

OIL CONSERVATION COMMISSION
1000 Rio Brazos Rd.
Aztec, New Mexico

DATE 1-19-60

OIL CONSERVATION COMMISSION
BOX 871
SANTA FE, NEW MEXICO

RE: Proposed NSP _____

Proposed NSL _____

Proposed NFO _____

Proposed DC ✓ _____

Gentlemen:

I have examined the application dated 1-12-60
for the EPNG SJ027-4 # 23 M-19-27-4
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

Approved

Yours very truly,

Ernest C. Smith
OIL CONSERVATION COMMISSION

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name Blanco M. V. & Tapacito P. C.		County Rio Arriba		Date January 12, 1960
Operator El Paso Natural Gas Company		Lease San Juan 27-4 Unit		Well No. 23 (FM)
Location of Well M	Unit 19	Section 27N	Township 4W	Range 4W

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES X NO
2. If answer is yes, identify one such instance: Order No. DC-662 ; Operator, Lease, and Well No.:

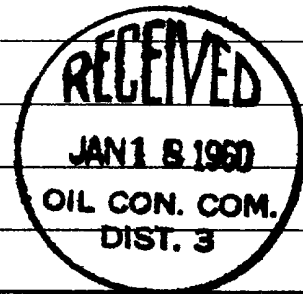
El Paso Natural Gas Co. San Juan 27-5 Unit No. 31 (FM)

3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	Pictured Cliffs	Mesa Verde
b. Top and Bottom of Pay Section (Perforations)	3540-3570	5654-5800 (Point Lookout)
c. Type of production (Oil or Gas)	Gas	Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing	Flowing

4. The following are attached. (Please mark YES or NO)

- Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- No c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
- No d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

El Paso Natural Gas Co. is Unit operator of the San Juan 27-4 and San Juan 27-5.

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES NO . If answer is yes, give date of such notification .

CERTIFICATE: I, the undersigned, state that I am the Division Petroleum Engr. of the El Paso Natural Gas Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

ORIGINAL SIGNED E. S. OBERLY

Signature

- * Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.
- NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

STATE OF NEW MEXICO)

COUNTY OF SAN JUAN)

I, Mack M. Mahaffey, being first duly sworn upon my oath
depose and say as follows:

I am an employee of Baker Oil Tools, Inc., and that on
November 24, 1959, I was called to the location of the El Paso Natural
Gas Company San Juan 27-4 Unit No. 23 (PM) Well located in the SWSW/4
of Section 19, Township 27 North, Range 4 West, N.M.P.M., for advisory
service in connection with installation of a production packer. In my
presence, a Baker Model "N" Production Packer was set in this well at
4968 feet in accordance with the usual practices and customs of the
industry.

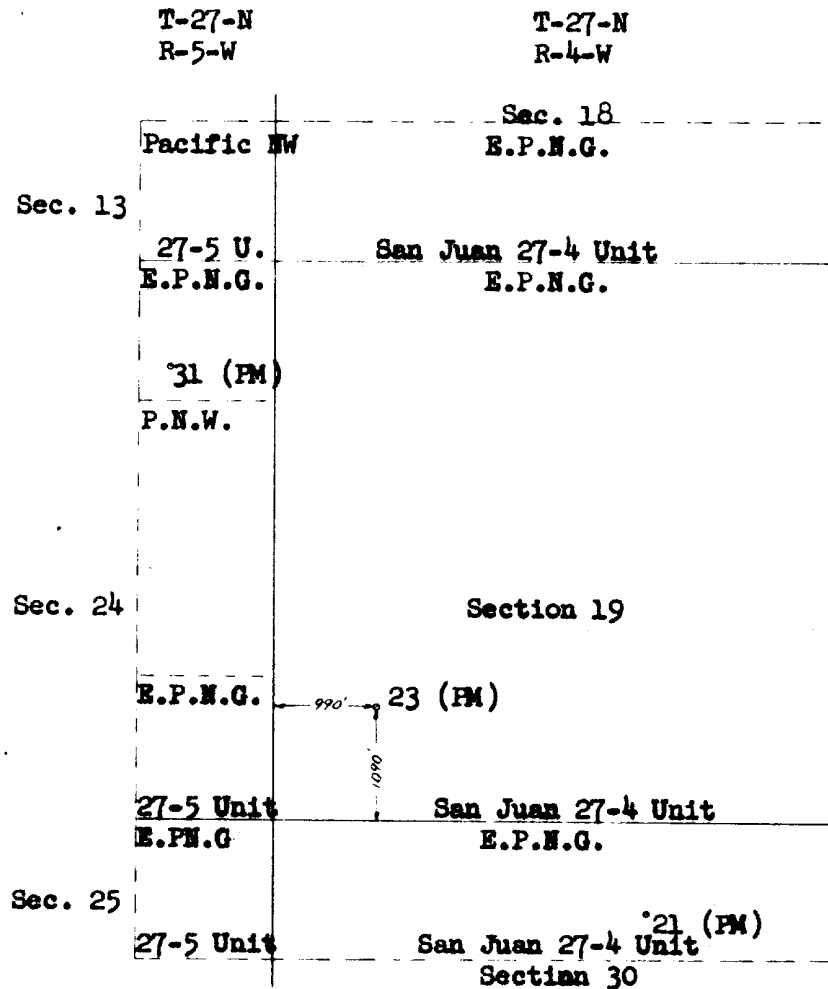
Mack M. Mahaffey

Subscribed and sworn to before me this 13th day of January, 1960.

Ruth Beland
Notary Public in and for San Juan County,
New Mexico

My commission expires February 24, 1960.

**PLAT SHOWING LOCATION OF DUALY COMPLETED
El Paso Natural Gas Co. San Juan 27-4 Unit No. 23 (PM)
and Offset Acreage**



EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

SCALE

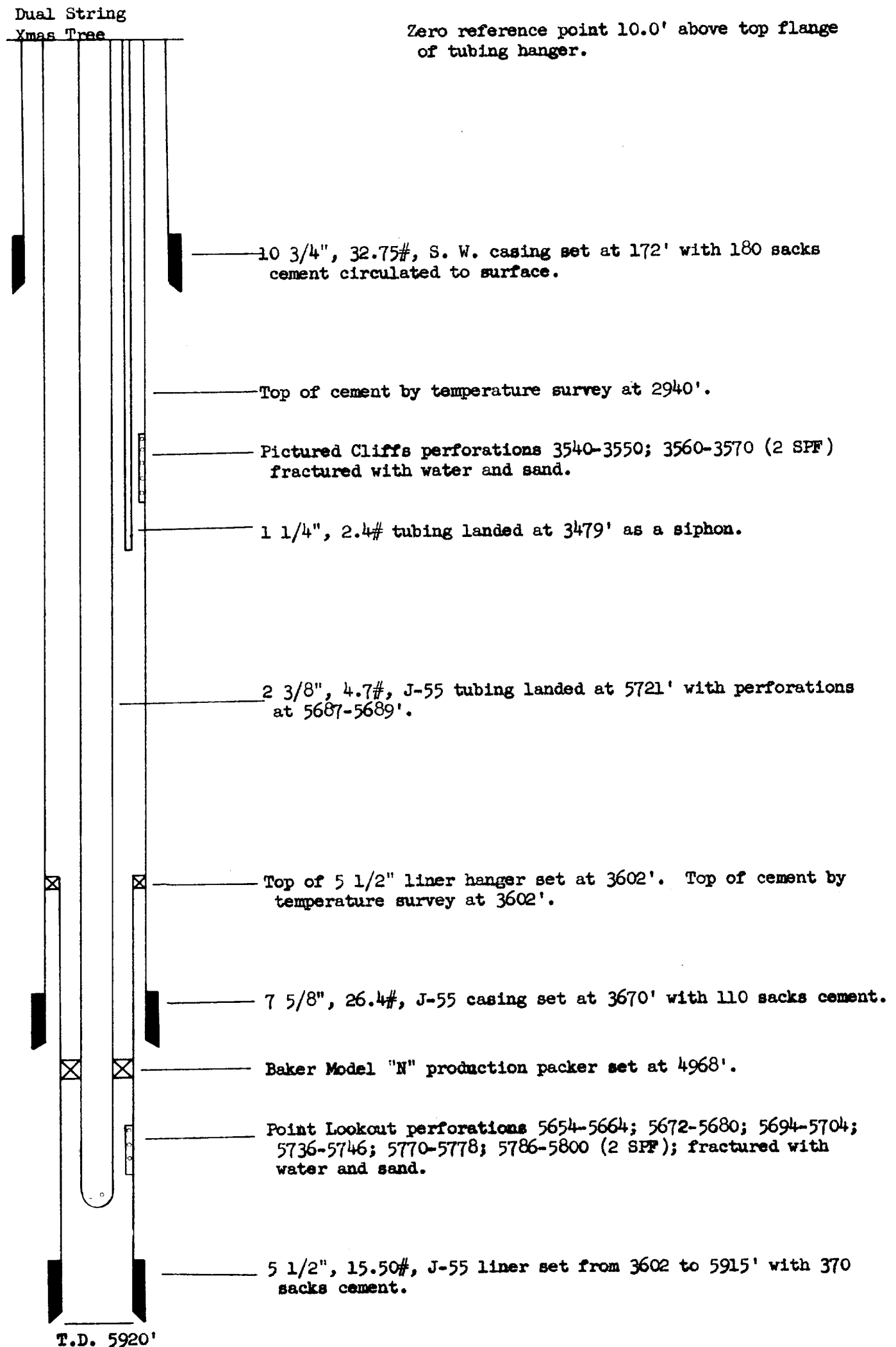
DATE

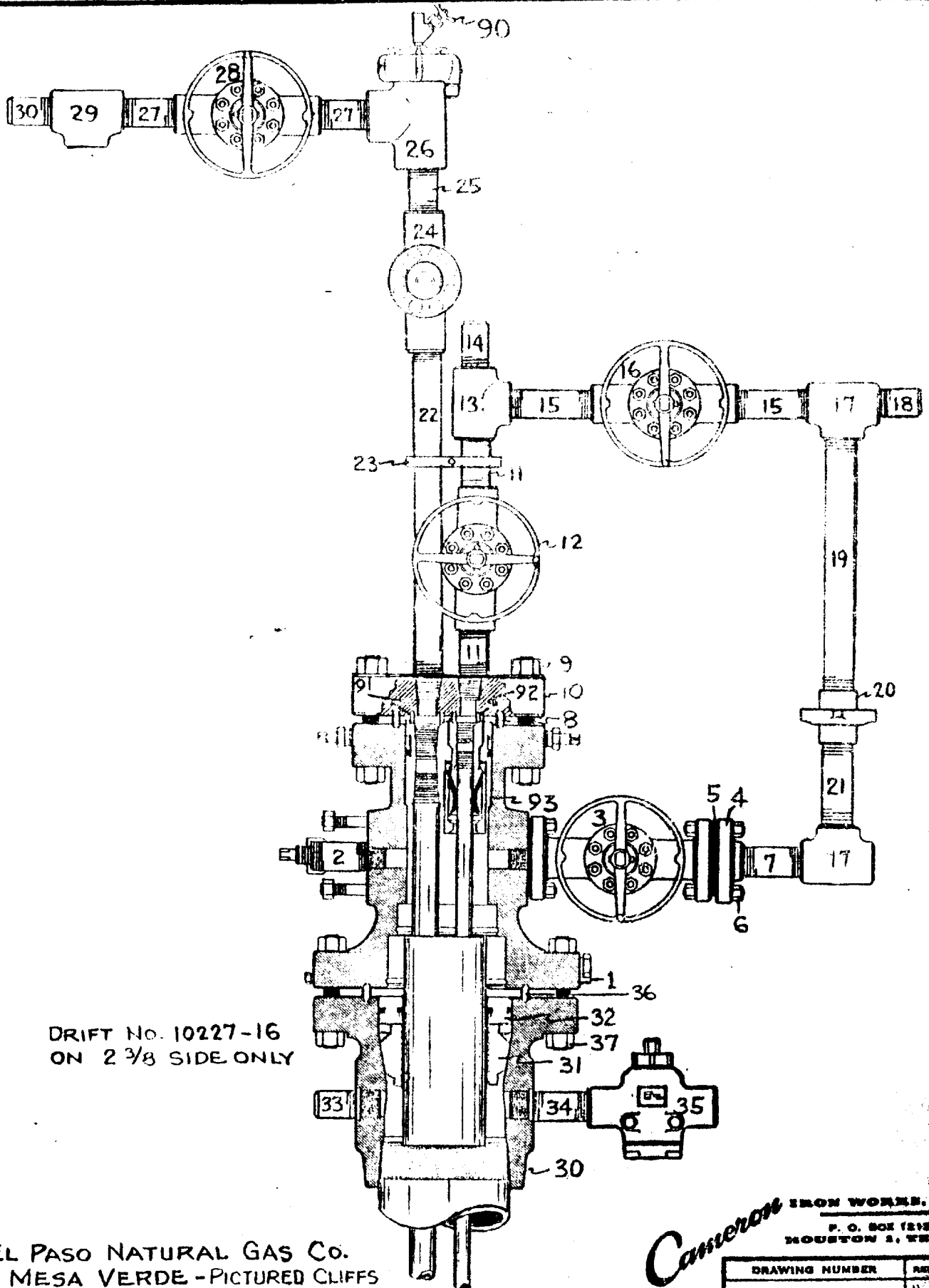
No.

DRAWN BY

CHECKED BY

SCHEMATIC DIAGRAM OF DUAL COMPLETION
El Paso Natural Gas Co. San Juan 27-4 Unit No. 23 (PM)
SW/4 Section 19, T-27-N, R-4-W





EL PASO NATURAL GAS Co.
MESA VERDE - PICTURED CLIFFS

DRAWN BY <u>E H</u>	DATE <u>3-17-59</u>	WORKING PRESSURE <u>2,000</u> #	DRIFT NO. _____	DRAWING NUMBER <u>916015</u>	REVISION <u>"A"</u>
---------------------	---------------------	---------------------------------	-----------------	---------------------------------	------------------------

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA

DUAL COMPLETION

DATE November 30, 1959

El Paso Natural Gas Location 1090S, 990W; 19-27-4 Name of well Mesa Verde Tubing Diameter 5-1/2 Set At Feet 5915 To 5800 Flow Through Tubing Sand Water Frac.		Lessee San Juan 27-4 Unit No. 23 (M) County Rio Arriba State New Mexico Pool Blanco Tubing Diameter 2 Set At Feet 5710 To Depth c/o 5871 Shut In: 11/23/59 Flow Through Tubing X	
--	--	--	--

Packer Size, inches .75 Initial Pressure 896 (PC) Final Pressure 186 (MV) Temperature 62	Casing Constant, C 12.365 PSIG 908 PSIG 198 PSIG .75	5-1/2 liner 3602-5915 Shut-in Pressure 1097 (MV) Actual Pressure Calc. 398 Flow From Tubing 1.020 Gravity .674
---	---	---

Initial SIPT (PC) = 897 psig
Final SIPC (PC) = 901 psig

Baker N-2 packer at 4968

QOK = C x P x E x F x G x H

$$Q = 12.365 \times 198 \times .9981 \times .9463 \times 1.020$$

2359 MCF/D

$$Q = \left(\frac{2.448 \times 10^{-18} \times P \times E \times F \times G \times H}{\mu \times L} \right)^{1/2}$$

$$Q = \left(\frac{1229881}{1071477} \right)^{1/2}$$

$$1.1478^{.75} \times 2359 = 1.1089 \times 2359$$

Act 2616 MCF/D

S. V. Roberts

WITNESSED BY

Lewis D. Galloway
L. D. Galloway

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATA

DUAL COMPLETION

DATE December 10, 1959

Operator El Paso Natural Gas	Lease San Juan 27-4 Unit No. 23 (P)
Location 1090S, 990W; 19-27-4	County Rio Arriba State New Mexico
Formation Pictured Cliffs	Pool Tapacito
Casing Diameter 7-5/8 Set At Feet 3670	Tubing Diameter 1-1/4 Set At Feet 3468
Flow Zone From 3540 To 3570	Total Depth c/o 5871 Shut In 11/23/59
Stimulation Method Sand Water Frac.	Flow Through Casing X Flow Through Tubing

Choke Size, inches .75	Choke Constant, C 12.365
Shut-In Pressure, Casing, PSIG 965 (PC)	Days Shut-In 17
Flowing Pressure, P, PSIG 95	Shut-In Pressure, Tubing, PSIG 962 (PC)
Temperature 58	Working Pressure, Pw, PSIG 101
F, 1.0019	Flowing Pressure, P, PSIG 107
Eg, .9498	Flowing Pressure, P, PSIG 113
Fpv, 1.009	Flowing Pressure, P, PSIG 113
	Gravity .669
	Fg, .9498

Initial SIPT (MV) = 1122 psig

Packer Baker N-2 at 4968

Final SIPT (MV) = 1124 psig

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

$$Q = 12.365 \times 107 \times 1.0019 \times .9498 \times 1.009$$

1270

MCF/D

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

$$\text{Aof } \left(\frac{954529}{941760} \right)^n$$

$$1.0136^{.85} \times 1270 = 1.0115 \times 1270$$

Aof 1285

MCF/D

TESTED BY S. V. Roberts

WITNESSED BY

Lewis D. Galloway
L. D. Galloway