NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name			County	Date
Wildcat N. V. & South Blanco P. C.			Rio Arriba	October 3, 1958
Operator		Lease		Well No.
El Paso Natural Gas Company		Jicarilla		A-C (SM)
Location of Well	Unit	Section	Township	Range
	G	16	29N	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 _____ NO X
2. If answer is yes, identify one such instance: Order No. _____ ; Operator, Lease, and Well No.:

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)	3812-3940	5764-5970 (Menefee) 5960-6126 (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.

Yes 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.

Humble Oil and Refining Co.

RECEIVED
OCT 10 1958
OIL CON. COM.
DIST. 3

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES _____ NO X . 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 _____ (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.

EL PASO NATURAL GAS COMPANY

P. O. Box 997
Farmington, New Mexico

September 25, 1958

Mr. E. C. Arnold
Oil Conservation Commission
1000 Rio Brazos Road
Aztec, New Mexico

Re: Packer Leakage Test on the El Paso Natural Gas Company Well, Jicarilla 4-C (PM), 1640N, 1600E; 16-25-4, Rio Arriba County, New Mexico.
(Name - Location - Company)

Dear Mr. Arnold:

The subject well was dually completed in the Pictured Cliffs and Mesa Verde zones and a packer was set at 3877 feet. The Mesa Verde zone was tested through a 3/4" choke for three hours Sept. 5, 1958 with the following data obtained:

PC SIPC 959 psig; Shut-in 21 days

PC SIPT 959 psig;

MV SIPT 872 psig; Shut-in 21 days

Time Minutes	(MV) Flowing Pressure Tubing Psig	(PC) SIP (C) Psig	(MV) Working Pressure, Psig	Temp ° F
0		959		
15	325	962		64
30	245	964		65
45	150	964		66
60	140	964		66
180	94	964	Calc. 203	66

The choke volume for the Mesa Verde was 1263 MCF/D with an AOF of 1322 MCF/D.

The Pictured Cliffs zone was tested September 25, 1958 with a 3/4" choke for 3 hours with the following data obtained:

PC SIPC 979 psig; Shut-in 41 days

PC SIPT 978 psig.

MV SIPT 1274 psig; Shut-in 21 days

Time Minutes	(PC) Flowing Pressure Casing Psig	(MV) SIT (T) Psig	(PC) Working Pressure, Psig	Temp ° F
0		1274		
15	177	1271		49
30	70	1272		52
45	36	1273		56
60	32	1274		56
180	22	1273	22	57

The choke volume for the Pictured Cliffs test was 386 MCF/D with an AOF of 386 MCF/D.

The results of the above tests indicate there is no packer leakage.

Very truly yours,

H. L. Kendrick
Gas Engineer

HLK/nb

cc: A. M. Rodgers
R. S. Oberly (2)
File

OPEN FLOW TEST DATA

DUAL COMPLETION CORRECTED COPY DATE September 5, 1958

El Paso Natural Gas		Jicarilla 4-C (M)	
1640N, 1600E; 16-25-4		Rio Arriba	New Mexico
Mesa Verde		Blanco MV	
7-5/8	3976	2"	6028
5764	6236	6210 c/o 6130	Shut in 8/15/58
Sand Water Frac.			X

.75	12.365	5-1/2 liner 3921 - 6159	
959 (PC) 971	21	872 (MV)	884
94	106	Calc.	215
66	.75	1.009	650

Initial SIPC (PC) = 959 PSIG
Final SIPC (PC) = 964 PSIG

Packer at 3877

12.365 x 106 x .9608 x 1.009 x .9943 1263

781456
735231

1263 $(1.0628)^{.75}$ = 1263 x 1.0467

1322

Richard Proctor

Checked By T. B. Grant

L. D. Galloway

L. D. Galloway

EL PASO NATURAL GAS COMPANY

OPEN FLOW TEST DATA

DUAL COMPLETION DATE **September 25, 1958**

Operator: El Paso Natural Gas		Lease: Jicarilla 4-C (P)	
Location: 1040N, 1600E; 16-25-4		County: Rio Arriba	State: New Mexico
Formation: Pictured Cliffs		Pool: Undesignated	
Casing: Diameter 7-5/8	Set At: Feet 3976	Tubing: Diameter 1-1/4	Set At: Feet 3819
Pay Zone: From 3812	To 3840	Total Depth: c/o 6130	Shut-in 8/15/58
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 3921 - 6159	
Shut-in Pressure, Casing, PSIG: 979	+ 12 = PSIA: 991	Days Shut-in: 41	Shut-in Pressure, Tubing PSIG: 978 + 12 = PSIA: 990
Flowing Pressure: P PSIG: 22	+ 12 = PSIA: 34		Working Pressure: P_w PSIG: 22 + 12 = PSIA: 34
Temperature: T: 57	F$_t$: .85	Fpv (From Tables): 1.004	Gravity: .721

Initial SIPT (MV) = 1274 PSIG **Packer at 3877**
Final SIPT (MV) = 1273 PSIG **2" at 6028**

CHOKE VOLUME: Q = C x P$_t$ x F$_t$ x F$_g$ x F$_{pv}$

Q = 12.365 x 34 x 1.0029 x .9129 x 1.004 = 386 MCF/D

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

Aof = $\left(\frac{982081}{980925}\right)^n$ $1.0011^{.85}$ (386) = 1.0009 (386)

Aof = 386 MCF/D

M. W. Rischard

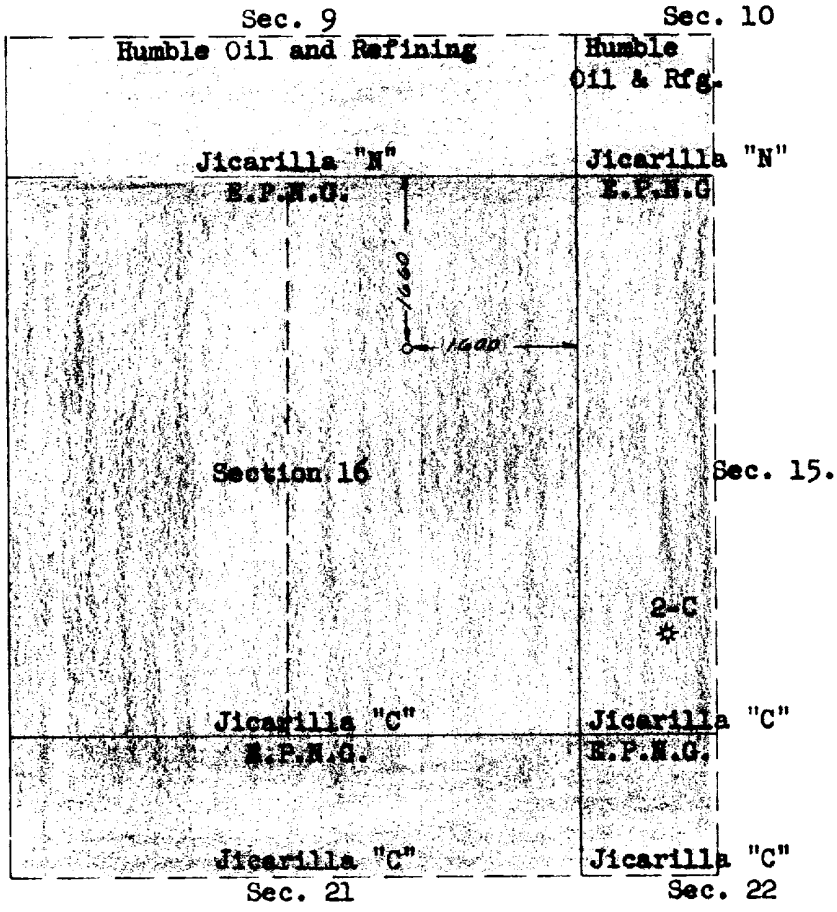
WITNESSED BY

Lewis D. Galloway

L. D. Galloway

PLAT SHOWING LOCATION OF DUALLY COMPLETED
El Paso Natural Gas Co. Jicarilla No. 4-C (PM)
and Offset Operator

T-25-N, R-4-W



EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

SCALE	DATE	No.
DRAWN BY	CHECKED BY	

FORM 7-132 (10-56)

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 August 15, 1958, I was called to the location of the El Paso Natural Gas Company Jicarilla No. 4-C (PM) Well located in the SWNE/4 of Section 16, Township 25 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 "D" Production Packer was set in this well at 3877 feet in accordance with the usual practices and customs of the industry.

Mack M. Mahaffey

Subscribed and sworn to before me, a Notary Public in and for San Juan County, New Mexico, the 6th day of October, 1958.

Notary Public in and for San Juan County,
New Mexico

My commission expires February 24, 1960.

SCHEMATIC DIAGRAM OF DUAL COMPLETION
El Paso Natural Gas Co. Jicarilla No. 4-C (PM)
NE/4 Section 16, T-25-N, R-4-W