

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE December 3, 1957

Operator El Paso Natural Gas Company		Lease San Juan 28-4 Unit No. 13-20	
Location 840'S, 1700'W, Sec. 20-28-4		County Rio Arriba	State New Mexico
Formation Mesa Verde		Pool Blanco	
Casing: Diameter 7-5/8	Set At: Feet 4467	Tubing: Diameter 2"	Set At: Feet 6642
Pay Zone: From 6436	To 6630	Total Depth: 6712 - c/o 6680	
Stimulation Method Sand Water Frac.		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches 0.75	Choke Constant: C 12.365	5-1/2" Liner 4399 to 6707	
Shut-In Pressure, Casing, PSIG 1138	- 12 = PSIA 1150	Days Shut-In 26	Shut-In Pressure, Tubing, PSIG 1102
Flowing Pressure: P, PSIG 292	- 12 = PSIA 304	Working Pressure: P _w , PSIG 758	- 12 = PSIA 770
Temperature: T, °F 57	n = 75	F _{pv} (From Tables) 1.037	Gravity 0.706

CHOKE VOLUME - $Q = C \times P_r \times F_r \times F_g \times F_{pv}$

$$Q = 12.365 \times 304 \times 1.0029 \times .9225 \times 1.037 = 3606 \text{ MCF/D}$$

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

$$Aof = \left(\frac{1,322,500}{729,600} \right)^{.75} = 1.8126^{.75} \times 3606 = 1.5640 \times 3606$$

$$Aof = 5640 \text{ MCF/D}$$

TESTED BY Jess Goodwin and Richard Proctor

WITNESSED BY _____

L. D. Galloway
L. D. Galloway

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LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company El Paso Natural Gas Company Address Box 997, Farmington, New Mexico
 Lessor or Tract San Juan 28-4 Unit Field Blanco State New Mexico
 Well No. 13-20 Sec. 20 T. 28N R. 4W Meridian N.M.P.M. County Rio Arriba
 Location 840 ft. (N.) of S Line and 1700 ft. (E.) of W Line of Section 20 Elevation 7345'

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed Original Signed D. C. Johnston

Date January 3, 1958 Title Petroleum Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling 9-30, 1957 Finished drilling 10-28, 1957

OIL OR GAS SANDS OR ZONES

(Denote gas by $\mathcal{G}$)

No. 1, from 4308 to 4405 (G) No. 4, from 6450 to 6600 (G)
No. 2, from 6080 to 6295 (G) No. 5, from to
No. 3, from 6205 to 6450 (G) No. 6, from to

IMPORTANT WATER SANDS

No. 1, from _____ to _____

No. 2, from _____ to _____

No. 3, from _____ to _____

No. 4, from _____ to _____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
10 3/4"	32.75	P. E.	S. W.	161'	Howe				Surface
7 1/2"	26.4	8 rd.	J-55	2301'	Baker				Prod. log.
5 1/2"	17.5	8 rd.	J-55	2301'	Baker				Prod. liner
2"	4.7	8 rd.	J-55	2301'	Baker				Prod. tubing

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10 5/8"	174'	150	Circulated		
7 5/8"	4478'	250	Single Stage		
5 1/2"	4414-6712	300	Single Stage		

PLUGS AND ADAPTERS

Heaving plug—Material	Length	Depth set
Adapters—Material	Size	

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
			See Well History			

TOOLS USED

Rotary tools were used from 0 feet to 4480 feet, and from 4480 feet to 6712 feet.

Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet.

DATES

-----11-7-----, 19-57 Put to producing -----, 19-----

The production for the first 24 hours was ----- barrels of fluid of which -----% was oil; -----% emulsion; -----% water; and -----% sediment. Gravity, °Bé. -----

If gas well, cu. ft. per 24 hours 3,606,000 Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. ----- 1138 ----- A.O.F. = 5640 MCF/D

EMPLOYEES

_____, Driller _____, Driller
_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	3612	3612	Tan to gry cr-grn ss interbedded w/gry sh.
3612	3818	206	Ojo Alamo ss. White cr-grn s.
3818	4092	274	Kirtland form. Gry sh interbedded w/tight gry fine-grn ss.
4092	4308	216	Fruitland form. Gry carb sh, scattered coal, coals and gry, tight, fine-grn ss.
4308	4405	97	Pictured Cliffs form. Gry, fine-grn, tight, varicolored soft ss.
4405	6080	1675	Lewis formation. Gry to white dense sh w/silty to shaly ss breaks.
6080	6205	125	Cliff House ss. Gry, fine-grn, dense sil ss.
6205	6450	245	Menefee form. Gry, fine-grn s, carb sh & coal.
6450	6600	150	Point Lookout form. Gry, very fine sil ss w/frequent sh breaks.
6600	6712	112	Mancos formation. Gry carb sh.

