

September 13, 2005

OIL AND GAS DOCKET NO. 06-0243684

APPLICATION OF EL PASO PRODUCTION COMPANY TO CONSOLIDATE VARIOUS COTTON VALLEY FIELDS AND ADOPT FIELD RULES FOR THE PROPOSED MINDEN (COTTON VALLEY CONS.) FIELD, RUSK COUNTY, TEXAS

HEARD BY: Thomas H. Richter, P.E.

DATE OF HEARING: August 25, 2005

APPEARANCES:

REPRESENTING:

Applicant:

George C. Neale, attorney
Gary Griffith
Cary McGregor

El Paso Production Company

EXAMINER'S REPORT AND RECOMMENDATION
STATEMENT OF THE CASE

This is the unprotested application of El Paso Production Company for the Commission to consider consolidating the Chapman (Cotton Valley), Church Hill (Cotton Valley), Henderson, S. (Cotton Valley), Henderson, S. (C.V., Seg I), Henderson, SE. (Cotton Valley), Minden (Cotton Valley), Pod (Cotton Valley), Pone, SE (Cotton Valley), and Rufus (Cotton Valley) Fields into a new field to be known as the Minden (Cotton Valley Cons.) Field. It is proposed that the following field rules be adopted:

1. The entire combined correlative interval from 9,180' to 10,697' as shown on the electric log of the El Paso Production Company, Rushton Lease Well No. 1 (API No. 42-401-33218), M. del Carmel Survey, A-158, Rusk County, Texas should be designated as the Minden (Cotton Valley Cons.) Field.
2. Minimum well spacing of 467' (leaseline) and 933' between well spacing;
3. 40 acre gas proration units with 10% tolerance and a maximum diagonal of 4,100'; and
4. An allocation formula based on 95% acreage and 5% deliverability. It is proposed that the allocation formula be suspended.

It is also proposed that 9 wells of Chinn Exploration Company, currently prorated in the Henderson, E. (Cotton Valley) Field, and 2 wells of Arena Resources, L.L.C., currently prorated in the Oak Hill (Cotton Valley) Field, be transferred to the proposed Minden (Cotton Valley Cons.) Field.

DISCUSSION OF THE EVIDENCE

The Oak Hill (Cotton Valley) Field was discovered in 1976 at approximately 10,000' subsurface depth. The Chapman (Cotton Valley), Church Hill (Cotton Valley), Henderson, S. (Cotton Valley), Henderson, S. (C.V., Seg I), Henderson, SE. (Cotton Valley), Minden (Cotton Valley), Pod (Cotton Valley), Pone, SE (Cotton Valley), and Rufus (Cotton Valley) Fields to be consolidated in this application were discovered between 1977 and 1984. The rules for the fields range from Statewide Rules to special field rules requiring minimum well spacing of 933'/1867' and 640 acre density. The Minden (Cotton Valley) Field has 86 wells; two fields have 4 wells each; one field has 5 wells; one field has one well; and four fields have no wells. The fields with active wells either have the allocation formula suspended or the allocation is based on 100% deliverability. The allocation formula should be suspended in the consolidated field as the demand for the gas being produced will be unchanged.

The subject fields lie on the southeast side of a regional syncline trend which separates them from the much larger Oak Hill (Cotton Valley) Field. This geological separation is apparent upon the viewing of a regional well location map of Cotton Valley reservoir wells. Well log analysis of wells from the subject fields show there are no geographic/structural/engineering reason that the subject gross Cotton Valley Formation reservoirs are not continuous across the area. All show the lesser productive upper Cotton Valley and the all have the more prolific "Taylor Sand" interval. The entire combined correlative interval from 9,180' to 10,697' as shown on the electric log of the El Paso Production Company, Rushton Lease Well No. 1 (API No. 42-401-33218), M. del Carmel Survey, A-158, Rusk County, Texas should be designated as the Minden (Cotton Valley Cons.) Field.

Consolidation of the subject 9 fields, operating pursuant to the same field rules, will provide for the recovery of reserves that otherwise would go unrecovered and orderly field development. Individual field production are:

Minden (Cotton Valley):	
Current Production:	25.2 MMCFD
Cumulative Prod.:	24.4 BCF
Chapman (Cotton Valley):	
Current Production:	0 MMCFD
Cumulative Prod.:	238 MMCF
Church Hill (Cotton Valley):	
Current Production:	1,802 MCFD
Cumulative Prod.:	238 MMCF
Henderson, S. (C.V. Seg. I):	
Current Production:	104 MCFD
Cumulative Prod.:	513 MMCF

Henderson, S. (Cotton Valley)	
Current Production:	0 MCFD
Cumulative Prod.:	342 MMCF
Henderson, SE. (Cotton Valley)	
Current Production:	0 MCFD
Cumulative Prod.:	96 MMCF
Pod (Cotton Valley)	
Current Production:	156 MCFD
Cumulative Prod.:	4.66 BCF
Pone, SE. (Cotton Valley)	
Current Production:	0 MCFD
Cumulative Prod.:	44.5 MMCF
Rufus (Cotton Valley)	
Current Production:	0 MCFD
Cumulative Prod.:	342 MMCF

The total daily production from the all the subject fields is 5,500 MCFD for a median per well rate of 183 MCFD. Cumulative production is 10.9 BCF from the nine fields.

The minimum well spacing of 467'/933' will provide flexibility in locating wells in the field and is the appropriate minimum well spacing for 40 acre proration unit density. In this area of East Texas the topography is of such a nature that flexibility is necessary in locating wells. Proration unit density of 40 acres will provide for the efficient and effective depletion of the Cotton Valley sand lenses contained within the gross interval. Volumetric analysis, assuming at least 140' of pay and 40 acre drainage, computes 2.5 BCF gas-in-place. Assuming a 40% recovery factor, the recoverable reserves are 1 BCF per well and a recovery factor of 60% yields recoverable reserves of 1.5 BCF per well. Production decline analysis of the El Paso Production, Parrott Well No. 1 estimates the ultimate recovery of the well to be 1.21 BCF of gas. In general most of the wells will recover between 800 MMCF and 1500 MMCF. There are eleven other Cotton Valley Fields in this region that in the past 12 months have had hearings that proposed 40 acre density.

There are eleven wells that are currently prorated in either the Henderson, E. (Cotton Valley) Field or the Oak Hill (Cotton Valley) Field which by location should properly be prorated in the proposed Minden (Cotton Valley Cons.) Field. The wells are:

Chinn Operating Company (Henderson, E. (Cotton Valley)):

195770	BENTON 1
200978	BENTON "A" 2
201240	BENTON 3
203233	BENTON "A" 4
204817	BENTON "C" 5
204931	BENTON "B" 6
206584	BENTON "F" 7
207538	BENTON "E" 9
208873	BENTON "D" 8

Arena Resources, L.L.C. (Oak Hill (Cotton Valley)):

093711	PEARL BARRON UNIT 1
157507	WEBB GAS UNIT 1

EXAMINER' S OPINION

The Cotton Valley Fields in this area should all have the same field rules for the orderly development of the fields and for the efficient and effective depletion of the Cotton Valley Formation. The gross interval includes the entire Cotton Valley section. The "Taylor" has always been recognized at the more prolific interval of the gross Cotton Valley interval. The "Upper Cotton Valley" interval is much more "ratty" (lenticular, come and go from well to well) and not the "sand" as seen so prominent on a well log. The "Upper Cotton Valley lenticular sands" may not be stand alone intervals as is the "Taylor Sand Section", but are productive of gas. The Minden (Cotton Valley) Field which is the largest of the fields to be consolidated with 86 wells and was discovered in 1979 has been developed on 40 acre density (Statewide Rules).

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the subject hearing.
2. There was no protest at the call of the hearing.
3. The Chapman (Cotton Valley), Church Hill (Cotton Valley), Henderson, S. (Cotton Valley), Henderson, S. (C.V., Seg I), Henderson, SE. (Cotton Valley), Minden (Cotton Valley), Pod (Cotton Valley), Pone, SE (Cotton Valley), and Rufus (Cotton Valley) Fields to be consolidated in this application were discovered between 1977 and 1984.
 - a. The rules for the fields range from Statewide Rules to special field rules requiring minimum well spacing of 933'/1867' and 640 acre density.
 - b. The Minden (Cotton Valley) Field has 86 wells; two fields have 4 wells each; one field has 5 wells; one field has one well; and four fields have no wells.
 - c. The fields with active wells either have the allocation formula suspended or the allocation is based on 100% deliverability.
4. Consolidation of the subject 9 fields, operating pursuant to the same field rules will provide for the recovery of reserves that otherwise would go unrecovered and orderly field development.
 - a. Well log analysis of wells from the subject fields show there are no geographic/structural/engineering reason that the subject gross Cotton Valley Formation reservoirs are not continuous across the area.
5. The entire combined correlative interval from 9,180' to 10,697' as shown on the electric log of the El Paso Production Company, Rushton Lease Well No. 1 (API No. 42-401-33218), M. del Carmel Survey, A-158, Rusk County, Texas should be designated as the Minden

(Cotton Valley Cons.) Field.

6. The minimum well spacing of 467'/933' will provide flexibility in locating wells in this area of East Texas because the topography is of such a nature that flexibility is necessary in locating wells.
7. Proration unit density of 40 acres will provide for the efficient and effective depletion of the Cotton Valley sand lenses contained within the gross interval.
 - a. Volumetric analysis calculates for 40 acre drainage 2.5 BCF gas-in-place.
 - b. Production decline analysis of the El Paso Production, Parrott Well No. 1 estimates the ultimate recovery of the well to be 1.21 BCF of gas.
 - c. In general most of the wells will recover between 800 MMCF and 1500 MMCF.
 - d. There are eleven other Cotton Valley Field in this region that in the past 12 months have had hearings that proposed 40 acre density.
8. The allocation formula should be suspended in the consolidated field as the 100% demand for the gas being produced will be unchanged.
9. The following wells should be transferred to the Minden (Cotton Valley Cons.) Field:
 - Chinn Operating Company (Henderson, E. (Cotton Valley)):

195770	BENTON 1
200978	BENTON "A" 2
201240	BENTON 3
203233	BENTON "A" 4
204817	BENTON "C" 5
204931	BENTON "B" 6
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207538	BENTON "E" 9
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 - Arena Resources, L.L.C. (Oak Hill (Cotton Valley)):

093711	PEARL BARRON UNIT 1
157507	WEBB GAS UNIT 1

CONCLUSIONS OF LAW

1. Proper notice was given to all parties as set out in the provisions of all applicable codes and regulatory statutes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this

matter.

3. Consideration for consolidation of fields and field rules, a determination of the effectiveness of the rules and appropriate actions is a matter within the Commission jurisdiction.
4. Adoption of the proposed consolidation of fields and adoption of the proposed field rules will prevent waste, foster conservation and protect correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends approval of the proposed field consolidation and field rules for the Minden (Cotton Valley Cons.) Field.

Respectfully submitted,

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