STATE OF NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

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

> CASE NO. 9237 Order No. R-8593

THE APPLICATION OF THE OIL CONSERVATION DIVISION UPON ITS OWN MOTION FOR AN ORDER ABOLISHING THE AMANDA-ABO GAS POOL, CONTRACTING THE HORIZONTAL LIMITS OF THE DRINKARD AND WANTZ-ABO POOLS, EXTENDING BOTH THE HORIZONTAL AND VERTICAL LIMITS OF THE SOUTH BRUNSON-ABO POOL, (TO BE REDESIGNATED THE SOUTH BRUNSON DRINKARD-ABO POOL), AND RE-ESTABLISHING THE VERTICAL LIMITS OF THE DRINKARD AND WANTZ-ABO POOLS, ALL IN LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 21, 1987, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this <u>27th</u> day of January, 1988, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

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

(2) By Orders Nos. 850, R-142, R-264, and R-4957, as amended, dated respectively January 1, 1950, April 11, 1952, February 17, 1953, and March 1, 1975, the Division created

and defined the horizontal and vertical limits, respectively, of the Drinkard Oil Pool, Wantz-Abo Pool, Amanda (Abo) Gas Pool, and the South Brunson-Abo Pool, all in Lea County, New Mexico.

(3) The record in this case indicates that over the operational history within the Drinkard, Wantz-Abo, and South Brunson-Abo Pools, a large number of wells have been perforated and produced out-of-zone and across vertical pool boundaries.

(4) The record and testimony in this case further indicate that the wells in questions are in an advanced state of depletion and that it would be uneconomic at the present time for the operators of the subject wells to be required to conduct extensive workover operations needed to bring the wells into compliance with the currently defined vertical and horizontal pool boundaries.

(5) Several meetings between the Division's Hobbs District Office personnel and the operators in the subject pools were held prior to the hearing so that a mutually acceptable solution to the existing problem could be determined.

(6) At the time of the hearing, the Division presented a proposal which has been agreed to by the majority of the operators in the subject pools and which involves the following procedures:

(a) Abolish the Amanda (Abo) Gas Pool which currently comprises the following described acreage in Lea County, New Mexico:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM Section 25: All

(b) Re-define the vertical limits of the Drinkard Pool and contract the horizontal limits of said pool by the deletion therefrom of the following described acreage in Lea County, New Mexico:

> TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM Sections 1, 12, 13, 24, 25, and 36: All

> TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM Section 6: SW/4 Section 7: All Section 17: SE/4 and W/2 Sections 18, 19, and 20: All Section 21: W/2 W/2 Section 28: W/2 W/2 and Lots 1, 2, 3, and 4 Sections 29, 30, 31, and 32: All Section 33: W/2 W/2 and Lots 1, 2, 3, and 4 TOWNSHIP 23 SOUTH, RANGE 38 EAST, NMPM Section 4: Lots 2 and 3 Sections 5 and 6: All Section 7: E/2 Section 18: N/2 NE/4

(c) Establish and incorporate the following Drinkard Pool provisions into this order:

- A requirement that all future Drinkard completions comply with the type cross sections labeled A-A', A'-A", B-B', and C-C", (all presented as evidence in this case and designated as Exhibits No. 4(A) through 4(C));
- 2) A provision approving existing Drinkard Pool well completions whose perforations extend not more than 35 feet downward into the upper portion of the Wantz-Abo Pool (shown on Exhibit "1" attached to this order);
- 3) A provision approving existing Drinkard completions (shown on Exhibit "2" attached to this order) which are perforated more than 35 feet out of zone;
- 4) Establishing an administrative procedure whereby the Division may approve Drinkard completions inadvertently omitted from Exhibit "2" but which are completed more than 35 feet out-of-zone.

> (d) Re-define the vertical limits of the Wantz-Abo Pool and contract the horizontal limits of said pool by the deletion therefrom of the following described acreage in Lea County, New Mexico:

> > TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM Section 1: SE/4, W/2 SW/4, and NE/4 SW/4 Section 12: S/2 NE/4 and NE/4 NE/4

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM Section 6: S/2 Section 7: N/2

(e) Establish and incorporate the following Wantz-Abo Pool provisions into this order:

- A requirement that all future Wantz-Abo completions comply with the type cross sections labeled A-A', A'-A", B-B', and C-C', (all presented as evidence in this case and designated as Exhibits Nos. 4(A) through 4(C));
- 2) A provision approving existing Wantz-Abo Pool completions (shown on Exhibit "3" attached to this order) which are perforated not more than 35 feet upward into the lower portion of the Drinkard Pool;
- 3) Establishing an administrative procedure whereby the Division may approve Wantz-Abo completions inadvertently omitted from Exhibit "3" but which are completed less than 35 feet out-of-zone.

(f) Extend the vertical limits of the South Brunson-Abo Pool to include the Drinkard and Abo formations, redesignate said pool as the South Brunson Drinkard-Abo Pool, and extend the horizontal limits of said pool to include the following described acreage in Lea County, New Mexico:

> TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM Sections 1, 12, 13, 24, 25, and 36: All

> TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM Section 6: <u>S/2</u> Section 7: A11 Section 17: SE/4 and W/2 Sections 18, 19, and 20: Section 21: W/2 W/2 All Section 28: Section 29: W/2 W/2 and Lots 1, 2, 3, and 4 All Section 30: W/2 TOWNSHIP 23 SOUTH, RANGE 38 EAST, NMPM Section 4: Lots 2 and 3 Sections 5 and 6: All Section 7: E/2 Section 18: N/2 NE/4

(g) Promulgate Special Rules and Regulations for the newly designated South Brunson Drinkard-Abo Pool including a limiting gas-oil ratio of 6000 cubic feet of gas per barrel of liquid hydrocarbons; a provision approving existing Drinkard Pool well completions whose perforations extend less than 35 feet upward into the lower portion of the Tubb Oil and Gas Pool (shown on Exhibit "4" attached to this order) and existing Drinkard Pool well completions whose perforations extend greater than 35 feet upward into the lower portion of the Tubb Oil and Gas Pool (shown on Exhibit "5" also attached to this order); a requirement that all future South Brunson Drinkard-Abo Pool completions comply with the type cross section D-D,' (presented as evidence in this case and designated as Exhibit No. 4(D)); and adoption of the following method to determine the allowable for those proration units existing on or before the effective date of this order in which the Drinkard and Abo zones are separately owned by different operators.

> If the combined total of both wells exceeds the top allowable, the allowable for each well will be determined based on percentage as follows:

> > % Allowable Formulas

Allowable Drinkard Formation = $\frac{142}{A+B}$

Allowable Abo Formation = $\frac{142 \text{ (B)}}{A+B}$

Where A = Amount produced from Drinkard formation during the annual 24 hour test.

> B = Amount produced from the Abo formation during the annual 24 hour test.

After % allowable is determined, any limit based on GOR will be applied.

- 2) If the combined production total of both wells is equal to or less than the top allowable, the allowable will be based on the number of barrels produced during the 24 hour test minus any limit, if applicable, based on GOR.
- 3) The results of the GOR test will be used for the annual 24 hour oil production test. The operator having the right to the other zone shall have the right to witness these tests. A change in allowable may be requested by submitting a new C-116 to the Hobbs District Office. The other operator shall be notified prior to testing and shall have the right to witness the test.

(7) Approval of the subject application as outlined in the previous findings will serve to prevent waste, protect correlative rights, and will further re-establish the integrity of the horizontal and vertical limits of the subject pools and should therefore be approved.

IT IS THEREFORE ORDERED THAT:

(1) The Amanda (Abo) Gas Pool which currently consists of the following described acreage in Lea County, New Mexico:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM Section 25: All

is hereby abolished.

(2) The Drinkard Pool is hereby contracted by the deletion therefrom of the following described acreage in Lea County, New Mexico:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM Sections 1, 12, 13, 24, 25, and 36: All

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM Section 6: SW/4 Section 7: All Section 17: SE/4 and W/2 Sections 18, 19, and 20: All Section 21: W/2 W/2 Section 28: W/2 W/2 and Lots 1, 2, 3, and 4 Sections 29, 30, 31, and 32: All Section 33: W/2 W/2 and Lots 1, 2, 3, and 4

TOWNSHIP 23 SOUTH, RANGE 38 EAST, NMPM Section 4: Lots 2 and 3 Sections 5 and 6: All Section 7: E/2 Section 18: N/2 NE/4

(3) The following Drinkard Pool provisions are hereby adopted:

- A) Type cross sections labeled A-A', A'-A", B-B', and C-C', (all presented as evidence in this case and designated Exhibits Nos. 4(A) through 4(C)) are hereby adopted for the purpose of defining the vertical limits of the Drinkard Pool. All future Drinkard Pool completions shall be in compliance with the above-described cross sections.
- B) Existing Drinkard Pool completions whose perforations extend not more than 35 feet downward into the upper portion of the Wantz-Abo Pool, (shown on Exhibit "1" attached to and made a part of this order), are hereby approved.
- C) Existing Drinkard Pool completions which are perforated more than 35 feet out of zone, (shown on Exhibit "2" attached to and made a part of this order), are hereby approved.

- D) An administrative procedure whereby the Division may approve Drinkard completions inadvertently omitted from Exhibit "2" but which are completed more than 35 feet out of zone is hereby established. To obtain administrative approval, the operator of a well so completed shall apply in writing to the supervisor of the Hobbs district office of the Division and shall describe the perforated interval in the well and the circumstances surrounding such completion. A copy of such request shall be furnished by certified or registered mail to all offset operators. If no objections are received by the Division within 20 days following receipt of such request, the supervisor may, if he deems prudent, issue a letter of approval. If any objections are received within the prescribed waiting period, the request may be set for hearing if the applicant so requests.

The Wantz-Abo Pool is hereby contracted by the (4) deletion therefrom of the following described acreage in Lea County, New Mexico:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM Section 1: SE/4, W/2 SW/4, and NE/4 SW/4 Section 12: S/2 NE/4 and NE/4 NE/4

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM Section 6: S/2 Section 7: N/2 Section 7:

The following Wantz-Abo Pool provisions are hereby (5)adopted:

> Type cross sections labeled A-A', A'-A", B-B', and C-C', (all presented as evidence in this case and designated Exhibits Nos. 4(A) A) through 4(C)) are hereby adopted for the purpose of defining the vertical limits of the Wantz-Abo Pool. All future Wantz-Abo Pool completions shall be in compliance with the above-described cross sections.

- B) Existing Wantz-Abo completions whose perforations extend not more than 35 feet upward into the lower portion of the Drinkard Pool, (shown on Exhibit "3" attached to and made a part of this order), are hereby approved.
- administrative procedure whereby the C) An Division may approve Wantz-Abo completions inadvertently omitted from Exhibit "3" but which are completed less than 35 feet out of is hereby established. To obtain zone administrative approval, the operator of a well so completed shall apply in writing to the supervisor of the Hobbs district office of the Division and shall describe the perforated interval in the well and the circumstances surrounding such completion. A copy of such request shall be furnished by certified or registered mail to all offset operators. If no objections are received by the Division within 20 days following receipt of such request, the supervisor may, if he deems prudent, issue a letter of approval. If any objections are received within the prescribed waiting period, the request may be set for hearing if the applicant so requests.

(6) The South Brunson-Abo Pool, heretofore defined, is hereby redesignated as the South Brunson Drinkard-Abo Pool with horizontal limits consisting of the following described acreage in Lea County, New Mexico:

> TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM Sections 1, 12, 13, 24, 25, and 36: All TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM Section 6: S/2 Section 7: All Section 17: SE/4 and W/2 Sections 18, 19, and 20: All Section 21: W/2 W/2 Section 28: W/2 W/2 and Lots 1, 2, 3, and 4 Section 29: All Section 30: W/2

> TOWNSHIP 23 SOUTH, RANGE 38 EAST, NMPM Section 4: Lots 2 and 3 Sections 5 and 6: All Section 7: E/2 Section 18: N/2 NE/4

(7) Special Rules and Regulations for the South Brunson Drinkard-Abo Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS FOR THE SOUTH BRUNSON DRINKARD-ABO POOL

Rule 1. The limiting gas-oil ratio for the South Brunson Drinkard-Abo Pool is hereby established at 6000 cubic feet of gas per barrel of oil.

Rule 2. Type cross section D-D', (presented as evidence in this case and designated Exhibit No. 4(D)), is hereby adopted for the purpose of defining the vertical limits of the South Brunson Drinkard-Abo Pool. All future South Brunson Drinkard-Abo Pool completions shall be in compliance with the above described cross section.

Rule 3. The following method to determine the allowable for those proration units existing on or before the effective date of this order in which the Drinkard and Abo zones are separately owned by different operators is hereby adopted:

A) If the combined total of both wells exceeds the top allowable, the allowable for each well will be determined based on percentage as follows:

% Allowable Formulas

Allowable Drinkard Formation = $\frac{142}{A+B}$

Allowable Abo Formation = $\frac{142}{A+B}$

Where A = Amount produced from Drinkard formation during the annual 24 hour test.

> B = Amount produced from the Abo formation during the annual 24 hour test.

After % allowable is determined, any limit based on GOR will be applied.

- B) If the combined production total of both wells is equal to or less than the top allowable, the allowable will be based on the number of barrels produced during the 24 hour test minus any limit, if applicable, based on GOR.
- C) The results of the GOR test will be used for the annual 24 hour oil production test. The operator having the right to the other zone shall have the right to witness these tests. A change in allowable may be requested by submitting a new C-116 to the Hobbs District Office. The other operator shall be notified prior to testing and shall have the right to witness the test.

IT IS FURTHER ORDERED THAT:

(8) Existing Drinkard Pool well completions whose perforations extend less than 35 feet upward into the lower portion of the Tubb Oil and Gas Pool, (shown on Exhibit "4" attached to and made a part of this order), are hereby approved.

(9) Existing Drinkard Pool well completions whose perforations extend more than 35 feet upward into the lower portion of the Tubb Oil and Gas Pool (shown on Exhibit "5" attached to and made a part of this order), are hereby approved.

(10) The effective date of this order shall be January 27, 1988.

(11) Jurisdiction of this cause is 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 ۲ WILLIAM J. LEMAY Director

SEAL

WELLS WITH PERFS 1 to 35' OUT OF DRINKARD POOL

OPERATOR	LEASE	NUM	U	SEC	TWN	s	RNG	e	OPEN PERFS
Amerada Hess	E. Wood	9	G	22	22	s	37	e	6234-6441
11	E. W. Walden	7	N	15	22	s	37	е	6282-6386
	State DA	4	I	16	21	s	37	e	6406-6501
ARCO O & G	Roy Barton	2	В	23	21	s	37	е	6407-6595
11	State 157 D	9	Ρ	12	22	s	36	e	6490-6611
11	State 367	1	М	36	21	s	37	e	6297-6489
Campbell & Hedrick	W. E. Lee	3	С	20	21	s	37	е	6450-6604
Chevron USA	CDU	427	G	29	21	s	37	e	6370-6488
11	11	429	G	32	21	s	37	e	6 319- 6504
11	11	431	K	33	21	s	37	е	6290-6311
11	11	432	Р	29	21	s	37	e	6297 - 6360
11	Eubank	2	А	22	21	s	37	е	6360-6432
11	11	4	Н	22	21	\mathbf{s}	37	e	6356-6444
I.	H. T. Mattern NCT-B	17	С	31	21	s	37	e	6488-6731
11	R. E. Cole NCT-A	4	А	16	22	s	37	е	6318-6584
11	H	11	J	16	22	s	37	е	6 325- 6572
Cities Services O&G	Brunson B	2	K	3	22	s	37	e	6302-6565
Conoco	Elliott B-15	1	G	15	22	s	37	e	625 3- 6321
11	Hawk A	8	А	8	21	s	37	е	657 3- 6770
11	Hawk B-1	16	N	8	21	s	37	е	6533-6790
11	Lockhart B-13 A	9	N	13	21	s	37	е	6578-6873
Elliott Oil	Elliott B	4	L	1	21	s	37	e	6664-6962
Exxon	F. F. Hardison B	3	G	34	21	s	37	е	6303-6394
11	11	5	0	27	21	s	37	e	6288-6570
Hartman, Doyle	Will Cary	5	F	22	22	s	37	e	6266-6349
11	11	8	L	22	22	s	37	e	6297-6386
Hendrix, John H.	Brunson C	4	J	3	22	s	37	е	6475-6561
н	н	5	0	3	22	s	37	е	6249-6544
T		6	1	3	22	s	37	е	6450 - 6550
11	S. E. Long	2	J	11	22	s	37	е	6206 - 6475
Martindale	Little V	4	Р	7	22	s	37	e	6375-6612
Shell	Livingston	3	W	3	21	s	37	е	6450-6750
11	State 15	4	Н	15	21	s	37	е	6397-6663
Summit Energy	Gulf Drinkard	1	М	30	22	s	38	e	624 6- 6480
Техасо	A. H. Blinebry NCT-2	2	N	29	22	s	38	e	6338-7368
н	C. P. Falby A	3	F	8	22	s	37	e	6343-6555
11	C. P. Falby B	4	L	8	22	S	37	e	6353 - 6536

WELLS WITH PERFS MORE THAN 35' OUT OF DRINKARD POOL

OPERATOR	LEASE	NUM	U	SEC	TWN	s	RNG	e	OPEN PERFS
Amerada Hess	E. W. Walden	6	М	15	22	s	37	e	6273-6383
Amoco	Grizzell B	4	G	8	22	s	37	e	6423-6686
ARCO O & G	S. J. Sarkeys	3	Ι	23	21	s	37	e	6 280-66 72
Bravo Operating	Federal 7	1	D	7	21	s	38	е	6597-7015
Campbell and Hedrick	Elliott	2	H	6	23	s	38	е	6763-6798
Chevron USA	CDU	411	в	28	21	s	37	е	6311 - 6554
11	Evelyn Lineberry	3	L	29	22	s	38	е	6630-7163
11	R. E. Cole NCT-A	9	Ν	16	22	s	37	е	6357-6887
11		13	0	16	22	s	37	е	6453-6889
11	Scarborough Estate	3	Ι	31	22	s	38	е	6354 - 6844
11	T. R. Andrews	3	J	32	22	s	38	е	6890 - 7064
11	11	7	Р	32	22	s	38	е	6932-7087
н	Watkins	2	Р	29	22	s	38	e	6407 - 7135
Cities Services O&G	Brunson B	3	М	3	22	s	37	е	6228 - 6490
Conoco	Lockhart B-14 A	1	Н	14	21	s	37	e	6487-6563
Hendrix, John H.	Cossatot F	3	D	23	22	s	37	e	6201-6930
0		4	F	23	22	S	37	е	6190-6897
11	11	5	Ε	23	22	s	37	е	6233-7148
11	Western Fed	1	D	5	23	s	38	e	6536 - 6982
Hunt, N.B.	Weatherly	2	D	21	21	s	37	е	6280-6318
	11	3	С	21	21	s	37	е	6228-6600
11	11	5	Е	21	21	s	37	е	6338-6636
	11	6	F	21	21	S	37	e	6323-6612
Kirby Exploration	Art Yeager	1	J	25	21	s	37	e	6532-6904
11 III	Elliott Fields	1	U	6	21	s	38	е	6722-7048
"	Gulf Sarkeys	2	F	25	21	s	37	e	6475-6849
11	McAllister	1	С	7	22	s	38	e	6481-6859
11	Rosa Lee Fed	1	F	19	21	s	38	е	6712-6938
11	Royalty Holding	3	Н	25	21	s	37	e	6643-7073
MKA Oil Prop.	Penrose	1	F	9	22	s	37	e	6278 - 7046
Southland Royalty	State	1	М	2	21	s	37	e	6495-6623
	II II	2							6525-6795
	н	7							6538-6866
		,		-		_		-	-

Page 2 Exhibit 2

OPERATOR	LEASE	NUM	U	SEC	TWN	s	RNG	е	OPEN PERFS
Summit Energy	Drinkard Estate "	4 7	H H	25 25	22 22	s s		e e	6205-7166 6662-7264
Sun E & P	Eva Owens	1	D	3	22	s	37	e	6235-6554
Texaco ''	C. P. Falby A C. P. Falby B	1 1	C K	8 8	22 22	s s	37 37	e e	6310-6565 6327-6538
Texan Petroleum	Lineberry	1	E	5	23	s	38	e	6231-6635
Wagner and Brown	Walden	1	A	21	22	s	37	е	6236-6540
Yarborough, W. B.	L E Grizzell	3	A	8	22	S	37	е	6251-6376

WELLS WITH PERFS OUT OF WANTZ-ABO POOL

OPERATOR	LEASE	NUM	U	SEC	TWN	s	RNG	е	OPEN PERFS
ARCO O & G	Eva Owens	4	N	25	21	s	37	e	6717-7228
Chevron USA	S. J. Sarkeys	2	E	25	21	s	37	e	6749-7361
Conoco "	Hawk B-10 Lockhart B-11	4 3	H E	10 11	21 21	s s	37 37	e e	6721-7366 6727-7370
Exxon	Wantz Fed	4	Q	1	21	s	37	е	7068-7693
Marathon	Mark Owen	8	М	35	21	s	37	e	6524 - 7011

WELLS WITH PERFS 1 to 35' OUTSIDE SOUTH BRUNSON DRINKARD-ABO POOL

OPERATOR	LEASE	NUM	U	SEC	TWN	s	RNG	е	OPEN PERFS
Hanson Operating	Max Gutman	7	D	19	22	S	38	е	6270 - 7135
Hendrix, John H.	Cossatot A	1	В	12	22	s	37	е	6310-6916
11	Cossatot B	2	М	12	22	s	37	е	6247-6980
11	Cossatot C	4	0	24	22	s	37	е	6218-7090
н	Cossatot G	1	F	13	22	s	37	е	6246-7014
11	Cossatot H	1	L	13	22	s	37	е	6233-6981
11	Cossatot H	2	K	13	22	s	37	е	6262-7095
11	Cossatot I	1	D	13	22	s	37	e	6233-6968
11	Lee	2	Ρ	23	22	s	37	e	6255 - 6886
Texaco	C. H. Lockhart Fed NCT-1	9	I	18	22	s	38	e	6411-7210

WELLS WITH PERFS MORE THAN 35' OUT OF SOUTH BRUNSON DRINKARD-ABO POOL

LISI 5

OPERATOR	LEASE	NUM	U	SEC	TWN	s	RNG	e	OPEN PERFS
Exxon	N. G. Penrose	3	G	13	22	s	37	e	6256-6953
Hendrix, John H.	Cossatot C	2	I	24	22	s	37	e	6225-6909
Phillips	New Mexico D	1	Н	36	22	s	37	e	6036 - 6730