OIL AND GAS DOCKET NO. 02-0251771

APPLICATION OF PETROHAWK OPERATING COMPANY TO CONSIDER A BLANKET EXCEPTION TO STATEWIDE RULE 10 AND FIELD RULES FOR VARIOUS HEARD RANCH FIELDS, BEE COUNTY, TEXAS

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HEARD BY: Thomas H. Richter, P.E. **DATE OF HEARING:** June 7, 2007

APPEARANCES:

REPRESENTING:

Dale E. Miller

Petrohawk Operating Company

EXAMINER'S REPORT AND RECOMMENDATION STATEMENT OF THE CASE

These are the applications of Petrohawk Operating Company for blanket fieldwide exceptions to Statewide Rule 10 for all wells/leases in various Heard Ranch Fields (see Attachment "A") for proration purposes. It is also proposed that field rules be adopted for each of the fields as follows:

- 1. The entire correlative interval for each field shall be designated as shown on Attachment "A" and shown by the appropriate well log as shown on Attachment "A" and shall be designated as a single reservoir for proration purposes and the intervals are indicated for each field proper as shown on Attachment "A" of this order.
- 2. Minimum well spacing of 467'/0' (leaseline/between well);
- 3. 40 acre oil/gas well density with 10% tolerance for gas wells and 20 acre tolerance for oil wells. No filing of proration unit plats.
- 4. An allocation formula based on 100% deliverability for gas wells and suspension of the allocation formula. Oil reservoirs should be classified as salvage.
- 5. No field listed in Attachment "A" in Oil & Gas Docket No. 02-0251770 may

administratively be downhole commingled with a field listed in Attachment "A" in Oil & Gas Docket No. 02-0251771except after notice of application and opportunity to protest to all affected parties.

The examiner recommends approval of the requested fieldwide Rule 10 authority and proposed field rules for each field.

DISCUSSION OF THE EVIDENCE

The fields that are the subject of these applications are divided into two groups: those fields that are the subject of Oil & Gas Docket No. 02-0251771 are depletion drive (21 fields) and those fields that are the subject of Oil & Gas Docket No. 02-0251770 are natural water drive(4 fields).

Downhole commingling of similar reservoirs with similar reservoir mechanics will provide for the efficient and effective depletion of each of these mature reservoirs. The subject fields were developed from the 1950's through the 1980's. These are mature reservoirs and downhole commingling of multiple zones will result in the recovery of reserves that otherwise would go unrecovered. The fields are designated as Non-Associated except for the Heard Ranch (4300) and Heard Ranch (4800) Field (each field has one well). A total of 44 wells have been completed in the fields. Many of the subject fields have no producing wells. The gas fields that are producing all have allocation formula's suspended. The two oil fields have cumulative production of 16,500 and 183,000 BO respectively. Cumulative production from the gas fields is in excess of 200 BCF of gas.

Five of the fields have special field rules and the remainder of the fields are governed by Statewide Rules. The 5 fields with special field rules are: Heard Ranch (4300); Heard Ranch (Frio V); Heard Ranch (Frio Z); Heard Ranch (2900); and Heard Ranch (4000) Fields.

It is proposed that well that are downhole commingled shall be placed in a field at the discretion of the operator.

Minimum well spacing of 467'/0' (lease line/between well) will provide for flexibility in completing or re-completing wells without the necessity of Rule37 exceptions.

Gas or oil well proration unit density of 40 acres with provide for the efficient and effective depletion of each designated field. A gas allocation formula based on 100% deliverability will provide for the protection of correlative rights. The allocation formula should remain suspended as there is a market for 100% of the produced gas from any of the subject fields. Any associated oil field should be classified as salvage and the gas field should be designated as "prorated" and not subject to 49(b) restricted allowables.

The entire correlative interval for each field shall be designated as shown on Attachment "A" and shown by the appropriate well log as shown on Attachment "A" and shall be designated as a single reservoir for proration purposes and the intervals are indicated for each field proper as shown

on Attachment "A" of this order. The subject fields are stacked Frio Formation sands.

FINDINGS OF FACT

- 1. Notice of this hearing was issued to all operators in the fields as listed on Attachment "A".
- 2. The fields that are the subject of these applications are divided into two groups: those fields that are the subject of Oil & Gas Docket No. 02-0251771 that are depletion drive (21) and those fields that are the subject of Oil & Gas Docket No. 02-0251770 that are natural water drive (4).
 - a. The subject fields were developed from the 1950's through the 1980's.
 - b. Five of the fields have special field rules and the remainder of the fields are governed by Statewide Rules. The 5 fields with special field rules are: Heard Ranch (4300); Heard Ranch (Frio V); Heard Ranch (Frio Z); Heard Ranch (2900); and Heard Ranch (4000) Fields.
- 3. Downhole commingling of similar reservoirs with similar reservoir mechanics will provide for the efficient and effective depletion of each of these mature reservoirs.
 - a. These are mature reservoirs and downhole commingling of multiple zones will result in the recovery of reserves that otherwise would go unrecovered.
- 4. Wells that are downhole commingled shall be placed in a field at the discretion of the operator.
- 5. Downhole commingling production from these fields will prevent waste because separate completions in the Frio are generally not economic any more.
- 6. Minimum well spacing of 467'/0' (lease line/between well) will provide for flexibility in completing or re-completing wells without the necessity of Rule37 exceptions.
- 7. Gas or oil well proration unit density of 40 acres with provide for the efficient and effective depletion of each designated field. No proration unit plats shall be required.
- 8. A gas allocation formula based on 100% deliverability will provide for the protection of correlative rights. The allocation formula should remain suspended as there is a market for 100% of the produced gas from any of the subject fields.
- 9. Any associated field with oil wells should be classified as salvage and the gas field should be designated as "prorated" and not subject to 49(b) restricted allowables.

10. The entire correlative interval for each field shall be designated as shown on Attachment "A" and shown by the appropriate well log as shown on Attachment "A" and shall be designated as a single reservoir for proration purposes and the intervals are indicated for each field proper as shown on Attachment "A" of this order.

CONCLUSIONS OF LAW

- 1. Proper notice was issued as required by all applicable codes and regulatory statutes.
- 2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
- 3. Approval of the requested fieldwide Rule 10 exceptions for all wells in the subject fields and adoption of field rules will prevent waste and will not harm correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends approval of the requested fieldwide Rule 10 exceptions for wells/ leases in the subject fields and adoption of the field rules for each field as specified in the attached order.

Respectfully submitted,

Thomas H. Richter, P.E. Technical Examiner Office of General Counsel

ATTACHMENT "A"

OIL AND GAS DOCKET NO. 02-0251770

FIELD NAME	FIELD NUMBER	INTERVAL (ft)
Heard Ranch (Frio V)	40032066	3230 - 3390
Heard Ranch (Frio Z)	40032132	4677 - 4938
Heard Ranch (2900)	40032264	2936 - 2980 see 1

Heard Ranch (4000) 40032660	3862 - 3905 see 1		
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FIELD NAME FIELD NUMBER			
Heard Ranch (3170) 40032310	3168 - 3206 see 2		
Heard Ranch (3300) 40032330	3208 - 3225		
Heard Ranch (3500) 40032396	3470 - 3550		
Heard Ranch (3550) 40032399	3534 - 3543 see 3		
Heard Ranch (3650) 40032462	3660 - 3680 see 4		
Heard Ranch (3700) 40032528	3568 - 3598		
Heard Ranch (3860) 40032545	3857 - 3865 see 3		
Heard Ranch (3875) 40032547	3882 - 3875 see 5		
Heard Ranch (3890) 40032550	3890 - 3902 see 3		
Heard Ranch (3900) 40032594	3772 - 3790		
Heard Ranch (4050) 40032675	4040 - 4058 see 6		
Heard Ranch (4150) 40032700	4140 - 4120 see 7		
Heard Ranch (4200) 40032726	4178 - 4190		
Heard Ranch (4225) 40032740	4220 - 4232 see 6		
Heard Ranch (4300) 40032792	4269 - 4297 see 8		
Heard Ranch (4330) 40032795	4328 - 4330 see 6		
Heard Ranch (4400) 40032858	4290 - 4320		
Heard Ranch (4500) 40032875	4503 - 4518 see 9		
Heard Ranch (4600) 40032890	4597 - 4603 see 3		
Heard Ranch (4750) 40032920	4750 - 4756 see 10		
Heard Ranch (4800) 40032924	4540 - 4560		

Petrohawk Operating, C.E. Heard "B" #19 (all wells without footnote)

- 1 Pan American, C.E. Heard #8-8
- 2 Amoco Production, C.E. Heard "B" # 17
- 3 UTX Exploration, K.D. Roche B #2
- 4 Pan American, C.E. Heard "B" #5
- 5 Hewit & Daughty, K.D. Roche B # 8
- 6 UTX Exploration, K.D. Roche B #4
- 7 Hewit & Daughty, K.D. Roche B # 6
- 8 Humble Oil & Refining, Laura D. Thompson B #3
- 9 UTX Exploration, K.D. Roche B #1
- 10 UTX Exploration, K.D. Roche C #1