CASE 3567: Application of TENNECO OIL CO. for a dual completion of its HOSPAH WELL NO. 10.

ASE MO.

APPlication,
Transcripts,
SMAIL Exhibits
ETC.

GOVERNOR DAVID F. CARGO CHAIRMAN

State of New Mexico Gil Conservation Commission



P. O. BOX 2088 SANTA FE

May 9, 1967

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

Mr. Charles White White, Gilbert, Koch & Kelly Attorneys at Law Post Office Box 787 Santa Fe, New Mexico

3567 Re: Case No. R-3231 order No. Applicant:

TENNECO OIL COMPANY

Dear Sir:

LAND COMMISSIONER GUYTON B. HAYS MEMBER

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

Very truly yours,

Secretary-Director

ALP/ir			
Carbon copy of	rder also	sent to:	
Hobbs occ x			
Artesia OCC			
Aztec OCCX			
Other			

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

> CASE No. 3567 Order No. R-3231

APPLICATION OF TERRECO OIL COMPANY FOR A DUAL COMPLETION, MCKINLEY COUNTY, MEM MEXICO.

ORDER OF THE CONCESSION

BY THE CONNISSION:

This cause came on for hearing at 9 a.m. on May 3, 1967, at Santa Fe, New Mexico, before Examiner Daniel S. Mutter.

NOW, on this 8th day of May, 1967, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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, Tenneco Oil Company, seeks authority to complete its Hospah Well No. 10, located in Unit C of Section 12, Township 17 North, Range 9 West, NMPM, McKinley County, New Mexico, as a dual completion (conventional) to produce oil from the South Hospah Lower Sand Oil Pool and gas from an undesignated Dakota pool through parallel strings of 2 3/8-inch tubing, with separation of sones by a packer set at approximately 2449 feet.
- (3) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.
- (4) That approval of the subject application will prevent waste and protect correlative rights.

-2-CASE Mo. 3567 Order Mo. R-3231

IT IS THEREFORE ORDERED:

(1) That the applicant, Tenneco Oil Company, is hereby authorized to complete its Hospah Well No. 10, located in Unit C of Section 12, Township 17 North, Range 9 West, NMPM, McKinley County, New Mexico, as a dual completion (conventional) to produce oil from the South Hospah Lower Sand Oil Pool and gas from an undesignated Dakota pool through parallel strings of 2 3/8-inch tubing, with separation of zones by a packer set at approximately 2449 feet;

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packerleakage tests upon completion and annually thereafter during the Annual Deliverability Test Period for the Dakota gas pool.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO

QIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

DAVIDE, CARGO, Charleman

GUYTCH B. HAVE, Nember

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

SEAL

esr/

Docket No. 13-67

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 3, 1967

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 3567:

Application of Tenneco Oil Company for a dual completion, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Hospah Well No. 10 located in Unit C of Section 12, Township 17 North, Range 9 West, to produce oil from the South Hospah Lower Sand Oil Pool and gas from an undesignated Dakota pool through parallel strings of tubing.

CASE 3556: (Continued and readvertised)

Application of Southland Royalty Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a proposed Devonian gas test well at an unorthodox gas well location 660 feet from the North and West lines of Section 20, Township 25 South, Range East, Lea County, New Mexico. The well would be dedicated to the N/2 of said Section 20.

CASE 3568:

Application of Pubco Petroleum Corporation for compulsory pooling and an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin-Dakota Gas Pool underlying Lots 1, 2, 3, and 4 and the S/2 of the N/2 of Section 1, Township 29 North, Range 13 West, San Juan County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location for said pool 1040 feet from the North line and 360 feet from the East line of said Section 1.

Docket No. 14-67

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 10, 1967

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

The following case will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 3569:

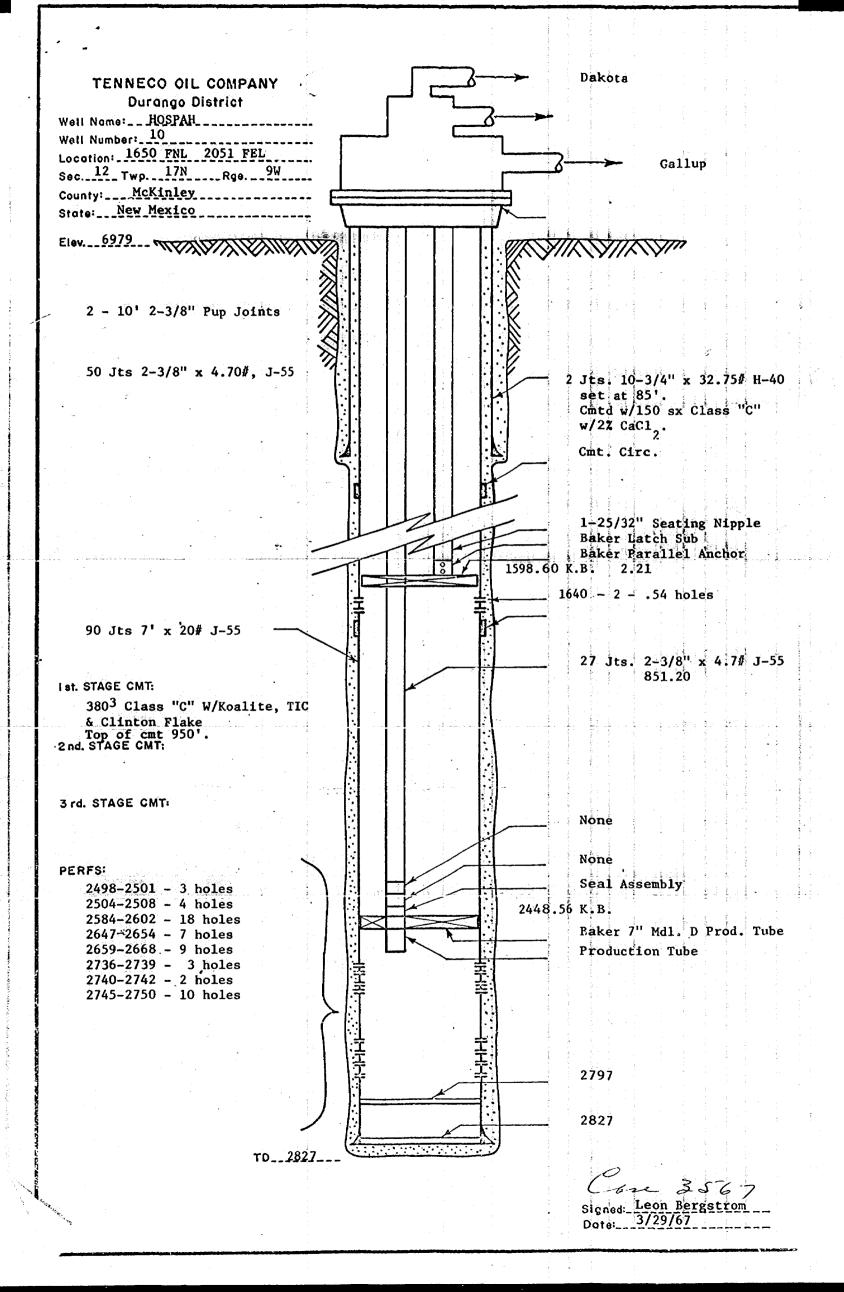
Application of American Trading and Production Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Southeast Lea Unit Area comprising 2,080 acres, more or less, of State lands in Township 20 South, Range 35 East, Lea County, New Mexico.

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•	NEW MEXICO OIL	CONSERVATION	I COMMISTAN	ose	6 Form C-107
*	SANTA	FE, NEW MEXIC	ं 🗏 .	35675	5-1-61
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Cperator		County	 	Date	<u>e</u>
Tenneco Oil Company		McKinle	F		<u>a</u>
Address		Lease	y	Well No.	11 6, 1967
P. O. Box 1714, Durang		Hospah	n e está y	10	• • • • • • • • • • • • • • • • • • •
Location	12	wnship	·	Range	
		17-N			9-W
1. Has the New Mexico Oil Conservation			tiple completion of	a well in t	hese same pools or in the same
zones within one mile of the subject 2. If answer is yes, identify one such i		NO X	Desertes I same a		
2. It answer is yes, identity one such i	instance. Order No.	· · ·	Operator Lease, a	id Well No.:	
					*
3. The following facts are submitted:	Upper		Intermediate		Lower
- Company of the Comp	Zone		Zone		Zone
a. Name of Pool and Formation b. Top and Bottom of	So. Hospah Lower	Sand		Ur	idesignated Dakota
Pay Section	1640			ا ا	
(Perforations)	1040			273	6-2498
c. Type of production (Oil or Gas)	011				Gas
d. Method of Production					
(Flowing or Artificial Lift)	Pump				Flowing
4. The following are attached. (Please	check YES or NO)				 * Control of the contro
izers and/or turboliz diameters and setting	ers and location thereof lau	iantities used and	top of cement, pe	rforated into	rs and setting depths, central- rvals, tubing strings, including formation as may be pertinent.
b. Plat showing the loc	ation of all wells on applicates offsetting applicant's	ant's lease, all d	offset wells on of	fset leases,	and the names and addresses
			operator, or in lie	u thereof, e	vidence that said offset opera-
d. Electrical log of the	shed copies of the applicat well or other acceptable I	og with tops and	bottoms of produc	ing zones	nd intervals of perforation in- ed as provided by Rule 112-A.)
					ed as provided by Rule 112-4.)
5. List all offset operators to the lease Tesoro Petroleum	- 533 Busby Drive			iig address.	
Walker Brother s	- P. O. Box 18715	, Oklahoma C	ity, Oklahom	ıa .	
Tidewater Oil Com	pany, P. O. Box 19	60. Durango	Colorado		
Thomas D. Chase	- P. O. Box 2072,	Santa Fe, N	ew_Mexico		
Kennedy & Lunt -	2162 Crestview Dr	ive. Durango	. Colorado		
					4
6. Were all operators listed in Item 5 a date of such notification April	bove notified and furnished 6, 1967	a copy of this ap	pplication? YES_	_X_ NO_	. If answer is yes, give
CERTIFICATE: I, the undersigned,	state that I am the Senia	or Productio	n Clerk of c	heTon	neco Oil Company
	ompany), and that I am aut	horized by said co	mpany to make th	is report: an	d that this report was prevared
	DOCKET N	MALLED	26	_// •	the contract of the contract o
	14.	2167	19. U.J.	nx-	TOT DEFENS
	Dale	G.	A. Ford	Signature	

Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conscruction 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 multiple completion will result in an unorthodox well location and/or a non-standard proration unit in One or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

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dearnley-meier reporting service, inc.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
MAY 3, 1967

EXAMINER HEARING

IN THE MATTER OF:

APPLICATION OF TENNECO OIL COMPANY FOR A DUAL COMPLETION, MCKINLEY COUNTY, NEW MEXICO.

Case No. 3567

BEFORE: Daniel S. Nutter Examiner



TRANSCRIPT

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE , NEW MEXICO

REGISTER

MAY 3, 1967 TIME: HEARING DATE LOCATION: REPRESENTING: NAME: Jack Willak LCUMI, Durago, Colo Tenneco Oil Santa Je P. Y. M. Suth 11.5.6.5. Farmington N.W. Syc I took Pay Co Rosewell Shirt Hind Soute De None Dukamie KWBy un abagagae modrall, by non Kenneth L. Harrigan Orin C. Crane Puler Pet. Corp. albuquerque.

MR. NUTTER: The hearing will come to order, please. The first case on the docket this morning will be Case Number

MR. HATCH: Case 3567, Application of Tenneco Oil Company for a dual completion, McKinley County, New Mexico.

(Whereupon, Applicant's Exhibits numbered 1, 2, 3 and 4, inclusive marked for identification.)

MR. WHITE: L. Charles White of Santa Fe, New Mexico, appearing on behalf of the applicant. We have one witness to be sworn at this time.

(Witness sworn.)

W I L L O C K, called as a witness by the Applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Will you state your full name for the record, please?

Jack Willock. I am employed by Tenneco Oil Company Α as a Petroleum Engineer in Durango, Colorado.

Have you previously testified before the New Mexico Q Oil Commission as a Petroleum Engineer?

Yes, I have.

- Are you familiar with the subject application? Q
- Yes, I am.
- What does Tenneco seek by the subject application?
- We seek approval of the dual completion in two zones, in the undesignated Dakota pool and the upper zone, which is the South Hospah Lower Sand, or Gallup Sand.
 - What is the reason for the application?
- The application grant is seeking permission to produce the upper sand and under an allowable status; and the lower sand, we are seeking to use as lease fuel. The gas from the lower sand is lease fuel. We are seeking lease fuel. holes aren't spacing at this time.
- Will you refer to your location plat, Exhibit One, and explain that, please?
- Exhibit One is a land or location plat showing the subject well, Hospah Number 10, which is located in the northeast of the northwest of Section 12, Township 17 North, Range 9 West, in the South Hospah Field in McKinley County, New Mexico. The purpose of this plat is to show the location of the well.
 - Q What is the present status of the well?
- The upper zone, the Lower Hospah Sand, or Gallup, as commonly called, is producing. The lower completion, the undesignated Dakota Sand, is shut-in.

Q Will you refer to your diagramatic sketch, which is Exhibit Number Two, and explain the down-hole equipment and installations?

A Exhibit Number Two is a mechanical sketch of the equipment in the well bore. The lower sand, we have shown the lower perforations from 2498 feet to 2757 feet. This is the undesignated Dakota Sand, and the upper perforations are the Lower Hospah Sand with two holes at 1640 feet. Separation between the two zones is accomplished by a permanent packer installed at, approximately, 2449 feet from the surface, and a tubing string that's set in this permanent packer from the surface down to the packer.

The second string, the short tubing string, is set in a tubing anchor. This anchor affects no seal whatsoever between the casing and the Lower Hospah Sand. We're pumping this zone. That's all the need we have for the second tubing string.

- Q Is the Exhibit, otherwise, self-explanatory?
- A I think so.
- Now, will you refer to your well log, Exhibit Number
 Three?
- A Okay. Exhibit Number Three is Dual Induction-Lateroldg.

 The copies we have are marked with the four sands as they occur.

The Upper Hospah Sand is at 1560 feet.

The Lower Hospah Sand, which is the upper completion in the sand, the top is 1640 feet. You will note that we have shown two holes perforated at 1640 feet. That is the completion of it.

The bottom of the Lower Hospah is 1750 feet.

The top of the Dakota Sand is at 2490 feet, and you'll note on our Exhibit that we've perforated four benches in this Dakota, these series of Dakota Sand.

The top uppermost perforations are from 2498 feet to 2501 feet, and from 2504 feet to 2508.

The next set of perforations is from 2584 feet to 2602 feet.

The third set is 2647 to 2654, and 2659 to 2668.

The fourth set of perforations are from 2736 to -39, from 2740 to -42, and from 2745 to 2750. These are all these eight perforated zones. Three, five -- yes, eight perforated zones are completed in the well as one sand. This concludes my part of this.

- What is the porosity?
- Porosity in this Dakota Sand is very variable. From what we've seen so far, it is 12% to 21%. We have no good fix on water saturation or permeability. We have taken no cores. The log calculations aren't too reliable because the water is fresh, and from all the information I can obtain, it's very

difficult to obtain a reliable water saturation for log calculations in extremely fresh water sands.

O Do you anticipate any corrosive problems?

A No, sir, not to my knowledge.

Q Will you refer to Exhibit Four and explain it?

A Exhibit Four is a Packer Leakage Test between the two zone tubes. We are filing this concurrently with the Aztec Office and Commission.

The first test is the Upper portion, showing the first test, which was run with the Dakota Sand flowing and the Lower Hospah Sand shut-in. Shut-in pressure after seven days on the Dakota Sand was 895 pounds. After we produced the sand for fifteen minutes, it was dropped to 28 pounds; and after forty-five minutes, it leveled off at 20 pounds. This is all P. S. I., excuse me. The well flowed, approximately, at the rate of 250 M. C. F. of gas per day through a three-quarter inch choke. Then the well was shut-in. Let's see. That was shut-in seven days, and the upper zone was pumped, and the lower zone was left shut-in, and pressure was stabilized throughout the test at 892 P. S. I. on the shut-in lower completion.

Q Do you have any cost data?

A Cost of the dually completed well is, approximately, \$50,000.00. A single well completed in the Lower Hospah Sand

costs, approximately, \$20,000.00. Our figures -- as we've only done work on two wells in this zone, we think that our costs are going to be around \$40,000.00.

- It will be a savings of, approximately, \$10,000.00?
- Yes, sir. It's a savings to dual complete a well.
- Were Exhibits One and Two prepared by you or under your direction?
 - Yes, sir.
 - And by whom were Exhibits Three and Four prepared?
- Exhibit Three is a log of the well; the log of the dual induction well was run by Schlumberger. Exhibit Four was prepared by a testing service, Tefteller, Inc., in Farmington, New Mexico.

MR. WHITE: At this time, we offer Exhibits One through Four in evidence.

> The Exhibits will be admitted. MR. NUTTER:

> > (Whereupon, Applicant's Exhibits numbered 1 through 4, inclusive, were admitted in evidence.)

- Do you have any further testimony? Q
- No, sir. Α

MR. WHITE: That completes our case.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Willock, are those a discovery insofar as Dakota production is concerned?

A Yes, sir. Currently, we are testing another well.

If you'll refer back to your Exhibit One, you'll notice in the southeast of the southeast of Section 11, Township 17 North,

Rante 9 West, there's a "2" there.

We are currently testing our Wigam Number Two well in the four sands, four benches of the Dakota. They occur similarly to what was found in the Hospah Number 10 well. The bottom bench is definite water. The next two, we got a little oil show. That would be the third and second bench. The top one, we have done some frac work on, and we are now putting the well on pump. We have pumped some oil and fraced it into the zone in an attempt to obtain production from it. We ran a drill test on the zone and recovered some oil shows. It was green, 50-degree gravity oil.

We have no conclusions, yet, on this well; and we're installing a pumping unit now, rods, to test the Dakota Sand in this well. This is our second attempted completion.

0 Well, now, the subject well here on the Packer Leakage Test produced 250 M. C. F. of gas per day?

A Dry gas, yes.

- Which you intend to use as fuel on the lease --
- Yes, sir.
- -- there being no gas sales outlet in this area?
- That's correct. There's no sales outlet.

MR. NUTTER: Are there any other questions of this

witness?

You may be excused.

(Whereupon, the witness was excused.)

Do you have anything further, Mr. White?

MR. WHITE: No.

MR. NUTTER: Does anyone have anything to offer in

Case 3567?

We will take the case under advisement.

SPECIALIZING IM. DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

, NEW MEXICO 87108 1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, 1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, STATE OF NEW MEXICO ss. COUNTY OF BERNALILLO)

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

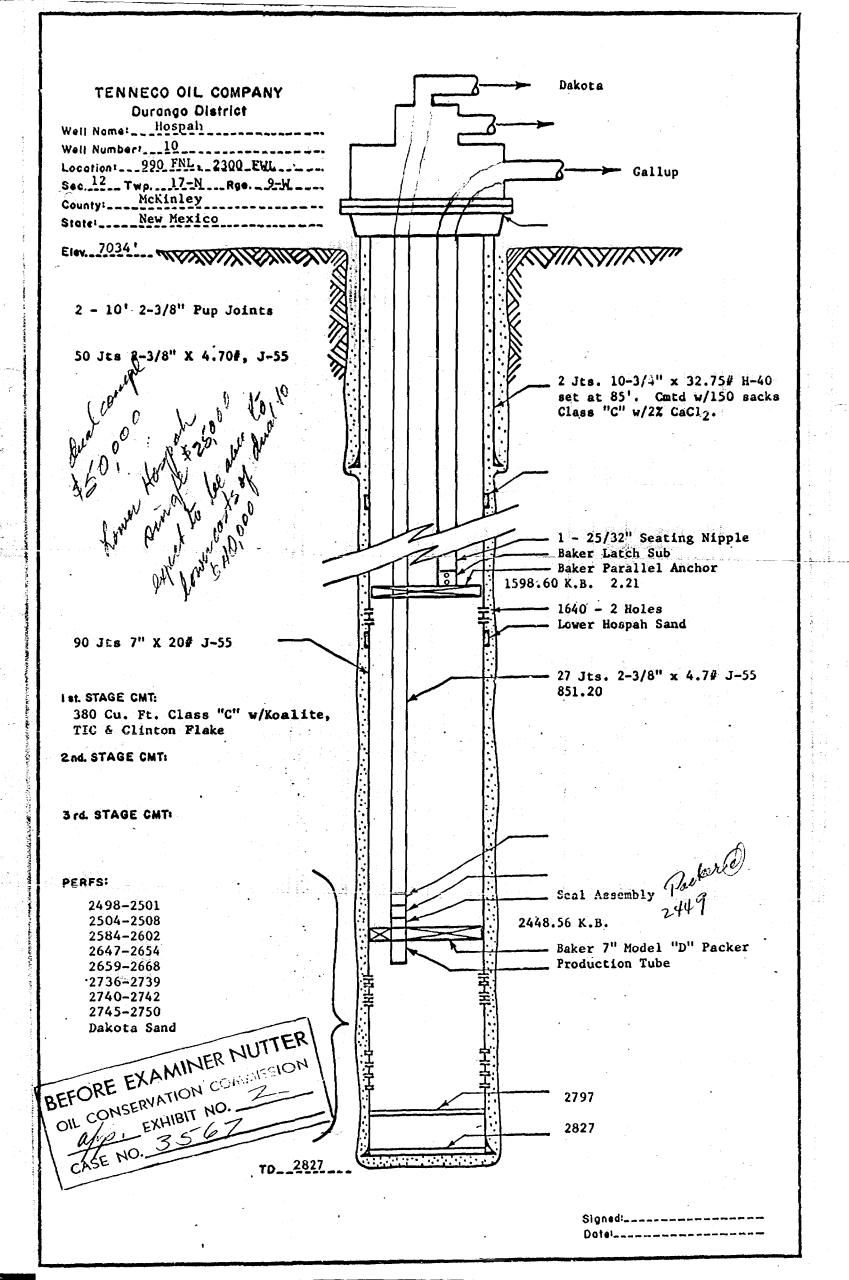
IN WITNESS WHEREOF, I have affixed my hand and notarial seal this 9th day of May, 1967.

Notary Public / Court Reporter

My Commission Expires: February 10, 1971.

> I do beredy cartify that the foregoing to a complete recture of the procuedings in the Examiner hearing of Case No. 3 %67

Mexico Oil Conservation Commission



Revised 11-1-58

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

	Tonnogo Ot 1	Company	T.	uni manuron	nah	Well
Operator Location	Telmeco OII	Company	1/L	ease Hos	span	No. 10
	t_C_Sec	12 Twp. 17	Type of Prod	9	County	McKinley
	Name of Rese	rvoir or Pool	Type of Prod. (Oil or Gas)	Method (Flow or	of Prod. Art. Lift)	Prod. Medium (Tbg. or Csg.)
Upper Completion Ho	ospah Lower S	and (Gallup)	011	Pumpir	18	Tbg.
Lower Completion	mpletion Dakota		Gas	Flow		Tbg.
Upper Hour, d			LOW SHUT-IN PRE			[Q4 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2
Compl Shut-	in 3/29/67	time shu	of t-in since comp	SI presignation		Stabilized? (Yes or-No)
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Compl Shut-	in 4/3/6/	[time shu	t-in / days FLOW TEST NO	psig	895.	(Yes or No)
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Ву			Titigen	r, Q. Box 11 Ington, New I	Mexico Mai T	ijklir agent
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- At least 72 bours prior to the consencesent of any packer leakage test, operator shall notify the Commission in ariting of the exact time the t is to be commenced. Offset operators shall also be so notified.
- 3. The packer leakage test shall commence when toth zones of the dual completion are shut-in for pressure stabilization. Both zones shall remain shut-in until the well-head pressure in each has stabilized, provided however, that they need not remain shut-in more than seven days.

 4. For Flow Test No. 1, one zone of the dual completion shall be produced at the normal rate of production shills the other zone remains shut-in. Such test shall be continued for seven days in the case of a gas well and for 24 hours in the case of an oil well. Note: If, on an initial packer leakage test, a gas well is being flowed to the atmosphere due to the lack of a pipeline connection the flow period shall be three bours.
- Following completion of Flow Test No. 1, the well shall again be shut-in accordance with Paragraph 3 above.
- 8. Flow Test No. 2 shall be conducted even though no leak was indicated during Flow Test No. 1. Procedure for Flow Test No. 2 is to be the same as for Flow Test No. 1 except that the previously produced xone shall remain shut-in while the zone which was previously shut-in is produced.

P

- 7. Presents for gaserone tests must be recover ion each rone with a desiredght pressure garge at time intervals as follows: 3-hour tests: invadiately prior to the beginning of each fine-period, at fifteen-simut intervals dring the first hour ticreof will at ourly intervals there-after, leadings one pressure associated taxof story prior to the conclusion of each flow period. 7-day tests, issociately prior to the beginning of rach flow period, at least one time during each flow period (at approximately the stiding point) and issociately prior to the conclusion of each flow period. Other pressures may be taken as desired, oneay be requested on wells which have previously whom questionable test data.
- 24-hour oil zone tests: all pressures, throughout the entire test, shall be continuously reasured and recorded with recording pressure stages, the accuracy of which must be checked at least trice, once at the beginning and once at the end of each test, with a dedweight pressure gauge, if a boil its a gas-oil or an oilige dual coapletion, the recording gauge shall be required on the oil zone only, with deadweight pressures as required showe being taken on the gas roce.

 8. The results of the above-described tests shall be filed in triplicate within 15 days after coapletion of the test. Tests shall be filed with the Artee District Office of the New Mexico Oil Conservation Coamission on Northwest New Mexico Cache Leakage Test form Revised 11-1-58, with all deadweight pressures indicated thereon as well as the flowing teaperatures (gas zones only) and gravity and GOR (oil zones only). A pressure versus time curve for each zone of each test shall be constructed on the reverse side of the lacker Leakage Test Form with all deadweight pressure points takes indicated thereon. For oil zones, the pressure curve should also indicate all key pressure changes should also be tabulated on the front of the Packer, Leakage Test Form.

