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Pophistion, Transcript,

Exhibits, Etc.

## BEFORE THE OIL COMSERVATION CONNISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL COMMERCATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF COMMIDERING:

> CASE No. 2028 Order No. R-1740

APPLICATION OF BENSON-MONTIN-GREER DRILLING CORPORATION FOR AN OIL-GAS DUAL COMPLETION IN AN UNDESIGNATED GALLUP POOL AND IN THE WEST KUTZ-DANOTA 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 July 27, 1960, at Santa Fe, New Mexico, before Daniel S. Mutter, 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.

MOW, on this 4th day of August, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel 8. Mutter, 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, Benson-Montin-Greer Drilling Corporation, is the owner and operator of the Jones Well No. 1, leading in Unit P, Section 17, Township 28 North, Range 13 West, MICPM, San Juan County, New Mexico.
- (3) That the applicant proposes to dually complete the above-described well in such a manner as to permit the production of oil from an undesignated Gallup Pool and the production of give from the West Katz-Dakota Pool through parallel strings of 1-1/2 inch OD tubing.
- (4) That inasmuch as the evidence indicates that production of oil from the Gallup formation through 1-1/2 inch tubing will be efficient in this particular installation, the mechanics of the proposed dual completion are feasible and in accord with sound conservation practices.

-2-CASE No. 2038 Order No. R-1740

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

#### IT IS THEREFORE ORDERED:

That the applicant, Benson-Montin-Greer Drilling Corporation, be and the same is hereby authorised to dually complete its Jones Well No. 1, located in Unit P. Section 17, Township 28 North, Range 13 West, MMPM, San Juan County, New Mexico, in such a manner as to permit the production of oil from an unlesignated Gallup Pool and the production of gas from the West Rutz-Dakota Pool through parallel strings of 1-1/2 inch OD tubing.

PROVIDED HOWEVER, 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 packerleakage tests upon completion and annually thereafter, and at such other times as the Secretary-Director may prescribe.

#### IT IS PURTHER ORDERED:

That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seen necessary or convenient for the prevention of waste and/or 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-some production in the interest of conservation.

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

> STATE OF NEW MEXICO OIL COMMERVATION COMMISSION

JOHN BURROUGHS, Chairman

MURRAY E. MORGAH, Member

L. L. FORTER, Jr., Newber & Secretary

SEZ/

#### GOVERNOR

JOHN BURROUGHS CHAIRMAN

## State of New Wexico O il Conservation Commission

LAND COMMISSIONER MURRAY E. MORGAN MEMBER



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

P. O. BOX 871 SANTA FE

August 4, 1960

Mr. Jason Kellahin P. C. Box 1713 Santa Fe, New Mexico

He:	Cage No		
	Order No.	B-1740	
	Applicant	•	

Benson-Montin-Greer Drilling Co.

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., Secretary-Director

1r/				
Carbon copy	of order	also	sent	to:
Hobbs OCC_	x			
Artesia OCC				
Aztec OCC	I			
Other				

### OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

			DateInly 28, 1960
CASE	2038	Hearing	DSN, Santa Fe, 9 a.M. 7/29
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Approve dual completion requested by Benson-Martin-Greer Drilling Company for its Jones Well No. 1, located 790 feet from the South line and 790 feet from the East line of Section 17, Township 28 North, Range 13 West to permit application to produce oil from the Gallup fromation and gas from the Dakota formation through parallel strings of 1 1/2 inch non upset tubing. Provide for standard packer leakage tests.

#### DOCKET: EXAMINER HEARING JULY 27, 1960

#### Oil Conservation Commission - 9 a.m., Mabry Hall, State Capitol, Santa Fe, N.M.

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

CASE NOS. 2023 through 2033 will not be heard before 1 p.m. on July 27, 1960. CASE NOS. 2034 through 2040 will not be heard before 9 a.m. on July 28, 1960.

CASE 2017: Application of Continental Oil Company for an order authorizing an automatic custody transfer system to handle the Maljamar Pool production from its Miller "BX" lease comprising in pertinent part the E/2 of Section 14, Township 17 South, Range 32 East, Lea County, New Mexico.

CASE 2018: Application of Continental Oil Company for an order authorizing the triple completion of its Jicarilla Apache Well No. 27-2, located in the NW/4 NW/4 of Section 27, Township 25 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of oil from the Gallup formation, the production of oil from the Greenhorn formation and the production of oil from the Dakota formation through parallel strings of 4½ inch, 2 7/8 inch, and 4½ inch casing cemented in a common well bore. Applicant proposes to install tubing to the Gallup and the Dakota formations.

CASE 2019: Application of Continental Oil Company for an order authorizing the triple completion of its Northeast Haynes Apache Well No. 9-1, located in the NW/4 SW/4 of Section 9, Township 24 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of gas from the Mesaverde formation, the production of gas from the gallup formation and the production of gas from the Greenhorn formation through parallel strings of 2 7/8 inch, 4½-inch, and 4½-inch casing respectively, cemented in a common well bore. Applicant also proposes to install tubing in the latter two zones.

CASE 2020: Application of Amerada Petroleum Corporation for an order authorizing the triple completion of its Wimberly Well No. 13, located in Unit M. Section 24, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Langlie Mattix Pool, the disposal of salt water into the Grayburg and San Andres formations in the interval from 3500 feet to 4200 feet, and the production of oil from the Justis-Blinebry Pool by means of two parallel strings of 3½-inch casing cemented in a common well bore. Applicant would dispose of the salt water through one string of casing, produce the Blinebry oil through 1½-inch tubing set in the second string of casing, and produce Langlie Mattix gas through the annulus of the 1½-inch tubing and the second casing string.

CASE 2021:

Application of Shell Oil Company for authority to recomplete its State BUA Well No. 2 (formerly its Bluitt Unit Well No. 2) at an unorthodox oil well location in the Pennsylvanian formation within one mile of the Bluitt Pennsylvanian Pool. Said well is located 1980 feet from the North line and 660 feet from the West line of Section 16, Township 8 South, Range 37 East, Roosevelt County, New Mexico.

CASE 2022:

Application of Sinclair Oil & Gas Company for an order authorizing the dual completion of its Turner "B" SP Well No. 67, located in Unit L, Section 20, Township 17 South, Range 31 East, Eddy County, New Mexico, in such a manner as to permit the production of oil from the Grayburg-Jackson Pool and the production of oil from an undesignated Abo pool through parallel strings of 2-inch tubing.

The following cases will not be heard before 1 p.m. on July 27, 1960:

CASE 2023:

Application of Honolulu Oil Corporation for an order authorizing it to institute a pressure maintenance project in the Horseshoe-Gallup Oil Pool by the injection of water into the Gallup formation through its Navajo Well No. 4, located in the SE/4 SE/4 of Section 5, Township 31 North, Range 17 West, San Juan County, New Mexico; applicant further seeks the adoption of special rules governing the operation of said project.

CASE 2024:

Application of Humble Oil & Refining Company for an order authorizing it to institute a pressure maintenance project in the Horseshoe-Gallup Oil Pool by the injection of water into the Gallup formation through 29 wells located in Sections 3, 4, 9, 10, and 11, Township 31 North, Range 17 West, San Juan County, New Mexico; Applicant further seeks the adoption of special rules governing the operation of said project.

CASE 2025:

Application of Socony Mobil Oil Company for permission to convert to water injection its Navajo "A" Well No. 9, located in NE/4 NW/4 of Section 14, Township 31 North, Range 17 West, Rio Arriba County, New Mexico, in conjunction with a proposed adjacent pressure maintenance project in the Horseshoe-Gallup Oil Pool.

CASE 2026:

Application of The British American Oil Producing Company for an order authorizing the "slim-hole" completion of its Fullerton Well No. 7, located 1850 feet from the South and West lines of Section 11, Township 27 North, Range 11 West, Dakota Producing Interval, San Juan County, New Mexico, utilizing 2 7/8-inch tubing as casing.

- CASE 2027: Application of Hondo Oil & Gas Company for an amendment of Order No. R-1643 to provide an alternative to the fail-safe features required in the automatic custody transfer system authorized therein for the Hondo-Western-Yates State 647 lease, Empire-Abo Pool, Eddy County, New Mexico.
- CASE 2028: Application of Pan American Petroleum Corporation for an order authorizing it to commingle the production from the Empire-Abo Pool from all wells on eight separate leases in Sections 27 and 34, Township 17 South, Range 28 East, Eddy County, New Mexico. Applicant also seeks authorization of an automatic sustody transfer system to handle said commingled production.
- Application of Pan American Petroleum Corporation for an amendment of Order R-1399 to permit the commingling of Empire-Abo Pool production from Federal Lease No. IC-064050-A, E/2 SE/4 of Section 34 and NW/4 SW/4 of Section 35, Township 17 South, Range 27 East, with the Empire-Abo Pool production from those leases for which commingling was approved by paragraph one of said order and to permit the commingling of Empire-Abo Pool production from Federal Lease No. NM-025602, NW/4 and N/2 SW/4 of Section 15, Township 18 South, Range 27 East with the Empire-Abo Pool production from those leases for which commingling was approved by paragraph two of said order. Applicant also seeks an amendment of Order No. R-1399-A to permit production from the above-described leases in Eddy County, to be handled by the automatic custody transfer systems authorized in said order.
- CASE 2030: Application of Pan American Petroleum Corporation for permission to commingle the Empire-Abo Pool production from eleven separate State leases in Townships 17 and 18 South, Range 28 East, Eddy County, New Mexico. Applicant further seeks permission to install automatic custody transfer facilities to handle said commingled production.
- CASE 2031: Application of Union Oil Company of California for approval of its South Caprock Queen Unit Agreement, which unit is to embrace 9526 acres in Townships 14 and 15 South, Ranges 30 and 31 East, Caprock Queen Pool, Chaves County, New Mexico.
- CASE 2032: Application of Union Oil Company of California for an order authorizing it to institute a waterflood project in the Caprock-Queen Pool on its proposed South Caprock Queen Unit by the injection of water into the Queen formation through ten wells located in Township 15 South, Range 31 East, Chaves County, New Mexico, and for authority to drill a water injection well at an unorthodox location, being 330 feet West of the East line and 1320 feet South of the North line of Section 18, Township 15 South, Range 31 East.

CASE 2033:

Application of Cabeen Exploration Corporation for permission to complete its State 1-K Well located 1980 feet from the South and West lines of Section 11, Township 10 South, Range 32 East, in an undesignated Permo-Pennsylvanian pool in Lea County, New Mexico as a "slim-hole" completion, using 2-7/8 inch casing.

The following cases will not be heard before 9 a.m. on July 28, 1960

CASE 2034:

Application of Gulf Oil Corporation for an order authorizing the dual completion of its J. N. Carson Well No. 6, located 330 feet from the South line and 965 feet from the East line of Section 28, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Penrose-Skelly Pool and the production of gas from the Blinebry Gas Pool through parallel strings of 2 3/8-inch tubing.

CASE 2035:

Application of Gulf Oil Corporation for an order authorizing the dual completion of its W. T. McCormack Well No. 12, located 554 feet from the North line and 1874 feet from the East line of Section 32, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Drinkard Pool and the production of oil from the Wantz-Abo Pool through parallel strings of 2 3/8-inch tubing.

CASE 2036:

Application of Charles Loveless, Jr., for the establishment of a 280-acre non-standard gas unit in the Atoka-Pennsylvanian Gas Pool consisting of the NE/4, N/2 NW/4 and SW/4 NW/4 of Section 21, Township 18 South, Range 26 East, Eddy County, New Mexico. Applicant proposes that said unit be dedicated to the Brunner No. 1 Dayton Townsite Well to be located on an unorthodox location at a point 1650 feet from the North line and 2310 feet from the East line of said Section 21.

**CASE 2037:** 

Application of Sun Cil Company for the creation of a new oil pool for Wolfcamp production to be designated as the Jenkins-Wolfcamp pool and to consist of Sections 2, 3, 4, 8, 9, 10 and 11 of Township 9 South, Range 34 East, Lea County, and Sections 34 and 35, Township 8 South, Range 34 East, Roosevelt County, New Mexico. Applicant further seeks the promulgation of special rules and regulations for said pool including a provision for 80-acre drilling and proration units.

CASE 2038:

Application of Benson-Montin-Greer Drilling Corporation for an order authorizing the dual completion of the Jones Well No. 1, located in Unit P, Section 17, Township 28 North, Range 13 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup Pool and the production of gas from the West Kutz-Dakota Pool through parallel strings of 12-inch OD tubing.

-5-Docket No. 21-60

CASE 2039:

Application of Southwest Production Company for approval of an unorthodox oil well location in the Gallegos-Gallup Oil Pool for its Rummel Federal Well No. 1, located 790 feet from the North line and 1190 feet from the West line of Section 36, Township 27 North, Range 12 West, San Juan County, New Mexico.

CASE 2040:

Application of Neville G. Penrose, Inc., for an order authorizing the dual completion of its Grizzel Well No. 1, located in Unit G, Section 5, Township 22 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Tubb Gas Pool and the production of oil from the Drinkard Pool through the casing-tubing annulus and 2 3/8-inch tubing respectively.

#### **NEW MEXICO OIL CONSERVATION COMMISSION**

SANTA FE, NEW MEXICO

#### HAM OFFICARRLICATION FOR DUAL COMPLETION

7-3-58

Field Nam	Log <b>yndesig</b> n	ATED	County SAN J	UAN Date Ju	me 24, 1960
Operator	BENSON-MONTIN-GR DRILLING CORP.	KER 12 Lease	jones	Well No.	1 4
Location	Unit P	Section 17	Township 28N	Range	13W
of Well	e New Mexico Oil Conservation			lasion of a reall in these on	
	within one mile of the subject ver is yes, identify one such i			r, Lease, and Well No.:	
3. The fol	llowing facts are submitted:	Up Up	per Zone	W. Kutz Lower	Zone
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<b>b.</b> Cop	and Bottom of			6304-631	Q
F	Pay Section	5665, 5660	, 5655	6234-624	
	Perforations)				
	be of production (Oil or Gas)	<del>_</del>	011	Gas	
	hod of Production	* Flow		Flow	ſ
	Flowing or Artificial Lift) Howing are attached. (Please	1 VEC - NO		<del></del>	<del></del>
	d. Electrical log of the well thereon. (If such log is no loffset operators to the lease an-American Petro	or available at the time at on which this well is l	application is filed, it shal ocated together with their	l be submitted as provided correct mailing address.	by Rule 112-A.)
* 1	Well is equipped	with 3 gas li	ft valves for f	uture artificia	al lift.
of such		24, 1960	•		
Dri	FICATE: I, the undersigned, Lling Corp. (com supervision and direction and	pany), and that I am auti		make this report; and that	
_	nould waivers from all offset o				

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.

#### BENSON-MONTIN-GREER DRILLING CORP.

GENERAL OFFICE: 2808 FIRST NATIONAL BLOG DKLAHDMA CITY 2, OKLAHDMA PHONE CENTRAL 5-0546

158 Petroleum Center Building Farmington, New Mexico June 24th, 1960

(2038 FARMINGTON, NEW MEXICO

PHONE DA 5-8874

Pan-American Petroleum Corp. Box 487 Farmington, New Mexico

> Benson-Montin-Greer Drilling Corp. Re: No. 1 Jones Well

SE/4 Sec. 17, Twp. 28N, Rge. 13W,

San Juan County, New Mexico

Gentlemen:

In accordance with Rule No. 112-A of the Rules and Regulations of the New Mexico Oil Conservation Commission, we are sending you herewith copy of Application for Dual Completion covering the captioned well.

Yours very truly,

BENSON-MONTIN-GREER DRILLING CORP.

PRICEMAL SIGNED DI ALBERT R. GREER

> Albert R. Greer Vice-President

New Mexico Oil Conservation Commission

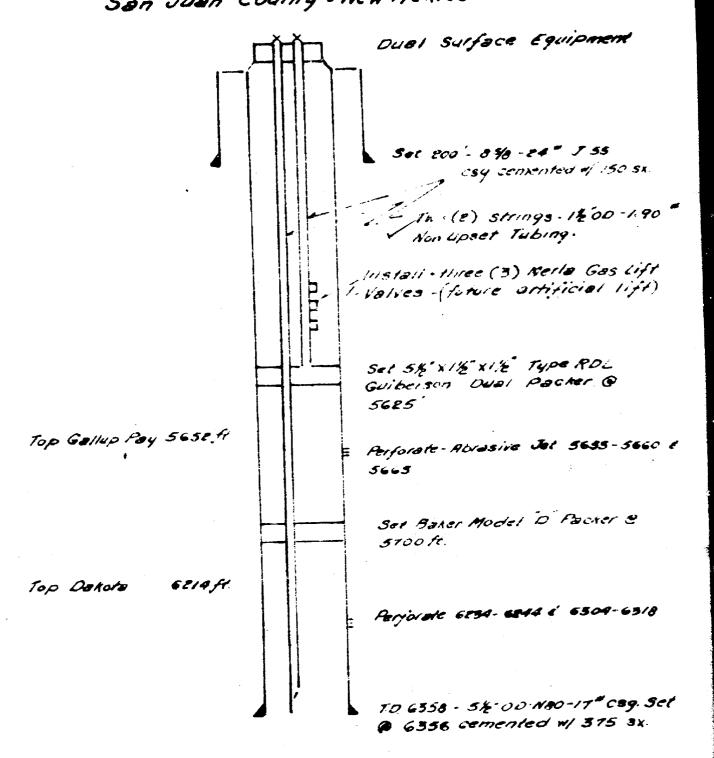
BENSON-MONTIN-GREER DRLG CORP.

Jones "I

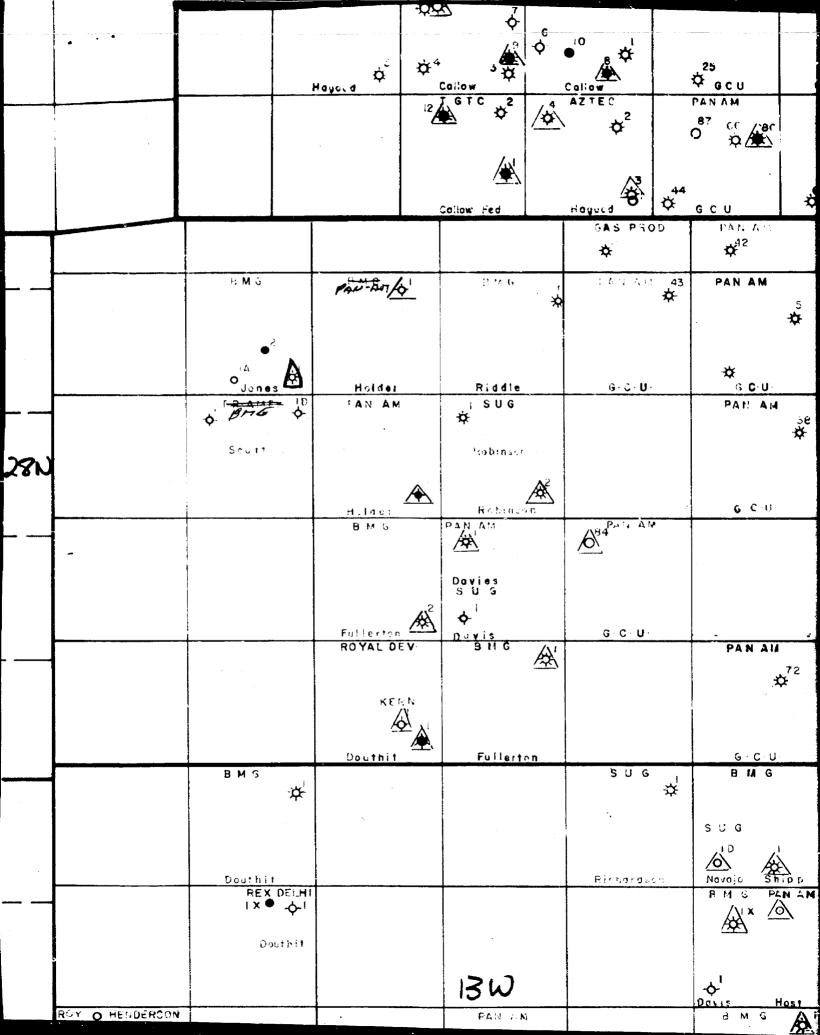
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Son Juan County - New Mexico

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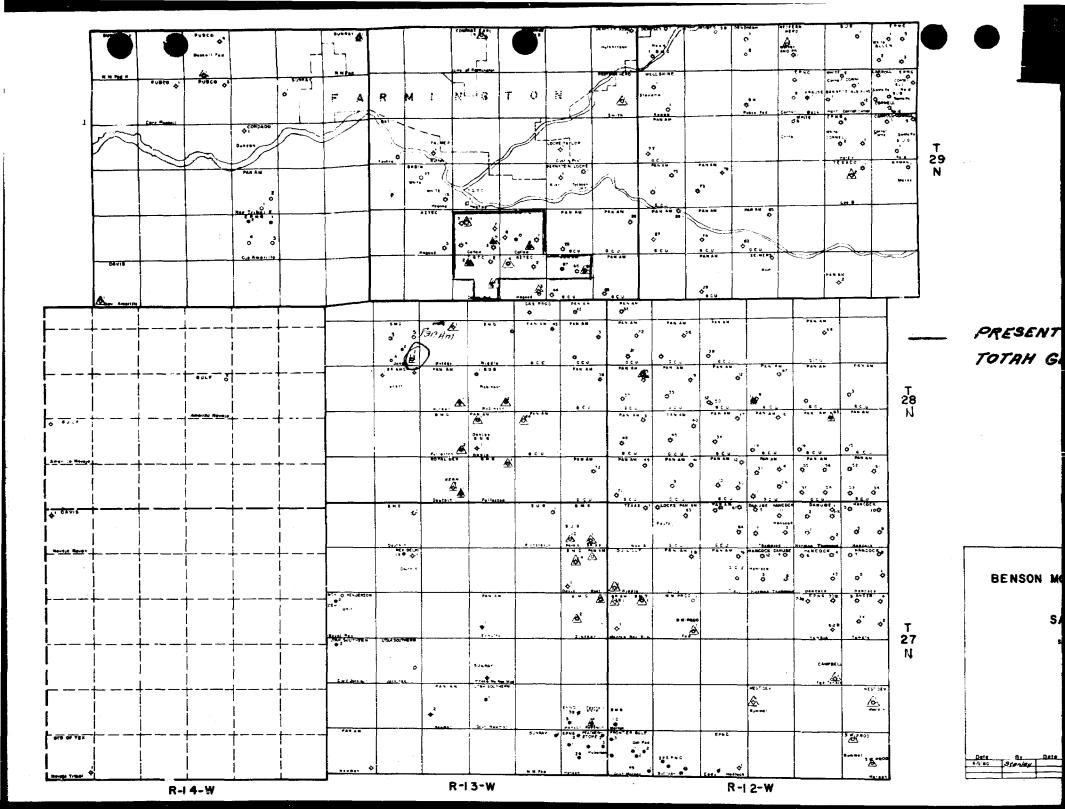
MAIN OFFICE CCCOIL CONSERVATION COMMISSION
1900 CUL S AM 8:33 Aztec, New Mexico

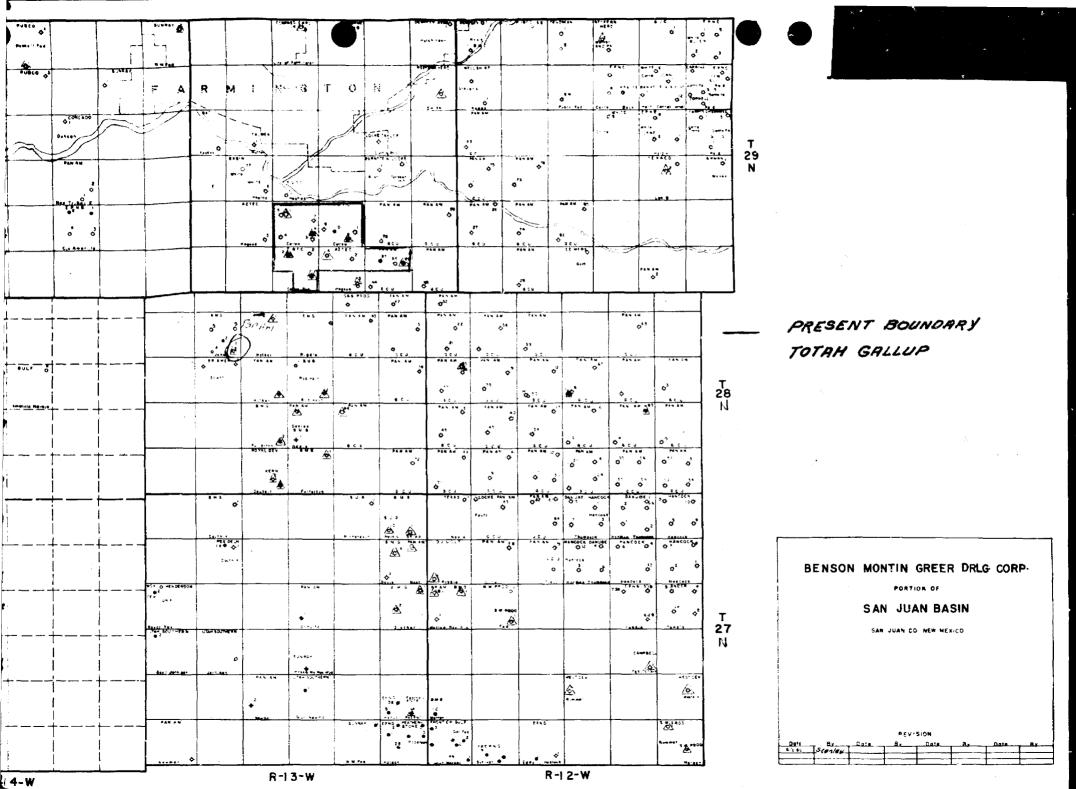
Case 9038

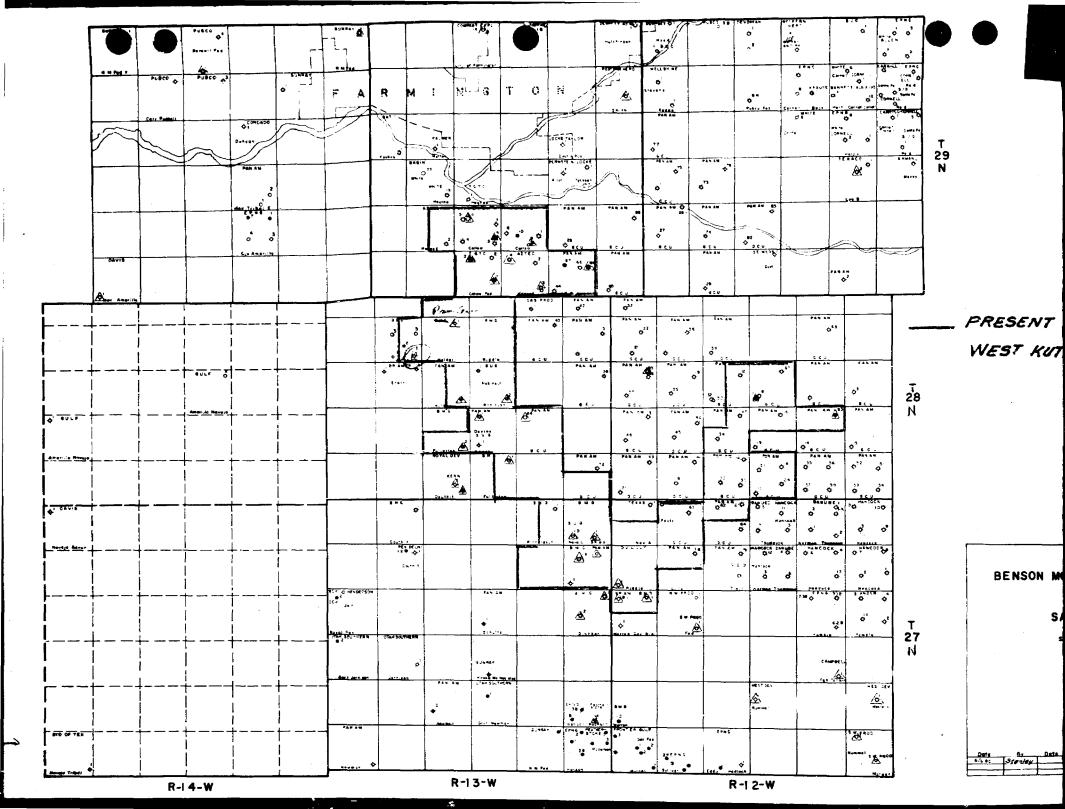
	/
	DATE VINE 30, 1960
OIL CONSERVATION COMMISSION BOX 871	RE: Proposed NSP
SANTA FE, NEW MEXICO	Proposed NSL
	Proposed NFO
	Proposed DC
Gentlemen:  I have examined the application dated	VINE 2 +, 1960 NES 4 17-17-28N-13W
	NES 1 17-17-28N-13W
Operator Lease and Well No.	S-T-R
and my recommendations are as follows:	praial after
Reavina	
Yours ver	ry truly,

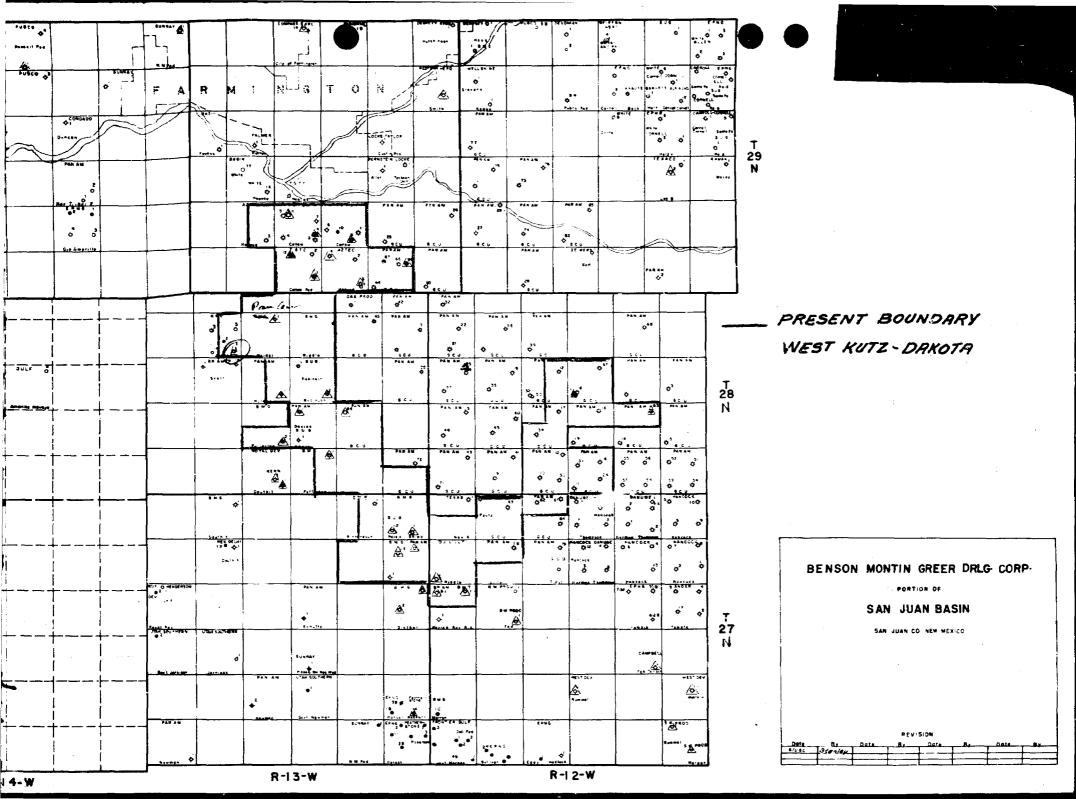
OIL CONSERVATION COMMISSION

A.K. Jenguik









#### BENSON-MONTH-GREER DRILLING CORP.

GENERAL OFFICE:

28GE FIRST NATIONAL BLOG

OKLANDMA CITY 2, OKLAHOMA

PHONE GENTRAL 3-0544

158 Petroleum Centor Building Fermington, New Mixico June 24th, 1900 FARMINGTON, NEW MEXICO

Pan-American Petroleum Corp. Bux 487 Parmington, New Mexico

Ro: Benson-Mintin-Greer Drilling Corp.
No. 1 Jones Well
SK/4 Sec. 17, Two. 28%, Rgs. 13%,
San Juan County, New Mexico

#### Gentlemen:

In accordance with Rule No. 112-A of the Rules and Regulations of the New Maxico Oil Commercation Commission, we are sending you herewith copy of application for Rule. Completion covering the captioned well.

Yours very truly,

MERSON-HONTIN-GREER DRILLING CORP.

Misers F. Greer Vice-Fresident

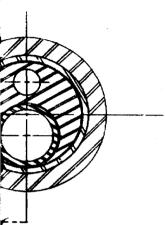
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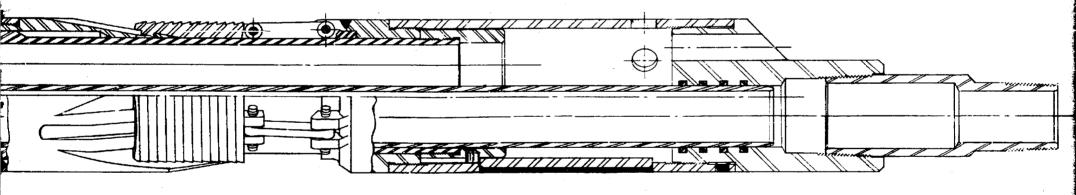
#### SANTA FE, NEW MEXICO

#### APPLICATION FOR DUAL COMPLETION

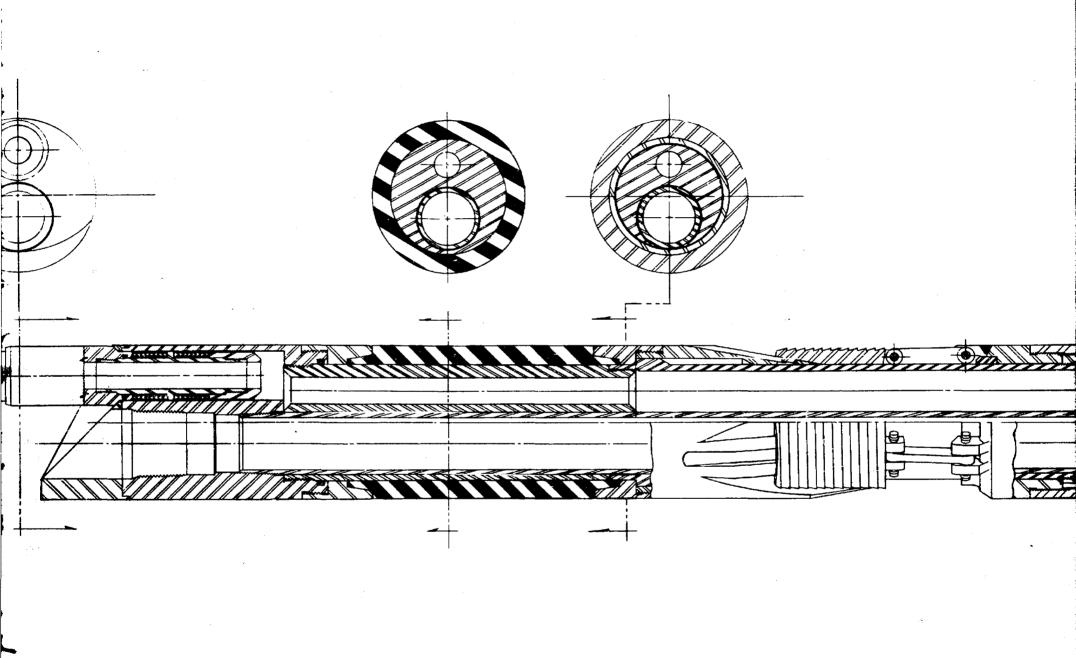
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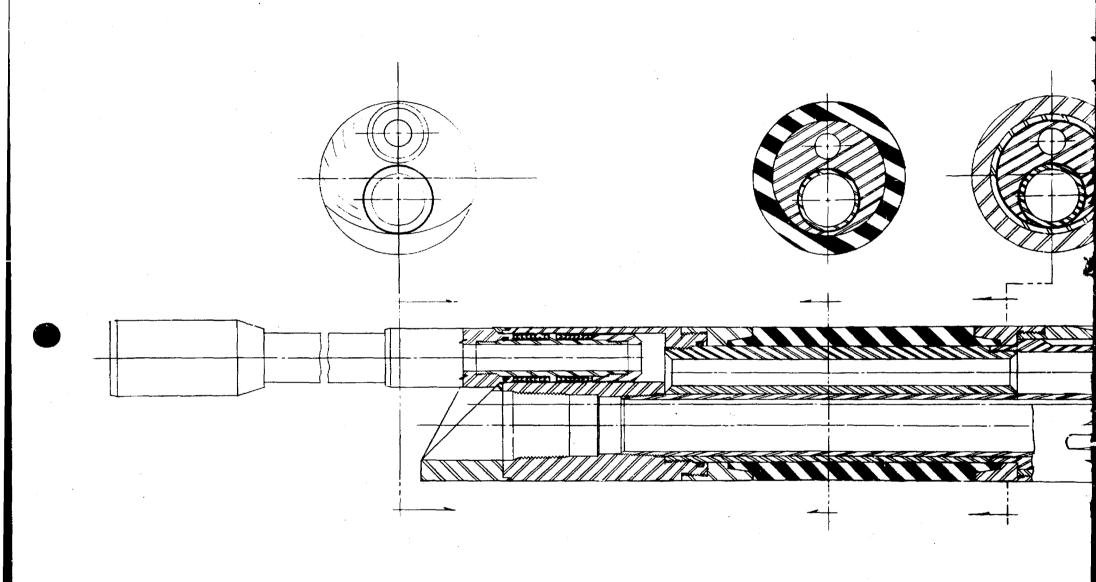
NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.





"PO" PACES ASSEMBLY 7-28-32 × 2 12 17 PC 6.5-56 NO. 30272





## BAKER

OIL TOOLS, INC

## BAKER MODEL "D" RETAINER PRODUCTION PACKER

#### Product No. 415-D

USE: The Baker Model "D" Retainer Production Packer is the most widely used, most versatile, high-performance, drillable production packer available. Reference to the application section Pages 494 through 498 will disclose that it has been used successfully in nearly every conceivable production application from simple single-zone, permanent-type completions throughout dual- and multiple-zone installations, including complex multiple-string applications. In conjunction with many of its numerous production applications it is frequently used as a high-performance squeeze or testing packer or as a permanent or temporary bridge plug.

ADVANTAGES: The Model "D" Retainer Production Packer offers all of the advantages and features described in Pages 501 through 503, plus one great advantage: its proven performance. This packer offers proven reliability based on thousands of successful applications under the most rigorous of high-pressure and temperature conditions over the past 16 years. Many of the first production models of this packer are still providing excellent service.

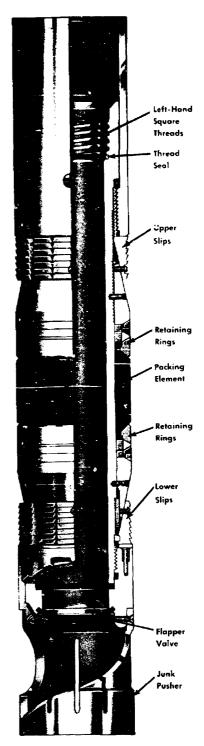
CHARACTERISTIC CONSTRUCTION FEATURES: (Refer to Fig. H-184). The Model "D" Retainer Production Packer contains two sets of opposed slips, a packing element confined by metal retaining rings, features that are characteristic of all Baker Retainer Production Packers. The characteristic feature of this packer is its smooth continuous I.D. sealing bore that contains a flapper-type backpressure valve at its lower end. In most instances the packer is available with different sealing bore sizes for a given O.D. and weight range of casing (see specification guide Pages 518 and 519).

Although the Models "DA", "F", and "FA" Retainer Production Packers contain larger bores for an equivalent casing O.D. and weight range, their use in normal production hookups is not warranted unless a larger bore is mandatory.

SETTING METHODS: All Model "D" Retainer Production Packers can be set on wire line (Pages 504, and 542) or tubing or drill pipe (Page 514).

#### **ACCESSORIES**

The typical accessories for use with the Model "D" Retainer Production Packer are illustrated and briefly described on the opposite page. Refer to specification guide on Pages 518 and 519 for partial specifications. These accessories can be used with the Baker Model "H" Retainer Production Packer, once the setting-seal mandrel has been removed.



Product No. 415-D

Fig. H-184

Baker Model "D"

Retainer Production

Packer

## **BAKER**

OIL TOOLS, INC.

## HOW TO DRILL OUT BAKER RETAINER PRODUCTION PACKERS

The recommendations listed below should be used as a guide only. Past experience and common sense should govern the drilling-out operation.

#### With Rotary Rig: BAKER PACKER MILLING TOOL Product No. 747

The Packer Milling Tool normally mills over a Baker Retainer Production Packer in 2 to 4 hours. After the upper outside portion of the packer is milled up, the balance of the packer is retrieved in over 90% of the jobs.

This new Packer Milling Tool can be run on drill pipe or tubing. It is recommended, however, that a Baker Junk Basket and at least one drill collar be run between the Packer Milling Tool and the drill string, refer to Fig. H-183-A, View I.

Both the milling shoe and the bottom sub of the Milling Tool are dressed with hundreds of crushed tungsten carbide chips for fast milling. All connec-

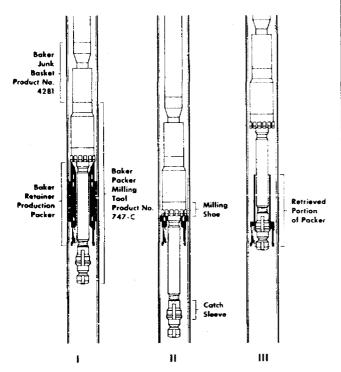


FIG. NO. 183-A-OPERATIONAL VIEWS

tions are threaded (right-hand thread) and locked with set screws. The tool itself will withstand a 50,000-lb. pull.

With pump on, run in and tag packer lightly. Set down with about 5,000 lbs., then take a 15,000-lb. strain to check operation of catch sleeve. Milling

operation is normally achieved with full circulation, from 5,000 to 10,000 lbs. of weight on drill string, and rotary set at 50 to 75 r.p.m.

View II illustrates the position of the Milling Tool as it mills over the top outside portion of the packer. Note that only the outside of the packer is milled, and that the Milling Tool is stabilized in the casing by the lower part of the Milling Tool which rotates inside the packer body.

After the packer is milled over and freed, the catch sleeve retrieves the body, guide and junk pusher of the packer, see View III. The Milling Tool is designed to mill over a packer and retrieve it in one round trip.

In case of an emergency, the Packer Milling Tool can be released from the packer by holding a 5,000 to 10,000-lb. strain on the drill string and rotating to the right until the catch sleeve collapses.

The Baker Packer Milling Tool, Product No. 747, is available to mill over and retrieve most sizes of Baker Models "D," "DA," "F" and "FA" Retainer Production Packers.

#### **Rock Bits**

The average time required to drill out a Baker Retainer Production Packer with rock bits usually ranges from 8 to 16 hours.

A Baker Junk Basket and at least one Drill Collar should be run between the rock bit and the drill string.

A new, high quality, hard formation rock bit with medium to short, regularly spaced teeth should be run. Select a bit that will not "track," and of a size that will give minimum clearance between the bit and the casing. It is recommended that a bit without "wings" between the outer teeth be used.

When feeling for the packer, try to avoid any impact which might break some of the teeth on the bit.

Experience has shown that rotary speeds between 50 and 75 r.p.m. will give the best results under normal conditions.

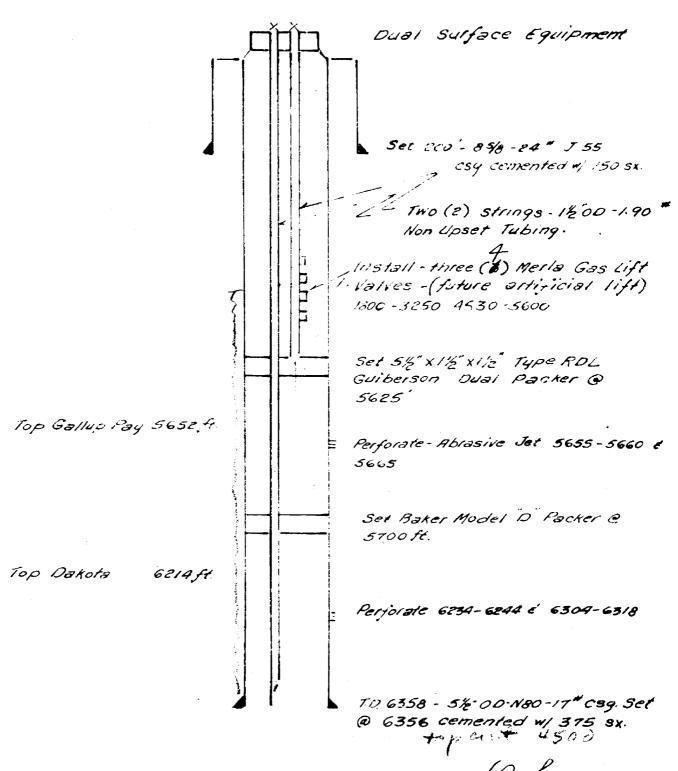
Weight should be gradually increased on the packer until there is as much weight on it as is safe for the bit and/or the drill pipe. From 14,000 to 15,000 lbs. has proved to be an efficient weight when using drill pipe. Care must be taken, when using tubing, not to apply excessive weight.

#### With Cable Tools:

Use conventional cable tools with either bevel or star bit. Dump about two barrels of heavy mud on top of the packer.

Drill in the usual manner. Run sand pump or hydrostatic bailer for clean out between drilling runs. Spot fresh mud and continue drilling. When the section of the packer that contains the packing element is reached the drilling efficiency can be increased considerably by dropping broken bottle glass on top of the packer.

# BENSON-MONTIN-GREER DRLG.CORP. Jones \*1 190/S- 190 E Sec. 11-28N-13W San Juan County - New Mexico



#### 158 Petroleum Center Building Parmington, New Mexico July 12th, 1960

New Maxico Oil Conservation Commission 1900 Rio Brazos Road Astec, New Moxico

Attention: Mr. K. C. Arnold

Re: Packer Test: Duel Completion: Benson-Montin-Greer & Jones, SE/V Sec. 17, Twp. 25%, Rgs. 13W, SAn Juan County

#### Gentlemen:

We propose to conduct packer test on the captioned well in accordance with the following schedule:

- 1. Shut in Gallup formation July 16th at 8:00 AM. The Dekets formation has been shut in for a period in excess of 7 days, and will continue to be shut in until opened as set out below.
- 2. After being shut in 3 days, which will be 8:00 AM on July 19th, the Gallup formation will be produced for 24 hours.
- 3. Deadweight tests will be taken of the Dakots shut-in pressure every day (except Sunday) ecomencing July 14th.
- 4. Measurement of Dakota shut-in pressure the morning of July 20th, as compared to previous pressures, will indicate whether a leak exists from the Dakota to the Gallup.
- 5. The Gallup fermation will be abut in from 3:00 AM on July 20th to 8:00 AM July 23rd.
- 6. Becoveright pressures will be taken of the Callup formation on the morning of July 21st, 22md and 23rd.
- 7. The Dakota formation will be opened and produced on standard potential test for three hours, and deadweight pressures of the Gallup will be taken during this test.
- 8. Samparison of Sondweight pressures taken on the Salimp while the Dakota is being flowed will indicate the presence or assence of look from the Gallup to the Dakota.

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PACKER LEAKAGE TEST
BENSON-MONTIN-GREER DRILLING CORP.

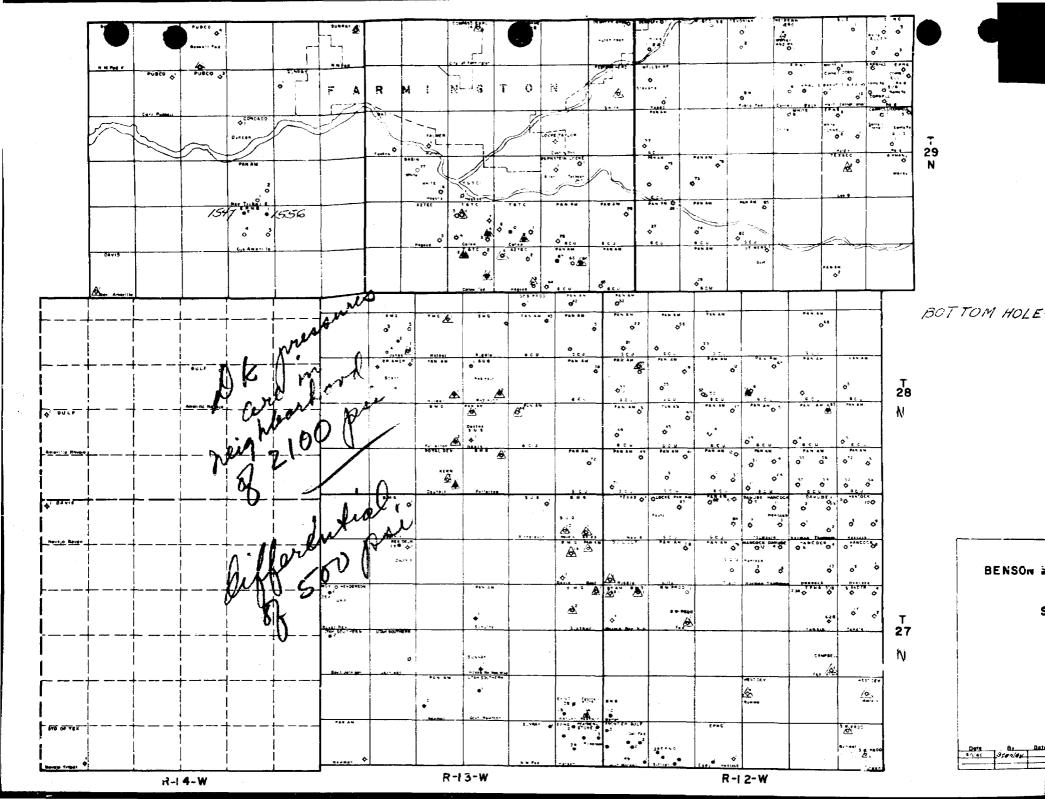
JONES #1

DATE	TIME	GALL PRESS Tbg.	URE	DAKOTA PRESSURE	REMARKS
7-16-60	8:00 A.M.	shut	-in	1661	Gallup produced 128 bbls/24 hrs. w/GOR of 823:1 % choke - Flowing csg. 400# - Flowing tbg. 25#-40#. Dakota Pressure stable at 1661#
7-17-60	8:00 A.M.	-		1662	
7-18-60	3:00 A.M.			1663	
7-19-60	8:00 A.M.			1667	
7-20-60	8:00 A.M.	N		1669	
7-21-60	8:00 A.M.	726	726	1673	
7-22-60	8:00 A.M.	766	766	1676	
7-23-60	8:00 A.M.	790	790	1678	Dakota opened to flow at 8:00 A.M. Pressure 1st hr 651 Pressure 2nd hr 626 Pressure 3rd hr 578 Gallup pressure stable at 790# during test
	(PRESSURES	RECORDE	D <b>WIT</b> H	DEAD WEIGHT !	Tester.)

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#### NEW MEXICO OIL CONSERVATION COMMISSION

#### GAS-OIL RATIO REPORT

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	Well	Date of	Producing	Choke	Test	Daily	Prod	uction Du	ing Test	GOR
Lean	No.	Test	Method	Size	Hours	Allowable Bbls.	Water Bbls.	Oil Bbls.	Gas MCF	Cu. Ft. Per Bbl.
Jones	1	7/16	7	1/2	21	94 <b>*</b>	0	105	86.4	823
<b>4 9 1 1</b>										
							-			

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 degrees F. Specific gravity base will be 0.60.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission. In accordance with Rule 301 and Appropriate Pool Rules.

	(I certify th	at the information given is true	c and complete to the best of my knowledge.)
July 26			BENCH-HOSTIS-QUEEN DRILLING CORP.
**********	***************************************		Сотрану
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PHONE

# BEFORE THE OIL CONSERVATION COMMISSION Santa Fe, New Mexico July 28, 1960.

#### IN THE MATTER OF:

APPLICATION OF BENSON-MONTIN-GREER DRILLING CORPORATION for an order authorizing the dual completion of the Jones Well No. 1, located in Unit P, Section 17, Township 28 North, Range 13 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup Pool and the production of gas from the West Kutz-Dakota Pool through parallel strings of 1½-inch OD tubing.

CASE

NO. 2038

#### BEFORE:

Hon. Daniel S. Nutter, Examiner.

### TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: Hearing will come to order, please. Case No. 2038.

MR. PAYNE: Case 2038. Application of Benson-Montin-Greer Drilling Corporation for an order authorizing a dual completion.

MR. KELLAHIN: Jason Kellahin, of Kellahin and Fox, Santa Fe, New Mexico, representing the Applicant. We have one witness, Mr. Stanley.

(Witness sworn.)

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CH 3-6691

STANLEY J. STANLEY, a witness, called by the Applicant, having been first duly sworn, was examined and testified as follows:

#### DIRECT EXAMINATION

#### BY MR. KELLAHIN:

- Q Will you state your name, please?
- A My name is Stanley J. Stanley.
- Q By whom are you employed, and in what position?
- A I am employed by Benson-Montin-Greer Drilling Corporation, Farmington, New Mexico.
  - Q What is your position with Benson-Montin and Greer?
  - A I am an engineer.
- Q Have you testified before this Commission as a petroleum engineer, and had your qualifications accepted?
  - A Yes, sir, they have.
    - MR. KELLAHIN: Are the witness' qualifications acceptable?
- MR. NUTTER: Well, there is a mistake, they are not in the record. Yes, they are.
- Q (By Mr. Kellahin) Mr. Stanley, are you familiar with the application which has been filed in Case 2038?
  - A Yes, I am.
- Q Would you state briefly what Benson-Montin and Greer proposed in this application?
- A Benson-Montin and Greer on their Jones Number 1, located in the SE/4 of Section 17, Township 28 North, Range 13 West, San



Juan County, New Mexico, propose to dually complete an oil well from the Gallup formation. and a gas well from the Dakota formation.

(Whereupon, Applicant's Exhibit 1 marked for identification.)

- Q Now, referring to Exhibit 1, and with reference to the first page in that exhibit, would you discuss the information shown there?
- A Yes, sir. Page 1 of Exhibit Number 1 shows the present boundary of the Totah-Gallup Pool, and our well is located, namely the Jones Number 1, approximately 10,000 feet from the boundary line of the Totah-Gallup.
- Q It is then not in any designated Gallup Oil Pool as designated by this application?
- A That is correct. It is a non-designated oil well in the non-designated oil pool.
- Q In your opinion, it is a step-out from the Totah-Gallup?
- A Yes, sir, it is, and subsequent drilling may prove, or may not prove that the two fields are connected.
- Q Now, referring to the second page of the exhibit, would you discuss that information?
- A The second page of the exhibit shows the present boundary of the West Kutz-Dakota Pool, and our Jones Number 1 is located within the boundaries of the West Kutz-Dakota Pool.
  - Q So your completion would then be in the designated pool



CH 3-6691

for Dakota production, and undesignated pool for Gallup production?

- A That is correct.
- Q Now, referring to page 3 and 4 of the exhibit, would you discuss those?
- A Page 3 and page 4 of Exhibit Number 1 are namely, also written by Albert R. Greer, vice president of Benson-Montin-Greer Drilling Corporation, these also and forms were completed by Mr. Greer applying for a dual completion for the Dakota gas well and Gallup oil well.
- Q Now, with reference to the next page of the exhibit, would you discuss the completion of the well, but first let me ask you what is the present status of this well?
- A The present status of the well is dually completed, and we are waiting on the Commission to give us an allowable. I might mention that at this particular time that we need the allowable rather urgently. We do have several wells drilling on the lease at the present time, and we need frack oil for the purposes of completion.
- Q Now, referring to the diagramatic sketch which I believe is page 5 of the exhibit, discuss that.
- A This page 5 is a shematic drawing of a Model K. D.

  Packer. I feel reasonably sure the Commission has received this exhibit many times in dual completions. The reason we have drawn the packers in this particular well, as you will see on the following page, is the fact we will run a packer on both the



## DEARNLEY-MEIER REPORTING SERVICE, Inc.

Ada Dearnley, President Marianna Meier, Vice President Mardi Proctor, Sec. - Treas. Over 10 years of Reliable Service SUITE 1120 SIMMS BUILDING
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Oil Conservation Commission P. O. Box 871 Santa Fe, New Mexico

Re: Case Nos. 2038, 2039 and 2040

Gentlemen:

Enclosed are the originals and copies of the above numbered cases before the Oil Conservation Commission on July 28, 1960.

Sincerely yours,

DEARNLEY-MEIER REPORTING SERVICE

By Mardi Procter

August 16, 1960

mp/enc.

HONE CH 3-6691

Gallup formation and Dakota formation for one purpose only.

MR. NUTTER: The R.D. Packer, Mr. Stanley?

The R.D. Packer. The reason we are going to run this packer is to provide an annular space for a gas lift system. We feel that the Gallup and its characteristics throughout the San Juan Basin, is that the fact it is very short-lived as far as flowing characteristics are concerned, and we anticipate in the near future this particular well, producing from the oil from the Gallup formation, will have to be artificially lifted. make a notation at this time. Benson-Montin and Greer has signed a contract with El Paso Natural Gas. Our company is going to spend considerable sums of money into laying a closed gas lift We will take the casinghead gas from the Gallup formation compress, use it to artificially lift the Gallup oil, and then go ahead and sell any excess gas we have to El Paso Natural Gas under pressure of 500 pounds, namely, the Dakota gas gathering system. Our equipment is now coming into Farmington; I noticed before I left most of it is there, and we anticipate this program very shortly.

- Q If this well goes on gas lift, there will be no gas flared?
  - A No gas flared at all.
- Q Referring to the next page, which is page 7, would you discuss that?
  - A Page 7 is a bigger model R. D. Packer, and the Commission



has probably received this exhibit many times in dual completions.

They are some of the more popular packers used in the oil field.

MR. NUTTER: These packers, you will rely on them for separation between the two zones?

- A That is correct.
- Q (By Mr. Kellahin) Referring to the diagram on page 8 of the exhibit, has the completion been made?

A Yes, sir, that is correct, all the details are here. We are running two dual strings, inch and a half in diameter. I might add here, we are contemplating bottom hole pressures in the Gallup zone, prior to putting on gas lift. We have installed artificial Gas lift valves at the depth on this particular well at 1800, 3250, 4530, and 5600. We will, with these valves, artificially lift the Gallup oil zone.

- Q The production will be through, partly through strings of tubing as indicated on the exhibit, is that correct?
  - A That is correct.
- Q Has this type of completion, which is shown here, has it heretofore been approved by this Commission?
- A Yes, sir, it has been approved by this Commission many times. I might add that on page 1 you will note that the Commission has granted Tennessee Gas and Transmission Company under Callow leases, four dually completed wells. I believe that on the first well Tennessee Gas Transmission Company, I believe on their California Number 8-D, had a hearing, Case Number 1784, and the



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Commission issued an order Number 1497, allowing Tennessee Gas and Transmission Company to go ahead and dually complete their well; and then the subsequent wells, namely Number 9, Number 11, and Number 12, they were given administrative orders DC-861, 887, and 908, and these were completed in the Dakota.

- Q All in the Gallup formation?
- A Yes, sir, they are.
- Q Now, in your opinion, does this type of completion achieve effective separation with the producer?
- A Yes, sir, it has in this particular well, and has in many cases, and our subsequent testimony will show we have effective separation between the Dakota and Gallup zones.
  - Q What is the cementing program on this well?
- A We cemented this well through the Dakota, and then took a temperature survey to determine the top of our cement, which was at 4500 feet. I might enter into the record, the Gallup was perforated at 5655, 5660, and 5665, with an abrasojet; and again I might state that the top of the cement was located at 4500 feet, and its perforation in the Dakota and Gallup was a routine operation.
- Q Would that effectively prevent communication behind the pipe?
- A Yes, sir, it will effectively prevent any communication between the zones.
  - Q Now, have you run some packer tests on this well since



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completion?

A Yes, sir, we have. On page 7, you may note a letter written by Mr. Albert R. Greer, vice president of Benson-Montin-Greer, to the New Mexico Oil Conservation Commission, 1,000 Rea Road in Azter, New Mexico, for the attention of Mr. Arnold, we outline a daily schedule, day by day, at 8:00 o'clock in the morning to conduct certain tests to prove to the Commission that the two zones were effectively separated, and we invited the Commission by this letter to witness these tests. And we diligently followed this schedule day by day, and every day at 8:00 o'clock in the morning, to provide testimony and invite witnesses to witness this particular test.

Q Do you have the results of those tests?

A Yes, sir, I have the results; on the following page is shown the tabulated results, and then subsequently from this page some graphs were drawn which portray the penetration we received between the Gallur and Dakota well. You will notice that the Dakota pressures are rising; this is typical of the Dakota formation since it is very tight, and we produced the Gallup on July 16, 1960, with the Dakota formation shut in at the pressure of 1661 pounds surface pressures. The Gallup was produced at a rate of 128 barrels per day, that is, in the 24 hours, with the G.O.R. of 823 to 1; on the half-inch choke the pressure, casing pressure was 400 pounds, remaining constant at 400 pounds, due to the artificial gas lift valves that are installed in a similar



string of tubing. The flowing tubing varied from 25 pounds to 40 pounds, and the Dakota pressures continued to rise because on the following day, which was July 17, 1960, the Dakota formation actually experienced an increase of 1 pound pressure, and remained at 1661 throughout the entire 24-hour test period.

Also on this tabulated sheet, on July 23, 1960, the Dakota was open to flow at 8:00 o'clock on that particular date, and we measured the pressures approximately every 15 minutes, but we did tabulate them here just on the hour bases. And the pressures on the first hour was 651, the second hour 626, and on the third hour 578; you will note, however, that the Gallup pressure remained constant at 790 pounds. It was our intent in flowing the Dakota to go ahead and lower the pressures below the shut in pressures of the Gallup formation.

Q That information has been presented in graphic form in the exhibit, has it not?

A Yes, sir, on the following two pages, you will note on page 9 and page 10, that this information has been plotted. I plotted this information, and on page 9 you might see that the Dakota shut in tubing pressure is constant at 1661 pounds; the Gallup casing pressure, due to the nature of the artificial valves that are installed in the well, remains constant at one hundred and some odd pounds, but the Gallup flowing tubing pressure varied from 25 to 40 pounds. And this is portrayed on page 9 on that particular graph, and on page 10 when we opened the Gallup --



- during that test?
  - No. sir. there was not.
- Do you have pressure information on other wells in the area?
- Yes, sir, I do. On this particular exhibit Number 1, A I have some bottom hole pressures. We have contemplated on taking some, but the only pressures that I was able to obtain was El Paso Natural Gas. You will note that El Paso Natural Gas drilled two wells, which are completed and, namely, the El Paso Natural Gas Ojo Amarillo Number 1, and 2, and they are drilling at the present time Number 3 and 4. El Paso Natural Gas stated they would give me these pressures and I could present them to the Commission to show the Commission the bottom hole pressures. Namely. I think our wells are approximately of the same pressure. The Number 1 well, the Ojo Amarillo well of El Paso Natural Gas was 1556 pounds, and the Number 2 well was 1547 pounds. I might add that I left an exhibit at home, that the Dakota pressures in our particular area, after stabilization and shut in over a long period of time, are over 2,000 pounds. They are on the order,



actually, of 2100 pounds at the present time.

- Q Then under shut in conditions you have a pressure of essentially approximately what?
- A Under shut in conditions, we have a differential in pressure of 500 pounds.
- Q Now, referring to the final page of the exhibit, would you discuss that?
- A This is a gas-oil ratio report taken on our Gallup zone on July 16, 1960, submitted to the Commission for the potential of our Jones Number 1 flow on the half inch choke, and after testing 21 hours, and produced 9 -- 105 barrels of oil with an allowable of 94 barrels, and a G.O.R. of 123 to 1.
- Q Now, referring to the final portion of the exhibit which is a Sun R. J. log, have you marked the tops of the formations on that exhibit?
- No, sir, I have not. I would like to read them into the record. This is an induction electro-log, Benson-Montin and Greer Jones Number 1. I would like to read into the record some of the formation tops in this particular well. The top Pictured Cliffs is 1580; Cliff House 2505; the Menifee 2550; Point Look Out 4098; Mancos 4274; Gallup 5260; base of the Gallup 5705; top of the Senosity is 5747; Green Horn 6124; Gramerco is 6168; Dakota 6214. I might also read into the record the perforations that exist in this particular well, namely: In the Dakota, it is perforated from 6234 to 6244, and 6304 to 6318; it was abrasojetted in the



Gallup zone, the abrasojet from 5655 to 5560, 5665.

- Q Do you have anything to add to what you have testified to?
- A No, sir, except the fact I do want to remind the Commission that we have a production problem in the fact that we want to go ahead and move some oil on the lease for completion; we would like to go ahead and get an allowable on the Jones Number 1 as soon as the Commission can give us one.
- Q Was Exhibit 1 prepared by you, or under your direct supervision?
  - A Yes, sir, Exhibit 1 was prepared by me.
- MR. KELLAHIN: I would like to offer in evidence Benson-Montin-Greer Exhibit Number 1.
- MR. NUTTER: It will be admitted into evidence, Benson-Montin-Greer's Exhibit Number 1. Do you have anything else?

MR. KELLAHIN: That is all I have.

MR. NUTTER: Does anyone else have any questions of the witness?

#### CROSS-EXAMINATION

#### BY MR. PAYNE:

- Q Do you anticipate any difficulty producing the Gallup oil through inch and a half tubing?
- A No, sir, we do not. As a matter of fact, sometimes small tubing is more efficient than larger size.  $I_n$  this particular instance when we are going to lift with gas, it will be an



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advantage to us.

MR. NUTTER: You are presently selling the gas of the Dakota?

- A Yes, sir.
- Q (By Mr. Payne) You are aware of the Commission's policy in the event of dual completion, and it has not been approved yet, that the operator can take his choice of either of the two zones that he wishes to produce?
  - A Yes, sir.
  - Q And shut one in and produce the other?
- A I say we are producing from the Dakota; actually, we are not, we are waiting on the Commission order; at this time, we have not sold any gas from the Dakota since we have dually completed this.
- Q I feel that pending it, the Aztec office of the Commission would authorize an allowable from one of the two zones. I presume that you would prefer the allowable from the Gallup since you need the oil for fracking the other wells?
  - A Yes, sir.
- Q I think you can get that well approved, this dual would come out.
  - A I understand.
- Q Mr. Stanley, is it your opinion that the Ojo-Amarillo lease of El Paso will prove to be a portion of the same field that Tennessee's Callow lease is on?



A We do not know for sure whether it will or will not; I feel reasonably sure El Paso doesn't know. We do not know whether the two pools will connect, however, you will notice on that particular exhibit the Pan American is drilling a couple of wells in the area of the Ojo-Amarillo. Benson-Montin and Greer has a rig running now which may connect to the Callow lease of Tennessee Gas and Transmission, and it might be possible that all three leases, all three operations of Tennessee Gas, Benson-Montin and Greer, and El Paso may connect, but at the same time it is possible that they may not connect.

Q Did you or El Paso in Section 16 test the Gallup on your Holder lease?

A I might add that is a mistake; that is a Pan American Holder lease, and I do not know what they tested. I thought I changed that on this page 1 of Exhibit Number 1. Actually, that is Pan American's Holder Number 1. I do not know whether they tested the oil well or not.

- Q You changed it on one page and not the other. I see.
- A Yes, sir.
- Q Mr. Stanley, how does the casing hold 400 pounds of pressure through these Merla Gas Lift valves, where is that pressure coming from?

A You will note that the pressure built up on the casing to approximately 790 pounds, and when it built up to that particular pressure, the valves are open and the tubing and the casing



are equalized.

Q In other words, if you have your Gallup shut in, and have pressure built up in the tubing, some of that pressure would bleed off from the tubing into the casing through those valves?

A Yes, sir. The pressure will -- the valves are delivery type of valves, and when they open at a certain pressure, determined pressure, prior to running into the hole, therefore, you will never be able to lower your pressure below 400 pounds.

- Q In the casing?
- A Yes, sir.
- Q But that is not Gallup, I mean, Dakota that got into that casing?
- A No, sir, that is actually the pressure derived from the Gallup formation.
- Q But these valves are so fixed then, when you open the Gallup up on flow, the Gallup, that this pressure in the casing cannot bleed off into the tubing?
- A It will bleed off to the tubing about 400 pounds, and then after that of course the annular space in the casing will be changed to the certain point, and the valves open due to the pressure inside the tubing, and when they open, of course, the gas in the annular space that is stored there from these compressors which we are installing, will go ahead and artificially lift the oil out.

MR. NUTTER: Does anyone have any further questions of



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Mr. Stanley?
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(No response.)

MR. NUTTER: You may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: Nothing further.

MR. NUTTER: Well, does anyone have anything further for

Case 2038?

(No response.)

MR. NUTTER: We will take the case under advisement.



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NUMBER	EXHIBIT	MARKED FOR IDENTIFICATION	OFFERED	ADMITTED
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STATE OF NEW MEXICO )

COUNTY OF BERNALILLO )

I, LLEWELYN NELSON, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS My Hand and Seal, this the 6th day of August, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Levellen & Melan NOTARY PUBLIC.

My Commission Expires:
June 14, 1964.

New Mexico Oil Conservation Commission

