \underline{2402} \text{ MCF/D}$$

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

$$Aof = Q \left(\frac{7546009}{7367925} \right)^n = 2402 (1.0242)^{.75} = 2402 (1.0181)$$

$$Aof = \underline{2446} \text{ MCF/D}$$

Note: Light Spray of water and oil throughout the test.

TESTED BY R. Hardy

WITNESSED BY _____

William D. Welch
Well Test Engineer



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____				5. LEASE DESIGNATION AND SERIAL NO. SF 079290-A	
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____				6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR El Paso Natural Gas Company				7. UNIT AGREEMENT NAME San Juan 28-7 Unit	
3. ADDRESS OF OPERATOR PO Box 990, Farmington, NM 87401				8. FARM OR LEASE NAME San Juan 28-7 Unit	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 900'N, 990'E At top prod. interval reported below At total depth				9. WELL NO. 187	
14. PERMIT NO. _____ DATE ISSUED _____				10. FIELD AND POOL, OR WILDCAT Basin Dakota	
15. DATE SPUDDED 7-9-73				11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 24, T-28-N, R-7-W NMMPM	
16. DATE T.D. REACHED 7-20-73				12. COUNTY OR PARISH Rio Arriba	
17. DATE COMPL. (Ready to prod.) 8-24-73				13. STATE NM	
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6574'GL				19. ELEV. CASINGHEAD	
20. TOTAL DEPTH, MD & TVD 7857'		21. PLUG, BACK T.D., MD & TVD 7848'		22. IF MULTIPLE COMPL., HOW MANY* _____	
23. INTERVALS DRILLED BY _____ ROTARY TOOLS 0-7857'				CABLE TOOLS _____	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 7578-7834'(Dakota)				25. WAS DIRECTIONAL SURVEY MADE NO	
26. TYPE ELECTRIC AND OTHER LOGS RUN CDL-GR; IL-GR; 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
9 5/8"	32.3#	233'	13 3/4"	225 cu. ft.	
7"	20#	3629'	8 3/4"	312 cu. ft.	
4 1/2"	11.6&10.5#	7857'	6 1/4"	655 cu. ft.	
29. LINER RECORD					
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	
30. TUBING RECORD					
SIZE	DEPTH SET (MD)	PACKER SET (MD)			
1 1/2"	7808'				
31. PERFORATION RECORD (Interval, size and number) 7578', 7588', 7698', 7700', 7742', 7766', 7768', 7802' and 7834' with one shot per foot.					
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.					
DEPTH INTERVAL (MD)			AMOUNT AND KIND OF MATERIAL USED		
7578-7834'			25,000#sand; 25,284 gal. water		
33.* PRODUCTION					
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) flowing			WELL STATUS (Producing or shut-in) shut in
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.
8-24-73	3	3/4"	→		
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.
SI 2166	SI 2747	→		24,148	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)					
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 <u>W. G. Dueso</u>		TITLE <u>Drilling Completion</u>		DATE <u>September 5, 1973</u>	

* (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.), formations, 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) (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.

For each cementing interval, to be separately produced, showing the additional data pertinent to each 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.)

38.	GEOLOGIC MARKERS	TOP	
		MEAS. DEPTH	TRUE VERT. DEPTH
		no	
	Pictured Cliffs	4986'	
	Mesa Verde	5498'	
	Point Lookout	6736'	
	Gallup	7464'	
	Greenhorn	7528'	
	Graneros	7684'	
	Dakota		