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

DATE 12-29-60

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 12-6-60

for the EPNG SJU 27-5 #49 A-18-27N-5W
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

Approve

Yours very truly,

OIL CONSERVATION COMMISSION

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name		County	Date
Blanco Mesa Verde & So. Blanco P. C. Ext.		Rio Arriba	December 5, 1960
Operator	**Lease**		**Well No.**
El Paso Natural Gas Company	San Juan 27-5 Unit		46 (PM)
Location of Well — **Unit**	**Section**	**Township**	**Range**
A	15	27N	5W

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-[illegible] ; Operator, Lease, and Well No.:

El Paso Natural Gas Company San Juan 27-5 Unit No. 46 (PM)

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)	3312-3342	5482-5608
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.

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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, C. D. Cox, Jr., being first duly sworn upon my oath depose and say as follows:

I am an employee of El Paso Natural Gas Co., and that on November 5, 1960, I was called to the location of the El Paso Natural Gas Company San Juan 27-5 Unit No. 49 (PM) Well located in the NENE/4 of Section 18, Township 27 North, Range 5 West, N.M.P.M., for advisory service in connection with installation of a production packer. In my presence, a Guiberson Model "Shorty) Production Packer was set in this well at 3575 feet in accordance with the usual practices and customs of the industry.

C. D. Cox, Jr.

Subscribed and sworn to before me this 6th day of December, 1960.

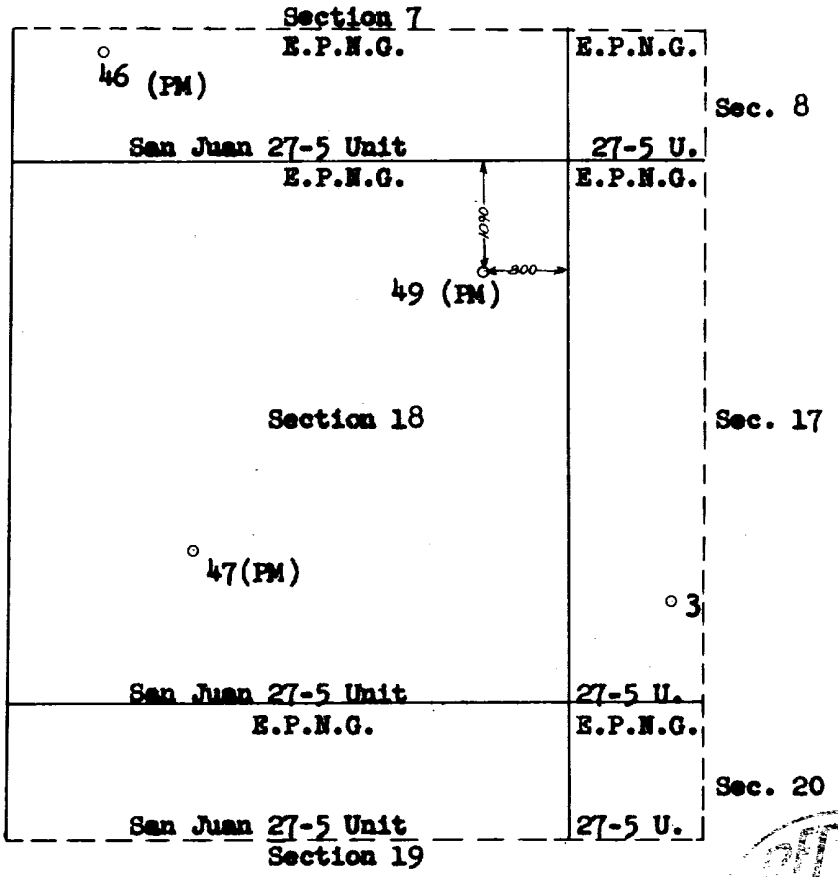
Laurance Bay Hall
Notary Public in and for San Juan County, New Mexico

My Commission Expires 6-21-61

My commission expires ~~October 5, 1964~~.

PLAT SHOWING LOCATION OF DUALLY COMPLETED
El Paso Natural Gas Co. San Juan 27-5 Unit No. 49 (PM)
and Offset Acreage

T-27-N
R-5-W

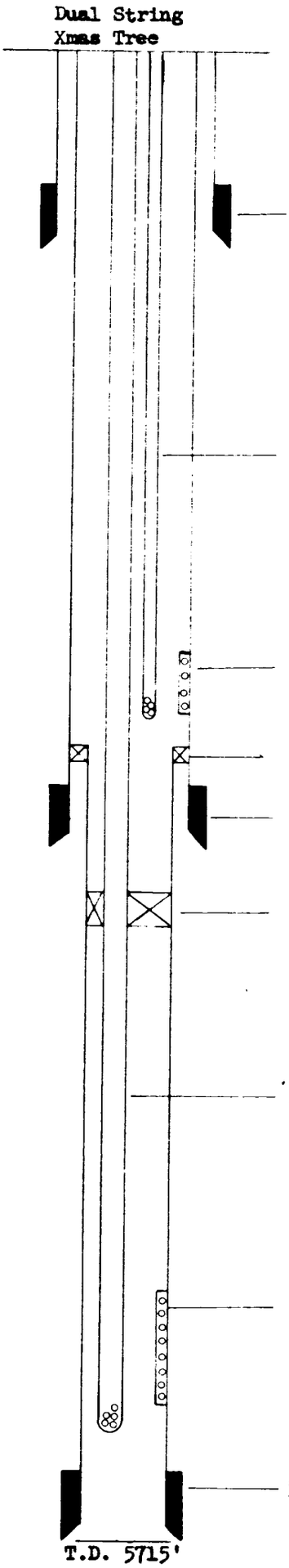


EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

SCALE	DATE	No.
DRAWN BY	CHECKED BY	

FORM 7-132R (10-56)

SCHEMATIC DIAGRAM OF DUALLY COMPLETED
El Paso Natural Gas Co. San Juan 27-5 Unit No. 49 (PM)
NE/4 Section 18, T-27-N, R-5-W



Zero reference point 10.0' above top flange of tubing hanger.

10 3/4", 31.68 S. W. casing set at 133' with 160 sacks cement circulated to surface.

1 1/4", 2.4#, J-55 tubing landed at 3355' with perforations at 3318-3320'.

Pictured Cliffs perforations 3312-3324; 3334-3342 (2 SPF); fractured with water and sand.

Top of 5 1/2" liner hanger set at 3490'. Squeeze top of liner with 100 sacks cement.

7 5/8", 26.4#, J-55 casing set at 3549' with 120 sacks cement.

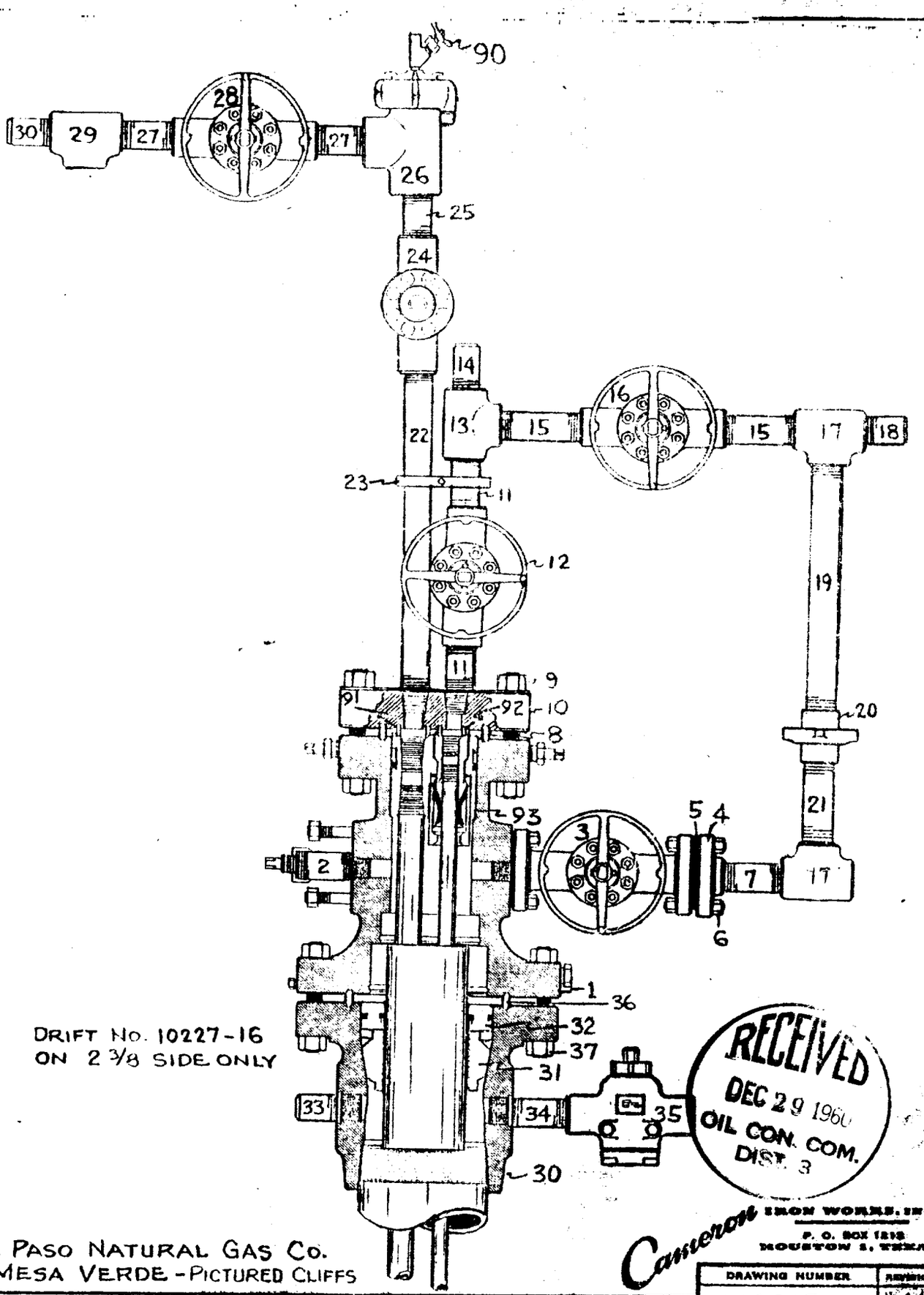
Guiberson "Shorty" model packer set at 3575'.

2", 4.7#, J-55 tubing landed at 5637' with perforations at 5602-5605'.

Point Lookout perforations 5480-5488; 5512-5520; 5536-5542; 5552-5556; 5558-5564; 5574-5582; 5592-5596; 5600-5608 (2 SPF); fractured with water and sand.

5 1/2", 15.50#, J-55 liner set from 3490' to 5710' with 210 sacks cement.

P.M.



DRIFT No. 10227-16
ON 2 3/8 SIDE ONLY

EL PASO NATURAL GAS Co.
MESA VERDE - PICTURED CLIFFS

Cameron IRON WORKS, INC.
P. O. BOX 1212
HOUSTON 1, TEXAS

DRAWN BY	DATE	WORKING PRESSURE	DRIFT NO.	DRAWING NUMBER	REVISION
E N	3-17-59	2,000 #		916015	"A"

OPEN FLOW TEST DATA

DUAL COMPLETION — DATE November 23, 1960

Operator: El Paso Natural Gas Company		Lease: San Juan 27-5 Unit No. 49 (PC)	
Location: 1090'N, 800'E, 18-27N-5W		County: Rio Arriba	State: New Mexico
Formation: Pictured Cliffs		Pool: Undesignated	
Casing: Diameter: 7-5/8"	Set At: Feet: 3549	Tubing: Diameter: 1-1/4"	Set At: Feet: 3345
Perforations: From: 3312	To: 3342	Total Depth: 5715 C/O 5672	Shut In: 11-6-60
Stimulation Method: Sand/Water Frac.		Flow Through Casing: X	Flow Through Tubing:

Choke Size, Inches: .75		Choke Constant: C: 12.365		5-1/2" Liner from 3490 to 5710 Guiberson "Shorty" Prod. Pkr. at 3575'			
Shut-in Pressure, Casing: (PC)	PSIG: 1069	PSIA: 1081	Days Shut In: 17	Shut-in Pressure, Tubing: (PC)	PSIG: 1069	PSIA: 1081	
Flowing Pressure: P (Csg)	PSIG: 100	PSIA: 112		Working Pressure: Pw (Tbg)	PSIG: 105	PSIA: 117	
Temperature: T: 57 °F	Ft: 1.0029	n: .85		Fpv (From Tables): 1.010	Gravity: .650	Fg: .9608	

Initial SIPT (M) = 1026 psig
Final SIPT (M) = 1024 psig

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

$Q = (12.365)(112)(1.0029)(.9608)(1.010) = 1348$ MCF D

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

$Aof = \left(\frac{1,168,561}{1,154,872}\right)^n \quad (1.0118)^{.85}(1348) = (1.0100)(1348)$

Aof 1361 MCF D

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F. M. Clark

Calculated by W. D. Dawson

Lewis D. Galloway

Lewis D. Galloway

FORM 2-75R (REV. 11-59)

EL PASO NATURAL GAS COMPANY

OPEN FLOW TEST DATA

DUAL COMPLETION

DATE November 15, 1960

Operator: El Paso Natural Gas Company		Lease: San Juan 27-5 Unit No. 49 (MV)	
Location: 1090'N, 800'E, 18-27N-5W		County: Rio Arriba	State: New Mexico
Formation: Mesa Verde		Pool: Blanco	
Casing: Diameter: 7-5/8"	Set At: Feet: 3549	Tubing: Diameter: 2"	Set At: Feet: 5627
Pay Zone: From: 5480	To: 5608	Total Depth: 5715 C/O 5672	Shut In: 11-6-60
Stimulation Method: Sand/Water Frac.		Flow Through Casing:	Flow Through Tubing: X

Choke Size, Inches: .750		Choke Constant: C: 12.365		5-1/2" Liner from 3490 to 5710 Guiberson "Shorty" Pkr. at 3575'	
Shut-In Pressure, Casing, PSIG: (PC) 1060	+ 12 = PSIA: 1072	Days Shut-In: 9	Shut-In Pressure, Tubing: (MV(1085	PSIG + 12 = PSIA: 1097	
Flowing Pressure: P PSIG: 226	+ 12 = PSIA: 238		Working Pressure: P_w: (Calc)	PSIG + 12 = PSIA: 478	
Temperature: T 61 °F	Ft .9990	n = 0.750	Fpv (From Tables): 1.024	Gravity: 0.679	Fg = .9427

Initial SIPT (P) = 1060 psig
Final SIPC (P) = 1062 psig

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

$Q = (12.365)(238)(.9990)(.9427)(1.024) = 2838$ MCF/D

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

$Aof = \left(\frac{1,203,409}{974,925} \right)^n = (1.2343)^{.75}(2838) = (1.1710)(2838)$

Aof = 3323 MCF/D

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TESTED BY R. F. Headrick

WITNESSED BY

Checked by W. D. Dawson

Lewis D. Galloway

Lewis D. Galloway