

**THE APPLICATION OF FOREST OIL CORPORATION TO AMEND FIELD RULES FOR THE BUFFALO WALLOW (GRANITE WASH) FIELD, HEMPHILL AND WHEELER COUNTIES, TEXAS**

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**Heard by:** Andres J. Trevino, P.E. on September 30, 2010

**Appearances:**

Mark Hana  
Mimi Winetroub

Paul Tough

**Representing:**

Forest Oil Corporation

Devon Energy Production Co.

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Field rules for the Buffalo Wallow (Granite Wash) Field were last amended in Order No. 10-0260701, effective March 11, 2009. The rules in effect for the field are summarized as follows:

1. Designation of the field as the correlative interval from 10,925 feet to 13,842 feet as shown on the log of the Holland "C" Lease, Well No. 5712;
2. 467'-0' well spacing with special provisions for take points in horizontal wells;
3. 640 acre gas units and 40 acre oil units with optional 20 acre gas and oil units;
4. Special provisions for stacked laterals in horizontal wells;
5. Allocation based on 95% deliverability/potential and 5% per well with AOF status.

Forest Oil Corporation requests that the Rule 2 be amended to allow off-lease penetration points. The examiner recommends that the field rules for the Buffalo Wallow (Granite Wash) Field be amended as proposed by Forest Oil Corporation.

**DISCUSSION OF EVIDENCE**

The Buffalo Wallow (Granite Wash) Field was discovered in September 1974 at a

depth of 11,520 feet. The field is designated as an associated field with 915 gas wells and 4 oil wells in the field. Forest Oil operates 252 of the wells in the field. Cumulative production from the field is 360.3 BCF of gas and 5.49 MMBO. The field operates under Special Rules that allow 640/20 acre density and 467'/0' well spacing, take point language, provisions for stacked laterals and the allocation formula is currently suspended. The field is in the early stages of horizontal development with only 10 wells completed as horizontal wells. A typical vertical well completed in the Buffalo Wallow (Granite Wash) Field will recover .433 BCF of gas while a typical horizontal well will recover 1.842 BCF of gas or 4.25 times greater recovery.

Operators are currently developing similar Granite Wash fields in the area with horizontal wellbores. Forest Oil requests similar horizontal well rules that are approved for other horizontal plays in Texas.

Forest Oil requests that field Rule 2 for the subject field provide for off-lease penetration points. Statewide Rule 86 requires that the penetration point of a horizontal drainhole be on the lease. In some cases, it is beneficial to penetrate the reservoir off lease, while still having "take points" no closer to lease lines than allowed under the field rules. Similar rules allowing offsite penetration points have been adopted in other fields, after notice to the mineral owners of the off-lease tract on which the penetration point is to be located. A wellbore requires up to 667 feet of lateral distance to turn from vertical to horizontal. By allowing off-lease penetration an additional 200 feet of the reservoir is exposed to the horizontal lateral and drained. Production data analysis indicates each foot of horizontal lateral will recover an additional 776 MCF/ft. These reserves are estimated to be an additional 155 MMCF or 8.5% of a well's original EUR. These reserves would go unrecovered if off-lease penetration is not approved.

### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Buffalo Wallow (Granite Wash) Field is an associated field with 915 gas wells and 4 oil wells which operates under Special Rules and has AOF status. The field is under going horizontal development.
3. The Buffalo Wallow (Granite Wash) Field was discovered in September 1974 at a depth of 11,520 feet. The field is designated as an associated field with 915 gas wells and 4 oil wells in the field. Cumulative production from the field is 360.3 BCF of gas and 5.49 MMBO.

4. A typical vertical well completed in the Buffalo Wallow (Granite Wash) Field will recover .433 BCF of gas while a typical horizontal well will recover 1.842 BCF of gas or 4.25 times greater recovery.
5. A vertical well completed in the Buffalo Wallow (Granite Wash) Field requires up to 667 feet of lateral distance to complete a turn from vertical to horizontal.
6. Allowing off-lease penetration points, after notice to mineral owners of the offsite tract, will result in maximizing the producing drainhole length, thereby increasing ultimate recovery from horizontal drainhole wells.
7. A typical horizontal well may gain up to 200 feet of horizontal drainhole contact with the reservoir. The gain in contact with the reservoir is estimated to increase the ultimate recovery of a well by 155 MMCF or 8.5%.
8. Numerous other Granite Wash and shale fields that are developed with horizontal wells have adopted similar rules to help maximize recovery and prevent waste.

**CONCLUSIONS OF LAW**

1. Proper notice of this hearing was issued.
2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.
3. Amending the field rules for the Buffalo Wallow (Granite Wash) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

**RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiner recommends that the Commission amend the field rules for the Buffalo Wallow (Granite Wash) Field as proposed by Forest Oil Corporation.

Respectfully submitted,

Andres J. Trevino, P.E.  
Technical Examiner