

CASE NO. 1: Application of M. P. P. for a writ of habeas corpus of its hearing. Held: writ granted. - San Juan County, N.M.

-asa / No.

2201

Application, Transcript,
Small Exhibits, Etc.

EL PASO NATURAL GAS COMPANY

OIL WELL TEST

TO: Mr. A. J. Dudenhoeffer
FROM: Production Engineering Dept.

DATE: January 11, 1961
PLACE: Farmington, N. M.

SUBJECT: Gas-Oil ratio test on El Paso Natural Gas Company well
Huertano Unit No. 116 (Gallup)

TESTED BY: K. C. McBride

LOCATION: Sec. 11 T. 21 R. 10

SHUT-IN PRESSURE: SIPC psig Shut-In 8 days)
SIPT 977 psig

TIME AND DATE TEST STARTED: January 6, 1961 12:00 Noon

TIME AND DATE TEST ENDED: January 7, 1961 12:00 Noon

TOTAL PRODUCTION 24 hours

Gas 272 MCF

Oil 7.8 BBLs

Water 0 BBLs

GAS-OIL RATIO: 38.87 Cubic Ft. per BBL.

PRODUCING METHOD: Flowing

PRODUCING THROUGH 2" CHOKE SETTING 14/64 INCHES

FLOWING PRESSURE 260 psig TUBING: -- psig CASING

SPM LENGTH OF STROKE

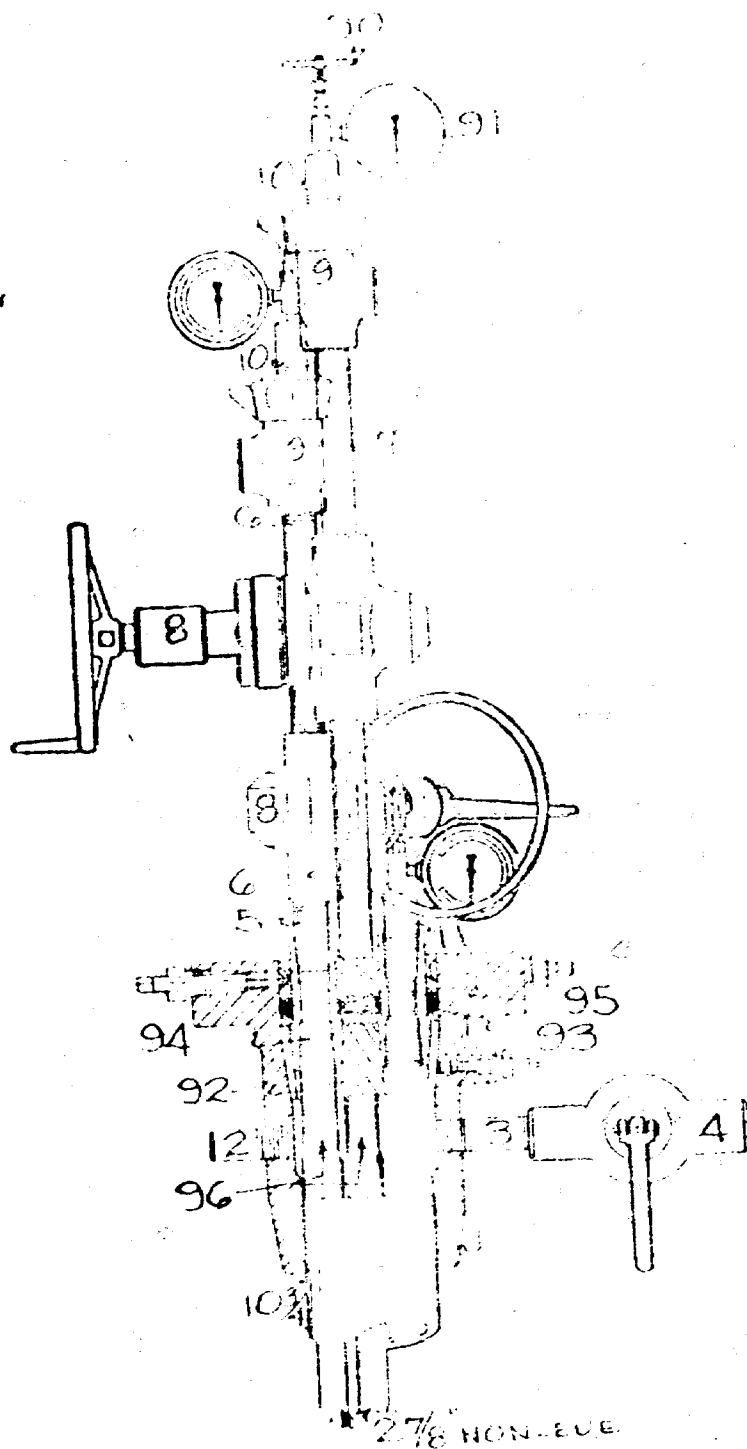
PRODUCING FORMATION: Gallup

FIELD: Angels Peak Gallup

K. C. McBride
Production Engineer

cc: B. C. Adams
Ed E. Alsop
D. N. Canfield
W. C. Cheek
E. J. Coel, Jr.
A. M. Derrick
Drilling Dept.
O. W. Fowler
C. C. Kennedy
E. S. Oberly (1) Singels - (6) Duals
L. M. Parrish
Proration Dept.
W. M. Rodgers
S. Smith
L. G. Truby
D. H. Tucker
File
+ Pan American Pet.

Frac oil is still being removed.



EL PASO NATURAL GAS CO

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

DRAWN BY <u>M. M. M.</u>	DATE <u>10-6-60</u>	WORKING PRESSURE <u>2,000</u>	LIB. NO. <u>10227-20</u>	DRAWING NUMBER	REVISION
				<u>919310</u>	

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE December 20, 1960

DUAL COMPLETION

Operator El Paso Natural Gas Company		Lease Huerfano Unit No. 116 (DK)	
Location 990'N, 1652'W, 11-26N-10W		County San Juan	State New Mexico
Formation Dakota		Pool Basin	
Casing Diameter 2-1/8" O.D.	Set At: Feet 7021	Tubing Diameter No tubing	Set At: Feet ---
Pay Zone: From 6840	To 6884	Total Depth 7030 c/o 7021	Shut In 12-5-60
Stimulation Method Sand/Water Frac.		Flow Through Casing X	Flow Through Tubing ---

Choke Size, Inches 0.750	Choke Constant: C 12.365	"Slim Hole" Dual	
Shut-In Pressure, Casing, PSIG 977	12 PSIA 989	Days Shut-In 15	Shut-In Pressure, Tubing, PSIG 2001 (D)
Flowing Pressure: P 254	12 PSIA 266		Working Pressure: Pw Calc.
Temperature: T: 80 F	F: .9813		Fpv (From Tables) 1.030
	0.750		Gravity 0.740
			Fg: .9005

Initial SIPC (G) = 977 psig

Final SIPC (G) = 983 psig

CHOKE VOLUME: $Q = C \times P_1 \times F_1 \times F_g \times F_{pv}$

$$Q = 12.365 \times 266 \times .9813 \times .9005 \times 1.030$$

2994

MCF/D

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

$$\text{Aof } \left(\frac{4,052,169}{3,896,144} \right)^n$$

$$(1.0400)^{.75}(2994) = (1.0299)(2994)$$

Aof

3084

MCF/D

TESTED BY **T.B. Grant - R.L. Nickell - C.R. Wagner**

WITNESSED BY

Checked by: W. D. Dawson

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
El Paso EXHIBIT NO. 3-A
CASE NO. 2201

Lewis D. Galloway
Lewis D. Galloway

EL PASO NATURAL GAS COMPANY

OIL WELL TEST

TO: Mr. A. J. Dudenhoeffer

DATE: February 24, 1961

FROM: Production Engineering Dept.

PLACE: Farmington, N. M.

CORRECTED COPY

SUBJECT: Gas-Oil Ratio test on El Paso Natural Gas Company well
Huerfano Unit No. 116 (Gallup)

TESTED BY: K. C. McBride

LOCATION: Sec. 11 T21 R. 10

SHUT-IN PRESSURE: SIPC 977 psig (Shut-In 8 days)
SIPT --- psig

TIME AND DATE TEST STARTED: January 6, 1961 12:00 Noon

TIME AND DATE TEST ENDED: January 7, 1961 12:00 Noon

TOTAL PRODUCTION 24 hours

Gas 272 MCF

Oil 7.8 BBLs

Water 0 BBLs

GAS-OIL RATIO: 34.871 Cubic Ft. per BBL.

PRODUCING METHOD: Flowing

PRODUCING THROUGH 2" CHOKE SEETING 1 1/4 INCHES

FLOWING PRESSURE --- psig TUBING: 260 psig CASING

SPM --- LENGTH OF STROKE ---

PRODUCING FORMATION: Gallup

FIELD: Angel Peak Gallup

K. C. McBride
Production Engineer

cc: B. C. Adams
Ed E. Alsup
D. N. Canfield
W. C. Cheek
E. J. Coel, Jr.
A. M. Derrick
Drilling Dept.
O. W. Fowler
C. C. Kennedy
E. S. Oberly (1) Singels - (6) Duals
L. M. Parrish
Proration Dept.
W. M. Rodgers
S. Smith
L. G. Truby
D. H. Tucker
File
+ Pan American Pet.

NOTE: This well is a tubingless completion -
Frac oil is still being removed.

BEFORE EXAMINER NUTTER

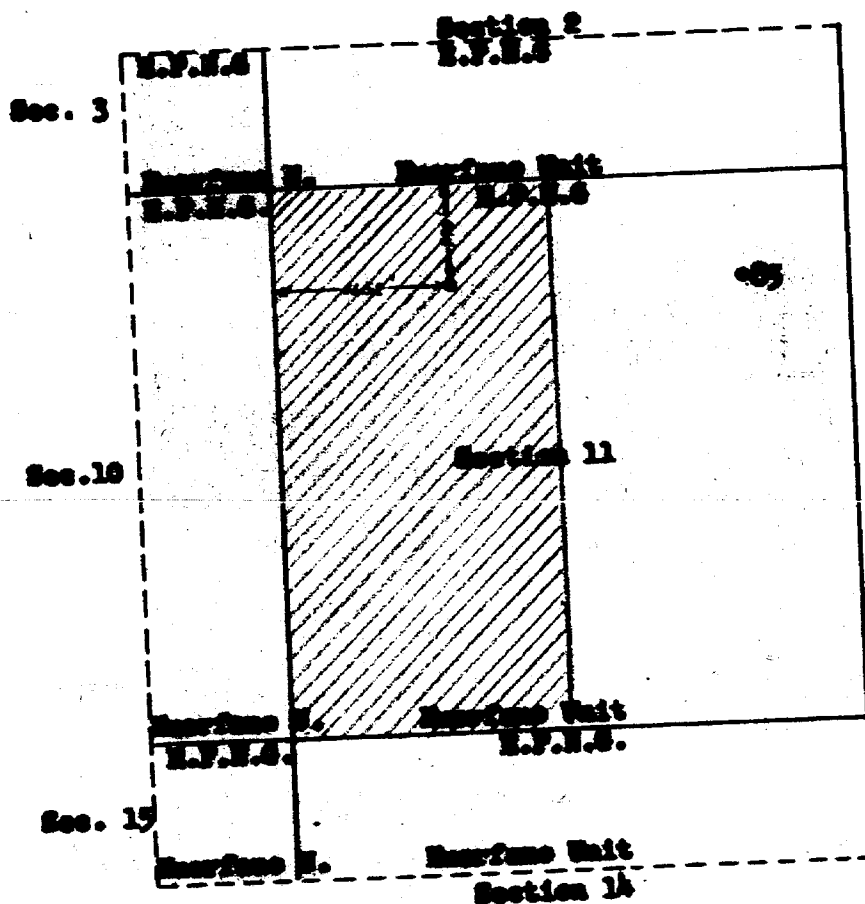
OIL CONSERVATION COMMISSION

El Paso EXHIBIT NO. 3-B

CASE NO. 220

Plot showing location of doubly completed
El Paso Natural Gas Surface Unit No. 116(20)
and effect acreage

T-26-N
R-10-W



ACREAGE DEDICATED TO THE DAKOTA AND GROUP

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
El Paso EXHIBIT NO. 1
CASE NO. 2201

EL PASO NATURAL GAS COMPANY
EL PASO, TEXAS

SCALE	DATE	No.
DRAWN BY	CHECKED BY	

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name <u>Angel Peak Gallup Ext. & Basin Dakota</u>		County <u>San Juan</u>	Date <u>January 31, 1961</u>
Operator <u>El Paso Natural Gas Company</u>		Lease <u>Huerfano Unit</u>	Well No. <u>116 (GD)</u>
Location of Well <u>C</u>	Unit <u>C</u>	Section <u>11</u>	Township <u>26-N</u>
		Range <u>10-W</u>	

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	<u>Gallup</u>	<u>Dakota</u>
b. Top and Bottom of Pay Section (Perforations)	<u>5996-6192</u>	<u>6840-6884</u>
c. Type of production (Oil or Gas)	<u>Gas</u>	<u>Gas</u>
d. Method of Production (Flowing or Artificial Lift)	<u>Flowing</u>	<u>Flowing</u>

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 Company is Unit Operator

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 Div. Petroleum Engineer of the El Paso Natural Gas Company (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.

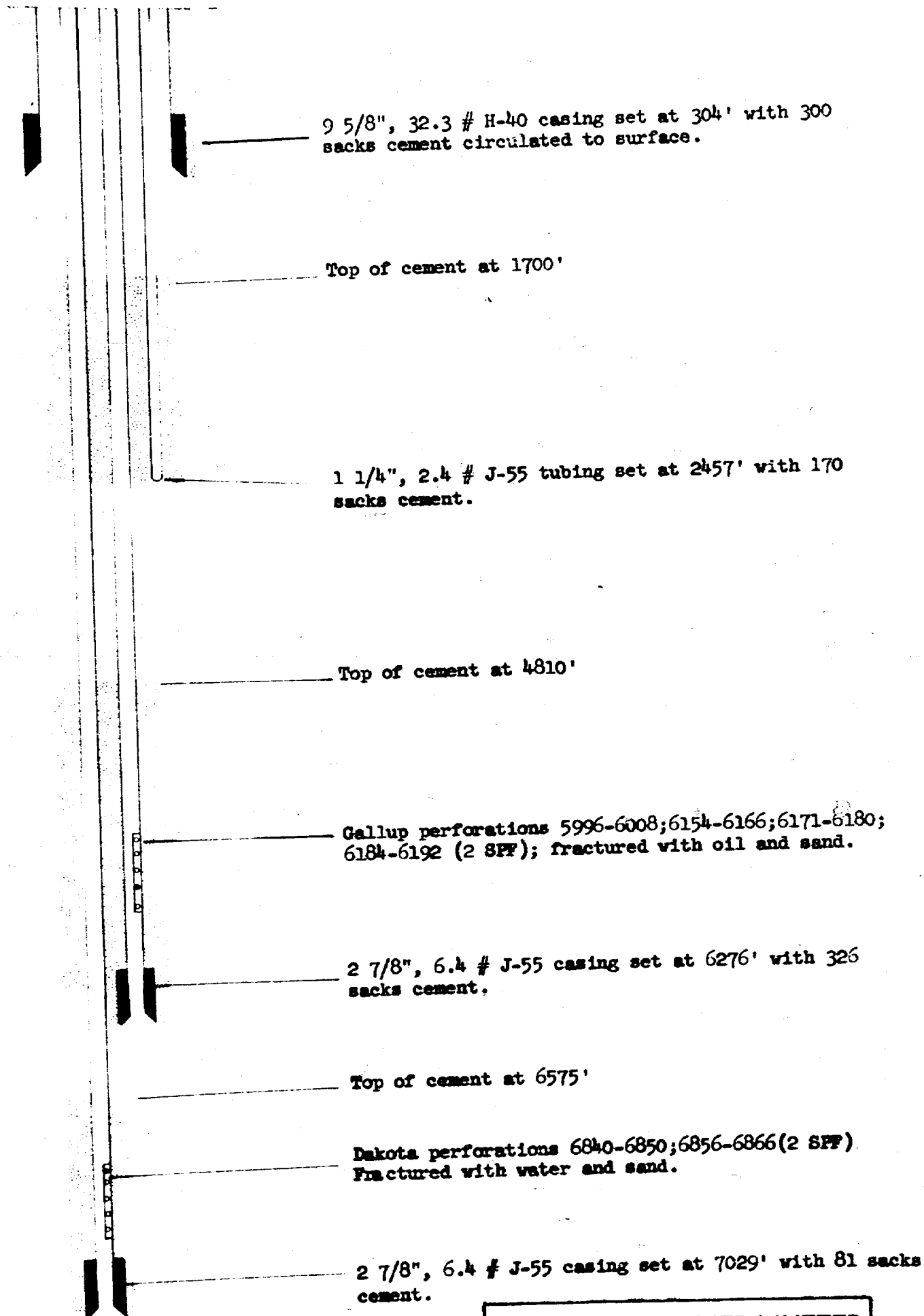
Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest 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.

Schematic Diagram of Dually Completed
El Paso Natural Gas Huerfano Unit No. 116(GD)
NW/4 Section 11, T-26-N, R-10-W

Dual String
Xmas Tree

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



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 2901

NEW MEXICO OIL CONSERVATION COMMISSION
 NO. WEST NEW MEXICO PACKER-LEAKAGE TEST

FORM PL-NW-1
 REVISED 6-1-59

El Paso Natural Gas Company
 Unit C Sec. 11 Twp 26 Rge 10
 County: San Juan
 Huerfano Unit
 Initial 12-20-60
 Well No. 116 (GD)
 Annual
 Producing Casing or Tubing
 Casing
 Producing Casing or Tubing
 Casing

SHUT-IN PRESSURE DATA BEFORE FLOW TEST NO. 1

UPPER COMPLETION: 12-5-60
 LOWER COMPLETION: 12-5-60
 Length of Time Shut-in: 15 days
 Shut-in Pressure, PSIG: 977
 Stabilized Pressure (X) (No)
 Shut-in Pressure, PSIG: 2001
 Stabilized Pressure (X) (No)

FLOW TEST NO. 1

LAPSED TIME SINCE FLOW BEGAN			SHUT-IN ZONE PRESSURE, PSIG		WORKING COLUMN PRESSURE, PSIG		FLOWING ZONE PRESSURE, PSIG		FLOWING TEMPERATURE		REMARKS	
15 min.			979				511		72		This well is completed with two strings of 2-7/8" casing set in cement, with cement acting as packer. It is a <u>dual slim-hole well</u> .	
30 min.			981				430		76			
45 min.			981				362		78			
60 min.			981				339		79			
120 min.			983				287		80			
180 min.			983				254		80			
					(Calc.) 383							
OIL PRODUCED			Total Bbls.		Number Hours		Oil Rate:		Gravity		Gas Oil Ratio	
GAS PRODUCED			Rate of Flow		Tested Through		Bbl./D					
REMARKS:			2994 MCF/D		(Choke 2000 2000)							

SHUT-IN PRESSURE DATA BEFORE FLOW TEST NO. 2

UPPER COMPLETION: 12-20-60
 LOWER COMPLETION: 12-20-60
 Length of Time Shut-in: 10 days
 Shut-in Pressure, PSIG: 50
 Stabilized Pressure (X) (No)
 Shut-in Pressure, PSIG: 1976
 Stabilized Pressure (X) (No)

FLOW TEST NO. 2

Zone Producing (Upper or Lower)			Hour & Date Flow Started		
LAPSED TIME SINCE FLOW BEGAN	FLOWING ZONE PRESSURE, PSIG	WORKING COLUMN PRESSURE, PSIG	SHUT-IN ZONE PRESSURE, PSIG	FLOWING TEMPERATURE	REMARKS
15 min.	845		1978		
30 min.	575		1979		
45 min.	375		1980		
60 min.	290		1982		
75 min.	145		1983		
4 days	50		1988		
OIL PRODUCED	Total Bbls.	Number Hours	Oil Rate:	Gravity	Gas Oil Ratio
GAS PRODUCED	Rate of Flow	Tested Through	Bbl./D		
REMARKS	MCF/D (Choke or Meter)				

BEFORE EXAMINER NUTTER
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. 4
 CASE NO. 2201

The results of this test indicate (No Packer Leakage) ~~no packer leakage~~ in this well.
 I hereby certify that the information herein contained is true and complete to the best of my knowledge.

Approved
 NEW MEXICO OIL CONSERVATION COMMISSION

OPERATOR El Paso Natural Gas Company
 H. L. Kendrick
 Sr. Gas Engineer

DATE

J. O. SETH
A. K. MONTGOMERY
OLIVER SETH
WM. FEDERICI
FRANK ANDREWS
FRED C. HANNAHS
GEORGE A. GRAHAM, JR.

SETH, MONTGOMERY, FEDERICI & ANDREWS

ATTORNEYS AND COUNSELORS AT LAW

301 DON GASPAR AVENUE
SANTA FE, NEW MEXICO

POST OFFICE BOX 828
TELEPHONE YU 3-7315

March 3, 1961

Oil Conservation Commission
Santa Fe, New Mexico

Re: Case No. 2201

Gentlemen:

The undersigned hereby enter their appearance as local attorneys for El Paso Natural Gas Company in Case No. 2201 and state that they are associated in this hearing with Mr. Whitworth, the attorney for El Paso Natural Gas Company.

Very truly yours,

SETH, MONTGOMERY, FEDERICI & ANDREWS

By



OS:wcl

DOCKET: EXAMINER HEARING - FRIDAY, MARCH 3, 1961

OIL CONSERVATION COMMISSION - 9 A.M., CONFERENCE ROOM - STATE LAND OFFICE
BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Oliver E. Payne, attorney, as alternate examiner:

Cases 2210 through 2213 will not be heard before 1:00 P.M.

CASE 2199: Application of Texaco, Inc. for an oil-oil-oil triple completion. Applicant, in the above-styled cause, seeks an order authorizing the triple completion of its A. H. Blinebry (NCT-1) Well No. 13, located in Unit E, Section 29, Township 22 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Drinkard Pool, the production of oil from the Blinebry Oil Pool and the production of oil from the Paddock Pool through parallel strings of tubing.

CASE 2200: Application of Aztec Oil & Gas Company for a 320-acre non-standard gas proration unit. Applicant, in the above-styled cause, seeks the establishment of a 320-acre non-standard gas proration unit in the Basin-Dakota Pool consisting of the SE/4 SE/4 of Section 23 and all of the W/2 of Section 24 except the NW/4 NW/4, Township 31 North, Range 12 West, San Juan County, New Mexico. Said unit is to be dedicated to the East Well No. 5, located 990 feet from the South line and 1650 feet from the West line of said Section 24.

CASE 2201: Application of El Paso Natural Gas Company for a gas-gas dual completion utilizing two strings of casing. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Huerfano Unit Well No. 116, located in Unit C, Section 11, Township 26 North, Range 10 West, San Juan County, New Mexico, in such a manner as to permit the production of gas from the Gallup formation adjacent to the Angels Peak-Gallup Pool and the production of gas from the Basin-Dakota Pool through parallel strings of 2 7/8-inch casing cemented in a common well bore.

CASE 2202: Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the oil production from the Drinkard and Paddock Pools from all wells presently completed on the Eva Owen B Lease, comprising the SW/4 of Section 34, Township 21 South, Range 37 East, Lea County, New Mexico, without separately metering the production from each pool.

CASE 2203: Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the oil production from the Drinkard and Paddock Pools from all wells presently completed on the L. E. Grizzel "B" Lease, comprising the S/2 NE/4 of Section 8, Township 22 South, Range 37 East, Lea County, New Mexico, without separately metering the production from each pool.

CASE 2204: Application of Pan American Petroleum Corporation for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks permission to commingle the oil production from the Drinkard and Penrose-Skelly Pools from all wells presently completed on the J. W. Grizzell Lease, comprising the SW/4 of Section 5, Township 22 South, Range 37 East, Lea County, New Mexico, without separately metering the production from each pool.

CASE 2205: Application of Tamanaco Oil Corporation for an unorthodox well location. Applicant, in the above-styled cause, seeks approval of an unorthodox well location for its El Poso Ranch N-11 Well at a point 175 feet from the South line and 1700 feet from the West line of Section 11, Township 28 North, Range 1 East, Rio Arriba County, New Mexico.

CASE 2206: Application of The Ohio Oil Company for permission to transfer allowables. Applicant, in the above-styled cause, seeks permission to shut-in certain wells in the Lea Unit, both in the Devonian and Bone Springs formations, and transfer the allowable for such wells, for a limited period of time, to other wells within said Lea Unit, Township 20 South, Ranges 34 and 35 East, Lea County, New Mexico.

CASE 2207: Application of Honolulu Oil Corporation for a pressure maintenance project. Applicant, in the above-styled cause, seeks permission to institute a pressure maintenance project in the Chisum Oil Pool, Chaves County, New Mexico, by the injection of water into certain wells underlying its State B Lease, N/2 SE/4 of Section 13, Township 11 South, Range 27 East. Applicant further seeks the promulgation of special rules and regulations governing said project.

CASE 2208: Application of Grest Western Drilling Company for a water injection-oil producing dual completion and for an exception to Rule 107 (d). Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Federal MM Well No. 1, located in the NW/4 NE/4 of Section 8, Township 9 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the injection of water into an interval from 4300 feet to 9400 feet and the production of oil from an undesignated Pennsylvanian pool. Applicant further seeks an exception to Rule 107 (d) to permit the setting of tubing in said well more than 250 feet above the top of the pay section.

CASE 2209: Application of The Atlantic Refining Company for permission to commingle the production from two separate pools and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the oil production from the Denton-Wolfcamp and Denton-Devonian Pools from all wells presently completed or hereafter drilled on the State "T" Lease, comprising the SE/4 NW/4, E/2 SW/4 and SW/4 SW/4 of Section 2, Township 15 South, Range 37 East, Lea County, New Mexico. Applicant further seeks permission to install an automatic custody transfer system to handle said commingled production.

The following cases will not be heard before 1:00 P.M.

CASE 2210: Application of Humble Oil & Refining Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to install an automatic custody transfer system to handle the commingled production from the Eumont, Arrowhead and Langlie-Mattix Pools from all wells presently completed or hereafter drilled on the State "M" Lease, comprising portions of Sections 17, 18, 19, 20, 29 and 30, Township 22 South, Range 37 East, Lea County, New Mexico.

CASE 2211: Application of Union Oil Company of California for an unorthodox water injection well location. Applicant, in the above-styled cause, seeks permission to locate a water injection well in the South Caprock Queen Unit, Caprock-Queen Pool, at an unorthodox location 1325 feet from the North line and 330 feet from the East line of Section 18, Township 15 South, Range 31 East, Chaves County, New Mexico.

CASE 2212:

Application of Union Oil Company of California for permission to commingle the production from two separate leases from two separate pools and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the Anderson Ranch-Devonian and Anderson Ranch-Wolfcamp Pool production from all wells presently completed or hereafter drilled on the following-described leases: North Anderson Ranch Unit, E/2 NE/4 and NE/4 SE/4 of Section 32 and NW/4 and N/2 SW/4 of Section 33; State "A" Lease, comprising 360 acres in Sections 28 and 33, all in Township 15 South, Range 32 East, Lea County, New Mexico. Applicant further seeks permission to install an automatic custody transfer system to handle said commingled production.

CASE 2213:

Application of E. G. Rodman for a 160-acre non-standard gas proration unit. Applicant, in the above-styled cause, seeks the establishment of a 160-acre non-standard gas proration unit in the Blinbry Gas Pool consisting of the W/2 NW/4, NE/4 NW/4 and NW/4 NE/4 of Section 20, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 2214:

Application of Sinclair Oil & Gas Company for approval of a unit agreement. Applicant, in the above-styled cause, seeks approval of the Keel Deep Unit Agreement, which unit embraces 6,155.5 acres of Federal and State lands in Township 17 South, Range 31 East, Eddy County, New Mexico.

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 3/6/61

CASE NO. 2201

HEARING DATE 9am 3/3/61
DSN @ SF

My recommendations for an order in the above numbered case(s) are as follows:

Enter an order approving the
dual compl. of El Pecos
Sheridan Unit #116 as
requested.

At least for time being,
well will be a gas-gas
dual in the GP & DK.

Provide for cement & centralizers
or turbolizers throughout
the pays and for at least
3 joints of casing above each
pay

Samuel
Staff Member
Examiner

MAIN OFFICE OCC

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

Case # 2201

1961 FEB 9 AM 8:30

OIL CONSERVATION COMMISSION
BOX 871
SANTA FE, NEW MEXICO

DATE

RE: Proposed NSP

Proposed NSL

Proposed NFO

Proposed DC

Gentlemen:

I have examined the application dated 1-31-61
for the EPNG Huerfano Unit #116(SD) C-11-26-10
Operator Lease and Well No. S-I-R

and my recommendations are as follows:

Approve

Yours very truly,

OIL CONSERVATION COMMISSION

A. R. Kendrick

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name Angel Peak Gallup Ext. & Basin Dakota		County San Juan	Date January 31, 1961
Operator El Paso Natural Gas Company		Lease Barfano Unit	Well No. 116 (RD)
Location of Well C	Section 11	Township 26-N	Range 10-W

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 ☒
2. If answer is yes, identify one such instance: Order No. _____; Operator, Lease, and Well No.: _____

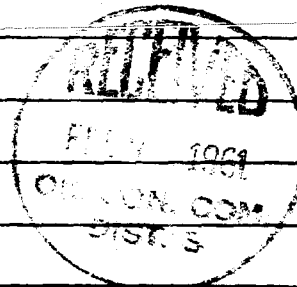
3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	Gallup	Dakota
b. Top and Bottom of Pay Section (Perforations)	5996-6192	6040-6084
c. Type of production (Oil or Gas)	Gas	Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing	Flowing

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 Company is Unit Operator



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 **Div. Petroleum Engineer** of the **El Paso Natural Gas Company** (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 perforation unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

RFW
3/7
JP
3/8
DRAFT

RSM/esr
March 7, 1961

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

224
3/8
CASE No. 2201

Order No. R- 1903

APPLICATION OF EL PASO NATURAL GAS
COMPANY FOR A ~~RECOMPLETION~~ DUAL COMPLETION
IN THE GALLUP FORMATION ADJACENT TO
THE ANGELS PEAK-GALLUP POOL AND IN
THE BASIN-DAKOTA POOL, SAN JUAN COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
March 3, 1961, at Santa Fe, New Mexico, before Daniel S. Nutter,
Examiner duly appointed by the Oil Conservation Commission of New
Mexico, hereinafter referred to as the "Commission," in accordance
with Rule 1214 of the Commission Rules and Regulations.

NOW, on this day of March, 1961, the Commission,
a quorum being present, having considered the application, the
evidence adduced, and the recommendations of the Examiner,
Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, El Paso Natural Gas Company, is
the ~~owner and~~ operator of the Huerfano Unit Well No. 116, located
in Unit C, Section 11, Township 26 North, Range 10 West, NMPM,
San Juan County, New Mexico.

(3) That the applicant proposes to dually complete said
well in such a manner as to permit the production of ^{hydrocarbons} ~~gas~~ from
the Gallup formation adjacent to the Angels Peak-Gallup Pool
and the production of gas from the Basin-Dakota Pool through
parallel strings of 2 7/8-inch casing cemented in a common
well bore.

(4) That the mechanics of the proposed dual completion
are feasible and in accord with sound conservation practices,
provided ^{sufficient cement is used and} adequate centralizing ^{or} and turbolizing equipment is
used. *utilized.*

(5) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

That the applicant, El Paso Natural Gas Company, is hereby authorized to dually complete its Huerfano Unit Well No. 116, located in Unit C, Section 11, Township 26 North, Range 10 West, NMPM, San Juan County, New Mexico, in such a manner as to permit the production of ^{hydrocarbons} ~~gas~~ from the Gallup formation adjacent to the Angels Peak-Gallup Pool and the production of gas from the Basin-Dakota Pool through parallel strings of 2 7/8-inch casing cemented in a common well bore.

PROVIDED HOWEVER, That centralizers ^{or} ~~and~~ turbolizers shall be installed at thirty-foot intervals throughout the producing formations and to a point ^{at least} one hundred feet above such formations ^{each} ~~and~~ ^{String of casing shall be cemented throughout the producing formations and to a point at least} PROVIDED FURTHER, That the applicant shall complete, operate, and produce said well in accordance with the provisions of Section V, Rule 112-A.

PROVIDED FURTHER, That the applicant shall take communication tests upon completion and annually thereafter during the Annual Deliverability Test Period for the Basin-Dakota Pool, or as prescribed by the Secretary-Director of the Commission.

IT IS FURTHER ORDERED:

That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or the protection of correlative rights. Upon failure of the applicant to comply with any requirement of this order, the Commission may terminate the authority herein granted and require the applicant or its successors and assigns to limit its activities to regular single-zone production in the interest of conservation.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

100 feet above the producing formation

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER



P. O. BOX 671
SANTA FE

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

March 9, 1961

Re: Case No. 2301
Order No. B-1903
Applicant:
El Paso Natural Gas Company

Mr. Oliver Seth
Seth, Montgomery, Federico & Andrews
Box 838
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith are two copies of the above-referenced
Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.
A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC X
Artesia OCC
Aztec OCC X

OTHER

**BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:**

**CASE No. 2201
Order No. R-1903**

**APPLICATION OF EL PASO NATURAL GAS
COMPANY FOR A DUAL COMPLETION IN
THE GALLUP FORMATION ADJACENT TO
THE ANGELS PEAK-GALLUP POOL AND IN
THE BASIN-DAKOTA POOL, SAN JUAN
COUNTY, NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

**This cause came on for hearing at 9 o'clock a.m. on
March 3, 1961, at Santa Fe, New Mexico, before Daniel S. Nutter,
Examiner duly appointed by the Oil Conservation Commission of New
Mexico, hereinafter referred to as the "Commission," in accordance
with Rule 1214 of the Commission Rules and Regulations.**

**NOW, on this 9th day of March, 1961, the Commission,
a quorum being present, having considered the application, the
evidence adduced, and the recommendations of the Examiner,
Daniel S. Nutter, and being fully advised in the premises,**

FINDS:

**(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.**

**(2) That the applicant, El Paso Natural Gas Company, is
the operator of the Esmeralda Unit Well No. 116, located in Unit
C, Section 11, Township 26 North, Range 10 West, NEM, San Juan
County, New Mexico.**

**(3) That the applicant proposes to dually complete said
well in such a manner as to permit the production of hydrocarbons
from the Gallup formation adjacent to the Angels Peak-Gallup Pool
and the production of gas from the Basin-Dakota Pool through
parallel strings of 2 7/8-inch casing cemented in a common well
bore.**

**(4) That the mechanics of the proposed dual completion
are feasible and in accord with sound conservation practices,
provided sufficient cement is used and adequate centralizing
or turbolining equipment is utilized.**

**(5) That approval of the subject application will neither
cause waste nor impair correlative rights.**

-2-

CASE No. 2201
Order No. R-1903

IT IS THEREFORE ORDERED:

That the applicant, El Paso Natural Gas Company, is hereby authorized to dually complete its Huerfano Unit Well No. 116, located in Unit C, Section 11, Township 26 North, Range 10 West, NMPM, San Juan County, New Mexico, in such a manner as to permit the production of hydrocarbons from the Gallup formation adjacent to the Angels Peak-Gallup Pool and the production of gas from the Basin-Dakota Pool through parallel strings of 2 7/8-inch casing cemented in a common well bore.

PROVIDED HOWEVER, That centralizers or turbolizers shall be installed at thirty-foot intervals throughout the producing formations and to a point at least one hundred feet above such formations and each string of casing shall be cemented throughout the producing formations and to a point at least one hundred feet above the producing formation.

PROVIDED FURTHER, That the applicant shall complete, operate, and produce said well in accordance with the provisions of Section V, Rule 112-A.

PROVIDED FURTHER, That the applicant shall take communication tests upon completion and annually thereafter during the Annual Deliverability Test Period for the Basin-Dakota Pool, or as prescribed by the Secretary-Director of the Commission.

IT IS FURTHER ORDERED:

That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or the protection of correlative rights. Upon failure of the applicant to comply with any requirement of this order, the Commission may terminate the authority herein granted and require the applicant or its successors and assigns to limit its activities to regular single-zone production in the interest of conservation.

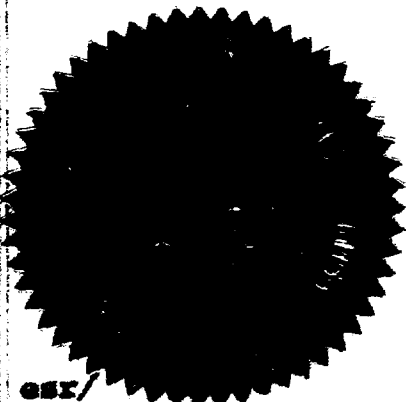
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Ed L. Mechem
EDWIN L. MECHEM, Chairman

E. S. Walker
E. S. WALKER, Member

A. L. Porter, Jr.
A. L. PORTER, JR., Member & Secretary



enr/

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 3, 1961

IN THE MATTER OF:

Application of El Paso Natural Gas Company for a gas-
gas dual completion utilizing two strings of casing.
Applicant, in the above-styled cause, seeks an order
authorizing the dual completion of its Huerfano Unit
Well No. 116, located in Unit C, Section 11, Township
26 North, Range 10 West, San Juan County, New Mexico,
in such a manner as to permit the production of gas
from the Gallup formation adjacent to the Angels Peak-
Gallup Pool and the production of gas from the Basin-
Dakota Pool through parallel strings of 2 7/8-inch
casing cemented in a common well bore.

Case
2201

BEFORE:

Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. MORRIS: Application of El Paso Natural Gas Company
for a gas-gas dual completion.

MR. WHITWORTH: Garrett Whitworth, representing El Paso
Natural Gas Company, with the local counsel, the Seth Montgomery
firm, who has entered a written appearance in this case. We have
one witness to be sworn.

(Witness sworn.)

GERALD A. HICKSON,

called as a witness, having been previously duly sworn, testified
as follows:



DIRECT EXAMINATION

BY MR. WHITWORTH:

Q Would you state your full name, by whom you are employed, and in what capacity you are employed?

A Gerald A. Hickson, Proration Engineer, El Paso Natural Gas Company.

Q Mr. Hickson, have you previously testified before this Commission as an expert proration engineer?

A I have.

Q And have you been accepted in that capacity, and is that made a matter of record?

A Yes, sir.

MR. WHITWORTH: Are the witness's qualifications accepted?

MR. NUTTER: Yes, sir.

Q (By Mr. Whitworth) Are you familiar with El Paso's application in this case, Mr. Hickson?

A Yes, sir, I am.

Q What does El Paso expect with this application?

A We are seeking approval of a slimhole completion utilizing two strings of 2 7/8-inch casing, the bottom in the Dakota and Gallup formations.

Q Where is this well located?

A The well is located in 990 feet from the North line, 1652 feet from the West line of Section 11, Township 26 North, Range 10 West.

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PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



Q Do you have a plat showing the exact location of this well?

A Yes, sir, I do.

Q Is that El Paso's Exhibit No. 1?

A Yes, sir.

Q Is this a Federal unit here, Mr. Hickson?

A Yes, it is.

Q Who is the operator of the unit?

A El Paso Natural Gas.

Q What acreage has been dedicated to each well?

A The W/2 of Section 11 has been dedicated in both the Dakota and Gallup formation.

Q This well was completed to the Dakota and to the Gallup; is that right?

A Yes, sir.

Q By slimhole completion?

A Yes, sir.

Q As you stated?

A Yes, sir.

Q Will you tell the Examiner the reason for completing this well as a slimhole completion?

A Well, it is economics. We save approximately between 30 and 35% on this slimhole completion over a conventional dual, and had we used a conventional dual it would have been uneconomical to make a completion in the Gallup the way the Gallup turned out to be.



PHONE CN 3-6691

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ALBUQUERQUE, NEW MEXICO

Q Do you have a schematic diagram showing just how this well was completed and the separation of the two zones?

A Yes, sir.

Q Is that El Paso's Exhibit No. 2?

A It is.

Q Would you please explain this exhibit?

A It is a schematic diagram of the completion. It shows the 9 5/8-inch casing, surface casing, set at 304 feet with 300 sacks of cement; two strings of 2 7/8-inch casing, set at the Dakota string, set at 7,029 feet, cemented with 81 sacks of cement, and the Gallup string, set at 6276, cemented with 326 sacks. The top of the cement on the Dakota section is 6575 and the top of the cement in the Gallup section is 4815.

Q What is the packer in this case, the means of separating the two zones?

A It is cement.

Q You consider that this is an effective separation?

A Yes, sir, I do. We have found the tops and bottom of the cement sections by a temperature tool, and we have a total of 349 feet of cement separating the perforations in the Gallup, and the perforations in the Dakota.

Q Has a packer leakage test been run on this well?

A Yes, sir, it has.

Q What did that test reveal?

A It revealed no communication between the two zones.



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PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

Q When was the test run?

A It was taken December 20, 1960.

MR. PAYNE: Rather than packer leakage you mean communication test?

A Yes, sir, that is what it is. It is on a packer leakage form.

Q (By Mr. Whitworth) What kind of production is there from the two zones you mentioned?

A The Dakota had an A.O.F. of 3,034 MCF, based on a flowing rate of 2994 MCF per day; in the Gallup, it tested 272 MCF with 7.8 barrels of oil in 24 hours.

Q So you consider both these wells gas wells?

A Yes, sir, I do.

Q And what data are you using to determine that?

A I am using two tests submitted to us from our field personnel, the open flow test on the Dakota and an oil well test on the Gallup.

Q That is all shown on a document you have in your possession; is that right?

A Yes, sir.

Q Is that El Paso's Exhibit No. 3?

A Yes, sir.

Q Will you please explain this exhibit?

A I have given the potentials on both wells; that is about all these two exhibits reflect.



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PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

Q The exhibit is 3 A and 3 B; 3 A is what?

A 3 A, test taken in the Dakota formation, and 3 B test taken in the Gallup.

Q Did you give the gas-oil ratio in each well?

A There was no oil produced in the Dakota, so there is no gas-oil ratio; 34,871 cubic feet per barrel in the Gallup.

Q When was this dual completed?

A December 5th, 1960.

Q Do you have pressure data from the two zones; have you given that?

A Yes, sir. It is on the packer leakage test.

Q Is that El Paso's Exhibit No. 4?

A Yes, sir. The shut in pressure on the Dakota was 2,015 psia, and the shut in pressure on the Gallup 989 pounds psia.

Q Is there anything else that that exhibit shows you would like to explain?

A This exhibit shows the normal; we ran this communication test as a normal packer leakage test with the exception of shutting in both zones between the flowing period of 15 days. There is a correction to be made on that exhibit, if you would like to make it on yours. It is on the official exhibit. The shut in pressure data, before flow test No. 2, upper completion shut in for 25 days instead of 10.

Q Mr. Hickson, in your opinion, would the granting of this application for this dual completion prevent waste?



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PHONE CH 3-4691

ALBUQUERQUE, NEW MEXICO

A Yes, sir, I believe it would.

Q Would it violate or prejudice any correlative rights, to your knowledge?

A No, sir.

Q Do you have anything you would like to add to your testimony?

A I have one or two things here. A statewide hearing has dedicated the N/2 in the nomenclature, has dedicated the N/2 of Section 11 -- I mean, it is proposed to call the N/2 in the Angels Peak Gallup. We have dedicated the W/2. That leaves the SW/4 which is dedicated to this well out of the Angels Peak-Gallup.

MR. PAYNE: However, it would be within a mile?

A Yes, sir. Otherwise, the NW/4 would be in the Angels Peak and the SW, which is dedicated, would not be. It would be operated with those rules, but would not be in the pool.

Q (By Mr. Whitworth) Mr. Hickson, were El Paso's Exhibits 1, 2, 3 A and 3 B, and 4 prepared by you or under your direct supervision?

A Yes, sir, they were.

MR. WHITWORTH: We offer these in evidence.

MR. NUTTER: El Paso's Exhibits 1 through 4 will be admitted. Does anyone have any questions?

BY MR. PAYNE:

Q I thought on your Exhibit No. 4 you showed the upper completion as an oil completion. Was the Gallup completion originally



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PHONE CH 3-6091

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an oil well?

A No, sir. From the original test, they originally set it out as an oil well, but the well flowed seven barrels of oil per day with 272 MCF, which, under the Angels Peak-Gallup rules classifies it as a gas well.

Q What is the GOR?

A 34,871 to one, which is 4,000 above the breaking point between a gas well and an oil well.

Q The dividing line on that pool is 30,000?

A Yes, sir.

Q You are not producing either side now, are you?

A No, sir. We have no connection.

Q Did you use centralizers or turbilizers in the completion of this well?

A Yes, sir. We used centralizers on the Dakota and turbilizers on the Gallup.

Q What intervals?

A Dakota, 15 centralizers at the intervals 7,025 feet, 7,019 feet, 6,988, 6,957, 6,936, 6,901, 6,870, 6,839, 6,808, 6,770, 6,740, 6,709, 6,679, 6,648, and 6,618. On the Gallup we used ten Baker turbilizers, 6,264, 6,233, 6,202, 6,170, 6,139, 6,108, 6,077, 6,046, 6,015, 5,984.

Q Are any fresh waters in this area, Mr. Hickson?

A No, sir, not to my knowledge.

Q If there are they are probably shallower than 300 feet?



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PHONE CH 3-6591

ALBUQUERQUE, NEW MEXICO

A Yes, sir. That is the purpose of this.

Q Are your tubing strings plastic-coated internally?

A Not to my knowledge; they are not.

Q Could you tell me if the gas-oil ratio is rising in the Gallup formation on this well?

A We have only taken one test on the well. That was this communication test, and at this time we are still recovering frack oil. I would say it would be rising.

BY MR. PORTER:

Q You would anticipate the GOR's would go up?

A Yes, sir, I would, as soon as the frack oil is recovered I think there would be probably a small amount of oil produced.

BY MR. PAYNE:

Q It is not likely it would go the other way and become an oil well?

A I would say that would be very remote.

BY MR. MORRIS:

Q You show on your schematic diagram 1 1/4-inch tubing set at 1457. I am not an engineer. Would you explain to me the purpose of that?

A The purpose of using the 1 1/4-inch string, going back to the original cement process, which we went through to cement the hole, we ran the Dakota string in the hole and the Gallup string, and the 1 1/4, and then cemented the Dakota string and recirculated through the Gallup string. Then we went in and cemented the Gallup



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PHONE CH 3-6691

string and recirculated through 1 1/4, and then we went in and cemented the Pictured Cliff off through the 1 1/4, and circulated through, actually, the annulus.

Q So you used that string just for cementing purposes?

A That's right.

MR. NUTTER: Any other questions?

REDIRECT EXAMINATION

BY MR. WHITWORTH:

Q Would you say that the completion in the Gallup is a marginal well?

A Yes, sir, I would, and I would recommend to the Commission that if this is approved that the well be classified as a marginal from the beginning. It is making 272 MCF a day, and a top gas well in the Angels Peak-Gallup is allowed, I think, February's, approximately 1500 MCF.

MR. NUTTER: Any further questions? Witness may be excused. Do you have anything further, Mr. Whitworth?

MR. WHITWORTH: That is all I have.

MR. NUTTER: Does anyone have anything they wish to offer in Case 2201? Case will be taken under advisement and we will take a 15-minute recess.



STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

I, JUNE PAIGE, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 8th day of March, 1961.

June Paige
Notary Public - Court Reporter

My Commission expires:
May 11, 1964.

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ALBUQUERQUE, NEW MEXICO



I N D E X

WITNESS

PAGE

GERALD A. HICKSON
 Direct Examination by Mr. Whitworth
 QUESTIONS by Mr. Payne
 QUESTIONS by Mr. Porter
 QUESTIONS by Mr. Payne
 QUESTIONS by Mr. Morris
 Redirect Examination by Mr. Whitworth

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 ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691

E X H I B I T S

NUMBER
 Ex.#1
 Ex.#2
 Ex.#3
 Ex.#4

EXHIBITS
 Plat
 Schematic Diagram
 Production Data
 Test Data

IDENTIFIED

OFFERED

RECEIVED

3
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7
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I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Examiners' hearing of Case No. 2201
 heard by me on 8/3 1961
 Examiner
 New Mexico Oil Conservation Commission

