CASE 2764: Application of SKELLY for creation of STRAWN GAS POOL AND FOR TEMPORARY SPECIAL RULES.

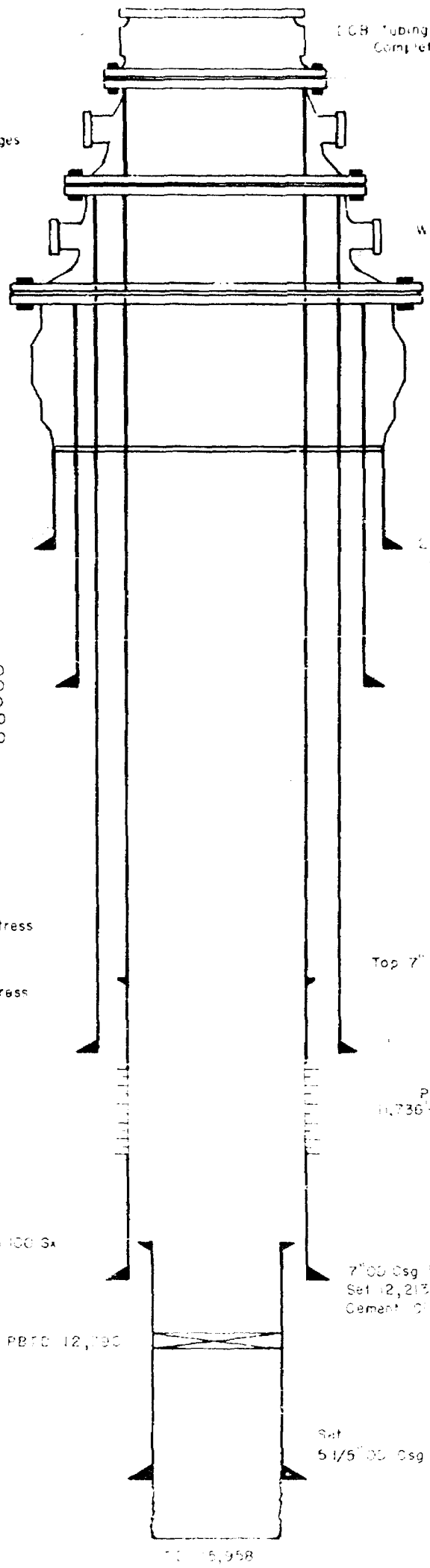
-ase No.

2-764

-plication, Transcript,

-and Exhibits, Etc.

WEST JAL UNIT NO. 1
LEA COUNTY, NEW MEXICO



W.F. Csg Head Spool S/1500
11"X14" 10,000 lb w/2/2" Flanges

W.F. Csg Housing Slip on S/900
20" 3000 lb w/2/3" outlets

13 3/8" O.D. Csg
908' 72 lb N-80
323' 72 lb S-80
1698' 61 lb S-80
1734' 68 lb S-80
1537' 72 lb S-80
Set 6300' w/ 3206 Sx
Top Cement 100'

9 5/8" Csg 1581' 53.5 lb P-110 Buttress
550' 53.5 lb S-95
993' 47 lb S-95
3344' 43.5 lb S-95
2933' 47 lb S-110 Buttress
Set 11,732 w/ 775 Sx
Top Cement 7475'

Top 5 1/2" Liner 12,032' Squeeze 100 Sx

PBTD 12,790'

TD 13,958'

W.F. Csg Head Spool S/1500
14"X20" 5000 lb w/2/3" Flanges

20" O.D. Csg 94 lb H-40
Set 969' w/1630 Sx Cement
Circulated

Top 7" Liner 11,473'

Perf
11,736'-11,894'

7" O.D. Csg 7/8" 26 lb P-110
Set 12,213' w/ 185 Sx
Cement Circulated

Set
5 1/5" O.D. Csg 447' 20 lb P-110
2898' 17 lb P-110
Set 5,4[illegible] w/650 Sx

SKELLY OIL COMPANY
EXHIBIT NO. 4

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Strawn County Lea

Initial XX Annual Special Date of Test 1-22-63

Company Skelly Oil Company Lease West Jal Unit Well No. 1

Unit H Sec. 20 Twp. 25S Rge. 36E Purchaser None

Casing 7" Wt. 26# I.D. 6.276 Set at 12,213 Perf. 11,736 To 11,894

Tubing 2-7/8" Wt. 6.4# I.D. 2.441 Set at 11,715 Perf. 11,711 To 11,715

Gas Pay: From 11,736 To 11,894 L 11,815 xG 0.650 -GL 7680 Bar.Press. 13

Producing Thru: Casing Tubing XX Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Packer 11,700 Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

	Flow Data					Tubing Data		Casing Data		
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						6218	48			89
1.	3"	2.0	500	16	15	6156	68			1:45
2.	3"	2.0	510	43	10	6075	72			2:00
3.	3"	2.0	510	77	20	5995	78			2:00
4.	3"	2.25	660	58	30	5915	80			1:30
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	27.52	90.6	513	1.0463	1.0000	1.049	2737
2.	27.52	150.0	523	1.0518	1.0000	1.051	4563
3.	27.52	200.7	523	[illegible]	1.0000	1.049	6025
4.	37.15	197.6	673	1.0302	1.0000	1.059	8009
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 56,202 cf/bbl.
Gravity of Liquid Hydrocarbons 52 deg. 0.771
F_c 5.866 $(1-e^{-s})$ 0.411

Specific Gravity Separator Gas 0.600
Specific Gravity Flowing Fluid
P_c 6231 P_c^2 38,825 X 103

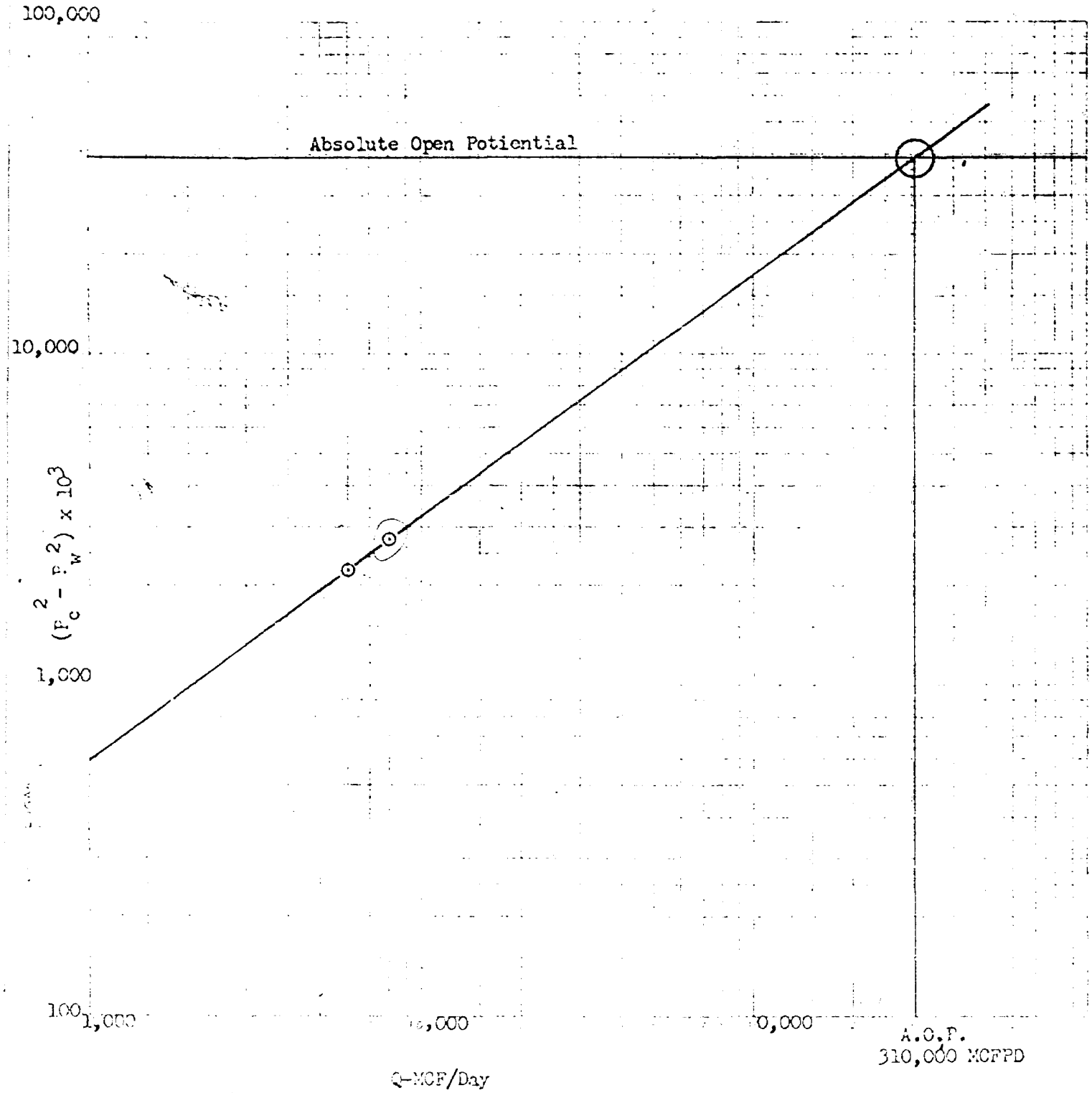
No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	6169	[illegible]	16,055	[illegible]	[illegible]	[illegible]	662		
2.	[illegible]	37,044	26,767	716.5	[illegible]	37,359	1466		
3.	6009	36,108	33,929	1151.2	[illegible]	[illegible]	2244		
4.	5922	35,141	46,9[illegible]	2203.0	905.0	36,046	2779		
5.									

Absolute Potential: 310,000 MCFPD; n 35.5 deg. 0.7133
COMPANY Skelly Oil Company
ADDRESS P.O. Box 38, Hobbs, New Mexico
AGENT and TITLE [signature] District Superintendent
WITNESSED [illegible] - Production Engineer
COMPANY Skelly Oil Company

REMARKS

SKELLY OIL CO.
EXHIBIT NO. 5

SHELLY OIL COMPANY
West Jal Unit No. 1
Section 20-T25S-R36E
Lea County, New Mexico
Multi-Point Back Pressure Test



DRAFT
JMD/esr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

CF Subj. _____

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

CASE No. 2764

Order No. R- 2439-A

APPLICATION OF SKELLY OIL COMPANY
FOR THE CREATION OF A STRAWN GAS
POOL AND FOR TEMPORARY SPECIAL
POOL RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on March 10, 1965, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this _____ day of March, 1965, 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 by Order No. R-2439, dated February 28, 1963, temporary Special Rules and Regulations were promulgated for the West Jal-Strawn Gas Pool, Lea County, New Mexico.

(3) That pursuant to the provisions of Order No. R-2439, this case was reopened to allow the operators in the subject pool to appear and show cause why the West Jal-Strawn Gas Pool should not be developed on 640-acre spacing units.

(4) That the evidence establishes that one well in the West Jal-Strawn Gas Pool can efficiently and economically drain and develop 640 acres.

(5) That the Special Rules and Regulations promulgated by Order No. R-2439 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

(6) That to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-2439 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the West Jal-Strawn Gas Pool promulgated by Order No. R-2439 are hereby continued in full force and effect until further order of the Commission.

(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.

NEW MEXICO OIL CONSERVATION COMMISSION

1963 APR 1 AM 8 55 OCC

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Strawn County Lea

Initial XX Annual Special Date of Test 1-22-63

Company Skelly Oil Company Lease West Jal Unit Well No. 1

Unit H Sec. 20 Twp. 25S Rge. 36E Purchaser None

Casing 7" Wt. 26# I.D. 6.276 Set at 12,213 Perf. 11,736 To 11,894

Tubing 2-7/8" Wt. 6.4# I.D. 2.441 Set at 11,715 Perf. 11,711 To 11,715

Gas Pay: From 11,736 To 11,894 L 11,815 xG 0.650 -GL 7680 Bar.Press. 13

Producing Thru: Casing Tubing XX Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Packer 11,700 Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						6218	68			89
1.	3"	2.0	500	16	15	6156	68			1:45
2.	3"	2.0	510	43	10	6075	72			2:00
3.	3"	2.0	510	77	20	5995	78			2:00
4.	3"	2.25	660	58	30	5915	80			1:30
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	27.52	90.6	513	1.0463	1.0000	1.049	2737
2.	27.52	150.0	523	1.0518	1.0000	1.051	4563
3.	27.52	200.7	523	1.0408	1.0000	1.048	6025
4.	37.15	197.6	673	1.0302	1.0000	1.059	8009
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 56,282 cf/bbl. Specific Gravity Separator Gas 0.600

Gravity of Liquid Hydrocarbons 52 deg. 0.771 Specific Gravity Flowing Fluid

P_c 5.866 $(1-e^{-s})$ 0.411 P_c 6231 P_c^2 38,825 X 103

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	6169	38,057	16,055	257.8	106.0	38,163	662		
2.	6088	37,064	26,767	716.5	294.5	37,359	1466		
3.	6009	36,108	33,926	1151.0					

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Strawn County Lea

Initial XX Annual Special Date of Test 1-22-63

Company Skelly Oil Company Lease West Jal Unit Well No. 1

Unit H Sec. 20 Twp. 25S Rge. 36E Purchaser None

Casing 7" Wt. 26# I.D. 6.276 Set at 12,213 Perf. 11,736 To 11,894

Tubing 2-7/8" Wt. 6.4# I.D. 2.441 Set at 11,715 Perf. 11,711 To 11,715

Gas Pay: From 11,736 To 11,894 L 11,815 xG 0.650 -GL 7680 Bar.Press. 13

Producing Thru: Casing Tubing XX Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Packer 11,709 Reservoir Temp.

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps Flange

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						6218	68			89
1.	3"	2.0	500	16	15	6156	66			1:45
2.	3"	2.0	510	43	10	6075	72			2:00
3.	3"	2.0	510	77	20	5995	78			2:00
4.	3"	2.25	660	58	30	5915	80			1:30
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	27.52	90.6	513	1.0463	1.0000	1.049	2737
2.	27.52	150.0	523	1.0518	1.0000	1.051	4563
3.	27.52	200.7	523	1.0408	1.0000	1.048	6025
4.	37.15	197.6	673	1.0302	1.0000	1.059	8009
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 56,282 cf/bbl. Specific Gravity Separator Gas 0.600
Gravity of Liquid Hydrocarbons 52 deg. 0.771 Specific Gravity Flowing Fluid
P_c 5.866 $(1-e^{-s})$ 0.411 P_c 6231 P_c^2 38,825 X 103

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	6169	38,057	16,055	257.8	106.0	38,163	662		
2.	6088	37,064	26,767	716.5	294.5	37,359	1466		
3.	6009	36,108	33,920	1151.2	473.1	36,581	2244		
4.	5928	35,141	40,961	2203.2	905.0	36,046	2779		
5.									

Absolute Potential: 310,000 MCFPD; n 35.5 deg. 0.7133

COMPANY Skelly Oil Company

ADDRESS P.O. Box 38, Hobbs, New Mexico

AGENT and TITLE District Superintendent

WITNESSED J. I. Morits - Production Engineer

COMPANY Skelly Oil Company

REMARKS

SKELLY OIL CO.

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia

P_w = Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

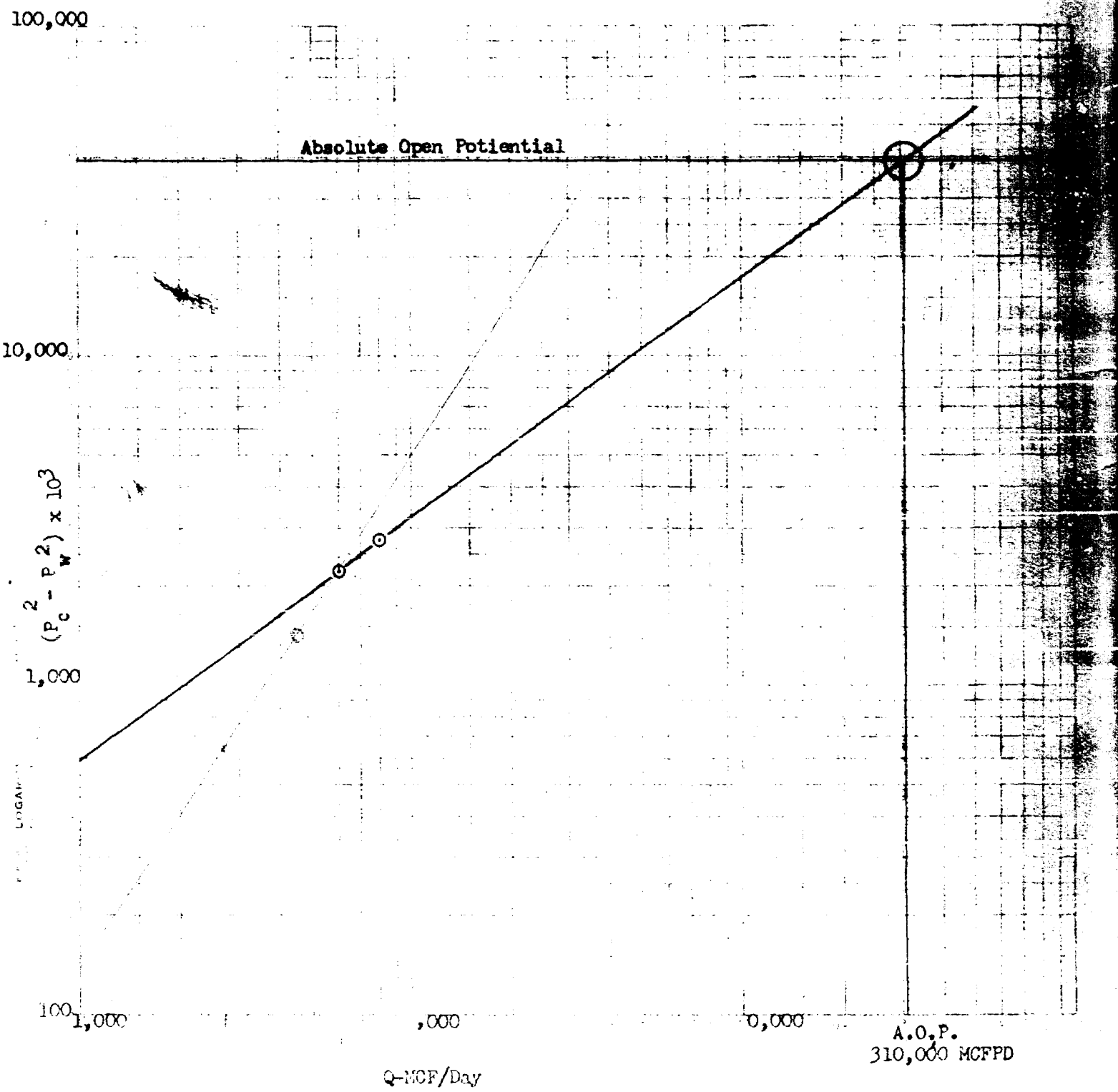
F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.

SKELLY OIL COMPANY
West Jal Unit No. 1
Section 20-T25S-R36E
Lea County, New Mexico
Multi-Point Back Pressure Test



DRAFT

JMD/esr
2-25-63

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. 2764
Order No. R-2439
Nomenclature

APPLICATION OF SKELLY OIL COMPANY
FOR THE CREATION OF A STRAWN GAS
POOL AND FOR TEMPORARY SPECIAL
POOL RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 21, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, 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 February, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Skelly Oil Company, seeks the creation of a new pool for Strawn production and the promulgation of temporary special rules and regulations governing said pool, including a provision for 640-acre spacing units.

(3) That a new gas pool for Strawn production should be created and designated the West Jal-Strawn Gas Pool. This pool was discovered on January 22,1963, by the West Jal Unit Well No. 1, located in Unit H of Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico.

(4) That temporary special rules and regulations establishing 640-acre spacing should be promulgated for the subject pool in order to prevent the possibility of economic loss resulting from the drilling of unnecessary wells and in order to allow the operators in the subject pool to gather information concerning the reservoir characteristics of the pool.

(5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(6) That the temporary special rules and regulations should be established for a ~~one-year~~ two-year period and that during this ~~one-year~~ two-year period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.

(7) That this case should be reopened at an examiner hearing in February, ~~1964~~ 1965, at which time the operators in the subject pool should appear and show cause why the West Jal-Strawn Gas Pool should not be developed on 160-acre spacing units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as a gas pool for Strawn production is hereby created and designated the West Jal-Strawn Gas Pool, consisting of the following-described area:

TOWNSHIP 25 SOUTH, RANGE 36 EAST, NMPM
Section 20: All

(2) That Special Rules and Regulations for the West Jal-Strawn Gas Pool are hereby promulgated as follows, effective March 1, 1963.

SPECIAL RULES AND REGULATIONS
FOR THE
WEST JAL-STRAWN GAS POOL

RULE 1. Each well completed or recompleted in the West Jal-Strawn Gas Pool or in the Strawn formation within one mile of the West Jal-Strawn Gas Pool, and not nearer to or within the limits of another designated Strawn pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the West Jal-Strawn Gas Pool shall be located on a standard unit containing 640 acres, more or less, consisting of a single governmental section.

RULE 3. The Secretary-Director ~~shall have authority to~~ may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Lands Survey, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a single governmental section and contains less acreage than a standard unit.

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which ~~any part of~~ the non-standard unit is situated and which acreage is not included in said non-standard unit.

(d) In lieu of Paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to ~~form~~ form such non-standard unit. The Secretary-Director may approve the application if, ~~after a period of 30 days~~, no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well completed or recompleted in the West Jal-Strawn Gas Pool shall be located no nearer than 1650 feet to ~~the governmental section line boundary of the spacing unit~~ the boundary of the spacing unit and no nearer than 330 feet to any governmental quarter-quarter section line.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an

application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed unorthodox location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.

IT IS FURTHER ORDERED:

(1) That any well presently drilling to or completed in the Strawn formation within the West Jal-Strawn Gas Pool or within one mile of the West Jal-Strawn Gas Pool that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of Rule 4. The operator of any such well shall notify the Hobbs District Office in writing of the name and location of the well on or before April 1, 1963.

(2) That any operator desiring to dedicate 640 acres to a well presently drilling or completed in the West Jal-Strawn Gas Pool shall file a new Form C-128 with the Commission on or before April 1, 1963.

(3) That this case shall be reopened at an examiner hearing in February, ~~1964~~ 1965, at which time the operators in the subject pool may appear and show cause why the West Jal-Strawn Gas Pool should not be developed on 160-acre spacing units.

(4) 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.

Case ~~2774~~ 2764 (Nomenclature)
Heard 2-21-63
Rec. 2-22-63

1. Create a Gas pool to be known as West Jal - Strawn Gas Pool and consisting of Sec. 20, 25(N)-36 E.

2. Write Pool rules using R-2743 or the recent Ralph Lowe 640 Ac. version as a model.

3. Grant 640 Ac. unit.

4. Each well shall be drilled at least 1650' from the ~~two~~ unit boundaries and ~~no~~ closer to the 1/4 1/4 section boundaries than 330. This gives 4 - 660' □ target areas which should be sufficient.

5. Use rule which will grant and exception to location for the one well in the pool.
Skelly - West Jal unit #1 1980/N - 660/E lines sec. 20 25S-36E.

No. 7-63

DOCKET: EXAMINER HEARING - THURSDAY - FEBRUARY 21, 1963

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

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

CASE 2755: Application of General American Oil Company of Texas for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen formation, High Lonesome Pool, Eddy County, New Mexico, through 16 wells in Sections 11, 12, 13 and 14, Township 16 South, Range 29 East.

CASE 2756: Application of Humble Oil & Refining Company for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of its State "S" Well No. 24, located in Unit J, Section 2, Township 22 South, Range 37 East, Lea County, New Mexico, as a triple completion (tubingless), to produce oil from the Blinebry and Drinkard Pools and from a third zone, either lower Drinkard or Abo, through parallel strings of 2 7/8-inch casing cemented in a common well bore.

CASE 2757: Application of Cabot Corporation for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the unorthodox location of its New Mexico State L Well No. 1 at a point 1970 feet from the North line and 330 feet from the West line of Section 23, Township 11 South, Range 33 East, North Bagley-Wolfcamp Pool, Lea County, New Mexico.

CASE 2758: Application of Odessa Natural Gasoline Company for a unit agreement Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Getty Deep Unit Area comprising 1,680 acres, more or less, of Federal land in Township 20 South, Range 29 East, Eddy County, New Mexico.

CASE 2759: Application of Continental Oil Company for a triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the triple completion (conventional) of its Skaggs B-12, Well No. 5, located in Unit C of Section 12, Township 20 South, Range 37 East, Lea County, New Mexico, to produce oil from the Skaggs Glorieta, East Weir Blinebry, and Skaggs-Drinkard Pools through parallel strings of tubing.

CASE 2760: Application of Gulf Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of its Scarborough Estate Well No. 7, located in Unit K of Section 31, Township 22 South, Range 38 East, Lea County, New Mexico, as a dual completion (conventional) to produce oil from the Blinebry Oil Pool and from the Ellenburger formation through parallel strings of tubing.

CASE 2761: Application of Compass Exploration, Inc. for the creation of a Gallup Gas Pool, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order deleting certain acreage from the South Blanco-Tocito Pool and redesignating portions of said acreage to comprise a new Gallup gas pool for its Northwest Lindrith Well No. 1-3, located in Unit K of Section 3, Township 26 North, Range 7 West, Rio Arriba County, New Mexico.

CASE 2314: (Reopened)
In the matter of the hearing called in accordance with Order No. R-2191, to permit Shell Oil Company to appear and show cause why its State Well No. 1-A, located in Unit D, Section 36, Township 24 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico should not be reclassified as an oil well in said pool.

CASE 2480: (Reopened & Continued)
In the matter of Case 2480 being reopened pursuant to the provisions of Order No. R-2182, which order established temporary 80-acre proration units for the Henshaw-Wolfcamp Pool, Eddy County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

CASE 2762: Application of Pan American Petroleum Corporation for a dual completion, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion of its USG Section 19 Well No. 17, located in Unit I of Section 19, Township 29 North, Range 16 West, San Juan County, New Mexico, to produce oil from the Hogback-Pennsylvanian Pool through tubing and to dispose of produced salt water into the Chinle formation through the intermediate casing annulus.

CASE 2763: Application of Sunray DX Oil Company for the creation of a Strawn Gas Pool and for Special Temporary Pool Rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Strawn Gas Pool for its New Mexico State "AH" Well No. 1, located in Unit K of Section 30, Township 18 South, Range 23 East, Eddy County, New Mexico, and the establishment of temporary pool rules therefor, including a provision for 640-acre proration units.

CASE 2764: Application of Skelly Oil Company for the creation of a Strawn Gas Pool and for Temporary Special Pool Rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Strawn Gas Pool for its West Jal Unit Well No. 1, located in Unit H, of Section 20, Township 25 South, Range 36 East, Lea County, New Mexico, and the establishment of temporary special pool rules therefor, including a provision for 640-acre proration units.

CASE 2746: (Continued)
In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Continental National Insurance Group and all other interested parties to appear and show cause why the Kenneth V. Barbee Well No. 1, located 1980 feet from the South line and 660 feet from the East line of Section 9, Township 11 South, Range 25 East, NMPM, Chaves County, New Mexico, should not be plugged in accordance with a Commission-approved plugging program.

CASE 2747: (Continued)
Application of El Paso Natural Gas Company for cancellation of a non-standard gas proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks cancellation of a non-standard gas proration unit comprising the SW/4 of Section 33 and the NW/4 of Section 26, Township 31 North, Range 7 West, Blanco-Mesaverde Gas Pool, San Juan County, New Mexico, said unit having been established and designated Block "N" by Order No. R-1066.

iqg/

No. 7-63

SUPPLEMENTAL DOCKET: EXAMINER HEARING - THURSDAY - FEBRUARY 21, 1963

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

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

CASE 2765:

Application of Perry R. Bass for an unorthodox gas well location, Lea County, New Mexico.

Applicant, in the above-styled cause seeks an exception to the Special Rules and Regulations for the Lusk-Morrow gas pool to permit the drilling of a gas well 1980 feet from the North line and 660 feet from the West line of Section 28, Township 19 South, Range 32 East.

GILBERT, WHITE AND GILBERT
ATTORNEYS AND COUNSELORS AT LAW
BISHOP BUILDING
SANTA FE, NEW MEXICO

CARL H. GILBERT
L. C. WHITE
WILLIAM [illegible]
SUMNER S. KOCH
WILLIAM B. KELLY

OIL CONSERVATION COMM. 1963 FEB 5 PM 1 35

February 4, 1963

Mr. Daniel S. Nutter, Examiner
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Skelly Oil Company

Dear Dan:

Enclosed please find replacement for the first page of Skelly's application in regard to their creation of a new pool for the Strawn gas production. Please destroy the ones I previously sent.

Very truly yours,

L. C. WHITE

LCW/ab
Encl.

NEW MEXICO

OIL CONSERVATION COMMISSION

Gas Well Plat

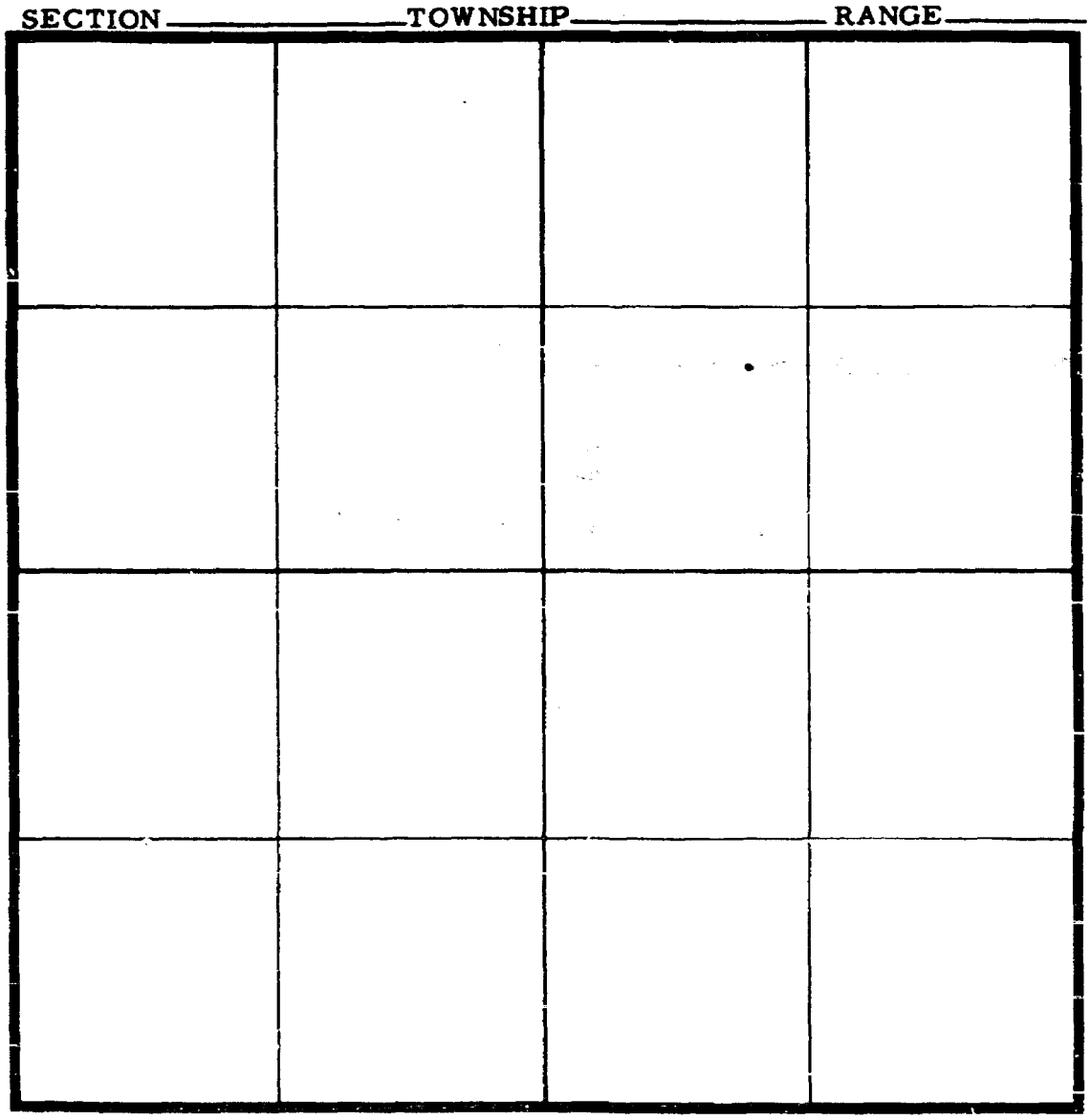
Date_____

Operator	Lease	Well No.

Name of Producing Formation_____ Pool_____

No. Acres Dedicated to the Well_____

SECTION_____ TOWNSHIP_____ RANGE_____



I hereby certify that the information given above is true and complete to the best of my knowledge.

Name_____

Position_____

Representing_____

Address_____

(over)

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. 2654
Order No. R-2349

APPLICATION OF CARPER DRILLING COMPANY, INC., FOR THE CREATION OF A NEW GAS POOL AND FOR TEMPORARY SPECIAL RULES AND REGULATIONS, CHAVES COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on October 10, 1962, 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 31st day of October, 1962, 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 a new gas pool for Pennsylvanian production should be created and designated the Buffalo Valley-Pennsylvanian Gas Pool. This pool was discovered by the Carper Drilling Company Inc., Baetz Well No. 1, located in Unit N of Section 35, Township 14 South, Range 27 East, NMPM, Chaves County, New Mexico.

(3) That Carper Drilling Company, Inc. seeks the promulgation of temporary special rules and regulations for the Buffalo Valley-Pennsylvanian Gas Pool to provide for 320-acre gas proration units.

(4) That the evidence presented concerning the reservoir characteristics of the Buffalo Valley-Pennsylvanian Gas Pool justifies the establishment of 320-acre gas proration units in said pool for a temporary period of two years.

(5) That the evidence establishes that the Buffalo Valley-Pennsylvanian Gas Pool can presently be efficiently and economically drained on 320-acre gas proration units.

(6) That during the two-year period in which this order will be in effect, all operators in the subject pool should gather all available information relative to drainage and recoverable reserves in said pool.

(7) That this case should be reopened at an examiner hearing in October, 1964, at which time the operators in the subject pool should be prepared to appear and show cause why the Buffalo Valley-Pennsylvanian Gas Pool should not be developed on 160-acre gas proration units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Chaves County, New Mexico, classified as a gas pool for Pennsylvanian production is hereby created and designated as the Buffalo Valley-Pennsylvanian Gas Pool consisting of the following-described area:

TOWNSHIP 14 SOUTH, RANGE 27 EAST, NMPM
Section 35: S/2

TOWNSHIP 15 SOUTH, RANGE 27 EAST, NMPM
Section 2: N/2

(2) That special rules and regulations for the Buffalo Valley-Pennsylvanian Gas Pool are hereby promulgated as follows, effective November 1, 1962.

SPECIAL RULES AND REGULATIONS
FOR THE
BUFFALO VALLEY-PENNSYLVANIAN GAS POOL

RULE 1. Each well completed or recompleted in the Buffalo Valley-Pennsylvanian Gas Pool or in the Pennsylvanian formation within one mile of the Buffalo Valley-Pennsylvanian Gas Pool, and not nearer to or within the limits of another designated Pennsylvanian pool, shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the Buffalo Valley-Pennsylvanian Gas Pool shall be located in the northwest quarter or the southeast quarter of the section and shall be located no nearer than 990 feet to the outer boundary of the quarter section nor nearer than 330 feet to any governmental quarter-quarter section line; provided, however, that any well

drilling to or completed in said pool as of the date of this order is hereby excepted from the requirements of this rule.

RULE 3. The Secretary-Director shall have authority to grant exceptions to Rule 2 without notice and hearing where an application therefor has been filed in due form and the necessity for the unorthodox location is based on topographical conditions or is occasioned by the recompletion of a well previously drilled to another horizon.

Applicants shall furnish all offset operators and all operators within the section in which the subject well is located a copy of the application to the Commission and shall stipulate to the Commission that proper notice has been furnished to all such operators. The Secretary-Director may approve the application if, after a period of twenty days, no offset operator has entered an objection to the proposed unorthodox location.

RULE 4. Each well completed or recompleted in the Buffalo Valley-Pennsylvanian Gas Pool shall be located on a standard proration unit consisting of any two contiguous quarter sections of a single governmental section, being a legal subdivision (half section) of the United States Public Lands Survey. For purposes of these rules, a standard proration unit shall consist of 316 through 324 contiguous surface acres.

RULE 5. The Secretary-Director shall have authority to grant an exception to Rule 4 without notice and hearing where an application has been filed in due form and where the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Lands Survey, or where the following facts exist and the following provisions are complied with:

(1) The non-standard unit consists of contiguous quarter-quarter sections or lots.

(2) The non-standard unit lies wholly within a single governmental section.

(3) The entire non-standard unit may reasonably be presumed to be productive of gas from the Buffalo Valley-Pennsylvanian Gas Pool.

(4) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which any part of the non-standard unit is situated and which acreage is not included in said non-standard unit.

(5) In lieu of Paragraph 4 of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if, after a period of thirty days, no such operator has entered an objection to the formation of such non-standard unit.

RULE 6. The vertical limits of the Buffalo Valley-Pennsylvanian Gas Pool shall be the Pennsylvanian formation.

(3) That this case shall be reopened at an examiner hearing in October, 1964, at which time the operators in the subject pool may appear and show cause why the Buffalo Valley-Pennsylvanian Gas Pool should not be developed on 160-acre gas proration units.

(4) 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
OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

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

S E A L

esr/

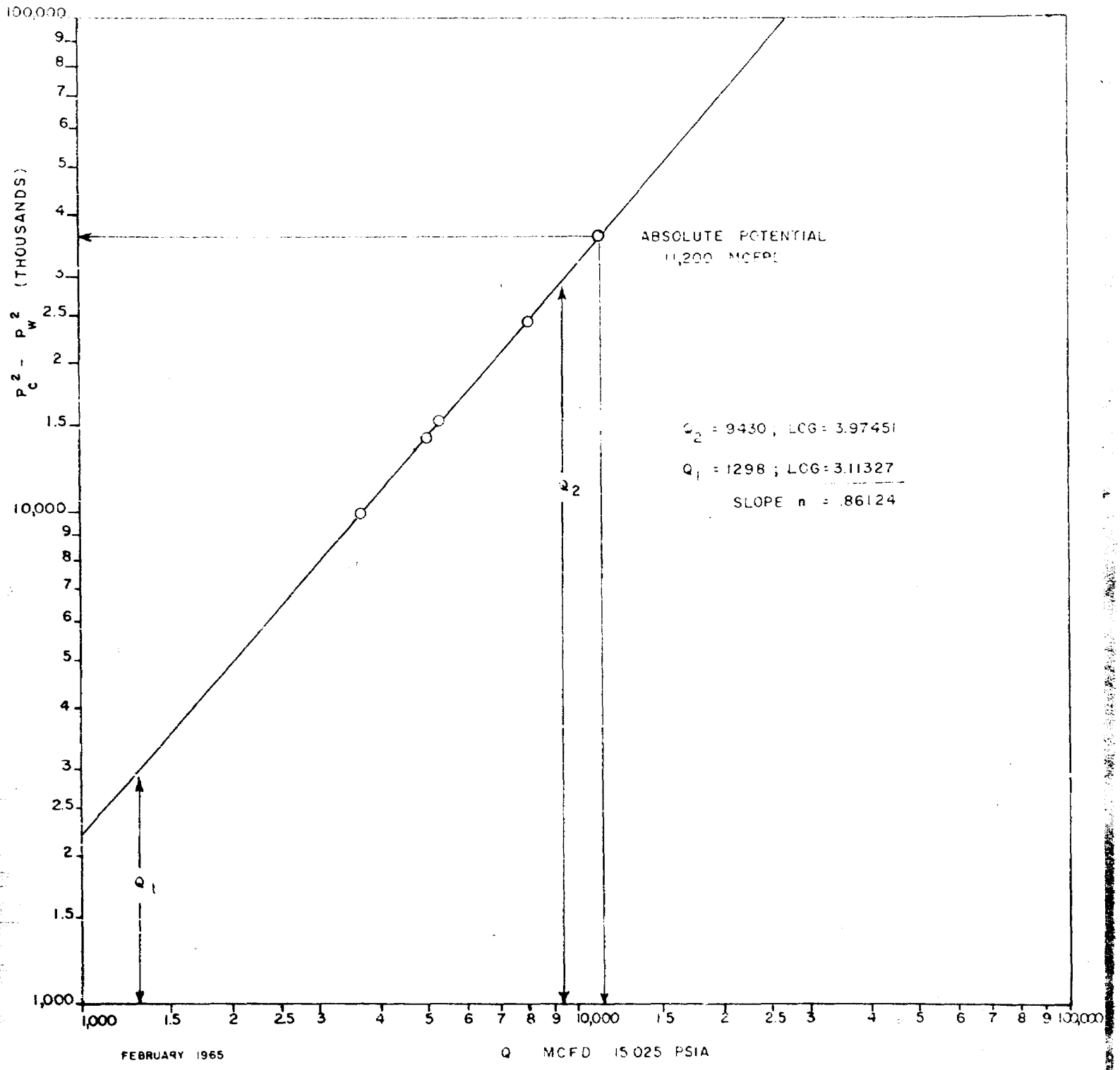
SKELLY OIL COMPANY

WEST JAL UNIT WELL NO B-1

UNIT J SECTION 17-T25S-R36E

LEA COUNTY, NEW MEXICO

JUNE 26, 1964



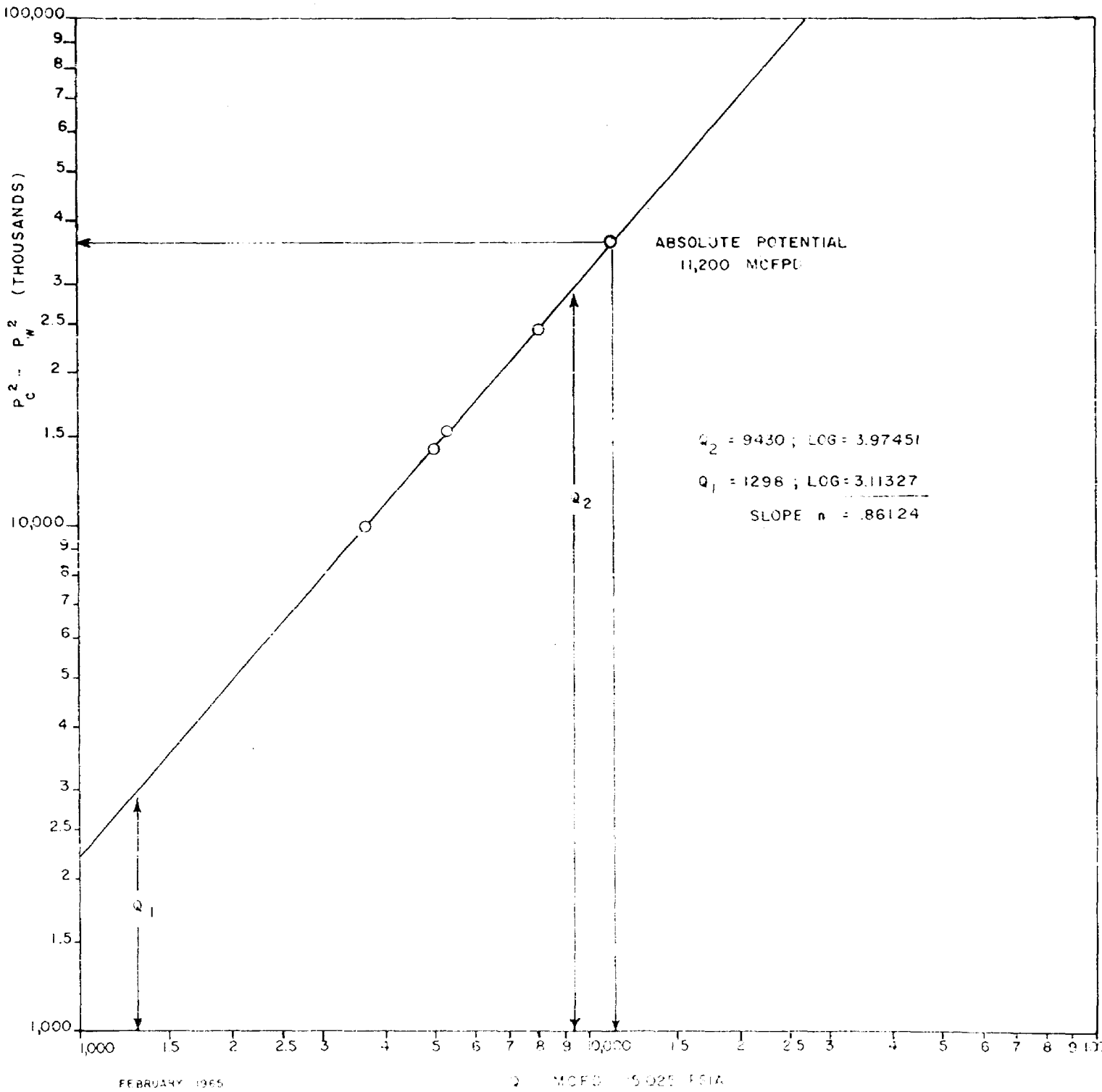
SKELLY OIL COMPANY

WEST JAL UNIT WELL NO B-1

UNIT J SECTION 17-T25S-R36E

LEA COUNTY, NEW MEXICO

JUNE 26, 1964



FEBRUARY 1965

2 MCFD @ 5025 PSIA

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

WEST JAL UNIT WELL NO. 1

PRODUCTION DATA

DATE	GAS PRODUCTION Monthly (MSCF)	GAS PRODUCTION Accumulative (MSCF)	CONDENSATE PRODUCTION Monthly (BBLS.)	CONDENSATE PRODUCTION Accumulative (BBLS.)
May 1963	39949	39949	1038	1038
June	21867	61816	675	1713
July	4522	66338	65	1778
August	2222	68560	35	1813
September	0	68560	0	1813
October	0	68560	0	1813
November	77684	146244	1625	3438
December	77241	223485	1521	4959
January 1964	72347	295832	1408	6367
February	55374	351206	1260	7627
March	63574	414780	1136	8763
April	145474	560254	3049	11812
May	103276	663530	2144	13956
June	0	663530	0	13956
July	115693	779223	2626	16582
August	176637	955860	3901	20483
September	61561	1017421	1364	21847
October	58818	1076239	1240	23087
November	89198	1165437	2295	25382
December	194947	1360384	3279	28661

WEST JAL UNIT WELL NO. B-1

May 1964	8038	8038	200	200
June	48065	56103	808	1008
July	0	56103	0	1008
August	0	56103	0	1008
September	0	56103	0	1008
October	0	56103	0	1008
November	98780	154883	1205	2213
December	103586	258469	1732	3945

JTC/bh
February 1965

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

PRESSURE PERFORMANCE

WEST JAL UNIT NO. 1

DATE (Mo/Day/Year)	Shut In Time Hours	Dead Wt.Test Pressure (psig)	Bottom Hole Pressure @ -8713' (psig)	Tubing Pressure (psig)
August 2, 1962	139	----	7763	6202
June 13, 1963	3	----	7672	6099
September 6, 1963	482	----	7720	6158
November 19, 1963	68	----	7566	6025
November 24, 1963	26	----	7588	----
December 5, 1963	234	----	7612	----
December 20, 1963	624	----	7652	6106
June 8, 1964	240	----	7247	5764
July 6, 1964	----	5828	----	----
July 20, 1964	72	5658	----	----
September 1, 1964	24	5377	----	----
September 2, 1964	48	5400	----	----
September 3, 1964	69	5425	----	----
September 21, 1964	163	5508	----	----
January 19, 1965	336	----	6845	5406

WEST JAL UNIT WELL NO. B-1

June 9, 1964	118	6088	----	----
June 15, 1964	56	----	7540	----
June 18, 1964	84	----	7529	6001
June 22, 1964	85	----	7496	----
July 6, 1964	223	5954	----	----
July 20, 1964	557	5946	----	----
August 3, 1964	896	5931	----	----
August 31, 1964	1565	5889	----	----
September 1, 1964	1589	5870	----	----
September 2, 1964	1613	5871	----	----
September 3, 1964	1634	5872	----	----
September 6, 1964	1659	----	7410	5861
September 9, 1964	1731	5867	----	----
September 11, 1964	1779	5862	----	----
September 14, 1964	1851	5856	----	----
September 21, 1964	2019	5842	----	----
October 27, 1964	2859	5812	----	----
January 19, 1965	336	5507	----	----
January 22, 1965	48	----	6939	5493

JTC/bh
February 1965

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

ECONOMICS

YEAR	ANNUAL GROSS PRODUCTION		GROSS WORKING INTEREST INCOME				PRODUCTION TAXES	G.W.I.I. AFTER PRODUCTION TAXES
	GAS	COND.	GAS		COND.**	TOTAL	TOTAL ***	
	MMSCF	BBLS.	$/MCF	$	$	$	$	$
1962	0	0	0	0	0	0	0	0
1963	223	5000	0.13563	30200	11700	41900	3100	38800
1964	1396	27600	0.13563	189300	64300	253600	18700	234900
1965	1400	25400	0.14438	202100	59200	261300	18300	243000
1966	1400	25000	0.14438	202100	58300	260400	18300	242100
1967	1400	24000	0.14438	202100	55900	258000	18100	239900
1968	1400	22000	0.14438	202100	51300	253400	17700	235700
1969	1400	20000	0.14438	202100	46600	248700	17400	231300
1970	1400	18000	0.15313	214400	41900	256300	17100	239200
1971	1400	18000	0.15313	214400	41900	256300	17100	239200
1972	1400	17000	0.15313	214400	39600	254000	16900	237100
1973	1400	17000	0.15313	214400	39600	254000	16900	237100
1974	1400	16000	0.15313	214400	37300	251700	16700	235000
1975	1400	16000	0.16188	226600	37300	263900	16700	247200
1976	1400	16000	0.16188	226600	37300	263900	16700	247200
1977	1400	15000	0.16188	226600	35000	261600	16600	245000
1978	1400	15000	0.16188	226600	35000	261600	16600	245000
1979	1400	15000	0.16188	226600	35000	261600	16600	245000
1980	1400	14000	0.17063	238900	32600	271500	16400	255100
1981	1400	14000	0.17063	238900	32600	271500	16400	255100
1982	1400	14000	0.17063	238900	32600	271500	16400	255100
1983*	268	3700	0.17063	45700	8600	54300	3300	51000
TOTAL	27087	357700	- - - -	4197400	833600	5031000	332000	4699000

* 2.33 Months
** $2.33/G.W.I. BBL.
*** $0.01/MSCF and $0.17/BBL.

JTC/bh
February 1965

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

ECONOMICS - 640 ACRE SPACING

YEAR	G.W.I.I. AFTER PRODUCTION TAXES $	DIRECT OPERATING EXPENSES ** $	OPERATING INCOME $	CAPITAL EXPENDITURES $	CASH FLOW $	DISCOUNTED CASH FLOW *** $
1962	0	0	0	1517800	(1517800)	(1474200)
1963	38800	2800	36000		36000	33000
1964	234900	8400	226500	373600	(147100)	(127200)
1965	243000	8400	234600		234600	191300
1966	242100	8400	233700		233700	179800
1967	239900	8400	231500		231500	168000
1968	235700	8400	227300		227300	155600
1969	231300	8400	222900		222900	144000
1970	239200	8400	230800		230800	140600
1971	239200	8400	230800		230800	132700
1972	237100	8400	228700		228700	124000
1973	237100	8400	228700		228700	117000
1974	235000	8400	226600		226600	109400
1975	247200	8400	238800		238800	108700
1976	247200	8400	238800		238800	102600
1977	245000	8400	236600		236600	95900
1978	245000	8400	236600		236600	90500
1979	245000	8400	236600		236600	85400
1980	255100	8400	246700		246700	84000
1981	255100	8400	246700		246700	79200
1982	255100	8400	246700		246700	74700
1983 *	51000	2300	48700		48700	14500
TOTAL	4699000	164700	4534300	1891400	2642900	629500

* 2.33 Months
** $350.00/Well/Month-(2 Wells)
*** 6 Per Cent Per Annum

JTC/bh
February 1965

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

ECONOMICS - 320 ACRE SPACING

YEAR	G.W.I.I. AFTER PRODUCTION TAXES $	DIRECT OPERATING EXPENSES ** $	OPERATING INCOME $	CAPITAL EXPENDITURES $	CASH FLOW $	DISCOUNTED CASH FLOW *** $
1962	0	0	0	1517800	(1517800)	(1474200)
1963	38800	2800	36000		36000	33000
1964	234900	8400	226500	373600	(147100)	(127200)
1965	243000	12600	230400	747100	(516700)	(421400)
1966	242100	16800	225300		225300	173400
1967	239900	16800	223100		223100	161900
1968	235700	16800	218900		218900	149900
1969	231300	16800	214500		214500	138600
1970	239200	16800	222400		222400	135500
1971	239200	16800	222400		222400	127900
1972	237100	16800	220300		220300	119500
1973	237100	16800	220300		220300	112700
1974	235000	16800	218200		218200	105300
1975	247200	16800	230400		230400	104900
1976	247200	16800	230400		230400	99000
1977	245000	16800	228200		228200	92500
1978	245000	16800	228200		228200	87300
1979	245000	16800	228200		228200	82300
1980	255100	16800	238300		238300	81100
1981	255100	16800	238300		238300	76500
1982	255100	16800	238300		238300	72200
1983	51000	4700	46300		46300	13800
TOTAL	4699000	314100	4384900	2638500	1746400	(55500)

* 2.33 Months
** $350.00/Well/Month - (4 Wells)
*** 6 Per Cent Per Annum

JTC/bh
February 1965

ATLANTIC

THE ATLANTIC REFINING COMPANY
INCORPORATED - 1870
PETROLEUM PRODUCTS

DOMESTIC PRODUCING DEPARTMENT
NEW MEXICO DISTRICT

MAILING ADDRESS
P. O. BOX 1978
ROSWELL, NEW MEXICO

March 8, 1965

New Mexico Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico

Attention: Mr. A. L. Porter

Re: Case 2764, West Jal-
Strawn Pool Rules

Gentlemen:

The Atlantic Refining Company is a working interest owner in the West Jal Unit operated by Skelly Oil Company. As an interested party in Case 2764, we recommend the Commission adopt the existing West Jal-Strawn Pool Rules as permanent rules for the pool. We think a well can adequately drain 640 acres in this gas pool and that correlative rights will be protected by the existing rules.

Yours very truly,

W. P. Tomlinson

WPT:la

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

ECONOMICS - 640 ACRE SPACING

YEAR	G.W.I.I. AFTER PRODUCTION TAXES $	DIRECT OPERATING EXPENSES ** $	OPERATING INCOME $	CAPITAL EXPENDITURES $	CASH FLOW $	DISCOUNTED CASH FLOW *** $
1962	0	0	0	1517800	(1517800)	(1474200)
1963	38800	2800	36000		36000	33000
1964	234900	8400	226500	373600	(147100)	(127200)
1965	243000	8400	234600		234600	191300
1966	242100	8400	233700		233700	179800
1967	239900	8400	231500		231500	168000
1968	235700	8400	227300		227300	155600
1969	231300	8400	222900		222900	144000
1970	239200	8400	230800		230800	140600
1971	239200	8400	230800		230800	132700
1972	237100	8400	228700		228700	124000
1973	237100	8400	228700		228700	117000
1974	235000	8400	226600		226600	109400
1975	247200	8400	238800		238800	108700
1976	247200	8400	238800		238800	102600
1977	245000	8400	236600		236600	95900
1978	245000	8400	236600		236600	90500
1979	245000	8400	236600		236600	85400
1980	255100	8400	246700		246700	84000
1981	255100	8400	246700		246700	79200
1982	255100	8400	246700		246700	74700
1983 *	51000	2300	48700		48700	14500
TOTAL	4699000	164700	4534300	1891400	2642900	629500

* 2.33 Months
** $350.00/Well/Month-(2 Wells)
*** 6 Per Cent Per Annum

JFC/bh
February 1965

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 16
CASE NO. 2764

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

ECONOMICS - 320 ACRE SPACING

YEAR	G.W.I.I. AFTER PRODUCTION TAXES $	DIRECT OPERATING EXPENSES ** $	OPERATING INCOME $	CAPITAL EXPENDITURES $	CASH FLOW $	DISCOUNTED CASH FLOW *** $
1962	0	0	0	1517800	(1517800)	(1474200)
1963	38800	2800	36000		36000	33000
1964	234900	8400	226500	373600	(147100)	(127200)
1965	243000	12600	230400	747100	(516700)	(421400)
1966	242100	16800	225300		225300	173400
1967	239900	16800	223100		223100	161900
1968	235700	16800	218900		218900	149900
1969	231300	16800	214500		214500	138600
1970	239200	16800	222400		222400	135500
1971	239200	16800	222400		222400	127900
1972	237100	16800	220300		220300	119500
1973	237100	16800	220300		220300	112700
1974	235000	16800	218200		218200	105300
1975	247200	16800	230400		230400	104900
1976	247200	16800	230400		230400	99000
1977	245000	16800	228200		228200	92500
1978	245000	16800	228200		228200	87300
1979	245000	16800	228200		228200	82300
1980	255100	16800	238300		238300	81100
1981	255100	16800	238300		238300	76500
1982	255100	16800	238300		238300	72200
1983	51000	4700	46300		46300	13800
TOTAL	4699000	314100	4384900	2638500	1746400	(55500)

* 2.33 Months
** $350.00/Well/Month - (4 Wells)
*** 6 Per Cent Per Annum

JTC/bh
February 1965

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

ECONOMICS

YEAR	ANNUAL GROSS PRODUCTION GAS MMSCF	ANNUAL GROSS PRODUCTION COND. BBLS.	GROSS WORKING INTEREST INCOME GAS $/MCF	GROSS WORKING INTEREST INCOME GAS $	GROSS WORKING INTEREST INCOME COND.** $	GROSS WORKING INTEREST INCOME TOTAL $	PRODUCTION TAXES TOTAL *** $	G.W.I.I. AFTER PRODUCTION TAXES $
1962	0	0	0	0	0	0	0	0
1963	223	5000	0.13563	30200	11700	41900	3100	38800
1964	1396	27600	0.13563	189300	64300	253600	18700	234900
1965	1400	25400	0.14438	202100	59200	261300	18300	243000
1966	1400	25000	0.14438	202100	58300	260400	18300	242100
1967	1400	24000	0.14438	202100	55900	258000	18100	239900
1968	1400	22000	0.14438	202100	51300	253400	17700	235700
1969	1400	20000	0.14438	202100	46600	248700	17400	231300
1970	1400	18000	0.15313	214400	41900	256300	17100	239200
1971	1400	18000	0.15313	214400	41900	256300	17100	239200
1972	1400	17000	0.15313	214400	39600	254000	16900	237100
1973	1400	17000	0.15313	214400	39600	254000	16900	237100
1974	1400	16000	0.15313	214400	37300	251700	16700	235000
1975	1400	16000	0.16188	226600	37300	263900	16700	247200
1976	1400	16000	0.16188	226600	37300	263900	16700	247200
1977	1400	15000	0.16188	226600	35000	261600	16600	245000
1978	1400	15000	0.16188	226600	35000	261600	16600	245000
1979	1400	15000	0.16188	226600	35000	261600	16600	245000
1980	1400	14000	0.17063	238900	32600	271500	16400	255100
1981	1400	14000	0.17063	238900	32600	271500	16400	255100
1982	1400	14000	0.17063	238900	32600	271500	16400	255100
1983*	268	3700	0.17063	45700	8600	54300	3300	51000
TOTAL	27087	357700	- - - -	4197400	833600	5031000	332000	3699000

* 2.33 Months
** $2.33/G.W.I. BBL.
*** $0.01/MSCF and $0.17/BBL.

JTC/bh
February 1965

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 10 A
CASE NO. 2764

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

PRESSURE PERFORMANCE

WEST JAL UNIT NO. 1

DATE (Mo/Day/Year)	Shut In Time Hours	Dead Wt.Test Pressure (psig)	Bottom Hole Pressure @ -8713' (psig)	Tubing Pressure (psig)
August 2, 1962	139	----	7763	6202
June 13, 1963	3	----	7672	6099
September 6, 1963	482	----	7720	6158
November 19, 1963	68	----	7566	6025
November 24, 1963	26	----	7588	----
December 5, 1963	234	----	7612	----
December 20, 1963	624	----	7652	6106
June 8, 1964	240	----	7247	5764
July 6, 1964	----	5828	----	----
July 20, 1964	72	5658	----	----
September 1, 1964	24	5377	----	----
September 2, 1964	48	5400	----	----
September 3, 1964	69	5425	----	----
September 21, 1964	163	5508	----	----
January 19, 1965	336	----	6845	5406

WEST JAL UNIT WELL NO. B-1

June 9, 1964	118	6088	----	----
June 15, 1964	56	----	7540	----
June 18, 1964	84	----	7529	6001
June 22, 1964	85	----	7496	----
July 6, 1964	223	5954	----	----
July 20, 1964	557	5946	----	----
August 3, 1964	896	5931	----	----
August 31, 1964	1565	5869	----	----
September 1, 1964	1589	5870	----	----
September 2, 1964	1613	5871	----	----
September 3, 1964	1634	5872	----	----
September 6, 1964	1659	----	7410	5861
September 9, 1964	1731	5867	----	----
September 11, 1964	1779	5862	----	----
September 14, 1964	1851	5856	----	----
September 21, 1964	2019	5842	----	----
October 27, 1964	2859	5812	----	----
January 19, 1965	336	5507	----	----
January 22, 1965	48	----	6939	5493

JTC/bh
February 1965

SKELLY OIL COMPANY

WEST JAL STRAWN GAS POOL

WEST JAL UNIT WELL NO. 1

PRODUCTION DATA

DATE	GAS PRODUCTION Monthly (MSCF)	GAS PRODUCTION Accumulative (MSCF)	CONDENSATE PRODUCTION Monthly (BBLS.)	CONDENSATE PRODUCTION Accumulative (BBLS.)
May 1963	39949	39949	1038	1038
June	21867	61816	675	1713
July	4522	66338	65	1778
August	2222	68560	35	1813
September	0	68560	0	1813
October	0	68560	0	1813
November	77684	146244	1625	3438
December	77241	223485	1521	4959
January 1964	72347	295832	1408	6367
February	55374	351206	1260	7627
March	63574	414780	1136	8763
April	145474	560254	3049	11812
May	103276	663530	2144	13956
June	0	663530	0	13956
July	115693	779223	2626	16582
August	176637	955860	3901	20483
September	61561	1017421	1364	21847
October	58818	1076239	1240	23087
November	89198	1165437	2295	25382
December	194947	1360384	3279	28661
WEST JAL UNIT WELL NO. B-1				
May 1964	8038	8038	200	200
June	48065	56103	808	1008
July	0	56103	0	1008
August	0	56103	0	1008
September	0	56103	0	1008
October	0	56103	0	1008
November	98780	154883	1205	2213
December	103586	258469	1732	3945

JTC/bh
February 1965

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool West Jal Strawn Formation Strawn County Lea

Initial X Annual _____ Special _____ Date of Test 6-16-64 to 6-26-64

Company SKELLY OIL COMPANY Lease WEST JAL "B" Well No. 1

Unit J Sec. 17 Twp. 25 S Rge. 36 E Purchaser El Paso Natural Gas Company

Liner ~~Casing~~ 5" OD Wt. 18#N-80 I.D. 4.276" Set at 12,273' Perf. 11,959 To 12,090

Tubing 2 3/8"OD Wt. 4.7#N-80 I.D. 1.995" Set at 11,917 Perf. 11,911 To 11,917

Gas Pay: From 11,959 To 12,090 L 11,911 xG Mic .649 -GL 7730 Bar.Press. 13.2

Producing Thru: Casing _____ Tubing X Type Well SINGLE

Date of Completion: 6-3-64 Packer Model "D" @ 11,905 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 172° F

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) Type Taps FLANGE

No.	Flow Data (Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI	6"	3"				6001				72 Hrs.
1.	6"	3"	801	4.20	58	5058	84			22 Hrs.
2.	6"	3"	779	6.75	4	4567	89			26 Hrs.
3.	6"	3"	835	6.90	3	4427	91			24 Hrs.
4.	6"	3"	835	16.00	9	3013	94			24 Hrs.
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	57.46	58.48	814.2	1.0019	1.0084	1.069	3629
2.	57.46	73.13	792.2	1.0586	1.0084	1.108	4970
3.	57.46	76.50	848.2	1.0598	1.0084	1.118	5252
4.	57.46	116.50	848.2	1.0529	1.0084	1.110	7889
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 47,584 cf/bbl.
Gravity of Liquid Hydrocarbons 52° deg.
F_c 9.936 $(1-e^{-s})$ 0.413

Specific Gravity Separator Gas .590
Specific Gravity Flowing Fluid .7711
P_c 6014 P_c^2 36,168

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	5071.2	25717	36.058	1300.18	536.97	26,253.97	9914.03	5123.9	85.2
2.	4580.2	20978	49.382	2438.58	1007.13	21,985.13	14182.87	4688.8	78.0
3.	4440.2	19715	52.184	2723.17	1124.67	20,839.67	15328.33	4565.0	75.9
4.	3026.2	9158	78.385	6144.21	2537.56	11,695.56	24472.44	3419.9	56.9
5.									

Absolute Potential: 11,200 MCFPD; n .86
COMPANY SKELLY OIL COMPANY
ADDRESS P.O. Box 730, Hobbs, New Mexico
AGENT and TITLE H. E. Aab, District Superintendent
WITNESSED _____
COMPANY _____

REMARKS

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 3261

February 1965

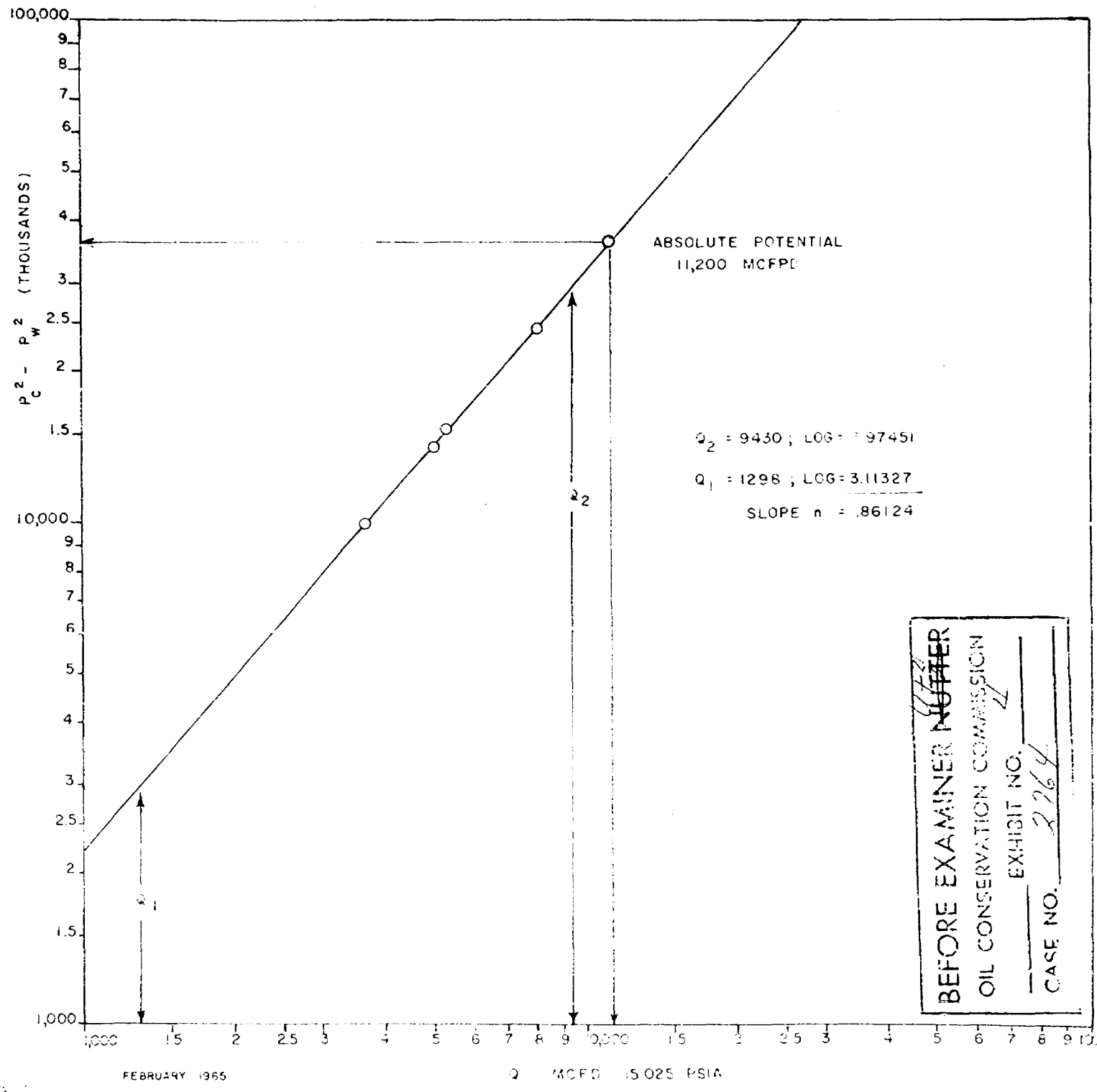
SKELLY OIL COMPANY

WEST JAL UNIT WELL NO B-1

UNIT J SECTION 17-T25S-R36E

LEA COUNTY, NEW MEXICO

JUNE 26, 1964



BEFORE EXAMINER ~~NUTTER~~

OIL CONSERVATION COMMISSION

EXHIBIT NO. 4

CASE NO. 2264

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

P. O. BOX 871
SANTA FE

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

February 28, 1963

Mr. Charlie White
Gilbert, White & Gilbert
Attorneys at Law
Box 787
Santa Fe, New Mexico

Re: Case No. 2764
Order No. R-2439
Applicant:
Skelly Oil Company

DOCKET:
Date 1-29-65

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
OTHER Mr. Richard Morris
Mr. Bill Kastler

DOCKET MAILED
Date 2-26-65

DOCKET MAILED
Date 1-29-65

SKELLY OIL COMPANY
P. O. Box 1650
TULSA 2, OKLAHOMA

January 26, 1965

PRODUCTION DEPARTMENT
C. L. BLACKSHER, VICE PRESIDENT
W. P. WHITMORE, MGR. PRODUCTION
W. D. CARSON, MGR. TECHNICAL SERVICES
ROBERT G. HILTZ, MGR. JOINT OPERATIONS
GEORGE W. SELINGER, MGR. CONSERVATION

Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

Under Order R-2439, Case No. 2764 of February 28, 1963, the Commission granted temporary pool rules for the West Jal (Strawn) gas pool, and in Paragraph 3 thereof provides that the case shall be re-opened at an Examiner's hearing in February, 1965.

Because of varied circumstances we will be unable to adequately present our case during February, 1965, but we will be in a position to present the proper data before the Commission at its Examiner's hearing on March 10, 1965.

We, therefore, earnestly request that this matter be set for the March 10th Examiner's hearing.

Yours very truly,

George W. Selinger

GWS:br

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF SKELLY OIL COMPANY FOR THE CREATION OF A NEW POOL FOR STRAWN GAS PRODUCTION AND FOR ESTABLISHMENT OF 640-ACRE SPACING UNITS IN THE STRAWN FORMATION AND TEMPORARY SPECIAL POOL RULES INCLUDING UNIFORM PRORATION UNITS FOR THE FURTHER DEVELOPMENT OF THE STRAWN FORMATION UNDERLYING SECTIONS 16-21 AND SECTIONS 28-30, BOTH INCLUSIVE, TOWNSHIP 25 SOUTH, RANGE 36 EAST, LEA COUNTY, NEW MEXICO.

Case No. 764

APPLICATION

TO THE HONORABLE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO:

Comes now SKELLY OIL COMPANY and respectfully alleges as follows:

1. It is the owner and operator of oil and gas leases within the following described area located in Lea County, New Mexico, viz:

Sections 16-21 and Sections 28-30, both inclusive,
Township 25 South, Range 36 East.

2. It has drilled and completed its discovery well, West Jal Unit Well No. 1, at a location of 1980 feet from the North line and 660 feet from the East line, Section 20, Township 25 South, Range 36 East, as a gas well from the Strawn formation with an open flow potential of 310 million cubic feet of gas per day. The Strawn formation in this well has a top of 11,510 feet and a base of 12,155 feet. The perforated Strawn interval is between 11,736 feet and 11,894 feet.

3. Applicant believes that the Strawn formation underlies all of the area described in Paragraph 1 above and constitutes a new and previously unencountered common source of supply.

4. In the interest of preventing waste of gas and gas condensate, the elimination of unnecessary wells, the recovery of the greatest ultimate amount of gas and gas condensate and the protection of correlative rights, the

vertical and horizontal limits of the pool should be defined and designated, and temporary special pool rules established, including a provision for uniform 640-acre proration units.

5. Applicant suggests that a uniform proration unit may be achieved by designating 640-acre governmental section spacing units for gas and associated hydrocarbons for this formation with the permitted well location for subsequent wells to be 1320 feet from unit lines and that the subject discovery well be declared an exception to said pool rules.

6. Attached hereto is a list of the names of all principal lessees or operators known to applicant who may be interested in this application.

7. This application may be set for hearing by an examiner of the New Mexico Oil and Gas Conservation Commission.

WHEREFORE, Applicant prays that this application be set for hearing; that notice thereof be given according to law and that upon the hearing of this application an order be entered as herein requested and for such other relief as the Commission may deem proper.

DATED at Santa Fe, New Mexico, this 29th day of January, 1963.

SKELLY OIL COMPANY

By GILBERT, WHITE AND GILBERT

By _____

Bishop Building
Santa Fe, New Mexico

GILBERT, WHITE AND GILBERT
ATTORNEYS AT LAW
SANTA FE, NEW MEXICO

GILBERT, WHITE AND GILBERT
ATTORNEYS AT LAW
SANTA FE, NEW MEXICO

LIST OF ALL PRINCIPAL LESSEES OR OPERATORS

Atlantic Refining Company

George Coates

General Crude Oil Company

Gulf Oil Corporation

Mobil Oil Company

J. Moore

Pan American Petroleum Corporation

Phillips Petroleum Company

Shell Oil Company

Sinclair Oil & Gas Company

Skelly Oil Company

Southern Petroleum Exploration, Inc.

Southland Royalty Company

Sunray DX Oil Company

J. R. Trigg

WELL DATA SHEET
WEST JAL UNIT WELL NO. 1

Location: 1,980' FNL, 660' FEL of Section 20, Township 25 South, Range 36 East, Lea County, New Mexico.

Commenced: December 25, 1961

Completed: July 28, 1962

Recompleted: January 22, 1963

Elevation: 3,102' (DF) T.D.: 15,958' P.B.T.D.: 12,790'

Producing Formation: Strawn, Top 11,510 (-8408)
Base 12,155 (-9053)

Casing Program:

20" OD, 94# set at 869', cemented with 1,630 sacks, circulated to surface.

13-3/8" OD, 61# to 72# set at 6,300', cemented with 3,206 sacks, top of cement 100'.

9-5/8" OD, 47# to 53.5# set at 11,732', cemented with 775 sacks, top of cement 7,475'.

7" OD Liner, 26#, set between 11,473' and 12,213' (718'), cemented with 185 sacks and circulated.

5-1/2" OD Liner, set between 12,032' and 15,400', cemented with 450 sacks, squeezed on top with 100 sacks.

Perforations: 11,736-741'
11,781-787'
11,808-915'
11,849-852'
11,860-894'

Potential: Calculated open flow, 310,000 MCF/D + 156 Bbl/D on January 22, 1963.

SKELLY OIL CO.
EXHIBIT NO. 2

Case 2764

GILBERT, WHITE AND GILBERT
ATTORNEYS AND COUNSELORS AT LAW
BISHOP BUILDING
SANTA FE, NEW MEXICO

MAIN OFFICE OCC
1963 JAN 31 AM 8:16

January 30, 1963

CARL H. GILBERT
L. C. WHITE
WILLIAM W. GILBERT
SUMNER S. KOCH
WILLIAM B. KELLY

Mrs. Ida Rodriguez
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Ida:

Enclosed is application for Skelly Oil Company for the establishment of a 640-acre non-standard gas proration unit and for temporary special pool rules.

It would be appreciated if you would include this application on the calendar for the examiner's hearing February 21, 1963.

Very truly yours,

L. C. White

~~L. C. WHITE~~

LCW/ab
Encl: Application in triplicate

DOCKET MAILED
Date 2/8/63

DOCKET MAILED
Date 1-29-63

Docket No. 7-65

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 10, 1965

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 2764: (Reopened and continued from the February 10, 1965 Examiner Hearing) In the matter of Case No. 2764 being reopened pursuant to the provisions of Order No. R-2439, which order established temporary 640-acre spacing units for the West Jal-Strawn Gas Pool, Lea County, New Mexico, for a period of two years. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing units.

CASE 3203: (Continued from the February 10, 1965 Examiner Hearing) Application of Schermerhorn Oil Corporation for a non-standard location and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an 80-acre non-standard gas proration unit comprising the N/2 NE/4 of Section 5, Township 19 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its Linam G Well No. 1 at a non-standard location 1025 feet from the North line and 1953 feet from the East line of said Section 5.

CASE 3214: Application of Carter Foundation Production Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Teague-Simpson Pool by the injection of water into the Simpson formation through two injection wells located in Units B and G of Section 34, Township 23 South, Range 37 East, Lea County, New Mexico.

CASE 3215: Application of Gulf Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Mescal Wash Unit Area comprising 21,446 acres, more or less, of Federal, State and Fee lands in Townships 25 and 26 South, Ranges 22 and 23 East, Eddy County, New Mexico.

CASE 3216: Application of Gulf Oil Corporation for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the expansion of its West Pearl Queen Unit Waterflood Project, Pearl Queen Pool, Lea County, New Mexico, to include the NW/4 of Section 28, Township 19 South, Range 35 East; applicant further seeks authority to convert two additional wells to water injection, said wells being located in Units D and F of said Section 28.

CASE 3217: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit S. S. Sutton, dba Eddy Oil Company and all other interested parties to show cause why the Eddy Oil Company Stanolind-State Wells Nos. 1 and 2, located in Units G and J, respectively, of Section 36, Township 19 South, Range 30 East, Eddy County, New Mexico, should not be plugged in accordance with a Commission approved plugging program.

CASE 3218: Application of Newmont Oil Company for a non-standard location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Fidel Well No. 5 as a water injection well to inject water into the Lower Grayburg and Upper San Andres formations in its East Square Lake Waterflood Project, at a non-standard location 50 feet from the North line and 50 feet from the East line of Section 29, Township 16 South, Range 31 East, Eddy County, New Mexico.

CASE 3219: (Continued to the March 24, 1965 Examiner Hearing)
Application of Humble Oil & Refining Company for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its State "M" lease waterflood project by the conversion to water injection of 13 additional wells located in Sections 19, 20, 29, 30 and 31, Township 22 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

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. 2764
Order No. R-2439
NOMENCLATURE

APPLICATION OF SKELLY OIL COMPANY
FOR THE CREATION OF A STRAWN GAS
POOL AND FOR TEMPORARY SPECIAL
POOL RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 21, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, 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 28th day of February, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Skelly Oil Company, seeks the creation of a new pool for Strawn production and the promulgation of temporary special rules and regulations governing said pool, including a provision for 640-acre spacing units.

(3) That a new gas pool for Strawn production should be created and designated the West Jal-Strawn Gas Pool. This pool was discovered on January 22, 1963, by the West Jal Unit Well No. 1, located in Unit I of Section 20, Township 25 South, Range 36 East, NMPM, Lea County, New Mexico.

(4) That temporary special rules and regulations establishing 640-acre spacing should be promulgated for the subject pool in order to prevent the possibility of economic loss resulting from the drilling of unnecessary wells and in order to allow the operators in the subject pool to gather information concerning the reservoir characteristics of the pool.

(5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(6) That the temporary special rules and regulations should be established for a two-year period and that during this two-year period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.

(7) That this case should be reopened at an examiner hearing in February, 1965, at which time the operators in the subject pool should appear and show cause why the West Jal-Strawn Gas Pool should not be developed on 160-acre spacing units.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as a gas pool for Strawn production is hereby created and designated the West Jal-Strawn Gas Pool, consisting of the following-described area:

TOWNSHIP 25 SOUTH, RANGE 36 EAST, NMPM
Section 20: All

(2) That Special Rules and Regulations for the West Jal-Strawn Gas Pool are hereby promulgated as follows, effective March 1, 1963.

SPECIAL RULES AND REGULATIONS
FOR THE
WEST JAL-STRAWN GAS POOL

RULE 1. Each well completed or recompleted in the West Jal-Strawn Gas Pool or in the Strawn formation within one mile of the West Jal-Strawn Gas Pool, and not nearer to or within the limits of another designated Strawn pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well completed or recompleted in the West Jal-Strawn Gas Pool shall be located on a standard unit containing 640 acres, more or less, consisting of a single governmental section.

RULE 3. The Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Lands Survey, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a single governmental section and contains less acreage than a standard unit.

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(d) In lieu of Paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well completed or recompleted in the West Jal-Strawn Gas Pool shall be located no nearer than 1650 feet to the boundary of the spacing unit and no nearer than 330 feet to any governmental quarter-quarter section line.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed unorthodox location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.

IT IS FURTHER ORDERED:

(1) That any well presently drilling to or completed in the Strawn formation within the West Jal-Strawn Gas Pool or within one mile of the West Jal-Strawn Gas Pool that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of Rule 4. The operator of any such well shall notify the Hobbs District Office in

writing of the name and location of the well on or before April 1, 1963.

(2) That any operator desiring to dedicate 640 acres to a well presently drilling or completed in the West Jal-Strawn Gas Pool shall file a new Form C-128 with the Commission on or before April 1, 1963.

(3) That this case shall be reopened at an examiner hearing in February, 1965, at which time the operators in the subject pool may appear and show cause why the West Jal-Strawn Gas Pool should not be developed on 160-acre spacing units.

(4) 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
OIL CONSERVATION COMMISSION

Jack M Campbell
JACK M. CAMPBELL, Chairman

E. S. WALKER, Member

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

esr/

Case. 2764
Heard. 3-10-65
Rec. 3-10-65

1. Grant Skelly a permanate order for ~~Eumont~~ West Jal - Ltrawn Gas pool as set out in R-2439.

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. 2764
Order No. R-2439-A

APPLICATION OF SKELLY OIL COMPANY
FOR THE CREATION OF A STRAWN GAS
POOL AND FOR TEMPORARY SPECIAL
POOL RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on March 10, 1965, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 25th day of March, 1965, 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 by Order No. R-2439, dated February 28, 1963, temporary Special Rules and Regulations were promulgated for the West Jal-Strawn Gas Pool, Lea County, New Mexico.

(3) That pursuant to the provisions of Order No. R-2439, this case was reopened to allow the operators in the subject pool to appear and show cause why the West Jal-Strawn Gas Pool should not be developed on 160-acre spacing units.

(4) That the evidence establishes that one well in the West Jal-Strawn Gas Pool can efficiently and economically drain and develop 640 acres.

(5) That the Special Rules and Regulations promulgated by Order No. R-2439 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

(6) That to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-2439 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the West Jal-Strawn Gas Pool promulgated by Order No. R-2439 are hereby continued in full force and effect until further order of the Commission.

(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
OIL CONSERVATION COMMISSION

Jack M Campbell

JACK M. CAMPBELL, Chairman

Guyton B. Hays

GUYTON B. HAYS, Member

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

esr/

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

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

March 25, 1965

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

Re: Case No. 2764
Order No. R-2439-A
Applicant:

Skelly Oil Company

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
OTHER

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 10, 1965

EXAMINER HEARING

IN THE MATTER OF:

Case Number 2764 being reopened pursuant to the provisions of Order No. R-2439, which order established temporary 640 acre spacing units for the West Jal-Strawn Gas Pool, Lea County, New Mexico, for a period of two years.

Case No. 2764 (reopened)

BEFORE: DANIEL S. NUTTER, Examiner
ELVIS A. UTZ: Alternate Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Call Case Number 2764.

MR. DURRETT: In the matter of Case Number 2764 being reopened pursuant to the provisions of Order No. R-2439, which order established temporary 640 acre spacing units for the West Jal-Strawn Gas Pool, Lea County, New Mexico for a period of two years.

We have a letter from George W. Selinger for Skelly Oil Company, requesting that this case be continued to the March 10 Examiner Hearing.

MR. UTZ: The case will be continued to that date.

* * *

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, a Notary Public, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

NOTARY PUBLIC

My Commission Expires:

June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2764, heard by me on October 6, 1965.

, Examiner
New Mexico Oil Conservation Commission

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 10, 1965

EXAMINER HEARING

IN THE MATTER OF:

CASE NO. 2764 BEING REOPENED PURSUANT TO THE PROVISIONS OF ORDER NO. R-2439, WHICH ORDER ESTABLISHED TEMPORARY 640-ACRE SPACING UNITS FOR THE WEST JAL-STRAWN GAS POOL, LEA COUNTY, NEW MEXICO, FOR A PERIOD OF TWO YEARS

Case No. 2764

BEFORE:

ELVIS A. UTZ

TRANSCRIPT OF HEARING

MR. UTZ: Case Number 2764.

MR. DURRETT: In the matter of Case Number 2764 being reopened pursuant to the provisions of Order Number R-2439.

MR. KELLY: Booker Kelly of Gilbert, White & Gilbert, appearing on behalf of Skelly. I have one witness, and ask that he be sworn.

J A Y T. C O X, the witness, having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name, employer and position, please.

A Name, Jay T. Cox; I am District Reservoir Engineer for Skelly Oil Company, Hobbs, New Mexico.

MR. UTZ: Are there other appearances in this case? ... You may proceed.

MR. KELLY: Have you previously testified before the New Mexico Oil Conservation Commission?

A No.

Q Would you give the Examiner a brief resume of your educational and professional experience, and experience as related to the Strawn Pool?

A I am a graduate of Oklahoma State University in

1956. I received my B. S. Degree in mechanical engineering with petroleum option. I was employed as Reservoir Engineer by Core Laboratories, Incorporated for five years. I have been with Skelly since last July in the classification of District Reservoir Engineer.

Q You have had actual experience in Lea County?

A Yes, I have.

MR. KELLY: Are the witness's qualifications acceptable?

MR. UTZ: Yes, sir, they are.

MR. KELLY: Now, would you state briefly what Skelly's position in this case is.

A Skelly is requesting adoption of the temporary rules to permanent rules for the Strawn Gas Pool.

Q In other words, you want a continuation of the 640-acre spacing?

A Yes.

Q At the time the original hearing was held, what was the general spacing down there?

A Spacing at the time of the original hearing was for 160 acre spacing. Since that time this pool has--not particularly this pool, but reservoirs in this depth, have been granted 320-acre spacing. We are requesting 640-acre spacing for our Strawn Gas Pool.

Q Referring to what has been marked Exhibit 1, would you explain that to the Examiner.

A Yes. As a matter of review, following the structure map on the lower portion of the exhibit, the West Jal Strawn Gas Pool was discovered by the Skelly Oil Company, West Jal Unit Well Number 1 located in Section 20. This is Unit H in Township 25 South, R 36 East, Lea County. Three additional wells have been drilled in the West Jal area with Skelly's Well Number B-1 being located in Section 17, Unit J, being the only other well successfully completed in the Strawn gas reservoir. The location of these four wells may be noted on Exhibit 1, the structure map. Skelly's Well Number 1-A, located in Section 21, Unit K, tested the Strawn gas zone and no commercial quantities of oil or gas were found in this interval. The well was ultimately completed in the Delaware Sand as an oil well in October, 1963. In April, 1964 the West Jal 1-18 Well Number 1, Section 18, Unit 5, drilled by G. C. Parker and Skelly Oil Company to a depth of 12,950 feet, was plugged and abandoned after testing operations indicated no commercial quantities of oil or gas.

The Strawn gas reservoir of the West Jal area is shown on the attached exhibit. The map is contoured on top of the Strawn Formation and shows an asymmetrical anticline faulted on the east flank. As demonstrated in the cross section, the

fault is an effective seal and limits the reservoir to the east. Physical limits to the north, west and south are by structural closure. Sun Oil Company drilled to a depth of 14,933 feet in Section 26 and plugged and abandoned the well. Sinclair has a well in Section 4 which tested the Strawn, and as may be noted on the structure map, an effective pay of zero feet is indicated. Further limitation of the reservoir is caused by the lack of porosity development. These zones of porosity should be interconnected by fracturing accomplished when the faulting occurred. A cross-sectional map drawn through the four wells is presented as Exhibit 1 for clarification of the geology in the West Jal area. Also on the structure map itself is the net pay of Strawn formation for each well. Average properties have been determined for the reservoir; porosity is 8%. permeability 27 millidarcies and connate water saturation is determined to be 32%.

Q Is it Skelly's position that, based on the information they have now, the limits of the pool are pretty well defined?

A Yes.

MR. KELLY: Going on to Exhibit--first, Mr. Examiner, we have logs available, gamma ray and electric logs and micrology. Would you like to have them? This is for the B-1 well.

MR. UTZ: It's the logs as you have shown on this exhibit?

MR. KELLY: This shows the pay zone?

WITNESS: Yes, the cross-section shows the pay zone. The electric logs would just be additional data.

MR. UTZ: Whatever you want--this is good enough as far as I am concerned.

MR. KELLY: Mr. Cox, going to what has been marked Exhibit 3, would you go through that for the Examiner. .. 3 and 4 together.

A Skelly Oil Company's West Jal Unit Number B-1 well was completed in the Strawn gas reservoir on June 27, 1964. Pertinent data for this well are given on Exhibits 2, 3 and 4. Exhibit 2 is an electric log which we offered to the Commission. Exhibits 3 and 4 are the calculation sheet and a plat of results for the multipoint back pressure test conducted June 16 through June 26, 1964. The calculated absolute open flow potential for the B-1 well was 11,200 MCF of gas per day.

Q On Exhibits 5, 6 and 7, which again are pressure information and production history you have plotted, would you briefly explain the information you have gathered there for the Examiner.

A Yes. Production and pressure data for the West Jal Unit Number 1 and B-1 wells are presented in Exhibits 5 and 6,

and Exhibit 7 is a graphic illustration of these data. Exhibit 5 is the production data for two wells. Given on the top of the table is data for the West Jal Number 1. The first column is the date the company noted the Unit 1 well first produced, in May of 1963. Gas production is given monthly in MSCF and cumulative also in MSCF. Condensation is also given monthly and cumulatively. Total production of the Unit 1 well to January 1, 1965 has been 1,360,384 MSCF of gas. A total of 28,661 barrels of condensate have been produced from this well. In the lower portion of the table similar data is given for the B-1 well. The company noted first production reported in May of 1964. There is a period, July, August, September and October, when no production was taken from the well--we were awaiting pipeline connection. Total production from this to January 1, 1965 has been 258,469 MSCF of gas and 3,945 barrels of condensate. Exhibit 6 is a tabulation of pressure performance for both wells. The first column shows the month, day and year of the pressure measurements. The next column is hours of shut-in time. The next column is dead weight test pressure which we measured at well-head, given in PSIG. The next column is bottom hole pressure at datum of minus 837 feet. The next column is tubing pressure which increases to bottom hole pressure given in the previous conurn. Exhibit 7 is a plot of these data. The top curve is static bottom hole

pressure at the minus 8,713 feet subsea--these pressures are given in PSIG. Pressures presented on this plot are bottom hole pressures and are not surface pressures which have been extrapolated down--they represent strictly bottom pressure measurement. Given above the pressure points are the number of hours the well was shut in. The red curves are for the West Jal Unit Well Number 1. The yellow curves are for the West Jal Well B-1. In the lower portion of the graph we have monthly production given in MMSCF as a bar graph. It can be seen that starting in the month of May, our West Jal Unit Well Number 1 was put on production. It can be seen also on the bar graph that the West Jal Unit Well Number 1 started production in the month of May, 1964. Also shown on this exhibit is a plot of the cumulative gas production in MMSCF. The scale for this is on the right-hand side of the curve.

Q You have made a calculation of reserves for this reservoir, have you not?

A Yes.

Q --As shown on Skelly's Exhibit 8?

A Before we get into the reserves, I would like to discuss the initial reservoir pressures in each well.

Q All right.

A The original reservoir pressure measured by Amerada bottom hole in the West Jal Unit Number 1 well was found to

be 7,763 PSIG at the datum of minus 8,313 feet. The first pressure measurement in the B-1 well on June 9, 1964 was taken by a dead weight test instrument at well head after there had been withdrawals of approximately 17,000,000 CF of wet gas. Surface pressure of 6088 PSIG referred to the reservoir datum is 7,629 PSIG. Extrapolation of the 7629 PSIG pressure to initial well conditions--to get back to an original pressure for the well, I used average pressure drop per MMSCF of gas production, which is a value of .53 PSI for MMSCF, and have determined an estimated original pressure for the B-1 well of 7,638 PSIG. Comparison of the original pressures in the two West Jal Unit wells indicates the B-1 pressure to have been 125 PSI lower than the original pressure measured in the Number 1 well.

Now I would like to discuss the reserves which I calculated for the West Jal Strawn. Reserves were determined by extrapolation of the P over Z versus cumulative wet gas production curve. Gas reserves calculated by this method were 31,100 MMSCF. Recoverable gas reserves to an abandonment pressure of 1,000 PSIG were 27,400 MMSCF of gas. An arithmetic average of the two wells' pressure was used to establish reservoir pressure performance. Total withdrawals from the reservoir to January 1, 1965 have been approximately 1,619 MMSCF of gas and 32,600 barrels of condensate.

Calculations for the reserves are shown on Exhibit 8.

Q What is your opinion as to the life of this reservoir?

A The life of this reservoir will be approximately twenty years.

Q And this corresponds with the contract you have with El Paso?

A Yes.

Q Now, going to Exhibit 9, you have calculated the effect of bottom hole pressures on one well?

A Yes. Evidence of pressure interference between the two West Jal wells is indicated by the apparent initial pressure in the B-1 well being lower than the original pressure measured in the Number 1 well. Further evidence of drainage was observed during the months of July through October 1964. Exhibit 9 shows the shut-in well-head pressure for the B-1 well--that is on the top portion of the curve. This is in PSIG. Also shown on the top of the curve is cumulative shut-in time for each of the surface pressure measurements. On the bottom portion is the daily production rate in MMSCF per day of production taken from the Number 1 well. We noted that for withdrawals from the Number 1 well, while the B-1 well was shut in there was a surface pressure drop. Shut-in press-

ure dropped in the B-1 well 8 PSI and an additional 15 PSI during the Well Number 1 flow periods of July 8th to July 17th and July 23rd to August 3rd. The largest pressure drop in the B-1 well of 62 PSI was noted between the sustained flow period of the Number 1 well from August 6th to August 31st. A slight increase in pressure was observed at the cumulative shut-in hours of 1589, 1613, and 1634; however, this increase was only 3 PSI and is considered to be insignificant. The Unit Well Number 1 produced intermittently from September 9th to October 27th during which time a pressure drop of 55 PSI was observed in the B-1 well. During the period from July 6th to October 27th, the West Jal Unit Number 1 well produced approximately 405 MMSCF of gas and 9,000 barrels of condensate, while the shut-in pressure in the B-1 well dropped a total of 142 PSI.

Q The pressure you are using for the B-1 well was surface pressure?

A Yes.

Q Do you feel that there will be any difference between surface and bottom hole pressure?

A In my opinion, in a well shut-in for the number of hours the B-1 was, surface pressure should represent static bottom hole pressure.

Q In your opinion, this is almost a classic situation of pressure interference?

A Yes.

Q Would it also be your opinion that the wells in this pool are capable of draining in excess of 640 acres?

A Yes.

Q You have prepared some economic figures that are shown on Exhibit 10, pages 1, 2 and 3. Would you go through this for the Examiner.

A Economics of the West Jal Strawn Pool are shown as Exhibit 10, of which there are three pages. Page 1 is basic economics. Column 1 is the year; Columns 2 and 3 are annual gross production with the second column being gas in MMSCF, and the third column is condensate in barrels. The next four colums were used to calculate gross working interest income. The first of these four colums are price per MCF for the gas. This is actually gross working interest value of the gas. The next column shows the dollar value for the gas; the next column is gross working interest income for the condensate, for which a value of $2.33 per gross working interest a barrel was used. The next column is total of the condensate and gas income. The total for this gross working interest income is $5,031,000. The next column represents production taxes, a value of .01 dollars per MSCF and .17 dollars per barrel for condensate. The last column is gross working interest income after production taxes.

Page 2 shows economics for the 640-acre spacing. The first column is year; the second column is gross working interest income after production taxes and is a duplication of the last column given on page 1. The next column is direct operating expenses. A value of $350.00 per month per well for two wells was used in this calculation. The next column is operating income, which is the gross working interest income after taxes less direct operating expenses. The next column is capital expenditures. In this column we have the initial expenditure of $1,517,800 which represents our West Jal Unit Number 1 well. In the year 1964 we have an expenditure of $373,600, which represents expenditure for the B-1 well. The next column is cash flow in dollars. The last column is discounted cash flow and cash flow was discounted at 6% per annum. The discounted cash flow value for the life of this reservoir will be $629,500.

Q That is on 640-acre spacing?

A Yes.

Q You have not added in any of the cost of the dry holes, of course?

A No, they were not included.

Q Go on.

A On page 3 are the economics for 320-acre spacing. Column 1 is the year; Column 2 the gross working interest

income after production taxes, which is carried over from page 1. Direct operating expenses in this case were $350.00 per well per month, and four wells were included. Capital expenditures for the first year representing Unit Number 1 well for the year 1964, represents the B-1 well; for 1965 there is a capital expenditure of $747,100, which represents the two additional wells which would be drilled in the event 320-acre spacing was required. This value for these two additional wells was based on cost of the B-1 well. It can be seen that the cost of our Number 1 well greatly exceeded the cost of the B-1 well. Loss of circulation problems were encountered during drilling operations and the cost of that well was quite high. The next column is cash flow; the last column is discounted cash flow, again discounted at 6% per annum. It can be seen from the total that the discounted cash flow for the life of this reservoir would be a negative $55,500.

Q You are presently having all of your gas purchased --strike that. You can produce a lot more gas than is being purchased now, is that correct? Are the wells capable of it?

A The wells are capable of producing more gas.

Q And so the result of going back to 320-acre spacing would be to drill two more wells to produce what is now being produced through these two wells?

A Yes.

Q In your opinion, could this pool be economically developed on 320-acre spacing?

A No.

Q Do you have anything else you would like to add?

A I might say this--that no additional reserves were included in the 320-acre spacing, in that the total reserves, or recoverable reserves, are 27,400 MSCF of gas, and additional wells will not increase the reserves in this reservoir. A faster return of our investment by 320-acre spacing would not be possible because gas sales are restricted on the basis of reserves rather than number of wells.

Q Were Exhibits 1 and 3 through 10 prepared by you or under your supervision?

A Yes.

MR. KELLY: I move the introduction of Exhibits 1 and 3 through 10.

MR. UTZ: It would be through 10C, wouldn't it?

MR. KELLY: Yes.

MR. UTZ: The Exhibits 1 and 3 through 10C will be accepted in the record of this case.

MR. KELLY: I have no further questions at this time.

CROSS-EXAMINATION

BY MR. UTZ:

Q Mr. Cox, we have heard from time to time considerable testimony on direct operating costs for operating gas wells. Your figure of $350.00 per month seems extremely high compared to other testimony. Can you justify that?

A This value of $350.00 per well per month was taken from the actual cost of this well--actual operating cost assigned to this well.

Q Why are costs so high on this type of gas well? It wouldn't be the depth, would it? Does that include supervisory costs?

A Yes.

Q And overhead?

A Yes, this does include overhead cost.

Q Does the fact that this well produces substantial quantities of condensate increase the cost?

A Yes. Operating costs are high in that special equipment for the high-pressure wells were required.

Q It might be well to go into some detail as to how you arrive at this $350.00 figure--what the actual charges are.

MR. KELLY: Mr. Cox, do you face increased operating expenses due to this surface equipment for your condensate on these wells?

A Would you re-state the question.

Q I said, do you face additional operating expenses

in these wells because of your measuring equipment and surface equipment for your condensate?

A Yes, our operating expenses would be high due to the surface facilities and the storage facilities for the condensate.

Q And you actually have to have additional employees for guaging and working the surface equipment too?

A Yes.

Q Do you feel that that would explain the higher figure of $350.00?

A Yes, it certainly would.

MR. UTZ: Do you know of your own knowledge how much it costs Skelly to operate the oil well?

A No, I don't.

Q Do you know whether it would be close to this figure or not?

A I'm sure the cost for operating an oil well would not be this high, in that normally pressures and the equipment used for the production of oil do not require high pressure capacities, so therefore the cost of operating would be less. One reason why surface facilities for these gas condensate wells is so expensive is due to the fact that they are high pressure gas wells.

MR. PORTER: Would you say these are rather isolated

wells?

A Yes, they are.

Q How many wells do you have here?

A We have two gas condensate wells and one producing oil well.

MR. SELINGER: It necessitates special pumping.

MR. PORTER: Two gas wells and an oil well?

MR. SELINGER: Yes.

MR. PORTER: Do you know whether--you probably have a switcher assigned to these wells. Do you know whether or not he handles other wells?

MR. SELINGER: No, he does not--he just handles these. It's an isolated operation.

MR. PORTER: In other words, this requires the full time services of one man?

MR. SELINGER: Yes.

MR. PORTER: Plus probably some other services?

MR. SELINGER: Yes.

MR. PORTER: That's all the questions I have.

MR. UTZ: I believe you said this 27,400,000 MMCF was for the whole pool?

A Yes, sir, they are our recoverable reserves for the pool.

Q Do you have any idea how much acreage these reserves

represent?

A This is dependent upon your net feet of section. With reference back to our Exhibit 1, it will be noted that we have an effective 37 feet of pay in our B-1 well in our West Jal Unit, and we have 96 feet of pay for an average thickness of roughly 50 feet, and using rock properties of porosity and water saturation, the areal extent under which these reserves would lie would be in the range of perhaps 640 to 1200 acres. These were--I have calculated these one time, to get a general idea of what the areal extent of the reservoir would be, and in my opinion these reserves for this net feet would not cover more than 1200 acres.

Q Since you have two completed wells, you actually have 1,280 acres dedicated to the acreage?

A Yes.

Q Some of that acreage would certainly be dry, would it not?

A Possibly. In our opinion, porosity and permeability in the reservoir decreases off away from the top of the structure. This can be seen by the fact that the 118 Number 1 well drilled by Parker and Skelly was a dry hole. On the Sinclair well which is also off the main portion of the structure, there is zero feet of net pay. The same is true for the Sun well in Section 26--zero effective feet of pay; so we feel that the

main development of porosity and permeability is at the highermost portion of the structure.

Q Since this is a non-prorated gas pool would it make any difference whether 340 or 620 acres was dedicated to the pool? The contract is on a reserve basis, is it not?

A Yes. As far as this reservoir is concerned, no; however, Skelly Oil Company would not be interested in dropping this additional acreage, in that although we have no immediate plans for additional development in the area, it is conceivable that we may have future plans for development, and wish to retain these leases.

Q Both of these wells are capable of producing the volume of gas your contract allows?

A Yes.

MR. UTZ: Are there any other questions of this witness?

MR. KELLY: I might point out that it would certainly be disadvantageous to the royalty owners if 320 were allocated to these wells, because the other 320 would be just left out.

MR. UTZ: You would have fewer participating royalty owners?

MR. KELLY: Yes.

MR. UTZ: And the royalty is diversified?

MR. KELLY: I believe so. Isn't it?

MR. COX: Yes.

MR. SELINGER: Both sections.

MR. KELLY: It would certainly be drained, but they wouldn't be getting any income on the 320.

MR. UTZ: Are there any other questions? ... The witness may be excused. The case will be taken under advisement.

* * *

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ELIZABETH K. HALE, Notary Public and Court Reporter, do hereby certify that proceedings in the foregoing case were taken and transcribed by me, and that the foregoing is a true and accurate transcript of proceedings to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF, my hand and seal of office this 21st day of March, 1965.

Notary Public

My commission expires

May 23, 1968.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2764, heard by me on March 20, 1965.

....., Examiner
New Mexico Oil Conservation Commission

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 21, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Skelly Oil Company for the creation of a Strawn Gas Pool and for Temporary Special Pool Rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Strawn Gas Pool for its West Jal Unit Well No. 1, located in Unit H, of Section 20, Township 25 South, Range 36 East, Lea County, New Mexico, and the establishment of temporary special pool rules therefor, including a provision for 640-acre proration units. Case 2764

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 2764.

MR. DURRETT: Application of Skelly Oil Company for the creation of a Strawn Gas Pool and for Temporary Special Pool Rules, Lea County, New Mexico.

MR. WHITE: May the record show the same appearance as in the previous case and we have one witness to be sworn at this time, Mr. Ron Jacobs.

(Witness sworn.)

RONALD J. JACOBS

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

DIRECT EXAMINATION

BY MR. WHITE:

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

A Ronald J. Jacobs.

Q By whom are you employed and in what capacity?

A Employed by Skelly Oil Company as conservation engineer, located in Tulsa, Oklahoma.

Q Have you previously testified before this Commission and as a conservation engineer?

A Yes, sir, I have.

Q Have your qualifications been accepted?

A Yes, sir.

Q Are you familiar with the subject application?

A Yes, I am.

Q Will you briefly state what Skelly is seeking?

A Skelly is seeking temporary rules for the Strawn formation found by a new discovery of the West Jal Unit Well No. 1. This well is located 1980 feet from the North line and 660 feet from the East line of Section 20, 25 South, 36 East, Lea County, New Mexico.

Q All the area underlying the acreage set forth in the application, does that all constitute new and unencountered common source of supply?

A Yes, the area requested by the application is all the direct and diagonal offset to the section in which the discovery well is located.

Q Will you refer to what has been marked Exhibit No. 1 and explain the map as it appears on the board?

(Whereupon, Applican't Exhibit No. 1 was marked for identification.)

A Exhibit No. 1 is a map showing portions of Townships 25 and 26 South, 35 and 36 East, Lea County, New Mexico. Circled in red is the location of the discovery well, West Jal Unit No. 1. The area outlined in red is the outline of a working interest unit in which a number of operators own an interest, these operators being as follows: Skelly Oil Company, The Atlantic Refining Company, Gulf Oil Corporation, Phillips Petroleum Company, Shell Oil Company, Southland Royalty Company, Sunray DX Oil Company, George H. Coates, General Crude Oil Company, and Socony Mobil Oil Company. Skelly Oil Company is operator of the working interest unit having 45.94 plus percent interest in the working interest.

The remaining interest is split up among the operators

I have heretofore mentioned and varies from slightly over 20% to less than one percent.

Outlined in green dashed lines emcompassing nine sections, these sections being Sections 16, 17, 18, 19, 20, 21, 28, 29 and 30, is the area for which temporary spacing rules is asked for in this application and at this time. The remainder of the map is self-explanatory. It has the leasehold information to the best of our knowledge as of approximately two to three weeks ago. Of course, these leases change hands from time to time so they may be slightly different, but as of a few weeks ago this was the lease situation to the best of our knowledge.

Q Mr. Jacobs, will you give a brief history of the subject well, the West Jal Unit Well No. 1, and in so doing refer to Exhibit 2?

(Whereupon, Applicant's Exhibit No. 2 was marked for identification.)

A Well, Exhibit 2 is a well data sheet showing most of the pertinent information on the West Jal Unit Well No. 1. We show the location which I have previously testified to. In addition we show the well was commenced on December 25, 1961. The well was initially completed July 28, 1962, and was re-completed January 22, 1963.

I might add the well involved is earning some farmout

acreage and required the testing of deeper horizons so as to perpetuate the lease on the federal requirements, an initial creation was attempted and was completed and was made July 28, 1962. After that time the well was drilled deeper.

The lower zones tested and evaluated and the well was plugged back and was, quote, recompleted, end quote, in January of 1963. Next we give the elevation of this well, total depth of 15,958, present plug back total depth being 12,790 feet. The producing fromation is the Strawn with the top of 11,500 feet, the base of the Strawn 12,155 feet.

Then the next we show the casing program and then following that we show the perforations in the Strawn interval, which is the pay section. Last we show the potential of this well which has a calculated open flow of 310,000,000 cubic feet of gas per day, and this was on a four point test, which is Exhibit No. 5, which we will introduce later.

Q Mr. Jacobs, are there any other wells in this area, and if so, where?

A There's only one other well that went through the Strawn section and that is located in Section 26, Township 25 South, Range 35 East. It is the Sun Harper Federal No. 1, at a total depth of 14,933 feet. The Strawn formation found in this well was not commercially productive, although they did have, some

gas shows.

The structural difference between the top of the Strawn in the Skelly, et. al, West Jal Unit Well, and the Sun's Harper well is approximately 1600 feet, that is the Sun Harper Federal well is approximately 1600 feet deeper, the top of the pay.

We feel that we're in a rather large fault block, the extent of which is not known at this time. We have taken a number of geophysical surveys, the area is quite complicated, the results are highly interpretative, and in fact that is one of the reasons that there was some farmout acreage involved in that, some of the operators involved in this unit did not feel that the data would indicate a trap sufficient and would be oil productive. For that reason we have no structural maps or isopach maps at this time, being only one well in this new pool.

Q Now, will you refer to Exhibit 3 and tell us what has been depicted on that log?

(Whereupon, Applicant's Exhibit No. 3 was marked for identification.)

A Exhibit 3 is a composite log of the West Jal Unit Well No. 1. First we have the sonic log, and if you go down through the log, the tops of the formations are marked in red on this log. I won't go into detail as to these tops because they are not germane to this hearing, but they are marked for

your information and for identification on this log.

Continuing on down through approximately the interval of the Strawn, which is at 11,510 feet, we have shown the drill stem test and indicated the casing. This can better be seen by examining the detail log of this section which follows immediately this section we have just looked at.

On the detailed log we have shown the drill stem test, and the drill stem test data, the interval that was tested, the location of the casing and on the left-hand side we have indicated the perforations. These perforations are colored in red in addition to the red markings, and they indicate that this zone is still open and is the producing zone.

The rest of the log, I believe, is self-explanatory. There again, we've picked up the tops and show all the important markers for all the formations that this well has encountered.

Q Have you made any calculations as to porosity?

A Yes. We have calculated the porosity from the logs and from log analyses the porosity is indicated to be at least 10%. It varied between 10 and 13%, but we feel that 10% is a very reliable figure. The Strawn formation here is a limestone and the porosity we feel is in the vugular nature. Also from logs we have calculated we find the water saturation to be 30%.

Q Will you refer to Exhibit 4 and explain your casing

program?

(Whereupon, Applicant's Exhibit No. 4 was marked for identification.)

A Exhibit 4 is a diagrammatic sketch showing the casing program for this well. The exhibit is self-explanatory, I believe. It shows where the casing was set, the size and weight, type of casing. It also shows the cement and the calculated tops of the cement in each instance. Again we have shown the perforated interval in the Strawn formation being between 11,736 to 11,894. It also indicated the total depth and the plug back total depth on this exhibit.

Q Will you now refer to what has been marked Exhibit 5 and explain your open flow potential?

(Whereupon, Applicant's Exhibit No. 5 was marked for identification.)

A Exhibit 5 is a a copy of the New Mexico Oil Conservation Commission Form C-122, which is the multiple point back pressure test form. This form has been filled out and the test was taken on January 22, 1963, which is the date of final completion of this well.

As you can see from these calculations, the calculated absolute open flow is 310,000,000 cubic feet of gas per day. Attached to this form is a log, log graph showing a plot, I should

say, of the open flow calculation and indicating the 310,000,000 cubic feet of gas per day open flow potential. We do not have any cores in this well.

Q Will you state why?

A We had considerable difficulty in drilling this well. When we went into the Strawn formation we hit this high pressure gas, we started to mix mud and as soon as we started mudding up we started losing circulation up the hole and for about three or four months there we were mixing mud and trying to gain complete control of the well. We finally had to set an intermediate string of casing just above the Strawn formation to shut off the lost circulation. Unfortunately we do not have any cores, either hole cores or side wall cores from this well.

Q Mr. Jacobs, what was the cost of this No. 1 well?

A The cost of this well was $1,460,000.

Q What is your estimated cost as to any future wells you may drill?

A We estimate the cost to drill additional wells in this formation to be $450,000 each.

Q What is your future drilling program?

A Skelly Oil Company, as unit operator, will propose the drilling of a well in Section 21, and then will propose the drilling of a well in Section 17, which is inside the West Jal

Unit. We anticipate that this will take approximately a year for these two wells to be drilled. The problem here is in penetration rates and our drilling people estimate that it will take approximately six months to drill each well. We are also anticipating in Section 19 the drilling of a third well which will make four wells in this reservoir.

Q Have you made any preliminary calculations as to the reserves?

A On a volumetric basis, using the 10% porosity, using the 30% water saturation, using a reservoir pressure of 7,680 psi, and an 85% reservoir, we estimate that there will be recovered 980 MCF per acre foot. There are 51 average net feet in this Strawn section as evidenced by this log, and if considering a 640-acre unit --

MR. UTZ: How much net pay?

A Fifty-one. Calculating out the 640 acres times the 51 feet times the 980 MCF per acre foot, we come up with a volumetric calculation of 32,000,000 MCF, or 32,000,000,000 cubic feet recoverable reserves under a 640-acre tract based on this one well.

Q Mr. Jacobs, will you state what new pool rules you propose to advocate?

A We are proposing 640-acre spacing for the Strawn

formation. We are proposing that a committed well be located not less than 1320 feet from the unit boundaries.

Q Could you operate on the basis of say 1980 feet from unit lines?

A Well, of course, we would like the greatest flexibility in drilling these wells. Considering the cost of almost a half a million dollars each we would like to have some flexibility. Now, frankly, the land out here is flat. There are no particular topographic problems. We, if the Commission saw fit, would be willing to drill these wells at 1980. However, we do feel that the Commission should give consideration to the cost of these wells and give the operators a reasonable chance to locate these wells so as to avoid the drilling of unnecessary dry holes.

Q Will these proposed rules provide for the orderly development of the pool and also protect correlative rights?

A Yes, they will. We feel that the granting of temporary 640-acre spacing for this new pool will allow the pool to be developed approximately twice as fast as it would be if 320 acre were granted. Because by the drilling of these additional three wells in addition to the one already drilled we will have four complete sections drilled or proved up or not proved.

Q And you will furnish any new or additional reservoir

data to the Commission if, when and as it becomes known?

A Yes. Of course, we will gather as much information as possible. We are vitally interested in this Skelly as the operator of the unit and as a leasehold owner outside the unit is vitally interested in this new common source of supply.

Q Based upon the reservoir information now available, is it your opinion that one well can economically and efficiently drain 640 acres?

A Yes, sir. There's no doubt in my mind that a well will adequately and efficiently drain 640 acres from this formation.

Q How long would you request that these temporary rules be in effect?

A We would request that these temporary rules be in effect for two years. As I mentioned before, each well will take approximately six months to drill. We're looking at three additional wells which will take the better part of eighteen months. Then, too, we are negotiating at the present time for a gas market. By that time we also hope to have some production information and some performance data.

According to the negotiations we have made so far, as far as a gas market, which by the way are not finalized, and if you don't mind I won't go into a great deal of detail because we are

still negotiating with a number of companies.

Q What will the payout be?

A We estimate that the payout, based on the takes for the initial two-year period on an average well costing $450,000, will be slightly in excess of three and one-half years.

Q Again referring to your pool rules, are you familiar with Order R-2349 in Case 2654 in regard to the application of Carper Drilling Company for the creation of a new gas pool and temporary special rules and regulations?

A Yes. That order provides for temporary 320-acre spacing units. We have no objection to this type of order except that we would like for it to be modified where necessary to provide for the 640-acre spacing rather than the 320-acre spacing.

MR. WHITE: At this time, if the Examiner please, we would like to request that the Examiner take administrative notice of Order R-2349.

MR. UTZ: Will do so.

Q (By Mr. White) Is there anything further you would like to state in regard to the application, Mr. Jacobs?

A No, except that we feel that this is an important discovery in this State, some of the deep Strawn formation in this area has not been found. We feel that it's in the best

interest of all concerned that the field be developed as rapidly as possible, that the information be gained as rapidly as possible so that all persons interested in the area may share in that their correlative rights may be protected. For that reason we urge the Commission to adopt temporary 640-acre spacing for a two-year period.

Q Were these exhibits prepared by you or under your direction?

A Yes, sir, they were, except for Exhibit No. 5 which was merely a copy of the back pressure test which has heretofore been filed with the Commission.

MR. WHITE: At this time we offer the exhibits in evidence.

MR. UTZ: Without objections, Exhibits 1 through 5 will be entered into the record in this case.

(Whereupon, Applicant's Exhibits Nos. 1 through 5 were entered into the record.)

MR. WHITE: That concludes our testimony on direct.

MR. HASTLER: What pool was 2349?

MR. UTZ: Buffalo Valley, Pennsylvania Pool.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Jacobs, you have outlined a nine section area there

in which you, I believe you in your testimony requested that these spacing rules be effected. Does not Rule 1 of Order 2349 give you the same latitude there providing the pool was established consisting of Section 20?

A Well, we are looking immediately at the drilling of three direct offsets to this. Now, I think it would be in order, our geophysical information indicates, our geologists believe, and I believe that this pool covers at least the nine section area that I have outlined. I think it would be prudent to include these nine sections at this time rather than to come back and extend these things from time to time. What you say is probably true, but I think this would probably be a little more orderly in development of this pool.

Q Are you requesting these nine sections be designated as a pool?

A For the Strawn formation, yes, sir, and we would suggest that it be called West Jal Strawn Pool. However, we have no objections to the Commission designating it as any other name.

Q The provisions that any well drilled within a mile of the pool would protect your spacing regulation, would they not?

A Yes. Of course, we feel that it would also, as soon as these wells are drilled, or even before they are drilled, it would also protect this out here. Because there is some,

frankly, as far as we can tell, some open acreage there and we think that to prevent the unnecessary crowding of lease lines and to provide for the orderly development of this pool it would be desirable that this nine sections be spaced at this time.

Q However, you only have one well in nine sections that would show the original pool area?

A Yes, but it is, as you can tell from the back pressure tests, the open flow potential of 310,000,000, and indicates a pool of considerable size. Our information geologically indicates a pool with considerable size.

Q Referring to your back pressure test which is Exhibit No. 5, I note that you have four points, the first an hour and forty-five minutes and the next two hours, the third an hour and thirty minutes. Were any of those points stabilized?

A It is my understanding that this is when they were stabilized.

Q Do you have any pressure data, this flowing pressure data, to indicate that they were stabilized?

A I do not have it with me, but I'll be glad to furnish that by letter, or however you wish.

Q I notice that the first two points were not plotted on your log, log graph, I have roughly plotted them and they fall substantially below the line. Do you have any explanation for that?

A No. Except that we felt that the higher rates were more indicative of the absolute open flow at the two points, the last two points extrapolated out would give a more representative figure. Now, it may be that this plot is in error. Only performance data will really tell, but this is our best estimate of the performance at this time based on this four point test.

Q If one of the two original points were valid points and stabilized points, then it would tend to indicate that the well wasn't quite as large as 310,000 MCF?

A It may throw the line where it may only be 200,000 or even 100,000.

Q But it's still a pretty good size well?

A It's still a good well.

Q You didn't give any permeability information?

A No, sir.

Q Did you have any?

A No, sir, I explained that we do not have any core data on which to base any permeability.

Q You didn't have any micrologs either?

A There was a microlog run over most of the interval. A microlog was run between the interval of 11,740, which is just below the top of these perforations that are presently

open down to 13,600. We did not make calculations on the micro-log because we didn't feel that they were truly representative of any, you could accurately calculate permeability from the micrologs.

Q Not from the pay zone anyway?

A Not from the pay zone.

Q So, really, the only indication that you have as to what the permeability might be would be from your absolute open flow test?

A We feel we have considerable permeability. Just what that is I don't know. I don't feel you can really calculate permeability from four point test either. You might get a conformance factor or a ratio and differential pressures and things, but we'd only be fooling ourselves and be trying to fool the Commission if we tried to calculate the permeability from this data.

Q Do you have any idea whether you have fracturing in the reservoir or not?

A No, we do not feel from the sample that we collected from the well, we do not feel there is any appreciable fracturing. We feel that the porosity and all the connections are all through vugular things in the limestone.

MR. UTZ: Are there other questions of the witness?

MR. DURRETT: Yes, sir, I have a question.

BY MR. DURRETT:

Q Mr. Jacobs, I believe you stated on direct examination that you were requesting, as far as well locations, that the rule read not nearer than 1320 to the unit boundary?

A Yes.

Q Or possibly 1980 to the unit boundary?

A Yes, sir.

Q I assume that you also have no objection to the usual provision that the well also be located not nearer than 330 to a quarter, quarter section line, is that correct?

A We have no objections to that if the 1320 were adopted. Now, if the 1980 were adopted that would limit us quite a bit as to the area around the well, ten acres in each quarter section in which the well could be drilled, and if you limit it 330 here you appreciably cut down on the flexibility of locating these wells.

Q Yes, that's correct. But wouldn't you feel along these same lines that if the pool did happen at some later date to revert to 160 or 320 acres it would probably be a good idea for the Commission to try to prevent wells from being crowded in too close to a quarter, quarter section line?

A Well, then, you run into a problem of trying to locate

the wells as close to the center of the section as possible and yet try to look down the road and see the possibility of 320. I don't know how that can be reconciled to provide for orderly development. Of course, it's better that the wells be as equidistant as possible on the sections. But if you limit the distance not only from the unit lines but also from the quarter section, or quarter, quarter section lines, you really cut down on the permitted well location.

Q But you would feel that the Commission should probably at least consider this matter when it is drawing the rules?

A Yes.

MR. DURRETT: Thank you. I think that's all I have.

MR. UTZ: Are there other questions? The witness may be excused. Are there other statements in this case?

MR. WHITE: Mr. Dick Morris authorized me to state on behalf of the Shell that they concur in the granting of the application.

MR. UTZ: Are there other statements? Mr. Kastler.

MR. KASTLER: I'm Bill Kastler, appearing on behalf of Gulf Oil Corporation. I would like to state that Gulf Oil is an interest owner in the West Jal Unit and concurs most heartedly and unreservedly with this application.

MR. UTZ: Are there any other statements? The case

will be taken under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, 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 28th day of February, 1963.

Ada Dearnley
NOTARY PUBLIC

My commission expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2764, heard by me on Feb. 27, 1963.

Elvis A. Utz, Examiner
New Mexico Oil Conservation Commission