

CASE 6525: OCD ON ITS OWN MOTION TO
AMEND SPECIAL RULES FOR THE TUBB GAS
POOL, LEA COUNTY, NEW MEXICO

CASE NO.

6525

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

Gulf Oil Exploration and Production Company

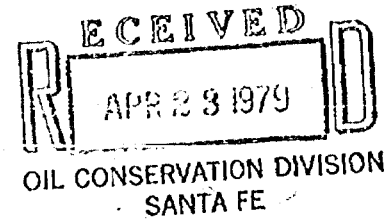
J. M. Thacker
GENERAL MANAGER PRODUCTION
SOUTHWEST DISTRICT

April 20, 1979

P. O. Drawer 1150
Midland, TX 79702

State of New Mexico
Energy & Minerals Department
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey



RE: Tubb Gas Pool, Lea County, New Mexico
Amend Special Rules (Case No. 6525)
April 25, 1979

Gentlemen:

By your own motion, you have called this case to amend the Special Rules for the Tubb Gas Pool, Lea County, New Mexico, to provide for the classification of wells as oil wells and gas wells on the basis of gas-oil ratios rather than on the basis of liquid gravity as at present.

It is respectfully recommended that the Special Rules for the Tubb Gas Pool be amended to provide that "a gas well shall mean a well producing with a gas-oil ratio in excess of 100,000 cubic feet of gas per barrel of oil". This is the present basis for gas well classification in both the Kumont and Jalmat Gas Pools. This is also, the same basis as adopted in Order No. R-4226, Effective April 1, 1972, for the statewide gas well definition.

Yours very truly,

R. H. Peacock
for R. H. PEACOCK
Manager - Operations

CFK:sdn

cc: J. T. Sexton - Hobbs, New Mexico
Oil Conservation Division



A DIVISION OF GULF OIL CORPORATION

CASE NO. 6525
TUBB GAS WELLS
(Latest C-116)

COMPANY	LEASE & WELL	LOCATION	GOR	GRAVITY	OIL
Marathon Oil Co.	Mark Owen #3	H-35-21-37	2,852,000	58.0	1 1.00
John H. Hendrix Corp.	Brunson C #6	I-3-22-37	790,000	44.9	1 1.00
Shell Oil Co.	Thomas Long #5	N-11-22-37	670,000	NR	1 1.00
Marathon Oil Co.	W. Lynch #4	D-1-22-37	651,000	56.0	2 1.00
Marathon Oil Co.	J.L. Muncy #1	P-24-22-37	578,000	62.0	1 1.00
Gulf Oil Corp.	N. Keenum #2	O-14-21-37	571,000	45.1	1 1.00
Penrose-Zachary	Hinton #5 M	P-12-22-37	466,000	42.1*	1 1.00
Mobil Oil Corp. MWU # 5	S.E. Long #8 N	J-11-22-37	446,000	39.4*	1 1.00
Shell Oil Company	Argo #5 N	N-11-21-37	372,667	47.4	3 1.00
Texaco Inc.	A.H. Blinebry Fed #17M	L-19-22-38	364,000	38.3*	1 1.00
oil - Amoco Production Co.	Owen "B" #2 N	L-34-21-37	327,750	NR	4 1.00
Shell Oil Company	Taylor Glenn #10	F-3-21-37	300,000	36.3*	1
Samedan Oil Corp.	Parks #6 M	L-14-22-37	284,667	51.0	2 1.00
Continental Oil Co.	Lockhart A27 #12 M	D-27-21-37	283,000	NR	2 1.00
Texas Pacific Oil Co.	Elliott BS #5 M	C-9-22-37	261,000	52.0	1 1.00
Shell Oil Co.	Rinewalt #4 M	C-4-22-37	253,000	NR	1 .75
Gulf Oil Corp.	L. Stebbins (NCT-B) #3 M	A-5-22-37	252,000	48.1	1 .50
Texaco Inc.	A.H. Blinebry Fed. #16M	L-33-22-38	249,000	36.9*	1 .80
Gulf Oil Corp.	Vivian #1- M	G-30-22-38	248,000	45.1	3 1.00
Samedan Oil Corp.	Parks A #4 M	I-14-22-37	240,000	52.0	4 1.00
Marathon Oil Co.	Wm. Turner #3 M	I-29-21-37	203,000	48.0	1 .50
Amerada Hess Corp.	State D "A" #3 M	J-16-21-37	191,000	48.8	1 1.00
Continental Oil Co.	Lockhart B-35 #1 M	G-35-21-37	180,667	NR	3 1.00
Texaco Inc.	A.H. Blinebry Fed #1 M	O-19-22-38	177,000	38.3*	3 1.00
Gulf Oil Corp.	E. Lineberry #1 N	K-29-22-38	176,000	45.1	2 .50
Shell Oil Company	Argo A #1-12 M	E-22-31-37	172,500	47.2	4 1.00
Amoco Production Co.	Southland Roy. A #4 M	X-4-21-37	151,000	NR	3 .75
Gulf Oil Corp.	Scarborough Est #2 M	H-31-22-38	146,200	45.8	5 1.00
Gulf Oil Corp.	T.R. Andrews #2 M	G-32-22-38	133,000	45.2	2 1.00
Gulf Oil Corp.	Vivian #1- M	C-30-22-38	131,000	45.4	1 1.00
Gulf Oil Corp.	Amanda #1 M	J-25-22-37	122,000	45.5	1 1.00
Moranco	Owen #1 M	E-14-21-37	120,000	49.0	1 1.00
Texaco Inc.	A.H. Bline. Fed. NCT-3 #1MD	D-31-22-38	115,000	38.4*	1 1.00
Mobil Oil Corp.	Brunson Argo #15 M	F-10-22-37	110,000	40.9*	2 1.00
Atlantic Richfield Co.	Rogers Gas Com #1 M	A-12-22-37	106,000	40.2*	2 .75
Texas Pacific Oil Co.	Boyd #5 M	B-23-22-37	104,000	63.0	1 1.00
Texas Pacific Oil Co.	S.E. Cone #1 M	J-26-21-37	94,000	54.0	1 .50
Marathon Oil Co.	L.G. Warlick C M	J-15-21-37	92,000	50.0	1 1.00
Marathon Oil Co.	E. Butler B #1 M	I-13-22-37	86,000	57.0	1 1.00
J.R. Cone	Eubanks #2 M	L-14-21-37	80,500	40.0*	4 1.00
Texas Pacific Oil Co.	E.W. Walden #4 M	C-15-22-37	73,000	53.0	1 1.00
Gulf Oil Corp.	Scarborough Est. #4 M	F-31-22-38	67,500	45.9	4 1.00
Atlantic Richfield Co.	Roy Barton #1 M	G-23-21-37	60,500	47.0	2 .75
Marathon Oil Co.	J.L. Muncy #2 M	K-24-22-37	50,000	58.0	1 1.00
? - Marathon Oil Co.	Sarkeys #1	K-23-21-37	47,800	43.7*	3
- Shell Oil Co.	State Sec. 15 #1 oil	G-15-21-37	45,625	38.0*	16
oil Texaco Inc.	A.H. Bline. Fed. NCT-4 #1	P-31-22-38 oil	39,333	38.8*	3

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Case No. 6525
Tubb Gas Wells

COMPANY	LEASE & WELL	LOCATION	GOR	GRAVITY	OIL
Shell Oil Company <i>oil</i>	Sarkeys #2	K-23-21-37	35,000	43.7*	7
? Marathon Oil Co.	W.S.Marshall B #2	M-27-21-37	31,000	60.0	1
Amoco Production Co.	State C Tr. 12 #6Y	C-16-21-37	30,750	NR	4
Texas Pacific Oil Co. <i>oil</i>	Sims #2	F-25-22-37	22,000	52.0	1
Crown Central <i>oil</i>	Danglade #1	B-24-22-37	21,000	47.0	1
Cities Service Co. <i>gas</i>	Brunson B #3	M-3-22-37	20,000	37.1*	3
Cities Service Co. <i>oil</i>	State S #2	F-15-21-37	20,000	37.0*	6
Marathon Oil Co. <i>gas</i>	W.S.Marshall B #3	K-27-21-37	17,000	60.0	5
Shell Oil Co. <i>oil</i>	T.Glenn #2	I-3-21-37	16,667	36.2*	9
Sun Oil Co. <i>gas</i>	E.Owen #1	D-3-22-37	10,500	NR	2

* wells presently in proration schedule under Tubb Gas Pool with gravities less than 45°.

4/13/79

Tubb Pool

Case 6525

Tubb Oil-Gas Changes
due to Gas-oil-Ratios

At 100,000 Ratio

3 oil wells will change to Gas wells
21 Gas wells will change to oil wells

At 50,000 Ratio

7 oil well will change to Gas wells
13 Gas wells will change to oil wells.

Presently 61 oil wells in Pool.

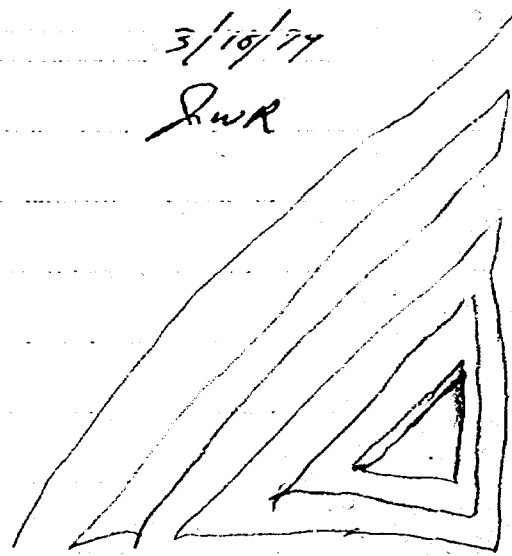
Presently 58 Gas wells which make oil in Pool.

Presently 88 Gas wells which make No oil in Pool.



3/18/77

JWR



CASE No. 6525
TUBB OIL WELLS
(Latest C-116)

COMPANY	LEASE & WELL	LOCATION	GOR	GRAVITY	OIL
Gulf Oil Corp.	Mark Owen #4	J-34-21-37	345,000	37.3	1
Gulf Oil Corp.	W.T. McComack #17	I-32-21-37	325,000	35.3	1
Amoco Production Co.	Southland Royalty A #2	B-9-21-37	182,000	NR	1
Getty Oil Company	S.J. Sarkeys #4	F-26-21-37	90,000	41.0	4
Getty Oil Co.	State Q #1	N-23-21-37	83,333	41.0	3
Shell Oil Co.	Sarkeys #2	K-23-21-37	63,000	43.7	4
Exxon Company	J.L. Greenwood #13	L-9-22-37	58,500	NR	2
Getty Oil Co.	D.A. Williamson #2	E-23-21-37	50,000	42.0	1
Continental Oil Co.	Hawk B-1 #5	K-9-21-37	48,000	36.0	1
Amoco Production Co.	Southland Roy. A #3	V-4-21-37	30,250	NR	1
Amerada Hess Corp.	E.W. Walden #3	N-15-22-37	26,000	NR	1
Getty Oil Corp.	S.J. Sarkeys #1	E-26-21-37	22,000	41.0	2
Cities Service Co.	State S #2	F-15-21-37	20,000	37.0	3
Amoco Production Co.	Southland Roy. A #8	W-4-21-37	18,714	NR	4
Shell Oil Co.	Taylor Glenn #2	I-3-21-37	16,667	36.2	9
Shell Oil Co.	Livingston #11	M-3-21-37	16,364	35.4	11
Amerada Hess Corp.	E.W. Walden #5	L-15-22-37	16,000	NR	5
Amoco Production Co.	State C Tr. 13 #9	F-36-21-37	15,750	NR	4
Texaco Inc.	C.H. Lockhart NCT-1 #2	D-18-22-38	13,667	39.4	1
Texaco, Inc.	A.H. Blinebry Fed #28	L-28-72-38	12,000	36.9	2
Hanson Oil Co.	Max Cutman #7	D-19-33-38	10,556	37.9	18
Continental Oil Co.	State 10 #3	D-10-21-37	8,750	38.0	8
Shell Oil Co.	St. Sec. 2 #4	U-2-21-37	8,333	35.2	3
Cambell & Hedrick	Lockhart #1	L-17-21-37	7,350	36.8	3
Southland Royalty Co.	State #3	M-2-21-37	7,208	38.0	12
Texaco, Inc.	C.H. Lockhart NCT-1 #5	C-18-22-38	7,200	39.4	1
Mabee Petroleum	Belcher #1	M-7-22-38	7,000	39.0	5
Gulf Oil Corp.	H.T. Mattern NCT-D#16	E-7-22-37	7,000	37.2	7
Texas Pacific	Belcher #1	L-7-22-38	6,923	NR	3
Texaco Inc.	C.H. Lockhart #6	G-18-22-38	6,500	39.4	4
Carter Foundation	E.M. Elliott #3	C-22-22-37	6,088	38.6	6
Continental Oil Co.	Hawk B-10 #9	F-10-21-37	6,000	37.1	3
Southland Royalty	State BD "36 #1	J-36-22-37	6,000	37.5	2
Texaco Inc.	A.H. Blinebry Fed #28	A-29-22-38	5,800	34.5	1
Gulf Oil Corp.	A.L. Xmas NCT-C #16	M-18-22-37	5,650	37.0	20
Continental Oil Co.	Hawk B-3 #8	P-3-21-37	5,600	33.3	5
Continental Oil Co.	Hawk B-10 #9	B-10-21-37	5,250	37.1	4
Campbell & Hedrick	W.E. Lee #2	B-20-21-37	5,133	38.0	11
Amerada Hess Corp.	H. Corrigan #7	H-4-22-37	5,093	40.3	32
Texaco Inc.	A.H. Blinebry Fed #27	K-28-22-38	5,000	36.9	1
Texaco Inc.	C.H. Lockhart NCT-1 #3	O-18-22-38	5,000	39.4	4
D.M. Norman	McCallister #1	E-7-22-38	4,480	40.1	3
Gulf Oil Corp.	H.T. Mattern NCT-D #12	K-6-22-37	4,438	38.2	16
Cambell & Hedrick	Elliott Fed. #1	G-6-23-38	4,414	48.5	11
Texaco Inc.	C.H. Lockhart NCT-1 #4	J-18-22-38	4,286	39.4	6
Shell Oil Co.	State Sec. 2 #15	K-2-21-37	4,200	35.6	5
Phillips Petroleum Co.	Sims #6	M-24-22-37	4,012	42.0	4

Case No. 6525
Tubb Oil Wells

COMPANY	LEASE & WELL	LOCATION	GOR	GRAVITY	OIL
Texaco Inc.	A.H.Blinebry Fed #25	N-28-22-38	4,000	36.9	1
Gulf Oil Corp.	H.Leonard NCT-F #7	J-2-21-37	3,500	38.9	4
Texaco Inc.	A.H.Blinebry Fed #26	B-29-22-38	3,000	38.1	2
Texaco Inc.	A.H.Blinebry Fed #24	E-28-22-38	2,857	36.9	3
Gulf Oil Corp.	A.L.Xmas(NCT-C) #16	M-18-22-37	2,167	36.3	12
Mabee Petroleum Co.	Belcher A #1	N-7-22-38	2,100	39.0	10
Texaco Inc.	A.H.Blinebry Fed #33	D-28-22-38	2,000	36.7	2
Continental Oil Co.	Lockhart A-17 #4	A-17-21-37	2,000	35.6	5
Exxon Company	N.M. V St. #11	K-10-21-37	1,925	NR	4
Hytech	State 34 #1	N-34-23-37	1,793	33.4	58
Gulf Oil Corp.	H.T.Mattern(NCT-D)#11	F-6-22-37	1,525	34.9	40
Texas Pacific Oil Co.	Sarkeys #1	E-25-21-37	1,035	44.0	8
Gulf Oil Corp.	H.Leonard NCT-F #1	R-2-21-37	800	38.7	5
Gulf Oil Corp.	Manda B(Tr.C) #1	C-28-22-37	556	35.3	9

4/13/79

7/24

CASE NO. 6525

TUBB GAS POOL

April 25, 1979

Oil Conservation Division
Hobbs, New Mexico

John W. Runyan
Geologist

Question: History

HISTORY:

The Tubb gas pool, located in Townships 21 and 22 South, Ranges 37 and 38 East, was discovered by Gulf Oil Corporation Danglade Well #1 located in Unit M of Section 13, Township 22 South, Range 37 East, on May 29, 1946. The pool has 146 gas wells and 61 oil wells currently producing.

Special rules governing the pool were established in 1957 and were based on gravity only (above 45° gas and below oil). Since that date the pool has become partly depleted and the oil rim which existed on the edges of the pool has expanded and no longer adheres to the original gas-oil contact of 2855 subsea. Many gas wells bounce back and forth from gas to oil to gas due to gravity changes and reservoir pressure decline.

Question: Res Data

RESERVOIR DATA:

Original reservoir shut-in pressure - P.S.I. was 1875 and original average gravity was 62.5°. Presently the average gravity is 46.8° and reservoir temperature is 122°F. Original gas-oil contact was 2855 subsea.

As shown by the structure map and the two crossections, production of oil wells and gas wells making oil is now rather random over the structure. That is, many gas wells which make oil are often structurally higher than gas wells which make no oil. Often oil wells are structurally higher than gas wells, although a large percentage of the oil wells are located on the north and southeast edges of the pool.

Question: Geology

GEOLOGY:

The tubb gas pool is an anticlinal structure of low relief which trends north and south and plunges gently to the north. The structure is approximately 6 miles wide and 12 miles in length and has an areal extent of approximately 46,000 acres.

The pool has a closure which increases from north to south. The north end has 167 feet of closure and the south end has about 330 feet of closure. The tubb formation averages 320 feet in thickness from top of Tubb marker to top of Drinkard formation.

The main gas and oil production comes from a dark silty sandstone of the mid to lower Tubb. Although some production comes from the upper Tubb which is a brown, porous, crystalline dolomite, the entire Tubb formation is in intercommunication. Variations in porosity and permeability in the pool plays an important part in relationship between oil and gas production, particularly as reservoir pressure declines. As noted on structure map there are many P&A wells scattered throughout the pool, both depleted wells and original completion attempts. A very large number of wells have been recompleted to other zones.

MAP EXHIBITS

Exhibit No. 1--Structure Map

Exhibit No. 2--Cross-Section A-A'

Exhibit No. 3--2nd Cross-Section B-B'

Question

Question - Ex 1 - 24 plain

I have prepared 3 map exhibits. Number 1 is a structural map contoured on 20 foot intervals on top of the "Tubb Marker" and reflects the total Tubb structure. The wells plotted on the map are coded as to type of production from the Tubb Pool. Black circles outlined in green are oil wells; gas well symbols circled in red are gas wells making oil; and gas well symbols with blue centers are dry gas wells. Plain circles are structure control wells. These produce from pools deeper than the Tubb Pool, mainly the Drinkard and Wantz Abo Pools. The black dashes outline the present pool boundary of the Tubb Pool.

The purpose of this map is to show the relationship between the types of Tubb wells and their structural position. The oil wells are mainly concentrated on the north and southeast sides of the pool, but there are many oil wells scattered over the pool regardless of structure position, and the same applies to the gas wells making oil. They are scattered over the pool in disregard to structure. The dry gas wells occur from the highest point structurally to the lowest point.

Question

Exhibit No. 2--Cross-Section A-A' shows the relationship between pool structure, well completion, the original gas-oil contact, and change of production of wells on the Cross-Section from 1957 to 1979. The 1st well (from left to right) is a gas well making oil, completed high in the Tubb formation; next, dry gas well with perforations deeper in Tubb, and this well has changed from a gas well making fluid to a dry gas well--no workover; next, high ratio oil well above original gas-oil contact, originally this well was a gas well making oil at 68.2° gravity--gravity has changed to 41°--no change in perforations. Far right, oil well down structure, perforations cross gas-oil contact. GOR has about doubled since 1957.

Question

Exhibit No. 3--is Cross-Section B-B', again shows the relationship between well completions, structure, original gas-oil contact and production changes since 1957. This cross-section (from left to right) shows an oil well with low ratio, completed at top of Tubb, structurally higher than two far right dry gas wells. 2nd well--dry gas well (left) shows change from low ratio gas well producing oil to dry gas well. 2nd is completed in same subsea zone as oil well to left. 3rd gas well--from left--is making oil and is flanked by two dry gas wells, this well has doubled its GOR since 1957, gravity about the same. 4th well on left is dry gas well completed in same zone as 3rd well, and this well has gone from a gas well making fluid to a dry gas well since 1957. Last well on right is a dry gas well and is low structurally, and has changed from gas well making oil to dry gas well. The well completions on this cross-section have not changed from 1957.

Exhibits Nos. 1, 2, and 3 serve to illustrate how oil and gas wells making oil and dry gas wells have an erratic distribution over the Tubb Pool regardless of structure position and depth of completion within the Tubb formation, and that these wells are changing in both gravity and gas-oil ratios, and that there is no definable gas-oil contact within the pool.

Question - Ex 4

Exhibit No. 4

As reflected on Exhibits 1, 2 and 3, Exhibit No. 4 is a tabulation of Tubb gas wells which make oil, their gas-oil ratios are recorded in descending order, with accompanying tabulation of gravity and oil in BOPD, and 2 tabulations of oil wells with descending gas-oil ratios with accompanying gravities and oil production.

The GOR of the gas wells which make oil range from 2,852,000 to 10,500, in a total of 47 wells.

The GOR of the oil wells range from 345,000 to 556, in a total of 64 wells.

Dry gas wells are not included in these tabulations since their GOR's are infinite. The recommendation for GOR limit was taken from this list by determining the best breaking point with the least well reclassification changes.

Both lists point out the fact that liquid gravity does not reflect the normal idea of a gas well or oil well in many instances.

CASE NO. 6525
TUBB OIL WELLS

EXHIBIT 4

COMPANY	LEASE & WELL #	LOCATION	GOR	GRAVITY	OIL
*Gulf Oil Corp.	Mark Owen #4	J-34-21-37	345,000	37.3	1
**Gulf Oil Corp.	W.T. McComack #17	I-32-21-37	325,000	35.3	1
Shell Oil Company	Taylor Glenn #10	F-3-21-37	300,000	36.3	1
***Amoco Production Co.	Southland Royalty A #2	B-9-21-37	182,000	NR	1
Shell Oil Co.	Rinewalt #4	C-4-22-37	253,000	NR	1
Getty Oil Co.	S.J.Sarkeys #4	F-26-21-37	90,000	41.0	4
Getty Oil Co.	State Q #1	N-23-21-37	83,333	41.0	3
Exxon Company	J.L.Greenwood #13	L-9-22-37	58,500	NR	2
Getty Oil Co.	D.A.Williamson #2	E-23-21-37	50,000	42.0	1
Continental Oil Co.	Hawk B-1 #5	K-9-21-37	48,000	36.0	1
Shell Oil Co.	State Sec. 15 #1	G-15-21-37	45,625	38.0	16
Texaco Inc.	A.H.Blinebry Fed NCT-4#1	P-31-22-38	39,333	38.8	3
Shell Oil Co.	Sarkeys #2	K-23-21-37	35,000	43.7	7
Amoco Production Co.	Southland Roy. A #3	V-4-21-37	30,250	NR	1
Amerada Hess Corp.	E.W.Walden #3	N-15-22-37	26,000	NR	1
Getty Oil Corp.	S.J.Sarkeys #1	E-26-21-37	22,000	41.0	2
Crown Central	Danglade #1	B-24-22-37	21,000	47.0	1
Cities Service Co.	State S #2	F-15-21-37	20,000	37.0	3
Amoco Production Co.	Southland Roy. A #8	W-4-21-37	18,714	NR	4
Shell Oil Co.	Taylor Glenn #2	I-3-21-37	16,667	36.2	9
Shell Oil Co.	Livingston #11	M-3-21-37	16,364	35.4	11
Amerada Hess Corp.	E.W.Walden #5	L-15-22-37	16,000	NR	5
Amoco Production Co.	State C Tr. 13 #9	F-36-21-37	15,750	NR	4
Texaco Inc.	C.H.Lockhart NCT-1 #2	D-18-22-38	13,667	39.4	1
Texaco Inc.	A.H.Blinebry Fed #11	L-28-22-38	12,000	36.9	2
Hanson Oil Co.	Max Gutman #7	D-19-33-38	10,556	37.9	18
Continental Oil Co.	State 10 #3	D-10-21-37	8,750	38.0	8
Shell Oil Co.	St. Sec. 2 #4	U-2-21-37	8,333	35.2	3
Cambell & Hedrick	Lockhart #1	L-17-21-37	7,350	36.8	3
Southland Royalty Co.	State #3	M-2-21-37	7,208	38.0	12
Texaco Inc.	C.H.Lockhart NCT-1 #5	C-18-22-38	7,200	39.4	1
Mabee Petroleum	Belcher #1	M-7-22-38	7,000	39.0	5
Gulf Oil Corp.	H.T.Mattern NCT-D #16	E-7-22-37	7,000	37.2	7
Texas Pacific Oil Co.	Belcher #1	L-7-22-38	6,923	NR	3
Texaco Inc.	C.H. Lockhart #6	G-18-22-38	6,500	39.4	4
Carter Foundation	E.M.Elliott #3	C-22-22-37	6,088	38.6	6
Continental Oil Co.	Hawk B-10 #7	F-10-21-37	6,000	37.1	3
Southland Royalty	State BD "36" #1	J-36-22-37	6,000	37.5	2
Texaco Inc.	A.H.Blinebry Fed #28	A-29-22-38	5,800	34.5	1
Continental Oil Co.	Hawk B-3 #8	P-3-21-37	5,600	33.3	5
Continental Oil Co.	Hawk B-10 #9	B-10-21-37	5,250	37.1	4
Campbell & Hedrick	W.E.Lee #2	B-20-21-37	5,133	38.0	11
Amerada Hess Corp.	H.Corrigan #7	H-4-22-37	5,093	40.3	32
Texaco Inc.	A.H.Blinebry Fed #27	K-28-22-38	5,000	36.9	1
Texaco Inc.	C.H.Lockhart NCT-1 #3	O-18-22-38	5,000	39.4	4
D.M. Norman	McCallister #1	E-7-22-38	4,480	40.1	3
Gulf Oil Corp.	H.T.Mattern NCT-D #12	K-6-22-37	4,438	38.2	16
Campbell & Hedrick	Elliott Fed. #1	G-6-23-38	4,414	48.5	11
Texaco Inc.	C.H.Lockhart NCT-1 #4	J-18-22-38	4,286	39.4	6
Shell Oil Co.	State Sec. 2#15	K-2-21-37	4,200	35.6	5
Phillips Pet. Co.	Sims #6	M-24-22-37	4,012	42.0	4
Texaco Inc.	A.H.Blinebry Fed #25	N-28-22-38	4,000	36.9	1
Gulf Oil Corp.	H.Leonard NCT-F #7	J-2-21-37	3,500	38.9	4
Texaco Inc.	A.H.Blinebry Fed #26	B-29-22-38	3,000	38.1	2
Texaco Inc.	A.H.Blinebry Fed. #24	E-28-22-38	2,857	36.9	3

EXHIBIT 4

Case No. 6525
Tubb Oil Wells

<u>COMPANY</u>	<u>LEASE & WELL #</u>	<u>LOCATION</u>	<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
Gulf Oil Corp.	A.L. Christmas(NCT-C)#16	M-18-22-37	2,167	36.3	12
Mabee Pet. Co.	Belcher A #1	N-7-22-38	2,100	39.0	10
Texaco Inc.	A.H.Blinebry Fed #33	D-28-22-38	2,000	36.7	2
Continental Oil Co.	Lockhart A-17#4	A-17-21-37	2,000	35.6	5
Exxon Company	N.M. V St. #11	K-10-21-37	1,925	NR	4
Gulf Oil Corp.	H.T.Mattern NCT-D #11	F-6-22-37	1,525	34.9	40
Texas Pacific Oil Co.	Sarkeys #1	E-25-21-37	1,035	44.0	8
Gulf Oil Corp.	H.Leonard NCT-F #1	R-2-21-37	800	38.7	5
Gulf Oil Corp.	Manda B Tr. C #1	C-28-22-37	556	35.3	9

* reclassified to gas Apr. 2, 1979

** reclassified to gas Apr. 2, 1979

*** reclassified to gas Feb. 1, 1979 not in Apr. Gas Schedule.

4-23-79

CASE NO. 6525
TUBB GAS WELLS

EXHIBIT 4

COMPANY	LEASE & WELL#	LOCATION	GOR	GRAVITY	OIL
Marathon Oil Co.	Mark Owen #3	N-35-21-37	2,852,000	58.0	1
John H. Hendrix Corp.	Brunson C #6	I-3-22-37	790,000	44.9	1
Shell Oil Co.	Thomas Long #5	N-11-22-37	670,000	NR	1
Marathon Oil Co.	W.Lynch #4	D-1-22-37	651,000	56.0	2
Marathon Oil Co.	J.L. Muncy #1	P-24-22-37	578,000	62.0	1
Gulf Oil Corp.	N.Keenum #2	O-14-21-37	571,000	45.1	1
Penrose-Zachary	Hinton #5	P-12-22-37	466,000	42.1*	1
Mobil Oil Corp.	S.E.Long #8	J-11-22-37	446,000	39.4*	1
Shell Oil Company	Argo #5	N-15-21-37	372,667	47.4	3
Texaco Inc.	A.H.Blinebry Fed #17	L-19-22-38	365,000	38.3*	1
Amoco Production Co.	Owen B #2	L-34-21-37	327,750	NR	4
Samedan Oil Corp.	Parks #6	L-14-22-37	284,667	51.0	2
Continental Oil Co.	Lockhart A-27 #12	D-27-21-37	283,000	NR	2
Texas Pacific Oil Co.	Elliott B9 #5	C-9-22-37	261,000	52.0	1
Gulf Oil Corp.	L.Stebbins(NCT-B) #3	A-5-22-37	252,000	48.1	1
Texaco Inc.	A.H.Blinebry Fed.#16	L-33-22-38	249,000	36.9*	1
Gulf Oil Corp.	Vivian #2	G-30-22-38	248,000	45.1	3
Samedan Oil Corp.	Parks A#4	I-14-22-37	240,000	52.0	4
Marathon Oil Co.	Wm. Turner #3	I-29-21-37	203,000	48.0	1
Amerada Hess Corp.	State D "A" #3	J-16-21-37	191,000	48.8	1
Continental Oil Co.	Lockhart B-35 #1	G-35-21-37	180,667	NR	3
Texaco Inc.	A.H.Blinebry Fed #1	O-19-22-38	177,000	38.3*	3
Gulf Oil Corp.	E.Linebry #1	K-29-22-38	176,000	45.1	2
Shell Oil Co.	Argo A #2	E-22-31-37	172,500	47.2	4
Amoco Production Co.	Southland Roy.A #4	X-4-21-37	151,000	NR	3
Gulf Oil Corp.	Scarborough Est. #2	H-31-22-38	146,200	45.8	5
Gulf Oil Corp.	T.R. Andrews #2	G-32-22-38	133,000	45.2	2
Gulf Oil Corp.	Vivian #1	C-30-22-38	131,000	45.4	1
Gulf Oil Corp.	Amanda #1	J-25-22-37	122,000	45.5	1
Moranco	Owen #1	E-14-21-37	120,000	49.0	1
Texaco Inc.	A.H.Bline.Fed.NCT-3 #1	D-31-22-38	115,000	38.4*	1
Mobil Oil Corp.	Brunson Argo #15	F-10-22-37	110,000	40.9*	2
Atlantic Richfield Co.	Rogers Gas Com #1	A-12-22-37	106,000	40.2*	2
Texas Pacific Oil Co.	Boyd #5	B-23-22-37	104,000	63.0	1
Texas Pacific Oil Co.	S.E. Cone #1	J-26-21-37	94,000	54.0	1
Marathon Oil Co.	L.G. Warlick C #1	J-15-21-37	72,000	50.0	1
Marathon Oil Co.	E.Butler B #1	I-13-22-37	86,000	57.0	1
J.R. Cone	Eubanks #2	L-14-21-37	80,500	40.0*	4
Texas Pacific Oil Co.	E.W.Walden #4	C-15-22-37	73,000	53.0	1
Gulf Oil Corp.	Scarborough Est. #4	F-31-22-38	67,500	45.9	4
Atlantic Richfield Co.	Roy Barton #1	G-23-21-37	60,500	47.0	2
Marathon Oil Co.	J.L. Muncy #2	K-24-22-37	50,000	58.0	1
Marathon Oil Co.	W.S.Marshall B #2	H-27-21-37	31,000	60.0	1
Amoco Production Co.	State C Tr. 12 #6Y	C-16-21-37	30,750	NR	4
Texas Pacific Oil Co.	Sims #2	F-25-22-37	22,000	52.0	1
Marathon Oil Co.	W.S.Marshall B #3	K-27-21-37	17,000	60.0	5
Sun Oil Co.	E.Owen #1	D-3-22-37	10,500	NR	2

*wells presently in proration schedule under Tubb Gas Pool with gravities less than 45 degrees.

4-23-79

*Question
Summarization*

CASE NO. 6525
TUBB GAS POOL

RESULTS OF STUDY

The study of the pool found that there are gas wells making oil, oil wells, and dry gas wells whose structural position and completion within the Tubb formation no longer have a great effect on their type of status. Gravities tend to change back and forth. There are oil wells with very high GOR's and gas wells with very low GOR's.

Due to changes in reservoir characteristics since 1956, such as, pressure decline, pool depletion, gravity changes and an unstable gas-oil contact make the present classification of 45° gravity as the breaking point for oil or gas wells no longer satisfactory or reasonable.

They have Recommendations

RECOMMENDATIONS

1. That the gravity classification for this pool be abolished.
2. That a GOR classification be used for the determination of well type status. A GOR of 50,000 to 1 is recommended.
3. That the oil wells which will be reclassified to gas wells be given an automatic NSP.
4. That the rules for the pool be written as the Tubb Gas and Oil Pool on the same order as the Blinbry Oil and Gas Pool.

5. That the present vertical limits of the pool remain the same (100 feet above top of Tubb marker to top of Drinkard as defined by the log of the Exxon State S Well No. 20 in Unit E, Section 2, Township 22 South, Range 37 East).

Respectfully submitted,

John W. Runyan
Geologist

Exhibit No. 5

*What effect would this reclass have on
the wells in the pool.*

Exhibit No. 5 lists the number of wells which will change from oil to gas and gas to oil, with related numbers of type wells in the pool at a ratio of 50,000 to 1 GOR.--"Read Figures"

Also, this exhibit shows the average GOR and gravity for both Tubb gas wells making oil and oil wells at the present date, and the average gravity for gas wells in 1957.

The second page lists the gas allowables on 160 acre dedications and 40 acre dedications with accompanying casinghead gas and oil allowables from January, 1978 to April, 1979, and reflects about what the future allowables will be on oil wells being reclassified to gas, and gas wells to oil.

CASE NO. 6525
TUBB GAS POOL

Tubb oil-gas well changes due to gas-oil ratio proposal.

50,000 RATIO

9 ~~8~~ -- oil wells will change to gas wells.

5 -- gas wells will change to oil wells.

Total 13 wells.

Presently 64 oil wells in pool

Presently 47 gas wells which make oil in pool

Presently 88 gas wells which make no oil in pool.

PRESENT TUBB OIL AVERAGES

<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
35,212	38.4°	7.2

PRESENT TUBB GAS AVERAGES

<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
275,749	48.4°	2

In 1957 the average gravity for gas wells was 62.5°

*2) 100,000
5 oil wells go to gas
13 gas wells go to oil*

CASE NO. 6525
TUBB GAS POOL

WELL ALLOWABLES

<u>MONTH/YEAR</u>	<u>GAS</u> <u>160 ac.</u> <u>MCFPD</u>	<u>GAS</u> <u>40 ac.</u> <u>MCFPD</u>	<u>CASINGHEAD</u> <u>GAS MCFPD</u>	<u>OIL</u> <u>40 ac.</u> <u>BOPD</u>
January 1978	31,143	1005 7,786	284	142
February 1978	27,684	989 6,921	284	142
March 1978	31,337	1011 7,834	284	142
April 1978	30,487	1016 7,622	284	142
May 1978	29,887	964 7,472	284	142
June 1978	26,428	881 6,607	284	142
July 1978	23,612	762 5,903	284	142
August 1978	23,567	760 5,892	284	142
September 1978	24,520	817 6,130	284	142
October 1978	25,945	831 6,486	284	142
November 1978	27,870	929 6,968	284	142
December 1978	29,779	961 7,445	284	142
January 1979	30,076	970 7,519	284	142
February 1979	27,166	970 6,792	284	142
March 1979	32,782	1057 8,196	284	142
April 1979	30,742	1025 7,686	284	142

ave 935 234/da

CASE NO. 6525
TUBB GAS WELLS

COMPANY	LEASE & WELL#	LOCATION	GOR	GRAVITY	OIL
Marathon Oil Co.	Mark Owen #3	N-35-21-37	2,852,000	58.0	1
John H. Hendrix Corp.	Brunson C #6	I-3-22-37	790,000	44.9	1
Shell Oil Co.	Thomas Long #5	N-11-22-37	670,000	NR	1
Marathon Oil Co.	W.Lynch #4	D-1-22-37	651,000	56.0	2
Marathon Oil Co.	J.L. Muncy #1	P-24-22-37	578,000	62.0	1
Gulf Oil Corp.	N.Keenum #2	O-14-21-37	571,000	45.1	1
Penrose-Zachary	Hinton #5	P-12-22-37	466,000	42.1*	1
Mobil Oil Corp.	S.E.Long #8	J-11-22-37	446,000	39.4*	1
Shell Oil Company	Argo #5	N-15-21-37	372,667	47.4	3
Texaco Inc.	A.H.Blinebry Fed #17	L-19-22-38	365,000	38.3*	1
Amoco Production Co.	Owen B #2	L-34-21-37	327,750	NR	4
Samedan Oil Corp.	Parks #6	L-14-22-37	284,667	51.0	2
Continental Oil Co.	Lockhart A-27 #12	D-27-21-37	283,000	NR	2
Texas Pacific Oil Co.	Elliott B9 #5	C-9-22-37	261,000	52.0	1
Gulf Oil Corp.	L.Stebbins(NCT-B) #3	A-5-22-37	252,000	48.1	1
Texaco Inc.	A.H.Blinebry Fed.#16	L-33-22-38	249,000	36.9*	1
Gulf Oil Corp.	Vivian #2	G-30-22-38	248,000	45.1	3
Samedan Oil Corp.	Parks A#4	I-14-22-37	240,000	52.0	4
Marathon Oil Co.	Wm. Turner #3	I-29-21-37	203,000	48.0	1
Amerada Hess Corp.	State D "A" #3	J-16-21-37	191,000	48.8	1
Continental Oil Co.	Lockhart B-35 #1	G-35-21-37	180,667	NR	3
Texaco Inc.	A.H.Blinebry Fed #1	O-19-22-38	177,000	38.3*	3
Gulf Oil Corp.	E.Linebry #1	K-29-22-38	176,000	45.1	2
Shell Oil Co.	Argo A #2	E-22-31-37	172,500	47.2	4
Amoco Production Co.	Southland Roy.A #4	X-4-21-37	151,000	NR	3
Gulf Oil Corp.	Scarborough Est. #2	H-31-22-38	146,200	45.8	5
Gulf Oil Corp.	T.R. Andrews #2	G-32-22-38	133,000	45.2	2
Gulf Oil Corp.	Vivian #1	C-30-22-38	131,000	45.4	1
Gulf Oil Corp.	Amanda #1	J-25-22-37	122,000	45.5	1
Moranco	Owen #1	E-14-21-37	120,000	49.0	1
Texaco Inc.	A.H.Bline.Fed.NCT-3 #1	D-31-22-38	115,000	38.4*	1
Mobil Oil Corp.	Brunson Argo #15	F-10-22-37	110,000	40.9*	2
Atlantic Richfield Co.	Rogers Gas Com #1	A-12-22-37	106,000	40.2*	2
Texas Pacific Oil Co.	Boyd #6	B-23-22-37	104,000	63.0	1
Texas Pacific Oil Co.	S.E. Cone #1	J-26-21-37	94,000	54.0	1
Marathon Oil Co.	L.G. Warlick C #1	J-15-21-37	92,000	50.0	1
Marathon Oil Co.	E.Butler B #1	I-13-22-37	86,000	57.0	1
J.R. Cone	Eubanks #2	L-14-21-37	80,500	40.0*	4
Texas Pacific Oil Co.	E.W.Walden #4	C-15-22-37	73,000	53.0	1
Gulf Oil Corp.	Scarborough Est. #4	F-31-22-38	67,500	45.9	4
Atlantic Richfield Co.	Roy Barton #1	G-23-21-37	60,500	47.0	2
Marathon Oil Co.	J.L. Muncy #2	K-24-22-37	50,000	58.0	1
Marathon Oil Co.	W.S.Marshall B #2	M-27-21-37	31,000	60.0	1
Amoco Production Co.	State C Tr. 12 #6Y	C-16-21-37	30,750	NR	4
Texas Pacific Oil Co.	Sims #2	F-25-22-37	22,000	52.0	1
Marathon Oil Co.	W.S.Marshall B #3	K-27-21-37	17,000	60.0	5
Sun Oil Co.	E.Owen #1	D-3-22-37	10,500	NR	2

*wells presently in proration schedule under Tubb Gas Pool with gravities less than 45 degrees.

4-23-79

COMPANY	LEASE & WELL #	LOCATION	GOR	GRAVITY	OIL
*Gulf Oil Corp.	Mark Owen #4	J-34-21-37	345,000	37.3	1
**Gulf Oil Corp.	W.T. McComack #17	I-32-21-37	325,000	35.3	1
Shell Oil Company	Taylor Glenn #10	F-3-21-37	300,000	36.3	1
***Amoco Production Co.	Southland Royalty A #2	B-9-21-37	182,000	NR	1
Shell Oil Co.	Rinewalt #4	C-4-22-37	253,000	NR	1
Getty Oil Co.	S.J.Sarkeys #4	F-26-21-37	90,000	41.0	4
Getty Oil Co.	State Q #1	N-23-21-37	83,333	41.0	3
Exxon Company	J.L.Greenwood #13	L-9-22-37	58,500	NR	2
Getty Oil Co.	D.A.Williamson #2	E-23-21-37	50,000	42.0	1
Continental Oil Co.	Hawk B-1 #5	K-9-21-37	48,000	36.0	1
Shell Oil Co.	State Sec. 15 #1	G-15-21-37	45,625	38.0	16
Texaco Inc.	A.H.Blinebry Fed NCT-4#1	P-31-22-38	39,333	38.8	3
Shell Oil Co.	Sarkeys #2	K-23-21-37	35,000	43.7	7
Amoco Production Co.	Southland Roy. A #3	V-4-21-37	30,250	NR	1
Amerada Hess Corp.	E.W.Walden #3	N-15-22-37	26,000	NR	1
Getty Oil Corp.	S.J.Sarkeys #1	E-26-21-37	22,000	41.0	2
Crown Central	Danglade #1	B-24-22-37	21,000	47.0	1
Cities Service Co.	State S #2	F-15-21-37	20,000	37.0	3
Amoco Production Co.	Southland Roy. A #8	W-4-21-37	18,714	NR	4
Shell Oil Co.	Taylor Glenn #2	I-3-21-37	16,667	36.2	9
Shell Oil Co.	Livingston #11	M-3-21-37	16,364	35.4	11
Amerada Hess Corp.	E.W.Walden #5	L-15-22-37	16,000	NR	5
Amoco Production Co.	State C Tr. 13 #9	F-36-21-37	15,750	NR	4
Texaco Inc.	C.H.Lockhart NCT-1 #2	D-18-22-38	13,667	39.4	1
Texaco Inc.	A.H.Blinebry Fed #11	L-28-22-38	12,000	36.9	2
Hanson Oil Co.	Max Gutman #7	D-19-33-38	10,556	37.9	18
Continental Oil Co.	State 10 #3	D-10-21-37	8,750	38.0	8
Shell Oil Co.	St. Sec. 2 #4	U-2-21-37	8,333	35.2	3
Cambell & Hedrick	Lockhart #1	L-17-21-37	7,350	36.8	3
Southland Royalty Co.	State #3	M-2-21-37	7,208	38.0	12
Texaco Inc.	C.H.Lockhart NCT-1 #5	C-18-22-38	7,200	39.4	1
Mabee Petroleum	Belcher #1	M-7-22-38	7,000	39.0	5
Gulf Oil Corp.	H.T.Mattern NCT-D #16	E-7-22-37	7,000	37.2	7
Texas Pacific Oil Co.	Belcher #1	L-7-22-38	6,923	NR	3
Texaco Inc.	C.H. Lockhart #6	G-18-22-38	6,500	39.4	4
Carter Foundation	E.M.Elliott #3	C-22-22-37	6,088	38.6	6
Continental Oil Co.	Hawk B-10 #7	F-10-21-37	6,000	37.1	3
Southland Royalty	State BD "36" #1	J-36-22-37	6,000	37.5	2
Texaco Inc.	A.H.Blinebry Fed #28	A-29-22-38	5,800	34.5	1
Continental Oil Co.	Hawk B-3 #8	P-3-21-37	5,600	33.3	5
Continental Oil Co.	Hawk B-10 #9	B-10-21-37	5,250	37.1	4
Campbell & Hedrick	W.E.Lee #2	B-20-21-37	5,133	38.0	11
Amerada Hess Corp.	H.Corrigan #7	H-4-22-37	5,093	40.3	32
Texaco Inc.	A.H.Blinebry Fed #27	K-28-22-38	5,000	36.9	1
Texaco Inc.	C.H.Lockhart NCT-1 #3	O-18-22-38	5,000	39.4	4
D.M. Norman	McCallister #1	E-7-22-38	4,480	40.1	3
Gulf Oil Corp.	H.T.Mattern NCT-D #12	K-6-22-37	4,438	38.2	16
Campbell & Hedrick	Elliott Fed. #1	G-6-23-38	4,414	48.5	11
Texaco Inc.	C.H.Lockhart NCT-1 #4	J-18-22-38	4,286	39.4	6
Shell Oil Co.	State Sec. 2#15	K-2-21-37	4,200	35.6	5
Phillips Pet. Co.	Sims #6	M-24-22-37	4,012	42.0	4
Texaco Inc.	A.H.Blinebry Fed #25	N-28-22-38	4,000	36.9	1
Gulf Oil Corp.	H.Leonard NCT-F #7	J-2-21-37	3,500	38.9	4
Texaco Inc.	A.H.Blinebry Fed #26	R-29-22-38	3,000	38.1	2
Texaco Inc.	A.H.Blinebry Fed. #24	E-28-22-38	2,857	36.9	3

Case No. 6525
Tubb Oil Wells

<u>COMPANY</u>	<u>LEASE & WELL #</u>	<u>LOCATION</u>	<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
Gulf Oil Corp.	A.L. Christmas(NCT-C)#16	M-18-22-37	2,167	36.3	12
Mabee Pet. Co.	Belcher A #1	N-7-22-38	2,100	39.0	10
Texaco Inc.	A.H.Blinebry Fed #33	D-28-22-38	2,000	36.7	2
Continental Oil Co.	Lockhart A-17#4	A-17-21-37	2,000	35.6	5
Exxon Company	N.M. V St. #11	K-10-21-37	1,925	NR	4
Gulf Oil Corp.	H.T.Mattern NCT-D #11	F-6-22-37	1,525	34.9	40
Texas Pacific Oil Co.	Sarkeys #1	E-25-21-37	1,035	44.0	8
Gulf Oil Corp.	H.Leonard NCT-F #1	R-2-21-37	800	38.7	5
Gulf Oil Corp.	Manda B Tr. C #1	C-28-22-37	556	35.3	9

- * reclassified to gas Apr. 2, 1979
 ** reclassified to gas Apr. 2, 1979
 *** reclassified to gas Feb. 1, 1979 not in Apr. Gas Schedule.

4-23-79

CASE NO. 6525
TUBB GAS POOL

Tubb oil-gas well changes due to gas-oil ratio proposal.

50,000 RATIO

8 -- oil wells will change to gas wells.

5 -- gas wells will change to oil wells.

Total 13 wells.

Presently 64 oil wells in pool

Presently 47 gas wells which make oil in pool

Presently 88 gas wells which make no oil in pool.

PRESENT TUBB OIL AVERAGES

<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
35,212	38.4 ⁰	7.2

PRESENT TUBB GAS AVERAGES

<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
275,749	48.4 ⁰	2

In 1957 the average gravity for gas wells was 62.5⁰

CASE NO. 6525
TUBB GAS POOL

WELL ALLOWABLES

<u>MONTH/YEAR</u>	<u>GAS 160 ac. MCFPD</u>	<u>GAS 40 ac. MCFPD</u>	<u>CASINGHEAD GAS MCFPD</u>	<u>OIL 40 ac. BOPD</u>
January 1978	31,143	7,786	284	142
February 1978	27,684	6,921	284	142
March 1978	31,337	7,834	284	142
April 1978	30,487	7,622	284	142
May 1978	29,887	7,472	284	142
June 1978	26,428	6,607	284	142
July 1978	23,612	5,903	284	142
August 1978	23,567	5,892	284	142
September 1978	24,520	6,130	284	142
October 1978	25,945	6,486	284	142
November 1978	27,870	6,968	284	142
December 1978	29,779	7,445	284	142
January 1979	30,076	7,519	284	142
February 1979	27,166	6,792	284	142
March 1979	32,782	8,196	284	142
April 1979	30,742	7,686	284	142

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION ON ITS OWN MOTION TO
AMEND THE SPECIAL RULES FOR THE
TUBB GAS POOL, LEA COUNTY,
NEW MEXICO.

CASE NO. 6525
Order No. R-6012

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on April 25, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 23rd day of May, 1979, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.
- (2) That the Tubb Gas Pool is part of a complex reservoir system of interrelated gas-bearing and oil-bearing stringers.
- (3) That the producing characteristics of a well completed in this complex reservoir system will frequently fluctuate during the life of the well with the result that under the present pool rules, the well's classification will often change from oil to gas and vice versa.
- (4) That Rule 26 (A) of the present Tubb Gas Pool Rules defines an oil well as being a well which produces liquid hydrocarbons possessing a gravity of 45° API or less.
- (5) That any well producing from the Tubb Gas Pool and not classified as an oil well, as defined above, is a gas well in said pool.
- (6) That a more succinct definition of gas wells and oil wells is needed in order to minimize the fluctuation of classification of wells referred to in Finding No. (3) above, and the definition of a well as a gas well or an oil well should not be

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dependent upon the gravity of the liquids produced but should be dependent upon the gas-liquid ratio of the well as determined from a review of the well's production data, gas-liquid ratio tests, and other pertinent data.

(7) That the basic criterion upon which a well should be classified as a gas well should be a determination as to whether the well's true ratio, in view of its production data, gas-liquid ratio tests, and other pertinent data, is 50,000 cubic feet of gas or more per barrel of liquid hydrocarbons.

(8) That the Tubb Gas Pool should be reclassified and redesignated as the Tubb Oil and Gas Pool, and a limiting gas-oil ratio of 2000 cubic feet of gas per barrel of oil should be established for oil wells in said Tubb Oil and Gas Pool.

(9) That the vertical limits of the Tubb Oil and Gas Pool should extend from a point 100 feet above the "Tubb Marker" to the top of the Drinkard formation. The Tubb Marker shall be that point encountered at a depth of 5921 feet (elevation 3380, sub-sea datum -2541) and the top of the Drinkard formation be that point encountered at a depth of 6245 feet (elevation 3380, sub-sea datum -2865) in the Exxon Corporation State "S" Well No. 20, located in the SW/4 NW/4 of Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

(10) That in order to prevent waste and to protect correlative rights, pool rules similar to Blinberry Oil and Gas Pool rules should, with minor modification, be adopted and made applicable to the Tubb Oil and Gas Pool.

IT IS THEREFORE ORDERED:

(1) That the Tubb Gas Pool is hereby reclassified and redesignated as the Tubb Oil and Gas Pool, with vertical limits as defined by Rule 25 below and horizontal limits the same as heretofore defined by the Division for the Tubb Gas Pool.

(2) That the aforesaid Tubb Oil and Gas Pool shall be subject to the following special rules and regulations which are hereby adopted as an amendment to Order No. R-1670, "Rules and Regulations Governing Prorated Gas Pools in New Mexico."

VII. SPECIAL RULES AND REGULATIONS FOR THE TUBB OIL AND GAS POOL

(This pool was created February 17, 1953, and prorationing was instituted January 1, 1954.)

A. WELL LOCATION AND ACREAGE REQUIREMENTS

RULE 1. Each well completed or recompleted in the Tubb Oil and Gas Pool or in the Tubb formation within one mile thereof and not nearer to nor within the boundaries of another pool producing from the Tubb formation, shall be spaced, drilled, operated, and prorated in accordance with the rules for the Tubb Oil and Gas Pool as set forth herein.

RULE 2 (a). After the effective date of this order, each well drilled or recompleted as an oil well, or as a gas well to which no more than 40 acres shall be dedicated, shall be located not closer than 330 feet to the outer boundary of any governmental quarter-quarter section or subdivision boundary line.

(b) After the effective date of this order, no well drilled as a gas well and to which is dedicated, or to which will be dedicated, more than 40 acres shall be located nearer than 660 feet to the outer boundary of its proration unit or of the quarter section and not nearer than 330 feet to any governmental quarter-quarter section line or subdivision line.

RULE 3. The Division Director may grant an exception to the footage requirements of Rule 2 (a) or 2 (b) 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 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 Director has received the application. If any written objection is received, or at the direction of the Director, any such application may be set for hearing. An unorthodox location may be subject to an allowable adjustment if it is directly offsetting another producing well.

RULE 4. The provisions of Statewide Rule 104, Paragraph (k), shall not apply to the Tubb Oil and Gas Pool.

RULE 5 (A). Each gas well within the Tubb Oil and Gas Pool shall be located on a standard proration unit consisting of approximately 160 acres which shall comprise a governmental quarter section. For purposes of these rules, a unit consisting of between 158 and 162 contiguous surface acres shall be considered a standard unit.

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RULE 5 (B). Each oil well within the Tubb Oil and Gas Pool shall be located on a standard unit consisting of approximately 40 acres which shall comprise a governmental quarter-quarter section or lot.

RULE 5 (C) 1. The District Supervisor of the Hobbs district office of the Division shall have authority to approve a non-standard unit as an exception to Rule 5 (A) or 5 (B) without notice and hearing when the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the U. S. Public Land Surveys and the non-standard unit is not less than 75 percent nor more than 125 percent of a standard unit.

2. The District Supervisor may approve the non-standard unit by:

(a) accepting a plat showing the proposed non-standard unit and the acreage to be dedicated to the non-standard unit, and

(b) assigning an allowable to the non-standard unit.

3. The Division Director may grant an exception to the requirements of Rule 5 (A) without notice and hearing where an application has been filed in due form and where the unorthodox size and shape of the tract is due to a variation in legal sub-divisions of the United States Public Lands Survey or where the following facts exist and the following provisions are complied with:

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

(b) The non-standard unit consists of not more than 164 acres and lies wholly within a single governmental section.

(c) The entire non-standard unit may reasonably be presumed to be productive of gas from the Tubb Oil and Gas Pool.

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

(e) In lieu of Paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the afore-said operators were notified by registered or certified

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mail of its intent to form such non-standard unit. The Director may approve the application if, after a period of 20 days, no such operator has entered an objection to the formation of the non-standard unit.

- (f) The Director may grant an exception to (a) above if a completion, re-completion, or reclassification of a Tubb well results in dedication of acreage to an oil well on a previously approved gas proration unit, and thereby severs acreage contained in said unit from the gas well which produces for the unit.

C. ALLOCATION AND GRANTING OF ALLOWABLES

RULE 8 (A). The total allowable to be allocated to gas wells in the pool regulated by this order each month shall be equal to the sum of the "Preliminary" or "Supplemental" Nominations (whichever is applicable) together with any adjustment which the Division deems advisable. The allowable remaining each month after deducting the total allowable assigned to marginal wells shall be allocated among the non-marginal gas wells entitled to an allowable in the proportion that each well's acreage factor bears to the total of the acreage factors for all non-marginal gas wells in the pool.

RULE 8 (B). Allowables to newly completed gas wells shall commence on the date of connection to a gas transportation facility, as determined from an affidavit furnished to the Division District Office (Box 1980, Hobbs, New Mexico 88240) by the purchaser, or the date of filing of Form C-104 and a plat (Form C-102), whichever date is the later.

G. GENERAL

RULE 22. No natural gas produced from a gas well in the Tubb Oil and Gas Pool shall be flared or vented except as provided in Rule 401 of the Division Rules and Regulations and no oil well casinghead gas shall be flared or vented except as provided in Rule 306.

H. MISCELLANEOUS SPECIAL POOL RULES

RULE 25. The vertical limits of the Tubb Oil and Gas Pool shall extend from a point 100 feet above the "Tubb Marker" to the top of the Drinkard formation. The Tubb Marker shall be that point encountered at a depth of 5921 feet (elevation 3380, sub-sea datum -2541) and the top of the Drinkard shall be that point encountered at a depth of 6245 feet (elevation 3380, sub-sea datum -2865) in the Exxon Corporation State "S" Well No. 20,

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SW/4 NW/4 of Section 2, Township 22 South, Range 37 East, NMPM,
Lea County, New Mexico.

RULE 26 (a). A gas well in the Tubb Oil and Gas Pool shall be a well producing from within the vertical and horizontal limits of the pool which produces with a gas-liquid ratio of 50,000 cubic feet of gas or more per barrel of liquid hydrocarbons.

(b) A well producing from within the horizontal and vertical limits of the Tubb Oil and Gas Pool and not classified as a gas well, as defined in Rule 26 (a) above, shall be classified as an oil well.

(c) The District Supervisor, on or before December 10 of each year, shall review production data, gas-oil ratio tests, and other pertinent data and reclassify a well under Rule 26 (a) if production data, gas-oil ratio tests, or other evidence reflects the need for such reclassification.

(d) Should remedial work, production data, or other circumstances at any time indicate classification of a well as an oil well or a gas well to be improper, the District Supervisor may reclassify said well to its proper category.

(e) In the event an oil well in the Tubb Oil and Gas Pool is reclassified as a gas well, the operator of such well will be afforded the opportunity to form a non-standard gas proration unit for the well; provided however, that, until such unit is formed, said well shall be allocated a gas allowable commensurate with the acreage contained in the unit formerly dedicated to the oil well. In the event of two or more gas wells producing from the Tubb Oil and Gas Pool within a single proration unit, the allowable assigned to the unit may be produced from any well on the unit in any proportion.

RULE 27. Oil wells within the Tubb Oil and Gas Pool shall receive oil and casinghead gas allowables as provided in State-wide Rules 503, 505, and 506. The limiting gas-oil ratio for the Tubb Oil and Gas Pool shall be 2000 cubic feet of gas per barrel of oil.

RULE 28. Acreage dedicated to a gas well in the Tubb Oil and Gas Pool shall not be simultaneously dedicated to an oil well in the pool, and the dual completion of a well so as to produce separate gas and oil allowables from the Tubb Oil and Gas Pool is hereby prohibited.

RULE 29 (a). Condensate from any gas well in the Tubb Oil and Gas Pool may be commingled with other condensate produced

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by any other gas well or gas wells producing from the pool or the Blinebry Oil and Gas Pool following its separation from the gas in a separator, provided approval therefor has been obtained in accordance with Division Rule 303-B and/or Rule 309-B, whichever is applicable.

If two-stage separation is used, the low-pressure gas shall be directed into a low-pressure gas gathering system, and said low-pressure gas need not be measured separately from the other low-pressure gas produced on the lease, provided that certain test facilities are available and periodic tests made in accordance with Rule 30 below.

(b) In submitting Form C-115 (Operator's Monthly Report) on wells producing from the Tubb Oil and Gas Pool in which condensate is commingled and/or the low-pressure gas is commingled with other low-pressure gas produced on the lease, the operator shall estimate the volume produced by each well in each pool by using the ratios as reflected in the most recent test submitted.

RULE 30. Gas-liquid ratio tests shall be conducted annually during the months of August, September, and October on all wells located in and producing from the Tubb Oil and Gas Pool. Results of such tests shall be reported to the Division on Form C-116 on or before the 10th day of November of each calendar year.

IT IS FURTHER ORDERED:

(1) That the Division's Statewide Rules and Regulations, and each of the General Rules and Regulations for the Prorated Gas Pools of Southeastern New Mexico, as promulgated by Order No. R-1670, as amended, unless in conflict with one of the above special rules applicable to the Tubb Oil and Gas Pool, shall also apply to the wells in the Tubb Oil and Gas Pool.

(2) That the Special Rules and Regulations for the Tubb Gas Pool, as promulgated by Order No. R-1670, are hereby superseded.

(3) That the vertical limits of the Tubb Oil and Gas Pool shall be as defined in Rule (25) above and the horizontal limits shall be as heretofore defined by the Division.

(4) That the effective date of this order shall be September 1, 1979.

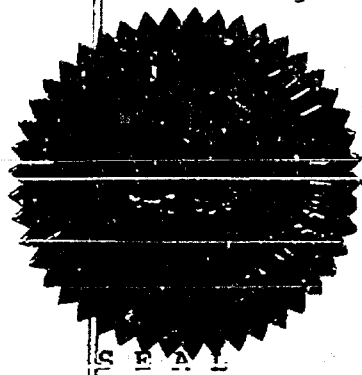
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(5) That jurisdiction of this cause is hereby retained for the entry of such further orders as the Division may deem necessary.

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



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Ramey
JOE D. RAMEY
Director

ed/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
25 April 1979

EXAMINER HEARING

IN THE MATTER OF:

The hearing called by the Oil Conservation
Division on its own motion to amend the
Special Rules for the Tubb Gas Pool in Lea) CASE
County, New Mexico, to provide for the) 6525
classification of wells as oil wells and
gas wells on the basis of gas-oil ratios
rather than on the basis of liquid gravity
as at present.

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Ernest L. Padilla, Esq.
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State Land Office Bldg.
Santa Fe, New Mexico 87503

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I N D E X

JOHN W. RUNYAN

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1 MR. STAMETS: Next we will call Case 6525.

2 MS. TESCHENDORF: Case 6525. In the matter
3 of the hearing called by the Oil Conservation Division
4 on its own motion to amend the Special Rules for the
5 Tubb Gas Pool in Lea County, New Mexico, to provide
6 for the classification of wells as oil wells and gas
7 wells on the basis of gas-oil ratios rather than on the
8 basis of liquid gravity as at present.

9 MR. STAMETS: Call for appearances in this
10 case.

11 MR. PADILLA: Ernest L. Padilla, representing
12 the Oil Conservation Division.

13 MR. STAMETS: Are there other appearances in
14 this case? Do you have a witness that will stand and
15 be sworn, please, Mr. Padilla?

16 MR. PADILLA: Yes, I do.

17 (witness sworn)

18
19 JOHN W. RUNYAN

20 being called as a witness, and having been duly sworn upon
21 his oath, testified as follows, to-wit:

22
23 DIRECT EXAMINATION

24 BY MR. PADILLA:

25 Q. Mr. Runyan, would you state for the record

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1 your name and by whom you are employed?

2 A. John W. Runyan. I'm employed as geologist,
3 district 1, for the Oil Conservation Division, Hobbs.

4 Q. Mr. Runyan, have you previously testified before
5 this commission?

6 A. Yes, sir I have.

7 Q. Are your credentials a matter of record before
8 the Division?

9 A. They are.

10 MR. PADILLA: Mr. Examiner, I would request that
11 I be allowed to dispense with further qualification of the
12 witness in view of his credentials being a matter of record
13 before the Commission.

14 MR. STAMETS: The witness is considered qualified.

15 Q. (Mr. Padilla continuing.) Mr. Runyan, could you
16 give us a brief history of the Tubb Gas Pool?

17 A. Okay. The Tubb Gas Pool, located in Townships
18 21 and 22 South, Ranges 37 and 38 East, were discovered
19 by Gulf Oil Corporation Danglade Well #1 located in Unit
20 M of Section 13, Township 22 South, Range 37 East, on
21 May 29, 1946. The pool has one hundred thirty four gas
22 wells and sixty four oil wells currently producing.

23 Special rules governing the pool were
24 established in 1957 and were based on gravity only,
25 above 45 degrees gas and below oil. Since that date

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1 the pool has become partly depleted. The oil rim which
2 existed on the edges of the pool expanded and no longer
3 adheres to the original gas-oil contact of a minus
4 2855 subsea. Many gas wells bounce back and forth from
5 gas to oil to gas due to gravity changes and reservoir
6 pressure decline.

7 Q. Can you give the division from reservoir data
8 on the Tubb gas pool?

9 A. The original reservoir shut in pressure psi was
10 1875 and original average gravity was 62.5. Presently
11 the average gas gravity is 48.4 and reservoir temperature
12 is 122 degrees F. Original gas-oil contact was minus
13 2855 subsea.

14 Q. Mr. Runyan, do you have any geology on the
15 Tubb gas pool?

16 A. Yes. The Tubb gas pool is an anticlinal
17 structure of low relief which trends north and south
18 and plunges gently to the north. The structure is
19 approximately six miles wide and twelve miles in length
20 and has an areal extent of approximately 46,000 acres.

21 The pool has a closure which increases from
22 north to south. The north end has 167 feet of closure
23 and the south end has about 330 feet of closure. The
24 Tubb formation averages 320 feet in thickness from top
25 of the Tubb marker to the top of the Drinkard formation.

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1 The main gas and oil production comes from
2 a dark, silty, sandstone of the mid to lower Tubb.
3 Although some production comes from the upper Tubb, which
4 is a brown, porous, crystalline dolomite, the entire Tubb
5 formation is in intercommunication. Variations in porosity
6 and permeability in the pool plays an important part in
7 the relationship between oil and gas production, particu-
8 larly as reservoir pressure declines. Also, there are
9 many P&A wells scattered throughout the pool, which
10 represent both depleted wells and original completion
11 attempts. Also, a very large number of wells have been
12 recompleted to other producing zones.

13 Q. Mr. Runyan, have you prepared any exhibits for
14 this hearing?

15 A. Yes sir, I have. I have prepared three map
16 exhibits.

17 Q. And have you marked those exhibits?

18 A. Yes sir, I have.

19 Q. Are they marked exhibit one, exhibit two and
20 exhibit three?

21 A. Exhibit three.

22 Q. And are you referring---have you posted them upon
23 the wall?

24 A. Yes sir, they are posted on the wall.

25 Q. Now, referring to exhibit number one, can you give

1 us an explanation of that exhibit?

2 A. Yes sir. Exhibit number one is a structure
3 map contoured on 20 foot intervals on top of the "Tubb
4 Marker" and reflects the total Tubb structure. The wells
5 plotted on the map are coded as to type of production.
6 The large black circles outlined in green are oil wells.
7 The gas well symbols circled in red are gas wells which
8 make oil, and the gas well symbols with blue centers are
9 dry gas wells. The plain circles on the map, the small
10 plain circles, are mainly structure control wells. They
11 are wells which are producing from other pools, particularly
12 the Drinkard and Wantz Abo Pools. The black dashes, which
13 outlines the area of the pool, is the present pool boundary
14 of the Tubb Pool.

15 The purpose of this map is to show the relationship
16 between the types of Tubb wells and their structural position.
17 Oil wells are mainly concentrated in the north and south-
18 east sides of the pool, but there are many oil wells
19 scattered all over the structure map regardless of their
20 ---well all of them regardless of their structure position,
21 and the same applies to the gas wells making oil. And in turn
22 they are scattered in disregard to the structure. Dry
23 gas wells occur from the highest point structurally on the
24 map to the lowest point structurally.

25 Q. Now regarding exhibit two, would you give an

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1 explanation of that exhibit?

2 A. Exhibit two is designated cross section A-A'
3 and it is located on the east top east side of the pool
4 and it shows the relationship between pool structure, well
5 completion, the original gas-oil contact, and the change
6 of production of wells on the cross section from 1957 to
7 1979.

8 The first well on the right is a gas well making
9 oil, completed high in the Tubb formation.

10 MR. NUTTER: Mr. Runyan, I think you mean the
11 first well on the left, don't you?

12 A. Yes, right. The first well on the left, right,
13 is a gas well making oil, completed high in the Tubb for-
14 mation.

15 The next gas well to the right of it is a dry gas
16 well with perforations deeper in the Tubb, and this
17 particular well has changed from a gas well making fluid
18 to a dry gas well, and there has been no workover on the
19 well.

20 The next well is a high ratio oil well, located
21 just above the original GOR contact. Originally this well
22 was a gas well with a 68.2 gravity and it has changed at the
23 present time to 41 gravity. There has been no change in
24 perforations, since it was completed.

25 Far right, is an oil well down structure, the

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1 perforations cross gas-oil contact. There's very little
2 change in the gravity of this well and the GOR has doubled
3 since 1957.

4 Q. Is that all you have on exhibit number two?

5 A. Yes.

6 Q. Referring now to exhibit number three, would
7 you give an explanation also on that?

8 A. Exhibit number three is cross section B-B'.
9 It is located on the southern end of the Tubb pool, and
10 again it shows the relationship between well completions,
11 structure, original gas-oil contact and production changes
12 since 1957.

13 This cross section, from left to right, starting
14 at the left, shows an oil well with a low ratio, completed
15 at the top of the Tubb, structurally much higher, structur-
16 ally, than the two gas wells on the far right, which are
17 dry gas wells.

18 The second well from the left is a dry gas well
19 and it shows a change from a low ratio gas well producing
20 oil to a dry gas well. It is also completed in the same
21 subsea zone as the oil well to its left. This well has
22 doubled its GOR since 1957, gravity about the same. The
23 third well from the left is making oil and is flanked by
24 two gas wells on either side, and these are dry gas wells.

25 The last well on the right is a dry gas well

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1 and is structurally low and has changed from a gas well
2 making oil to a dry gas well and the completions on this
3 cross section, as well as on both cross sections, the
4 perforations have not changed since the date of completion.

5 Exhibits one, two, and three serve to illustrate
6 how oil and gas wells making oil --- how oil and gas wells
7 making oil and dry gas wells have an erratic distribution
8 over the Tubb pool, regardless of structure position and
9 depth of completion within the Tubb formation, and that
10 wells are changing in both gravity and oil-ratios, and there
11 is no definable gas-oil contact within the pool at the
12 present time.

13 Q. Is that all you have on exhibits one, two, and
14 three?

15 A. Yes sir, it is.

16 MR. PADILLA: Mr. Stamets, I move the introduction
17 of these exhibits one, two, and three into evidence.

18 MR. STAMETS: These exhibits are admitted.

19 Q. (Mr. Padilla continuing) Mr. Runyan, have you
20 prepared any other exhibits?

21 A. Yes sir, I have prepared two tabulated exhibits,
22 number four and number five.

23 Q. Okay. Would you explain, give an explanation of
24 exhibit number four? Do you have that?

25 A. It's posted on the board, also.

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1 MR. STAMETS: Have you got another copy that is
2 a little more visible than that?

3 A. Oh, I can let you have mine.

4 MR. STAMETS: Okay.

5 A. I do have another copy.

6 MR. STAMETS: And while we're stopped here, I'd
7 like to determine whether or not when you have referred to
8 oil wells on these exhibits, and then you've got a list of
9 oil wells here, whether you're using the old definition of
10 an oil well, being below 45 degrees gravity, or what you're
11 going to propose as a new definition of an oil well.

12 A. The oil wells and the gas wells making oil, as
13 located on the map by color code, are the present wells.
14 They are not changed. They are the present 45 degree gravity

15 MR. STAMETS: Okay.

16 Q. (Mr. Padilla continuing) Turn to exhibit four and
17 would you please give an explanation of that exhibit, Mr.
18 Runyan?

19 A. As reflected by the color coded wells on exhibits
20 one, two, and three, exhibit four is a tabulation of Tubb
21 gas wells which make oil, their gas-oil ratios are recorded
22 in descending order, with accompanying tabulation of gravity
23 and oil in BOPD.

24 The second tabulation is oil wells with
25 descending gas-oil ratios with accompanying gravities and

1 oil production.

2 The GOR of the gas wells which make oil range from
3 2,852,000 to 10,500, for a total of 47 wells.

4 The GOR of the oil wells range from 345,000 to
5 556, for a total of 64 wells.

6 Dry gas wells are not included in these tabulations
7 since their GOR's are infinite. And the recommendation for
8 GOR limit was taken from this list by determining the best
9 breaking point with the least well reclassification changes.

10 Both of these lists point out the fact that liquid
11 gravity does not reflect the normal idea of a gas well or
12 oil well in many instances.

13 Q. Mr. Runyan, referring to exhibit five, would you
14 also explain that exhibit? Well, strike that, please.

15 Mr. Runyan, would you summarize your study of the
16 Tubb gas pool?

17 A. Yes sir. The study of the pool found that they
18 are gas wells making oil, oil wells, and dry gas wells
19 whose structural position and completion within the Tubb
20 formation no longer have a great effect on their type of
21 status. Gravities tend to change back and forth. There
22 are oil wells with very high GOR's and gas wells with very
23 low GOR's.

24 Due to changes in reservoir characteristics since
25 1956, such as pressure decline, pool depletion, gravity

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1 changes, and an unstable gas-oil contact make the present
2 classification of 45 degree gravity as the breaking point
3 for oil or gas wells no longer satisfactory or reasonable.

4 Q. In light of your testimony, your previous
5 testimony here before --- in this hearing, do you have any
6 recommendations with respect to the gas Tubb pool?

7 A. Yes, I do.

8 Q. Or Tubb gas pool?

9 A. No. 1, That the gravity classification of this
10 pool be abolished.

11 No. 2, That a GOR classification be used for the
12 determination of well type status. A GOR of 50,000 to 1 is
13 recommended.

14 No. 3, That the oil wells which will be reclassi-
15 fied to gas, would be given an automatic NSP unit.

16 No. 4, That the rules for the pool be written as
17 the Tubb gas and oil pool on the same order as the Blinebry
18 oil and gas pool.

19 No. 5, That the present rule for annexing a pool
20 remain the same, and they are (100 feet above the top of
21 the Tubb marker to top of the Tubb formation as defined by
22 the log of the Exxon Oil Company, State S Well No. 20 in
23 Unit E, Section 2, Township 22 South, Range 37 East).

24 Q. Mr. Runyan, what affect would reclassification
25 of the wells on the pool ---- or the reclassification that

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1 you have recommended have on the pool?

2 A. I have prepared exhibit five which lists the
3 number of wells which will change from oil to gas and gas
4 to oil with related types of wells in the pool, with
5 related numbers of type wells in the pool at a ratio of
6 50,000 to 1 GOR.

7 There will be nine oil wells that will change to
8 gas wells, five gas wells will change to oil wells, for a
9 total of fourteen wells. This change will be small in
10 relation to the number of producing wells in the pool at
11 present, which are 64 oil wells, 37 gas wells, which make
12 oil, and 88 dry gas wells.

13 Also, the exhibits shows the average GOR and
14 gravity for both the Tubb gas wells making oil and oil
15 wells at the present date and they are the Tubb oil pool
16 averages or GOR is 35,212, gravity 48.4, and the average
17 oil per well produced is 7.2.

18 The present Tubb gas averages are, the GOR
19 275,749, gravity 48.4, and they average two barrels of oil
20 per day, and as a comparison, the present Tubb gas gravity
21 is 48.4, whereas in 1957 it was 62.5.

22 The second sheet of exhibit five lists the gas
23 and oil both on 160 acre dedications, and 40 acre dedications,
24 accompanied with the casinghead gas allowable and oil allow-
25 able from January, 1978 to April, 1979, and reflects about

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1 what the future allowables will be on oil wells being
2 reclassified to gas, and gas wells to oil.

3 The present gas on a 160 acre dedication over a
4 sixteen month period averages 935 MCF per day; on a 40 acre
5 dedication over a sixteen month period the average is 234
6 MCF per day. As the casinghead gas is 240 MCF per day,
7 and of course, the oil is 142 barrels top allowable.

8 So we expect that there will not be too great a
9 change in most cases on the wells which are being reclassi-
10 fied.

11 MR. PADILLA: Mr. Stamets, I offer exhibits four
12 and five into evidence.

13 MR. STAMETS: These exhibits will be admitted.

14 MR. PADILLA: And I have no further questions for
15 Mr. Runyan, at this time.

16

17

CROSS EXAMINATION

18

BY MR. STAMETS:

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25

Q. Mr. Runyan, is the main purpose for this rule
change to reduce the unnecessary work load on the operators
and the division that results from this constant reclassi-
fication of the wells?

A. Yes sir, it is.

Q. Will the changes that you have proposed today
have any affect on correlative rights or cause waste

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1 or change the potential for either of these?

2 A. I don't believe so. By giving an automatic
3 NSF, it takes care of the problems on the gas wells going
4 to oil. There will be --- and a 50,000 ratio, a minimum
5 number of oil wells --- gas wells changing to oil, which
6 actually will be additional acreage fee which was dedicated
7 to these gas wells. I'm not too sure what effect this
8 would have. It would be additional acreage to drill more
9 oil wells.

10 Q. Since this pool was discovered in 1946, would
11 you say it has been pretty well developed?

12 A. Yes, it has, very well developed.

13 Q. And it's in a very advanced stage of its life
14 at this time?

15 A. That is true.

16 Q. Do you feel that these changes will have any ---
17 any significant effect over the remaining years of the pool,
18 other than to reduce the workload?

19 A. No sir, I don't.

20 Q. Again, what have you described as the vertical
21 limits of this pool?

22 A. The vertical limits of the pool at present are
23 100 feet above the top of the Tubb marker to the top of
24 the Drinkard pool and there is a type well which is the
25 Exxon State S No. 20 Well.

1 Q. Okay before you leave today will you make sure
2 that I have received a copy of what you have requested,
3 specifically here, the abolishment of the gravity require-
4 ments, the GOR, the automatic NSP, and so on.

5 A. Yes sir.

6 Q. All right.

7 MR. STAMETS: Any other questions of the witness?
8 He may be excused. Is there anything further on this case
9 Ms. Teschendorf?

10 MS. TESCHENDORF: We have received correspondence
11 from Gulf Oil Corporation in this case supporting the
12 adoption of the gas-oil ratio as the basis for classifi-
13 cation of oil well to gas well in the Tubb gas pool. And
14 Gulf further recommends that a hundred thousand to one be
15 the classification breakover.

16 MR. STAMETS: Anything further? Yes sir?

17 MR. WELCH: I'm Jim Welch from Northern Natural.
18 I'd like to read into the record.

19 MR. STAMETS: That would be fine.

20 MR. WELCH: My name is J.M. Welch. I am employed
21 by Northern Natural Gas Company as a Director of well
22 testing and reside in Midland, Texas.

23 Northern is a major purchaser of gas-well gas in
24 the Tubb Gas Pool and has a vital interest in this proceeding.
25 Northern currently purchases gas-well gas from over eighty

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1 gas wells in the Tubb Gas Pool with the production from
2 said wells approximating 10% of Northern's total gas pur-
3 chases in Southeastern New Mexico.

4 I would like to state for the record that in the
5 event an order, issued pursuant to the evidence presented
6 at this hearing, results in increased volumes becoming
7 available to gas wells dedicated to Northern, that Northern
8 has both the market requirements and facilities to take
9 such increased volumes of gas.

10 MR. STAMETS: Any further questions? Any other
11 statements?

12 The case will be taken under advisement.

13 (hearing concluded)
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REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY
CERTIFY that the foregoing and attached Transcript of
Hearing before the Oil Conservation Division was reported
by me; that said transcript is a full, true, and correct
record of the hearing, prepared by me to the best of my
ability, knowledge, and skill, from my notes taken at the
time of the hearing.

Sally W. Boyd CSR
Sally W. Boyd, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. *65-25*
heard by me on *4-25-67*
Richard A. Stewart, Examiner
Oil Conservation Division

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date APRIL 25, 1979 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
<i>L. E. Blocker</i>	<i>Getty Oil Co</i>	<i>Tulsa</i>
<i>Conrad F. Fied</i>	<i>Humble here in</i>	<i>Midland</i>
<i>Larry Emmons</i>	<i>Tenneco Oil Co.</i>	<i>San Antonio, TX</i>
<i>David DeMay</i>	<i>Tenneco Oil Co.</i>	<i>San Antonio, TX</i>
<i>Bob Malais</i>	<i>Atlantic Richfield</i>	<i>Midland Texas</i>
<i>Jim Pease</i>	<i>Amoco</i>	<i>HOUSTON</i>
<i>Jim Allen</i>	✓	✓
<i>Guy Buell</i>	✓	✓
<i>JACK A. MORGAN</i>	<i>Sun Oil Company</i>	<i>Dallas, Texas</i>
<i>Michael P. Kovich</i>	✓	✓
<i>Paul W. Burchell</i>	<i>Partners Producers Corp.</i>	<i>El Paso, Texas</i>
<i>John Hance</i>	" " "	" "
<i>Tom Kellahan</i>	<i>Kellahan + Kellahan</i>	<i>Santa Fe</i>
<i>Jim Welsh</i>	<i>Northern Nat. Gas Co</i>	<i>Midland, TX</i>
<i>Lowell P. Lund</i>	<i>Northern Nat Gas Co</i>	<i>Midland, TX</i>
<i>Ronald McWilliams</i>	<i>Conoco</i>	<i>Hobbs N.M.</i>
<i>Carson Watt</i>	<i>Northern Natural Gas</i>	<i>Midland, Tex.</i>
<i>William A. Felt</i>	<i>Campbell & Black, P.A.</i>	<i>Santa Fe</i>
<i>Mohammed Y. Merchant</i>	<i>Getty Oil Co.</i>	<i>Hobbs, NM.</i>

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
25 April 1979

EXAMINER HEARING

IN THE MATTER OF:

The hearing called by the Oil Conservation
Division on its own motion to amend the
Special Rules for the Tubb Gas Pool in Lea) CASE
County, New Mexico, to provide for the) 6525
classification of wells as oil wells and
gas wells on the basis of gas-oil ratios
rather than on the basis of liquid gravity
as at present.

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

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I N D E X

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JOHN W. RUNYAN

Direct Examination by Mr. Padilla	3
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E X H I B I T S

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1 MR. STAMETS: Next we will call Case 6525.

2 MS. TESCHENDORF: Case 6525. In the matter
3 of the hearing called by the Oil Conservation Division
4 on its own motion to amend the Special Rules for the
5 Tubb Gas Pool in Lea County, New Mexico, to provide
6 for the classification of wells as oil wells and gas
7 wells on the basis of gas-oil ratios rather than on the
8 basis of liquid gravity as at present.

9 MR. STAMETS: Call for appearances in this
10 case.

11 MR. PADILLA: Ernest L. Padilla, representing
12 the Oil Conservation Division.

13 MR. STAMETS: Are there other appearances in
14 this case? Do you have a witness that will stand and
15 be sworn, please, Mr. Padilla?

16 MR. PADILLA: Yes, I do.

17 (witness sworn)

18
19 JOHN W. RUNYAN
20 being called as a witness, and having been duly sworn upon
21 his oath, testified as follows, to-wit:

22
23 DIRECT EXAMINATION

24 BY MR. PADILLA:

25 Q. Mr. Runyan, would you state for the record

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1 your name and by whom you are employed?

2 A. John W. Runyan. I'm employed as geologist,
3 district 1, for the Oil Conservation Division, Hobbs.

4 Q. Mr. Runyan, have you previously testified before
5 this commission?

6 A. Yes, sir I have.

7 Q. Are your credentials a matter of record before
8 the Division?

9 A. They are.

10 MR. PADILLA: Mr. Examiner, I would request that
11 I be allowed to dispense with further qualification of the
12 witness in view of his credentials being a matter of record
13 before the Commission.

14 MR. STAMETS: The witness is considered qualified.

15 Q. (Mr. Padilla continuing.) Mr. Runyan, could you
16 give us a brief history of the Tubb Gas Pool?

17 A. Okay. The Tubb Gas Pool, located in Townships
18 21 and 22 South, Ranges 37 and 38 East, were discovered
19 by Gulf Oil Corporation Dangle Well #1 located in Unit
20 M of Section 13, Township 22 South, Range 37 East, on
21 May 29, 1946. The pool has one hundred thirty four gas
22 wells and sixty four oil wells currently producing.

23 Special rules governing the pool were
24 established in 1957 and were based on gravity only,
25 above 45 degrees gas and below oil. Since that date

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1 the pool has become partly depleted. The oil rim which
2 existed on the edges of the pool expanded and no longer
3 adheres to the original gas-oil contact of a minus
4 2855 subsea. Many gas wells bounce back and forth from
5 gas to oil to gas due to gravity changes and reservoir
6 pressure decline.

7 Q. Can you give the division from reservoir data
8 on the Tubb gas pool?

9 A. The original reservoir shut in pressure psi was
10 1875 and original average gravity was 62.5. Presently
11 the average gas gravity is 48.4 and reservoir temperature
12 is 122 degrees F. Original gas-oil contact was minus
13 2855 subsea.

14 Q. Mr. Ruhyan, do you have any geology on the
15 Tubb gas pool?

16 A. Yes. The Tubb gas pool is an anticlinal
17 structure of low relief which trends north and south
18 and plunges gently to the north. The structure is
19 approximately six miles wide and twelve miles in length
20 and has an areal extent of approximately 46,000 acres.

21 The pool has a closure which increases from
22 north to south. The north end has 167 feet of closure
23 and the south end has about 330 feet of closure. The
24 Tubb formation averages 320 feet in thickness from top
25 of the Tubb marker to the top of the Drinkard formation.

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1 The main gas and oil production comes from
2 a dark, silty, sandstone of the mid to lower Tubb.
3 Although some production comes from the upper Tubb, which
4 is a brown, porous, crystalline dolomite, the entire Tubb
5 formation is in intercommunication. Variations in porosity
6 and permeability in the pool plays an important part in
7 the relationship between oil and gas production. particu-
8 larly as reservoir pressure declines. Also, there are
9 many P&A wells scattered throughout the pool, which
10 represent both depleted wells and original completion
11 attempts. Also, a very large number of wells have been
12 recompleted to other producing zones.

13 Q. Mr. Runyan, have you prepared any exhibits for
14 this hearing?

15 A. Yes sir, I have. I have prepared three map
16 exhibits.

17 Q. And have you marked those exhibits?

18 A. Yes sir, I have.

19 Q. Are they marked exhibit one, exhibit two and
20 exhibit three?

21 A. Exhibit three.

22 Q. And are you referring---have you posted them upon
23 the wall?

24 A. Yes sir, they are posted on the wall.

25 Q. Now, referring to exhibit number one, can you give

1 us an explanation of that exhibit?

2 A. Yes sir. Exhibit number one is a structure
3 map contoured on 20 foot intervals on top of the "Tubb
4 Marker" and reflects the total Tubb structure. The wells
5 plotted on the map are coded as to type of production.
6 The large black circles outlined in green are oil wells.
7 The gas well symbols circled in red are gas wells which
8 make oil, and the gas well symbols with blue centers are
9 dry gas wells. The plain circles on the map, the small
10 plain circles, are mainly structure control wells. They
11 are wells which are producing from other pools, particularly
12 the Drinkard and Wantz Abo Pools. The black dashes, which
13 outlines the area of the pool, is the present pool boundary
14 of the Tubb Pool.

15 The purpose of this map is to show the relationship
16 between the types of Tubb wells and their structural position.
17 Oil wells are mainly concentrated in the north and south-
18 east sides of the pool, but there are many oil wells
19 scattered all over the structure map regardless of their
20 ---well all of them regardless of their structure position,
21 and the same applies to the gas wells making oil. And in turn
22 they are scattered in disregard to the structure. Dry
23 gas wells occur from the highest point structurally on the
24 map to the lowest point structurally.

25 Q. Now regarding exhibit two, would you give an

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1 explanation of that exhibit?

2 A. Exhibit two is designated cross section A-A'
3 and it is located on the east top east side of the pool
4 and it shows the relationship between pool structure, well
5 completion, the original gas-oil contact, and the change
6 of production of wells on the cross section from 1957 to
7 1979.

8 The first well on the right is a gas well making
9 oil, completed high in the Tubb formation.

10 MR. NUTTER: Mr. Runyan, I think you mean the
11 first well on the left, don't you?

12 A. Yes, right. The first well on the left, right,
13 is a gas well making oil, completed high in the Tubb for-
14 mation.

15 The next gas well to the right of it is a dry gas
16 well with perforations deeper in the Tubb, and this
17 particular well has changed from a gas well making fluid
18 to a dry gas well, and there has been no workover on the
19 well.

20 The next well is a high ratio oil well, located
21 just above the original GOR contact. Originally this well
22 was a gas well with a 68.2 gravity and it has changed at the
23 present time to 41 gravity. There has been no change in
24 perforations, since it was completed.

25 Far right, is an oil well down structure, the

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1 perforations cross gas-oil contact. There's very little
2 change in the gravity of this well and the GOR has doubled
3 since 1957.

4 Q. Is that all you have on exhibit number two?

5 A. Yes.

6 Q. Referring now to exhibit number three, would
7 you give an explanation also on that?

8 A. Exhibit number three is cross section B-B'.
9 It is located on the southern end of the Tubb pool, and
10 again it shows the relationship between well completions,
11 structure, original gas-oil contact and production changes
12 since 1957.

13 This cross-section, from left to right, starting
14 at the left, shows an oil well with a low ratio, completed
15 at the top of the Tubb, structurally much higher, structur-
16 ally, than the two gas wells on the far right, which are
17 dry gas wells.

18 The second well from the left is a dry gas well
19 and it shows a change from a low ratio gas well producing
20 oil to a dry gas well. It is also completed in the same
21 subsea zone as the oil well to its left. This well has
22 doubled its GOR since 1957, gravity about the same. The
23 third well from the left is making oil and is flanked by
24 two gas wells on either side, and these are dry gas wells.

25 The last well on the right is a dry gas well

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1 and is structurally low and has changed from a gas well
2 making oil to a dry gas well and the completions on this
3 cross section, as well as on both cross sections, the
4 perforations have not changed since the date of completion.

5 Exhibits one, two, and three serve to illustrate
6 how oil and gas wells making oil --- how oil and gas wells
7 making oil and dry gas wells have an erratic distribution
8 over the Tubb pool, regardless of structure position and
9 depth of completion within the Tubb formation, and that
10 wells are changing in both gravity and oil-ratios, and there
11 is no definable gas-oil contact within the pool at the
12 present time.

13 Q. Is that all you have on exhibits one, two, and
14 three?

15 A. Yes sir, it is.

16 MR. PADILLA: Mr. Stamets, I move the introduction
17 of these exhibits one, two, and three into evidence.

18 MR. STAMETS: These exhibits are admitted.

19 Q. (Mr. Padilla continuing) Mr. Runyan, have you
20 prepared any other exhibits?

21 A. Yes sir, I have prepared two tabulated exhibits,
22 number four and number five.

23 Q. Okay. Would you explain, give an explanation of
24 exhibit number four? Do you have that?

25 A. It's posted on the board, also.

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1 MR. STAMETS: Have you got another copy that is
2 a little more visible than that?

3 A. Oh, I can let you have mine.

4 MR. STAMETS: Okay.

5 A. I do have another copy.

6 MR. STAMETS: And while we're stopped here, I'd
7 like to determine whether or not when you have referred to
8 oil wells on these exhibits, and then you've got a list of
9 oil wells here, whether you're using the old definition of
10 an oil well, being below 45 degrees gravity, or what you're
11 going to propose as a new definition of an oil well.

12 A. The oil wells and the gas wells making oil, as
13 located on the map by color code, are the present wells.
14 They are not changed. They are the present 45 degree gravity.

15 MR. STAMETS: Okay.

16 Q. (Mr. Padilla continuing) Turn to exhibit four and
17 would you please give an explanation of that exhibit, Mr.
18 Runyan?

19 A. As reflected by the color coded wells on exhibits
20 one, two, and three, exhibit four is a tabulation of Tubb
21 gas wells which make oil, their gas-oil ratios are recorded
22 in descending order, with accompanying tabulation of gravity
23 and oil in BOPD.

24 The second tabulation is oil wells with
25 descending gas-oil ratios with accompanying gravities and

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1 oil production.

2 The GOR of the gas wells which make oil range from
3 2,852,000 to 10,500, for a total of 47 wells.

4 The GOR of the oil wells range from 345,000 to
5 556, for a total of 64 wells.

6 Dry gas wells are not included in these tabulations
7 since their GOR's are infinite. And the recommendation for
8 GOR limit was taken from this list by determining the best
9 breaking point with the least well reclassification changes.

10 Both of these lists point out the fact that liquid
11 gravity does not reflect the normal idea of a gas well or
12 oil well in many instances.

13 Q. Mr. Runyan, referring to exhibit five, would you
14 also explain that exhibit? Well, strike that, please.

15 Mr. Runyan, would you summarize your study of the
16 Tubb gas pool?

17 A. Yes sir. The study of the pool found that they
18 are gas wells making oil, oil wells, and dry gas wells
19 whose structural position and completion within the Tubb
20 formation no longer have a great effect on their type of
21 status. Gravities tend to change back and forth. There
22 are oil wells with very high GOR's and gas wells with very
23 low GOR's.

24 Due to changes in reservoir characteristics since
25 1956, such as pressure decline, pool depletion, gravity

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1 changes, and an unstable gas-oil contact make the present
2 classification of 45 degree gravity as the breaking point
3 for oil or gas wells no longer satisfactory or reasonable.

4 Q. In light of your testimony, your previous
5 testimony here before --- in this hearing, do you have any
6 recommendations with respect to the gas Tubb pool?

7 A. Yes, I do.

8 Q. Or Tubb gas pool?

9 A. No. 1, That the gravity classification of this
10 pool be abolished.

11 No. 2, That a GOR classification be used for the
12 determination of well type status. A GOR of 50,000 to 1 is
13 recommended.

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15 fied to gas, would be given an automatic NSP unit.

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17 the Tubb gas and oil pool on the same order as the Blinebry
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20 remain the same, and they are (100 feet above the top of
21 the Tubb marker to top of the Tubb formation as defined by
22 the log of the Exxon Oil Company, State S Well No. 20 in
23 Unit E, Section 2, Township 22 South, Range 37 East).

24 Q. Mr. Runyan, what affect would reclassification
25 of the wells on the pool ---- or the reclassification that

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4 to oil with related types of wells in the pool, with
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7 There will be nine oil wells that will change to
8 gas wells, five gas wells will change to oil wells, for a
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18 The present Tubb gas averages are, the GOR
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21 is 48.4, whereas in 1957 it was 62.5.

22 The second sheet of exhibit five lists the gas
23 and oil both on 160 acre dedications, and 40 acre dedications,
24 accompanied with the casinghead gas allowable and oil allow-
25 able from January, 1978 to April, 1979, and reflects about

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Santa Fe, New Mexico 87501

1 what the future allowables will be on oil wells being
2 reclassified to gas, and gas wells to oil.

3 The present gas on a 160 acre dedication over a
4 sixteen month period averages 935 MCF per day; on a 40 acre
5 dedication over a sixteen month period the average is 234
6 MCF per day. As the casinghead gas is 240 MCF per day,
7 and of course, the oil is 142 barrels top allowable.

8 So we expect that there will not be too great a
9 change in most cases on the wells which are being reclassi-
10 fied.

11 MR. PADILLA: Mr. Stamets, I offer exhibits four
12 and five into evidence.

13 MR. STAMETS: These exhibits will be admitted.

14 MR. PADILLA: And I have no further questions for
15 Mr. Runyan, at this time.

16
17 CROSS EXAMINATION

18 BY MR. STAMETS:

19 Q. Mr. Runyan, is the main purpose for this rule
20 change to reduce the unnecessary work load on the operators
21 and the division that results from this constant reclassi-
22 fication of the wells?

23 A. Yes sir, it is.

24 Q. Will the changes that you have proposed today
25 have any affect on correlative rights or cause waste

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1 or change the potential for either of these?

2 A. I don't believe so. By giving an automatic
3 NSP, it takes care of the problems on the gas wells going
4 to oil. There will be --- and a 50,000 ratio, a minimum
5 number of oil wells --- gas wells changing to oil, which
6 actually will be additional acreage fee which was dedicated
7 to these gas wells. I'm not too sure what effect this
8 would have. It would be additional acreage to drill more
9 oil wells.

10 Q. Since this pool was discovered in 1946, would
11 you say it has been pretty well developed?

12 A. Yes, it has, very well developed.

13 Q. And it's in a very advanced stage of its life
14 at this time?

15 A. That is true.

16 Q. Do you feel that these changes will have any ---
17 any significant effect over the remaining years of the pool,
18 other than to reduce the workload?

19 A. No sir, I don't.

20 Q. Again, what have you described as the vertical
21 limits of this pool?

22 A. The vertical limits of the pool at present are
23 100 feet above the top of the Tubb marker to the top of
24 the Drinkard pool and there is a type well which is the
25 Exxon State S No. 20 Well.

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1 Q. Okay before you leave today will you make sure
2 that I have received a copy of what you have requested,
3 specifically here, the abolishment of the gravity require-
4 ments, the GOR, the automatic NSP, and so on.

5 A. Yes sir.

6 Q. All right.

7 MR. STAMETS: Any other questions of the witness?
8 He may be excused. Is there anything further on this case
9 Ms. Teschendorf?

10 MS. TESCHENDORF: We have received correspondence
11 from Gulf Oil Corporation in this case supporting the
12 adoption of the gas-oil ratio as the basis for classifi-
13 cation of oil well to gas well in the Tubb gas pool. And
14 Gulf further recommends that a hundred thousand to one be
15 the classification breakover.

16 MR. STAMETS: Anything further? Yes sir?

17 MR. WELCH: I'm Jim Welch from Northern Natural.
18 I'd like to read into the record.

19 MR. STAMETS: That would be fine.

20 MR. WELCH: My name is J.M. Welch. I am employed
21 by Northern Natural Gas Company as a Director of well
22 testing and reside in Midland, Texas.

23 Northern is a major purchaser of gas-well gas in
24 the Tubb Gas Pool and has a vital interest in this proceeding.
25 Northern currently purchases gas-well gas from over eighty

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1 gas wells in the Tubb Gas Pool with the production from
2 said wells approximating 10% of Northern's total gas pur-
3 chases in Southeastern New Mexico.

4 I would like to state for the record that in the
5 event an order, issued pursuant to the evidence presented
6 at this hearing, results in increased volumes becoming
7 available to gas wells dedicated to Northern, that Northern
8 has both the market requirements and facilities to take
9 such increased volumes of gas.

10 MR. STAMETS: Any further questions? Any other
11 statements?

12 The case will be taken under advisement.

13 (hearing concluded)
14
15
16
17
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25

SALLY WALTON BOYD
(CERTIFIED SHORTHAND REPORTER)
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Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____, 19____.

_____, Examiner
Oil Conservation Division

SALLY WALTON BOYD
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Memo

From
R. L. STAMETS
TECHNICAL
SUPPORT CHIEF

To John

What are the depths
and subsea elevations
of the Tubb marker
and top of Drinkard
in the Exxon State
S well No 20?

33801
Elev. 33801
R Order # 464 & R 610
R Order # A635
Bli marker @ (5457' - 3380) = -2077.53
Tubb marker @ (5721 - 3380) = -2541.53
Top Drinkard @ 6245 (-3380) = -2865.53

OIL CONSERVATION COMMISSION-SANTA FE

To Dick A

John R

Memo

From

MELBA CARPENTER

To Dick

Jerry asked me to look over this and then send it on you.

My only comment is (and Jerry concurred) that we not give the operators an opportunity to object to the reclassification as in Rule 26 (d). This is just a big headache in the Blinbry rules--plus the fact that since that since GOR's for the Tubb are due by November 10th, there is not sufficient time to notify operators and wait for their comment prior to preparation of the Oil Proration Schedule, which begins about the 10th of December.

OIL CONSERVATION COMMISSION-HOBBS

EXHIBIT "A"

7466
HORIZONTAL LIMITS OF THE ~~WILKINSON~~ OIL AND GAS POOL
LEA COUNTY, NEW MEXICO

Township 21 South, Range 37 East, N.M.P.M.

Sec 2 : W/2
Sec 3 : A/1
Sec 4 : E/2 and 10 + 14
Sec 8 : E/2
Sec 9 and 10 : A/1
Sec 11 : W/2
Sec. 14 thru 17 : A/1
Sec 19 : E/2
Sec 20 thru 23 : A/1
Sec 25 : W/2
Sec 26 thru 29 : A/1
Sec 30 : E/2
Sec 31 : E/2
Sec 32 thru 36 : A/1

Township 22 South, Range 37 East, N.M.P.M.

~~Sec 1~~ thru 6 : A/1
Sec. 7 : NW/4
Sec 8 ~~thru~~ thru 16 : A/1
Sec 21 : E/2
Sec 22 thru 25 : A/1
Sec 28 : N/2
Sec 36 : NE/4

Township 22 South, Range 38 East, N.M.P.M.

Sec 6 : W/2
Sec 7 : W/2
Sec 18 and 19 : A/1
Sec 20 : W/2
Partial Sec 28 : W/2 NW/4 and S/2
Sec 29 and 30 : A/1
Sec 31 : N/2 and SE/4
Sec. 32 : A/1
Partial Section 33 : A/1

Township 13 S. R. Range 38 East, N.M.P.M.
Sec 5 : N/2 N/2
Sec 6 : N/2 N E/4

bears to the total of the acreage factors for all non-marginal gas wells in the pool.

RULE 8 (B). Allowables to newly completed gas wells shall commence on the date of connection to a gas transportation facility, as determined from an affidavit furnished to the Commission (Box 1980, Hobbs, New Mexico 98240) by the purchaser, or the date of filing of Form C-104 and a plat (Form C-102), whichever date is the later.

G. GENERAL

RULE 22. No natural gas produced from a gas well in the Blinebry Oil and Gas Pool shall be flared or vented except as provided in Rule 401 of the Commission Rules and Regulations and no oil well casinghead gas shall be flared or vented except as provided in Rule 306.

H. MISCELLANEOUS SPECIAL POOL RULES

RULE 25. The vertical limits of the Blinebry Oil and Gas Pool shall extend from a point 75 feet above the "Blinebry Marker" to a point 100 feet above the "Tubb Marker." The Blinebry Marker shall be that point encountered at a depth of 5457 feet (elevation 3380; sub-sea datum -2077) and the Tubb Marker shall be that point encountered at a depth of 5921 feet (elevation 3380, sub-sea datum -2541) in the Exxon Corporation State "S" Well NO. 20, SW/4 NW/4 Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

RULE 26 (a). A gas well in the Blinebry Oil and Gas Pool shall be a well producing from within the vertical and horizontal limits of the pool which produces with a gas-liquid ratio of 50,000 cubic feet of gas or more per barrel of liquid hydrocarbons. Provided, however, that any well which on January 1, 1974, was classified as a gas well in the Blinebry Gas Pool shall continue to be classified as a gas well. For those wells classified as gas wells, but with gas-liquid ratios of less than 50,000 cubic feet of gas per barrel, the operator may, upon application to the District Supervisor, receive a reclassification of said well to that of an oil well.

(b) A well producing from within the horizontal and vertical limits of the Blinebry Oil and Gas Pool and not classified as a gas well, as defined in Rule 26 (a) above, shall be classified as an oil well.

OK (c) Should remedial work, production data, or other circumstances at any time indicate classification of a well as an oil well or a gas well to be improper, the District Supervisor may reclassify said well to its proper category. ~~subject to the same procedures~~ outlined in Rule 26 (d) below.

Case No. 5108
Order No. R-1670-N

TUBB TEST PERIOD
DUE ~~11~~ 10
~~Nov.~~ December 201

(d) The District Supervisor, on or before ~~November 15~~ of each year, shall review production data, gas-oil ratio tests, and other pertinent data and reclassify a well under Rule 26 (a) if production data, gas-oil ratio tests, or other evidence reflects the need for such reclassification. In such event the District Supervisor will notify the operator of such reclassification at least 30 days before the effective date thereof. Any operator so notified may request that the District Supervisor reconsider the reclassification if he has reason and evidence to support such request and same is filed not later than 10 days after such notification of reclassification. The District Supervisor shall approve or disapprove the request within 10 days after receipt thereof or in the alternative, with the consent of applicant set the request for hearing.

OK
(e) In the event an oil well in the Blinebry Oil and Gas Pool is reclassified as a gas well, the operator of such well will be afforded the opportunity to form a non-standard gas proration unit for the well; provided however, that, until such unit is formed, said well shall be allocated a gas allowable commensurate with the acreage contained in the unit formerly dedicated to the oil well. In the event of two or more gas wells producing from the Blinebry Oil and Gas Pool within a single proration unit, the allowable assigned to the unit may be produced from any well on the unit in any proportion.

TUBB
G.O.P.
RULE 27. Oil wells within the Blinebry Oil and Gas Pool shall receive oil and casinghead gas allowables as provided in Statewide Rules 503, 505, and 506. The limiting gas-oil ratio for the Blinebry Oil and Gas Pool shall be 4,000 cubic feet of gas per barrel of oil.

OK
RULE 28. Acreage dedicated to a gas well in the Blinebry Oil and Gas Pool shall not be simultaneously dedicated to an oil well in the pool, and the dual completion of a well so as to produce separate gas and oil allowables from the Blinebry Oil and Gas Pool is hereby prohibited.

OK
RULE 29 (a). Condensate from any gas well in the Blinebry Oil and Gas Pool may be commingled with other condensate produced by any other gas well or gas wells producing from the pool or the Tubb Gas Pool following its separation from the gas in a separator, provided approval therefor has been obtained in accordance with Commission Rule 303-B and/or Rule 309-B, whichever is applicable.

OK
If two-stage separation is used, the low-pressure gas shall be directed into a low-pressure gas gathering system, and said low-pressure gas need not be measured separately from the other low-pressure gas produced on the lease, provided that certain test facilities are available and periodic tests made in accordance with Rule 30 below.

OK (b) In submitting Form C-115 (Operator's Monthly Report) on wells producing from the Blinebry Oil and Gas Pool in which condensate is commingled and/or the low-pressure gas is commingled with other low-pressure gas produced on the lease, the operator shall estimate the volume produced by each well in each pool by using the ratios as reflected in the most recent test submitted.

70BB RULES RULE 30. Gas-liquid ratio tests shall be conducted annually during the months of July, August and September on all wells located in and producing from the Blinebry Oil and Gas Pool. Results of such tests shall be reported to the Commission on Form C-116 on or before the 10th day of October of each calendar year.

IT IS FURTHER ORDERED:

(1) That the Commission's Statewide Rules and Regulations, and each of the General Rules and Regulations for the Prorated Gas Pools of Southeastern New Mexico, as promulgated by Order No. R-1670, as amended, unless in conflict with one of the above special rules applicable to the Blinebry Oil and Gas Pool, shall also apply to the wells in the Blinebry Oil and Gas Pool.

(2) That the Special Rules and Regulations for the Blinebry Gas Pool, as promulgated by Order No. R-1670, are hereby superseded.

Tu86 (3) That the vertical limits of the Blinebry Oil and Gas Pool shall be as defined in Rule (25) above and the horizontal limits shall be as described in Exhibit "A" attached hereto and made a part hereof.

Putz (4) That the Blinebry Gas Pool and the Blinebry Oil Pool, as heretofore classified and defined by the Commission, are hereby abolished.

(5) That the effective date of this order shall be January 1, 1974.

(6) That jurisdiction of this cause is hereby 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

I. R. TRUJILLO, Chairman

ALEX J. ARRIAGA, Member

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

S E A L

COMPANY	LEASE & WELL #	LOCATION	GOR	GRAVITY	OIL
*Gulf Oil Corp.	Mark Owen #4	J-34-21-37	345,000	37.3	1
**Gulf Oil Corp.	W.T. McComack #17	I-32-21-37	325,000	35.3	1
Shell Oil Company	Taylor Glenn #10	F-3-21-37	300,000	36.3	1
***Amoco Production Co.	Southland Royalty A #2	B-9-21-37	182,000	NR	1
Shell Oil Co.	Rinewalt #4	C-4-22-37	253,000	NR	1
Getty Oil Co.	S.J.Sarkeys #4	F-26-21-37	90,000	41.0	4
Getty Oil Co.	State Q #1	N-23-21-37	83,333	41.0	3
Exxon Company	J.L.Greenwood #13	L-9-22-37	58,500	NR	2
Getty Oil Co.	D.A.Williamson #2	E-23-21-37	50,000	42.0	1
Continental Oil Co.	Hawk B-1 #5	K-9-21-37	48,000	36.0	1
Shell Oil Co.	State Sec. 15 #1	G-15-21-37	45,625	38.0	16
Texaco Inc.	A.H.Blinebry Fed NCT-4#1	P-31-22-38	39,333	38.8	3
Shell Oil Co.	Sarkeys #2	K-23-21-37	35,000	43.7	7
Amoco Production Co.	Southland Roy. A #3	V-4-21-37	30,250	NR	1
Amerada Hess Corp.	E.W.Walden #3	N-15-22-37	26,000	NR	1
Getty Oil Corp.	S.J.Sarkeys #1	E-26-21-37	22,000	41.0	2
Crown Central	Danglade #1	B-24-22-37	21,000	47.0	1
Cities Service Co.	State S #2	F-15-21-37	20,000	37.0	3
Amoco Production Co.	Southland Roy. A #8	W-4-21-37	18,714	NR	4
Shell Oil Co.	Taylor Glenn #2	I-3-21-37	16,667	36.2	9
Shell Oil Co.	Livingston #11	M-3-21-37	16,364	35.4	11
Amerada Hess Corp.	E.W.Walden #5	L-15-22-37	16,000	NR	5
Amoco Production Co.	State C Tr. 13 #9	F-36-21-37	15,750	NR	4
Texaco Inc.	C.H.Lockhart NCT-1 #2	D-18-22-38	13,667	39.4	1
Texaco Inc.	A.H.Blinebry Fed #11	L-28-22-38	12,000	36.9	2
Hanson Oil Co.	Max Gutman #7	D-19-33-38	10,556	37.9	18
Continental Oil Co.	State 10 #3	D-10-21-37	8,750	38.0	8
Shell Oil Co.	St. Sec. 2 #A	U-2-21-37	8,333	35.2	3
Cambell & Hedrick	Lockhart #1	L-17-21-37	7,350	36.8	3
Southland Royalty Co.	State #3	M-2-21-37	7,208	38.0	12
Texaco Inc.	C.H.Lockhart NCT-1 #5	C-18-22-38	7,200	39.4	1
Mabee Petroleum	Belcher #1	M-7-22-38	7,000	39.0	5
Gulf Oil Corp.	H.T.Mattern NCT-D #16	E-7-22-37	7,000	37.2	7
Texas Pacific Oil Co.	Belcher #1	L-7-22-38	6,923	NR	3
Texaco Inc.	C.H. Lockhart #6	G-18-22-38	6,500	39.4	4
Carter Foundation	E.M.Elliott #3	C-22-22-37	6,088	38.6	6
Continental Oil Co.	Hawk B-10 #7	F-10-21-37	6,000	37.1	3
Southland Royalty	State BD "36" #1	J-36-22-37	6,000	37.5	2
Texaco Inc.	A.H.Blinebry Fed #28	A-29-22-38	5,800	34.5	1
Continental Oil Co.	Hawk B-3 #8	P-3-21-37	5,600	33.3	5
Continental Oil Co.	Hawk B-10 #9	B-10-21-37	5,250	37.1	4
Campbell & Hedrick	W.E.Lee #2	B-20-21-37	5,133	38.0	11
Amerada Hess Corp.	H.Corrigan #7	H-4-22-37	5,093	40.3	32
Texaco Inc.	A.H.Blinebry Fed #27	K-28-22-38	5,000	36.9	1
Texaco Inc.	C.H.Lockhart NCT-1 #3	O-18-22-38	5,000	39.4	4
D.M. Norman	McCallister #1	E-7-22-38	4,480	40.1	3
Gulf Oil Corp.	H.T.Mattern NCT-D #12	K-6-22-37	4,438	38.2	16
Campbell & Hedrick	Elliott Fed. #1	G-6-23-38	4,414	48.5	11
Texaco Inc.	C.H.Lockhart NCT-1 #4	J-18-22-38	4,286	39.4	6
Shell Oil Co.	State Sec. 2#15	K-2-21-37	4,200	35.6	5
Phillips Pet. Co.	Sims #6	M-24-22-37	4,012	42.0	4
Texaco Inc.	A.H.Blinebry Fed #25	N-28-22-38	4,000	36.9	1
Gulf Oil Corp.	H.Leonard NCT-F #7	J-2-21-37	3,500	38.9	4
Texaco Inc.	A.H.Blinebry Fed #26	B-29-22-38	3,000	38.1	2
Texaco Inc.	A.H.Blinebry Fed. #24	E-28-22-38	2,857	36.9	3

Case No. 6525
Tubb Oil Wells

<u>COMPANY</u>	<u>LEASE & WELL #</u>	<u>LOCATION</u>	<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
Gulf Oil Corp.	A.L. Christmas(NCT-C)#16	M-18-22-37	2,167	36.3	12
Mabee Pet. Co.	Belcher A #1	N-7-22-38	2,100	39.0	10
Texaco Inc.	A.H.Blinebry Fed #33	D-28-22-38	2,000	36.7	2
Continental Oil Co.	Lockhart A-17#4	A-17-21-37	2,000	35.6	5
Exxon Company	N.M. V St. #11	K-10-21-37	1,925	NR	4
Gulf Oil Corp.	H.T.Mattern NCT-D #11	F-6-22-37	1,525	34.9	40
Texas Pacific Oil Co.	Sarkeys #1	E-25-21-37	1,035	44.0	8
Gulf Oil Corp.	H.Leonard NCT-F #1	R-2-21-37	800	38.7	5
Gulf Oil Corp.	Manda B Tr. C #1	C-28-22-37	556	35.3	9

* reclassified to gas Apr. 2, 1979

** reclassified to gas Apr. 2, 1979

*** reclassified to gas Feb. 1, 1979 not in Apr. Gas Schedule.

4-23-79

CASE NO. 6525
TUBB GAS WELLS

COMPANY	LEASE & WELL#	LOCATION	GOR	GRAVITY	OIL
Marathon Oil Co.	Mark Owen #3	N-35-21-37	2,852,000	58.0	1
John H. Hendrix Corp.	Brunson C #6	I-3-22-37	790,000	44.9	1
Shell Oil Co.	Thomas Long #5	N-11-22-37	670,000	NR	1
Marathon Oil Co.	W.Lynch #4	D-1-22-37	651,000	56.0	2
Marathon Oil Co.	J.L. Muncy #1	P-24-22-37	578,000	62.0	1
Gulf Oil Corp.	N.Keenum #2	O-14-21-37	571,000	45.1	1
Penrose-Zachary	Hinton #5	P-12-22-37	466,000	42.1*	1
Mobil Oil Corp.	S.E.Long #8	J-11-22-37	446,000	39.4*	1
Shell Oil Company	Argo #5	N-15-21-37	372,667	47.4	3
Texaco Inc.	A.H.Blinebry Fed #17	I-19-22-38	365,000	38.3*	1
Amoco Production Co.	Owen B #2	L-34-21-37	327,750	NR	4
Samedan Oil Corp.	Parks #6	L-14-22-37	284,667	51.0	2
Continental Oil Co.	Lockhart A-27 #12	D-27-21-37	283,000	NR	2
Texas Pacific Oil Co.	Elliott B9 #5	C-9-22-37	261,000	52.0	1
Gulf Oil Corp.	L.Stebbins(NCT-B) #3	A-5-22-37	252,000	48.1	1
Texaco Inc.	A.H.Blinebry Fed.#16	L-33-22-38	249,000	36.9*	1
Gulf Oil Corp.	Vivian #2	G-30-22-38	248,000	45.1	3
Samedan Oil Corp.	Parks A#4	I-14-22-37	240,000	52.0	4
Marathon Oil Co.	Wm. Turner #3	I-29-21-37	203,000	48.0	1
Amerada Hess Corp.	State D "A" #3	J-16-21-37	191,000	48.8	1
Continental Oil Co.	Lockhart B-35 #1	G-35-21-37	180,667	NR	3
Texaco Inc.	A.H.Blinebry Fed #1	O-19-22-38	177,000	38.3*	3
Gulf Oil Corp.	E.Linebry #1	K-29-22-38	176,000	45.1	2
Shell Oil Co.	Argo A #2	E-22-31-37	172,500	47.2	4
Amoco Production Co.	Southland Roy.A #4	X-4-21-37	151,000	NR	3
Gulf Oil Corp.	Scarborough Est. #2	H-31-22-38	146,200	45.8	5
Gulf Oil Corp.	T.R. Andrews #2	G-32-22-38	133,000	45.2	2
Gulf Oil Corp.	Vivian #1	C-30-22-38	131,000	45.4	1
Gulf Oil Corp.	Amanda #1	J-25-22-37	122,000	45.5	1
Moranco	Owen #1	E-14-21-37	120,000	49.0	1
Texaco Inc.	A.H.Bline.Fed.NCI-3 #1	D-31-22-38	115,000	36.4*	1
Mobil Oil Corp.	Brunson Argo #15	F-10-22-37	110,000	40.9*	2
Atlantic Richfield Co.	Rogers Gas Com #1	A-12-22-37	106,000	40.2*	2
Texas Pacific Oil Co.	Boyd #5	B-23-22-37	104,000	63.0	1
Texas Pacific Oil Co.	S.E. Cone #1	J-26-21-37	94,000	54.0	1
Marathon Oil Co.	L.G. Warlick C #1	J-15-21-37	92,000	50.0	1
Marathon Oil Co.	E.Butler B #1	I-13-22-37	86,000	57.0	1
J.R. Cone	Eubanks #2	L-14-21-37	80,500	40.0*	4
Texas Pacific Oil Co.	E.W.Walden #4	C-15-22-37	73,000	53.0	1
Gulf Oil Corp.	Scarborough Est. #4	F-31-22-38	67,500	45.9	4
Atlantic Richfield Co.	Roy Barton #1	G-23-21-37	60,500	47.0	2
Marathon Oil Co.	J.L. Muncy #2	K-24-22-37	50,000	58.0	1
Marathon Oil Co.	W.S.Marshall B #2	M-27-21-37	31,000	60.0	1
Amoco Production Co.	State C Tr. 12 #6Y	C-16-21-37	30,750	NR	4
Texas Pacific Oil Co.	Sims #2	F-25-22-37	22,000	52.0	1
Marathon Oil Co.	W.S.Marshall B #3	K-27-21-37	17,000	60.0	5
Sun Oil Co.	E.Owen #1	D-3-22-37	10,500	NR	2

*wells presently in proration schedule under Tubb Gas Pool with gravities less than 45 degrees.

4-23-79

CASE NO. 6525
TUBB GAS POOL

Tubb oil-gas well changes due to gas-oil ratio proposal.

50,000 RATIO

9 -- oil wells will change to gas wells.

5 -- gas wells will change to oil wells.

Total 14 wells.

Presently 64 oil wells in pool

Presently 47 gas wells which make oil in pool

Presently 88 gas wells which make no oil in pool.

PRESENT TUBB OIL AVERAGES

<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
35,212	38.4 ⁰	7.2

PRESENT TUBB GAS AVERAGES

<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
275,749	48.4 ⁰	2

In 1957 the average gravity for gas wells was 62.5⁰

BEFORE EXAMINER STAMETS	
OIL CONSERVATION DIVISION	
EXHIBIT NO. <u>5</u>	
CASE NO. <u>6525</u>	
Submitted by <u>John W. Runyan</u>	
Hearing Date <u>April 25, 1979</u>	

CASE NO. 6525
TUBB GAS POOL

WELL ALLOWABLES

<u>MONTH/YEAR</u>	<u>GAS 160 ac. MCFPD</u>	<u>GAS 40 ac. MCFPD</u>	<u>CASINGHEAD GAS MCFPD</u>	<u>OIL 40 ac. BOPD</u>
January 1978	31,743	7,786	284	142
February 1978	27,684	6,921	284	142
March 1978	31,337	7,834	284	142
April 1978	30,487	7,622	284	142
May 1978	29,887	7,472	284	142
June 1978	26,428	6,607	284	142
July 1978	23,612	5,903	284	142
August 1978	23,567	5,892	284	142
September 1978	24,520	6,130	284	142
October 1978	25,945	6,486	284	142
November 1978	27,870	6,968	284	142
December 1978	29,779	7,445	284	142
January 1979	30,076	7,519	284	142
February 1979	27,166	6,792	284	142
March 1979	32,782	8,196	284	142
April 1979	30,742	7,686	284	142

COMPANY	LEASE & WELL #	LOCATION	GOR	GRAVITY	OIL
*Gulf Oil Corp.	Mark Owen #4	J-34-21-37	345,000	37.3	1
**Gulf Oil Corp.	W.T. McComack #17	I-32-21-37	325,000	35.3	1
Shell Oil Company	Taylor Glenn #10	F-3-21-37	300,000	36.3	1
***Amoco Production Co.	Southland Royalty A #2	B-9-21-37	182,000	NR	1
Shell Oil Co.	Rinewalt #4	C-4-22-37	253,000	NR	1
Getty Oil Co.	S.J.Sarkeys #4	F-26-21-37	90,000	41.0	4
Getty Oil Co.	State Q #1	N-23-21-37	83,333	41.0	3
Exxon Company	J.L.Greenwood #13	L-9-22-37	58,500	NR	2
Getty Oil Co.	D.A.Williamson #2	E-23-21-37	50,000	42.0	1
Continental Oil Co.	Hawk B-1 #5	K-9-21-37	48,000	36.0	1
Shell Oil Co.	State Sec. 15 #1	G-15-21-37	45,625	38.0	16
Texaco Inc.	A.H.Blinebry Fed NCT-4#1	P-31-22-38	39,333	38.8	3
Shell Oil Co.	Sarkeys #2	K-23-21-37	35,000	43.7	7
Amoco Production Co.	Southland Roy.A #3	V-4-21-37	30,250	NR	1
Amerada Hess Corp.	E.W.Walden #3	N-15-22-37	26,000	NR	1
Getty Oil Corp.	S.J.Sarkeys #1	E-26-21-37	22,000	41.0	2
Crown Central	Danglade #1	B-24-22-37	21,000	47.0	1
Cities Service Co.	State S #2	F-15-21-37	20,000	37.0	3
Amoco Production Co.	Southland Roy.A #8	W-4-21-37	18,714	NR	4
Shell Oil Co.	Taylor Glenn #2	I-3-21-37	16,667	36.2	9
Shell Oil Co.	Livingston #11	M-3-21-37	16,364	35.4	11
Amerada Hess Corp.	E.W.Walden #5	L-15-22-37	16,000	NR	5
Amoco Production Co.	State C Tr. 13 #9	F-36-21-37	15,750	NR	4
Texaco Inc.	C.H.Lockhart NCT-1 #2	D-18-22-38	13,667	39.4	1
Texaco Inc.	A.H.Blinebry Fed #11	L-28-22-38	12,000	36.9	2
Hanson Oil Co.	Max Gutman #7	D-19-33-38	10,556	37.9	18
Continental Oil Co.	State 10 #3	D-10-21-37	8,750	38.0	8
Shell Oil Co.	St. Sec. 2 #4	U-2-21-37	8,333	35.2	3
Cambell & Hedrick	Lockhart #1	L-17-21-37	7,350	36.8	3
Southland Royalty Co.	State #3	M-2-21-37	7,208	38.0	12
Texaco Inc.	C.H.Lockhart NCT-1 #5	C-18-22-38	7,200	39.4	1
Mabee Petroleum	Belcher #1	M-7-22-38	7,000	39.0	5
Gulf Oil Corp.	H.T.Mattern NCT-D #16	E-7-22-37	7,000	37.2	7
Texas Pacific Oil Co.	Belcher #1	L-7-22-38	6,923	NR	3
Texaco Inc.	C.H. Lockhart #6	G-18-22-38	6,500	39.4	4
Carter Foundation	E.M.Elliott #3	C-22-22-37	6,088	38.6	6
Continental Oil Co.	Hawk B-10 #7	F-10-21-37	6,000	37.1	3
Southland Royalty	State BD "36" #1	J-36-22-37	6,000	37.5	2
Texaco Inc.	A.H.Blinebry Fed #28	A-29-22-38	5,800	34.5	1
Continental Oil Co.	Hawk B-3 #8	P-3-21-37	5,600	33.3	5
Continental Oil Co.	Hawk B-10 #9	B-10-21-37	5,250	37.1	4
Campbell & Hedrick	W.E.Lee #2	B-20-21-37	5,133	38.0	11
Amerada Hess Corp.	H.Corrigan #7	H-4-22-37	5,093	40.3	32
Texaco Inc.	A.H.Blinebry Fed #27	K-28-22-38	5,000	36.9	1
Texaco Inc.	C.H.Lockhart NCT-1 #3	O-18-22-38	5,000	39.4	4
D.M. Norman	McCallister #1	E-7-22-38	4,480	40.1	3
Gulf Oil Corp.	H.T.Mattern NCT-D #12	K-6-22-37	4,438	38.2	16
Campbell & Hedrick	Elliott Fed. #1	G-6-23-38	4,414	48.5	11
Texaco Inc.	C.H.Lockhart NCT-1 #4	J-18-22-38	4,286	39.4	6
Shell Oil Co.	State Sec. 2#15	K-2-21-37	4,200	35.6	5
Phillips Pet. Co.	Sims #6	M-24-22-37	4,012	42.0	4
Texaco Inc.	A.H.Blinebry Fed #25	N-28-22-38	4,000	36.9	1
Gulf Oil Corp.	H.Leonard NCT-F #7	J-2-21-37	3,500	38.9	4
Texaco Inc.	A.H.Blinebry Fed #26	B-29-22-38	3,000	38.1	2
Texaco Inc.	A.H.Blinebry Fed. #24	E-28-22-38	2,857	36.9	3

*Proposed
GOR
split*

Case No. 6525
Tubb Oil Wells

<u>COMPANY</u>	<u>LEASE & WELL #</u>	<u>LOCATION</u>	<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
Gulf Oil Corp.	A.L. Christmas(NCT-C)#16	M-18-22-37	2,167	36.3	12
Mabee Pet. Co.	Belcher A #1	N-7-22-38	2,100	39.0	10
Texaco Inc.	A.H.Blinebry Fed #33	D-28-22-38	2,000	36.7	2
Continental Oil Co.	Lockhart A-17#4	A-17-21-37	2,000	35.6	5
Exxon Company	N.M. V St. #11	K-10-21-37	1,925	NR	4
Gulf Oil Corp.	H.T.Mattern NCT-D #11	F-6-22-37	1,525	34.9	40
Texas Pacific Oil Co.	Sarkeys #1	E-25-21-37	1,035	44.0	8
Gulf Oil Corp.	H.Leonard NCT-F #1	R-2-21-37	800	38.7	5
Gulf Oil Corp.	Manda B Tr. C #1	C-28-22-37	556	35.3	9

* reclassified to gas Apr. 2, 1979

** reclassified to gas Apr. 2, 1979

*** reclassified to gas Feb. 1, 1979 not in Apr. Gas Schedule.

4-23-79

CASE NO. 6525
TUBB GAS WELLS

EXHIBIT 4

COMPANY	LEASE & WELL#	LOCATION	GOR	GRAVITY	OIL
Marathon Oil Co.	Mark Owen #3	N-35-21-37	2,852,000	58.0	1
John H. Hendrix Corp.	Brunson C #6	I-3-22-37	790,000	44.9	1
Shell Oil Co.	Thomas Long #5	N-11-22-37	670,000	NR	1
Marathon Oil Co.	W.Lynch #4	D-1-22-37	651,000	56.0	2
Marathon Oil Co.	J.L. Muncy #1	P-24-22-37	578,000	62.0	1
Gulf Oil Corp.	N.Keenum #2	O-14-21-37	571,000	45.1	1
Penrose-Zachary	Hinton #5	P-12-22-37	466,000	42.1*	1
Mobil Oil Corp.	S.E.Long #8	J-11-22-37	446,000	39.4*	1
Shell Oil Company	Argo #5	N-15-21-37	372,667	47.4	3
Texaco Inc.	A.H.Blinebry Fed #17	L-19-22-38	365,000	38.3*	1
Amoco Production Co.	Owen B #2	L-34-21-37	327,750	NR	4
Samedan Oil Corp.	Parks #6	L-14-22-37	284,667	51.0	2
Continental Oil Co.	Lockhart A-27 #12	D-27-21-37	283,000	NR	2
Texas Pacific Oil Co.	Elliott B9 #5	C-9-22-37	261,000	52.0	1
Gulf Oil Corp.	L.Stebbins(NCT-B) #3	A-5-22-37	252,000	48.1	1
Texaco Inc.	A.H.Blinebry Fed.#16	I-33-22-38	249,000	36.9*	1
Gulf Oil Corp.	Vivian #2	G-30-22-38	248,000	45.1	3
Samedan Oil Corp.	Parks A#4	I-14-22-37	240,000	52.0	4
Marathon Oil Co.	Wm. Turner #3	I-29-21-37	203,000	48.0	1
Amerada Hess Corp.	State D "A" #3	J-16-21-37	191,000	48.8	1
Continental Oil Co.	Lockhart B-35 #1	G-35-21-37	180,667	NR	3
Texaco Inc.	A.H.Blinebry Fed #1	O-19-22-38	177,000	38.3*	3
Gulf Oil Corp.	E.Linebry #1	K-29-22-38	176,000	45.1	2
Shell Oil Co.	Argo A #2	E-22-31-37	172,500	47.2	4
Amoco Production Co.	Southland Roy.A #4	X-4-21-37	151,000	NR	3
Gulf Oil Corp.	Scarborough Est. #2	H-31-22-38	146,200	45.8	5
Gulf Oil Corp.	T.R. Andrews #2	G-32-22-38	133,000	45.2	2
Gulf Oil Corp.	Vivian #1	C-30-22-38	131,000	45.4	1
Gulf Oil Corp.	Amanda #1	J-25-22-37	122,000	45.5	1
Moranco	Owen #1	E-14-21-37	120,000	49.0	1
Texaco Inc.	A.H.Bline.Fed.NCT-3 #1	D-31-22-38	115,000	38.4*	1
Mobil Oil Corp.	Brunson Argo #15	F-10-22-37	110,000	40.9*	2
Atlantic Richfield Co.	Rogers Gas Com #1	A-12-22-37	106,000	40.2*	2
Texas Pacific Oil Co.	Boyd #5	B-23-22-37	104,000	63.0	1
Texas Pacific Oil Co.	S.E. Cone #1	J-26-21-37	94,000	54.0	1
Marathon Oil Co.	L.G. Warlick C #1	J-15-21-37	92,000	50.0	1
Marathon Oil Co.	E.Butler B #1	I-13-22-37	86,000	57.0	1
J.R. Cone	Eubanks #2	L-14-21-37	80,500	40.0*	4
Texas Pacific Oil Co.	E.W.Walden #4	C-15-22-37	73,000	53.0	1
Gulf Oil Corp.	Scarborough Est. #4	F-31-22-38	67,500	45.9	4
Atlantic Richfield Co.	Roy Barton #1	G-23-21-37	60,500	47.0	2
Marathon Oil Co.	J.L. Muncy #2	K-24-22-37	50,000	58.0	1
Marathon Oil Co.	W.S.Marshall B #2	M-27-21-37	31,000	60.0	1
Amoco Production Co.	State C Tr. 12 #6Y	C-16-21-37	30,750	NR	4
Texas Pacific Oil Co.	Sims #2	F-25-22-37	22,000	52.0	1
Marathon Oil Co.	W.S.Marshall B #3	K-27-21-37	17,000	60.0	5
Sun Oil Co.	E.Owen #1	D-3-22-37	10,500	NR	2

*wells presently in proration schedule under Tubb Gas Pool with gravities less than 45 degrees.

4-23-79

Proposed
GOR
split

CASE NO. 6525
TUBB GAS POOL

Tubb oil-gas well changes due to gas-oil ratio proposal.

50,000 RATIO

9 -- oil wells will change to gas wells.

5 -- gas wells will change to oil wells.

Total ~~14~~ wells.

Presently 64 oil wells in pool

Presently 47 gas wells which make oil in pool

Presently 88 gas wells which make no oil in pool.

PRESENT TUBB OIL AVERAGES

<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
35,212	38.4 ⁰	7.2

PRESENT TUBB GAS AVERAGES

<u>GOR</u>	<u>GRAVITY</u>	<u>OIL</u>
275,749	48.4 ⁰	2

In 1957 the average gravity for gas wells was 62.5⁰

CASE NO. 6525
TUBB GAS POOL

WELL ALLOWABLES

MONTH/YEAR	GAS 160 ac. MCFPD	GAS 40 ac. MCFPD	CASINGHEAD GAS MCFPD	OIL 40 ac. BOPD
January 1978	31,143	7,786	284	142
February 1978	27,684	6,921	284	142
March 1978	31,337	7,834	284	142
April 1978	30,487	7,622	284	142
May 1978	29,887	7,472	284	142
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March 1979	32,782	8,196	284	142
April 1979	30,742	7,686	284	142

CASE NO. 6525
TUBB GAS POOL

RESULTS OF STUDY

The study of the pool found that there are gas wells making oil, oil wells, and dry gas wells whose structural position and completion within the Tubb formation no longer have a great effect on their type of status. Gravities tend to change back and forth. There are oil wells with very high GOR's and gas wells with very low GOR's.

Due to changes in reservoir characteristics since 1956, such as, pressure decline, pool depletion, gravity changes and an unstable gas-oil contact make the present classification of 45° gravity as the breaking point for oil or gas wells no longer satisfactory or reasonable.

RECOMMENDATIONS

1. That the gravity classification for this pool be abolished.
2. That a GOR classification be used for the determination of well type status. A GOR of 50,000 to 1 is recommended.
3. That the oil wells which will be reclassified to gas wells be given an automatic NSP.
4. That the rules for the pool be written as the Tubb Gas and Oil Pool on the same order as the Blinbry Oil and Gas Pool.

5. That the present vertical limits of the pool remain the same (100 feet above top of Tubb marker to top of Drinkard as defined by the log of the Exxon State S Well No. 20 in Unit E, Section 2, Township 22 South, Range 37 East).

Respectfully submitted,

John W. Runyan
Geologist

My name is J. M. Welch. I am employed by Northern Natural Gas Company as Director of Well Testing and reside in Midland, Texas. Northern Natural is a major purchaser of gas-well gas in the Tubb Gas Pool and has a vital interest in this proceeding. Northern currently purchases gas-well gas from over eighty gas wells in the Tubb Gas Pool with the production from said wells approximating 10% of Northern's total gas purchases in Southeastern New Mexico. I would like to state for the record that in the event an order, issued pursuant to the evidence presented at this hearing, results in increased volumes becoming available to gas wells dedicated to Northern that Northern has both the market requirements and facilities to take such increased volumes of gas.

My name is J. M. Welch. I am employed by Northern Natural Gas Company as Director of Well Testing and reside in Midland, Texas. Northern Natural is a major purchaser of gas-well gas in the Tubb Gas Pool and has a vital interest in this proceeding. Northern currently purchases gas-well gas from over eighty gas wells in the Tubb Gas Pool with the production from said wells approximating 10% of Northern's total gas purchases in Southeastern New Mexico. I would like to state for the record that in the event an order, issued pursuant to the evidence presented at this hearing, results in increased volumes becoming available to gas wells dedicated to Northern that Northern has both the market requirements and facilities to take such increased volumes of gas.

My name is J. M. Welsh. I am employed by Northern Natural Gas Company as Director of Well Testing and reside in Midland, Texas. Northern Natural is a major purchaser of gas-well gas in the Tubb Gas Pool and has a vital interest in this proceeding. Northern currently purchases gas-well gas from over eighty gas wells in the Tubb Gas Pool with the production from said wells approximating 10% of Northern's total gas purchases in Southeastern New Mexico. I would like to state for the record that in the event an order, issued pursuant to the evidence presented at this hearing, results in increased volumes becoming available to gas wells dedicated to Northern that Northern has both the market requirements and facilities to take such increased volumes of gas.

Dockets Nos. 18-79 and 20-79 are tentatively set for hearing on May 9 and 23, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 25, 1979

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

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Rutter, Alternate Examiner:

- CASE 6525: In the matter of the hearing called by the Oil Conservation Division on its own motion to amend the Special Rules for the Tubb Gas Pool in Lea County, New Mexico, to provide for the classification of wells as oil wells and gas wells on the basis of gas-oil ratios rather than on the basis of liquid gravity as at present.
- CASE 6526: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider a procedure for the adoption of findings, when applicable and pursuant to the Federal Natural Gas Policy Act, that another well is necessary to effectively and efficiently drain that portion of its proration unit which cannot be so drained by any existing well, and that existing well spacing requirements are waived. The proposed procedure would provide a system whereby such findings could be issued administratively without the necessity for public hearing.
- CASE 6527: Application of Tenneco Oil Company for two non-standard oil proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of two 80-acre non-standard oil proration units, the first comprising the N/2 NW/4, the other the N/2 NE/4, of Section 12, Township 9 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico, said units to be dedicated to applicant's Ward Insall Wells Nos. 1 and 2, respectively, located in Units D and A of said Section 12.
- CASE 6528: Application of Bass Enterprises Production Co. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox Morrow test well location to be drilled 660 feet from the North and West lines of Section 10, Township 21 South, Range 32 East, Lea County, New Mexico, the W/2 of said Section 10 to be dedicated to the well.
- CASE 6529: Application of Amoco Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the S/2 of Section 22, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to its Brantley Gas Com. Well No. 1 located in Unit K of said Section 22. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6530: Application of Amoco Production Company for unorthodox gas well locations, temporary injection of produced gas, and to vent gas, Union and Harding Counties, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox locations in the Tubb formation of its State FI Well No. 3, located 1315 feet from the South line and 1980 feet from the East line of Section 36, Township 20 North, Range 34 East, Union County, and its Heimann Well No. 5, located 660 feet from the South line and 1315 feet from the West line of Section 3, Township 19 North, Range 33 East, Harding County. Applicant further seeks authority to conduct pressure interference tests, including authority to vent gas produced from the State FI Well No. 1 for a period not to exceed 45 days and to inject produced gas into its Heimann Well No. 4 located in Unit K of Section 34, Township 20 North, Range 33 East, for a period not to exceed six months.
- CASE 6531: Application of Getty Oil Company for an unorthodox gas well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to simultaneously dedicate its Baker B Well No. 6 at an unorthodox location 510 feet from the South and West lines of Section 10, Township 22 South, Range 37 East, Lea County, New Mexico, and its Baker B Well No. 15 located in Unit L of said Section 10, the current unit well, to the existing proration unit.
- CASE 6532: Application of Northwest Production Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Tapacito-Pictured Cliffs and Blanco Mesaverde production in the wellbore of its Jicarilla 117E Well No. 5 located in Unit M of Section 28, Township 26 North, Range 3 West, Rio Arriba County, New Mexico.
- CASE 6072: (Continued from March 28, 1979, Examiner Hearing)
- In the matter of Case 6072 being reopened pursuant to the provisions of Order No. R-5643 which order created the Travis-Upper Pennsylvanian Pool, Eddy County, New Mexico, with provisions for 80-acre spacing. All interested parties may appear and show cause why the Travis-Upper Pennsylvanian Pool should not be developed on 40-acre spacing units.

ROUGH

On its own motion

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

To Amend the Special
Rules for The Tubbs
Gas Pool, Lea County
New Mexico

CASE NO. 6525

Order No. R-6012

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on April 25
19 79, at Santa Fe, New Mexico, before Examiner RLS

NOW, on this _____ day of _____, 19____, the
Division Director, 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 Division has jurisdiction of this cause and the
subject matter thereof.

^{Tubb}
(2) ~~(8)~~ That the ~~Blinbry Gas Pool and the Blinbry Oil Pool~~ ¹⁵ are part of a complex reservoir system of interrelated gas-bearing and oil-bearing stringers.

(6) That method of completion is often the determining factor as to whether a well will be classified as a gas well in the ~~Blinbry Gas Pool~~ or as an oil well in the ~~Blinbry Oil Pool~~.

(3) ~~(10)~~ That the producing characteristics of a well completed in this complex ~~Blinbry~~ reservoir system will frequently fluctuate during the life of the well with the result that under the present pool rules, the well's classification will often change from oil to gas and vice versa.

²⁶
(4) ~~(10)~~ That Rule ~~20b~~ ^{Tubb Gas} (A) of the present ~~Blinbry~~ Pool Rules defines an ~~oil~~ well in the ~~Blinbry Gas Pool~~ as being a well producing from within the vertical and horizontal limits of the ~~Blinbry Gas Pool~~ and which (1) produces liquid hydrocarbons possessing a gravity of 45° API or greater, ~~or less~~ ^{less} or (2) produces liquid hydrocarbons possessing a gravity of less than 51° API but with a producing gas-liquid ratio of 32,000 cubic feet of gas or more per barrel of liquid hydrocarbon.

as being a well which

OK → (5) ~~(9)~~ That ~~any well producing from the Tubb Gas Pool and not classified as an oil well, as defined above, is a gas well in the Tubb Gas Pool.~~ ^{any} well producing from the Tubb Gas Pool and not classified as an ~~oil~~ well, as defined above, is a gas well in ~~the Tubb Gas Pool~~ ^{said pool.}

(6) ~~(10)~~ That a more succinct definition of gas wells and oil wells is needed in order to minimize the fluctuation of classification of wells referred to in Finding No. (3) above, and the definition of a well as a gas well or an oil well should not be dependent upon the gravity of the liquids produced but should be dependent upon the gas-liquid ratio of the well as determined from a review of the well's production data, gas-liquid ratio tests, and other pertinent data.

(7) ~~(11)~~ That the basic criterion upon which a well should be classified as a gas well should be a determination as to whether the well's true ratio, in view of its production data, gas-liquid ratio tests, and other pertinent data, is 50,000 cubic feet of gas or more per barrel of liquid hydrocarbons.

(8) ~~(12)~~ That ~~in order to more nearly equalize natural gas with liquids from wells and casinghead gas withdrawals from oil wells on a per-dedicated-acre basis, and to more adequately prevent reservoir damage and underground waste and to protect~~ ^{the Tubb Gas Pool should be reclassified and redesignated as the} a limiting gas-oil ratio of 2000 cubic feet of gas per barrel of oil should be established for oil wells in ~~said Tubb~~ Oil and Gas Pool.

^{Tubb}
(9) ~~(13)~~ That the vertical limits of the ~~Blinbry~~ Oil and Gas Pool should extend from a point 75 feet above the ~~"Blinbry Marker"~~ ^{Drin Hard formation} to a point 100 feet above the ~~"Tubb Marker"~~ ^{The Tubb Marker}. The ~~Tubb~~ Marker shall be that point encountered at a depth of 5921 feet (elevation 3380, sub-sea datum -2541') and the top of the Drin Hard formation.

be that point encountered at a depth of 6245 feet (elevation 3380, sub-sea datum - 2845') in the Exxon Corporation State "S" Well No. 20, located in the SW/4 NW/4 of Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

(10) (11) That in order to prevent waste and to protect correlative rights, the recommended pool rules ^{similar to} ~~the~~ Blinbry Oil and Gas Pool ~~as presented at the hearing by the Blinbry Pool Study Committee, should, with minor modification, be adopted and made applicable to the Tubb Oil and Gas Pool. as defined in Finding No. (10) above and on Exhibit "A" attached to this order.~~

IT IS THEREFORE ORDERED:

~~(1) That there is hereby created and defined as described in Rule 25 below and in Exhibit "A" attached hereto and made a part hereof, the Tubb Oil and Gas Pool.~~
~~(2) That the aforesaid Tubb Oil and Gas Pool shall be subject to the following special rules and regulations which are hereby adopted as an amendment to Order No. R-1670, "Rules and Regulations Governing Prorated Gas Pools in New Mexico."~~
the Tubb Gas Pool is hereby reclassified and redesignated as
the Tubb Oil and Gas Pool, with vertical limits as defined by Rule 25 below and horizontal limits the same as heretofore defined by the Division for the Tubb Gas Pool.

SPECIAL RULES AND REGULATIONS FOR THE TUBB BLINBRY OIL AND GAS POOL

This pool
~~(the Tubb Gas Pool)~~ was created February 17, 1953, and prorating was instituted January 1, 1954.)

A. WELL LOCATION AND ACREAGE REQUIREMENTS

RULE 1. Each well completed or recompleted in the Tubb Oil and Gas Pool or in the Tubb formation within one mile thereof and not nearer to nor within the boundaries of another pool producing from the Tubb formation, shall be spaced, drilled, operated, and prorated in accordance with the rules for the Tubb Oil and Gas Pool as set forth herein.

RULE 2 (a). After the effective date of this order, each well drilled or recompleted as an oil well, or as a gas well to which no more than 40 acres shall be dedicated, shall be located not closer than 330 feet to the outer boundary of any governmental quarter-quarter section or subdivision boundary line.

(b) After the effective date of this order, no well drilled as a gas well and to which is dedicated, or to which will be dedicated, more than 40 acres shall be located nearer than 660 feet to the outer boundary of its proration unit or of the quarter section and not nearer than 330 feet to any governmental quarter-quarter section line or subdivision line.

RULE 3. The ~~Division~~ Director ~~of the Division~~ may grant an exception to the footage requirements of Rule 2 (a) or 2 (b) 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 ~~Division~~ 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 ~~Division~~ Director has received the application. If any written objection is received, or at the direction of the ~~Division~~ Director, any such application may be set for hearing. An unorthodox location may be subject to an allowable adjustment if it is directly offsetting another producing well.

RULE 4. The provisions of Statewide Rule 104, Paragraph (k), shall not apply to the ~~Tubb~~ Oil and Gas Pool.

RULE 5 (A). Each gas well within the ~~Tubb~~ Oil and Gas Pool shall be located on a standard proration unit consisting of approximately 160 acres which shall comprise a governmental quarter section. For purposes of these rules, a unit consisting of between 158 and 162 contiguous surface acres shall be considered a standard unit.

RULE 5 (B). Each oil well within the ~~Tubb~~ Oil and Gas Pool shall be located on a standard unit consisting of approximately 40 acres which shall comprise a governmental quarter-quarter section or lot.

RULE 5 (C) 1. The District Supervisor of the Hobbs district office of the ~~Division~~ shall have authority to approve a non-standard unit as an exception to Rule 5 (A) or 5 (B) without notice and hearing when the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the U. S. Public Land Surveys and the non-standard unit is not less than 75 percent nor more than 125 percent of a standard unit.

2. The District Supervisor may approve the non-standard unit by:

(a) accepting a plat showing the proposed non-standard unit and the acreage to be dedicated to the non-standard unit, and

(b) assigning an allowable to the non-standard unit.

3. The ~~Division~~ Director may grant an exception to the requirements of Rule 5 (A) without notice and hearing where an application has been filed in due form and where the unorthodox size and shape of the tract is due to a variation in legal subdivisions of the United States Public Lands Survey or where the following facts exist and the following provisions are complied with:

- (a) The non-standard unit consists of contiguous quarter-quarter sections or lots.
- (b) The non-standard unit consists of not more than 164 acres and lies wholly within a single governmental section.
- (c) The entire non-standard unit may reasonably be presumed to be productive of gas from the ~~Blaine~~ Blaine Oil and Gas Pool.
- (d) The applicant presents written consent in the form of waivers from all offset operators, and from all operators owning interests in the quarter section in which any part of the non-standard unit is situated and which acreage is not included in the non-standard unit.
- (e) 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 its intent to form such non-standard unit. The ~~Director~~ Director may approve the application if, after a period of 20 days, no such operator has entered an objection to the formation of the non-standard unit.
- (f) The ~~Secretary~~ Director may grant an exception to (a) above if a completion, re-completion, or reclassification of a ~~Tubb~~ well results in dedication of acreage to an oil well on a previously approved gas proration unit, and thereby severs acreage contained in said unit from the gas well which produces for the unit.

C. ALLOCATION AND GRANTING OF ALLOWABLES

RULE 8 (A). The total allowable to be allocated to gas wells in the pool regulated by this order each month shall be equal to the sum of the "Preliminary" or "Supplemental" Nominations (whichever is applicable) together with any adjustment which the ~~Division~~ Director deems advisable. The allowable remaining each month after deducting the total allowable assigned to marginal wells shall be allocated among the non-marginal gas wells entitled to an allowable in the proportion that each well's acreage factor

bears to the total of the acreage factors for all non-marginal gas wells in the pool.

RULE 8 (B). Allowables to newly completed gas wells shall commence on the date of connection to a gas transportation facility, as determined from an affidavit furnished to the *Division District Office* (Box 1980, Hobbs, New Mexico 88240) by the purchaser, or the date of filing of Form C-104 and a plat (Form C-102), whichever date is the later.

G. GENERAL

RULE 22. No natural gas produced from a gas well in the *Tubbey* Oil and Gas Pool shall be flared or vented except as provided in Rule 401 of the *Division Rules and Regulations* and no oil well casinghead gas shall be flared or vented except as provided in Rule 306.

H. MISCELLANEOUS SPECIAL POOL RULES

RULE 25. The vertical limits of the *Tubbey* Oil and Gas Pool shall extend from a point ~~100~~ feet above the "*Tubbey* Marker" to *the top of the Drinkard formation.* The *Tubbey* Marker shall be that point encountered at a depth of *5921* feet (elevation *3380*, sub-sea datum *-2541*) and the *top of the Drinkard* shall be that point encountered at a depth of *6245* feet (elevation *3380*, sub-sea datum *-2865*) in the Exxon Corporation State "S" Well No. 20, SW/4 NW/4 Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

RULE 26 (a). A gas well in the *Tubbey* Oil and Gas Pool shall be a well producing from within the vertical and horizontal limits of the pool which produces with a gas-liquid ratio of 50,000 cubic feet of gas or more per barrel of liquid hydrocarbons. ~~Provided, however, that any well which on January 1, 1974, was classified as a gas well in the *Tubbey* Oil and Gas Pool shall continue to be classified as a gas well. For those wells classified as gas wells, but with gas-liquid ratios of less than 50,000 cubic feet of gas per barrel, the operator may, upon application to the District Supervisor, receive a reclassification of said well to that of an oil well.~~

(b) A well producing from within the horizontal and vertical limits of the *Tubbey* Oil and Gas Pool and not classified as a gas well, as defined in Rule 26 (a) above, shall be classified as an oil well.

(c) The District Supervisor, on or before *December 1st* of each year, shall review production data, gas-oil ratio tests, and other pertinent data and reclassify a well under Rule 26 (a) if production data, gas-oil ratio tests, or other evidence reflects the need for such reclassification. *In such event the District Supervisor will notify the operator of such reclassification at least 30 days before the effective date thereof. Any operator so notified may request that the District Supervisor reconsider the reclassification if he has reason and evidence to support such request and same is filed not later than 10 days after such notification of reclassification. The District Supervisor shall approve or disapprove the request within 10 days after receipt thereof or in the alternative, with the consent of applicant set the request for hearing.*

(d) Should remedial work, production data, or other circumstances at any time indicate classification of a well as an oil well or a gas well to be improper, the District Supervisor may reclassify said well to its proper category, subject to the same procedures outlined in Rule 26 (d) below.

(e) In the event an oil well in the Tubbs Oil and Gas Pool is reclassified as a gas well, the operator of such well will be afforded the opportunity to form a non-standard gas proration unit for the well; provided however, that, until such unit is formed, said well shall be allocated a gas allowable commensurate with the acreage contained in the unit formerly dedicated to the oil well. In the event of two or more gas wells producing from the Tubbs Oil and Gas Pool within a single proration unit, the allowable assigned to the unit may be produced from any well on the unit in any proportion.

RULE 27. Oil wells within the Tubbs Oil and Gas Pool shall receive oil and casinghead gas allowables as provided in Statewide Rules 503, 505, and 506. The limiting gas-oil ratio for the Tubbs Oil and Gas Pool shall be 2,000 cubic feet of gas per barrel of oil.

RULE 28. Acreage dedicated to a gas well in the Tubbs Oil and Gas Pool shall not be simultaneously dedicated to an oil well in the pool, and the dual completion of a well so as to produce separate gas and oil allowables from the Tubbs Oil and Gas Pool is hereby prohibited.

RULE 29 (a). Condensate from any gas well in the Tubbs Oil and Gas Pool may be commingled with other condensate produced by any other gas well or gas wells producing from the pool or the Tubbs Gas Pool following its separation from the gas in a separator, provided approval therefor has been obtained in accordance with Commission Rule 303-B and/or Rule 309-B, whichever is applicable.

If two-stage separation is used, the low-pressure gas shall be directed into a low-pressure gas gathering system, and said low-pressure gas need not be measured separately from the other low-pressure gas produced on the lease, provided that certain test facilities are available and periodic tests made in accordance with Rule 30 below.

(b) In submitting Form C-115 (Operator's Monthly Report) on wells producing from the Tubb Oil and Gas Pool in which condensate is commingled and/or the low-pressure gas is commingled with other low-pressure gas produced on the lease, the operator shall estimate the volume produced by each well in each pool by using the ratios as reflected in the most recent test submitted.

RULE 30. Gas-liquid ratio tests shall be conducted annually during the months of ~~2007~~, August, ~~and~~ September ^{on or before} on all wells located in and producing from the Tubb Oil and Gas Pool. Results of such tests shall be reported to the ~~Division~~ ^{Division} on Form C-116 on or before the 10th day of ~~October~~ ^{November} of each calendar year.

IT IS FURTHER ORDERED:

(1) That the ^{Division's} ~~Commission's~~ Statewide Rules and Regulations, and each of the General Rules and Regulations for the Prorated Gas Pools of Southeastern New Mexico, as promulgated by Order No. R-1670, as amended, unless in conflict with one of the above special rules applicable to the Tubb Oil and Gas Pool, shall also apply to the wells in the Tubb Oil and Gas Pool.

(2) That the Special Rules and Regulations for the Tubb Gas Pool, as promulgated by Order No. R-1670, are hereby superseded.

(3) That the vertical limits of the Tubb Oil and Gas Pool shall be as defined in Rule (25) above and the horizontal limits shall be as ~~described in Exhibit "A" attached hereto and made a part hereof.~~ ^{heretofore defined by the Division.}

~~(4) That the Tubb Gas Pool and the Blinbry Oil Pool, as heretofore classified and defined by the Commission, are hereby abolished.~~

(4) That the effective date of this order shall be ^{September} January 1, 1978.

(5) That jurisdiction of this cause is hereby retained for the entry of such further orders as the ^{Division} may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

I. R. TRUJILLO, Chairman

ALEX J. ARRIJO, Member

R. L. PORTER, JR., Member & Secretary

S E A L

dr/

DAN NUTTER

Apr 25 1949

Amend The Special
Rules Texas Gas
Pool to provide
for the classifica-
tion of wells as
oil wells and gas
wells on the basis
of gas-oil ratios
rather than on the
basis of liquid
gravity as at
present.