



RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 04-0255995

THE APPLICATION OF EL PASO E & P COMPANY, LP TO AMEND THE FIELD RULES 3 AND 4 FOR VARIOUS BOB WEST FIELDS, STARR AND ZAPATA COUNTIES, TEXAS

Heard by: Richard D. Atkins, P.E.

Date of Hearing: April 10, 2008

Appearances:

Jim Cowden
John F. Miller

Representing:

El Paso E & P Company, LP

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

El Paso E & P Company, LP requests to amend Field Rules 3 and 4 for the Bob West Fields listed below in Starr and Zapata Counties, Texas.

<u>FIELD NAME</u>	<u>FIELD NUMBER</u>
Bob West (L-1-4)	10041 138
Bob West (L-5-10)	10041 143
Bob West (L-12, 13, 14, 15)	10041 151
Bob West (L-18, 20, 21, 22)	10041 228
Bob West (L-24, 25, 26)	10041 250
Bob West (L-27, 28, 29)	10041 350
Bob West (L-30, 31, 32, 33)	10041 375
Bob West (L-34-47)	10041 376
Bob West (Roleta)	10041 500

The subject fields are all non-associated gas fields which operate under rules providing for 467'-0' well spacing and 40 acre density. The allocation formula is either 95% deliverability and 5% per well or 75% deliverability and 25% per well. Currently, the allocation formula in each of the Bob West Fields is suspended.

El Paso E & P Company, LP requests that the Field Rules 3 and 4 be amended to provide for 40 acre standard units, 20 acre optional units, the allocation formula be amended to 95% deliverability and 5% per well and the filing of P-15's and plats not be required.

El Paso also requests a blanket exception to Statewide Rule 10 to allow downhole commingling in all of the fields.

This application was unopposed and the examiner recommends that the Field Rules 3 and 4 for the Bob West Fields listed above be amended and a blanket exception to Statewide Rule 10 be approved, as proposed by El Paso.

DISCUSSION OF THE EVIDENCE

The Bob West Field area is geologically and geographically complicated. It is located at the Texas-Mexico border. A large portion of the field underlies Falcon Reservoir and Falcon State Park. Surface locations are restricted by the US Government, the Texas Parks and Wildlife Department as well as private landowners in this area and almost all the wells are directionally drilled. The target zones are a series of Wilcox sands ranging from 8,000' to 15,000' subsurface depth. There are 43 productive pay intervals and the area is complexly faulted. All the sands are geo-pressured, very low permeability and have been designated as tight gas sands by the Commission. Commercial production requires massive hydraulic fracture stimulations resulting in an average cost of drilling and completion of \$5.0 million.

There are three operators in the nine Bob West Fields and 131 producing wells containing 329 completions. Cumulative production is 786 BCFG and 3 MBO. Current monthly production is 1.0 BCFG. El Paso operates 113 wells, Milagro Exploration, LLC operates 15 wells and Morningstar Gas, Inc. operates 3 wells. Average production from each well is approximately 250 MCFGPD.

The first Bob West Field well was drilled in March 1990 and placed on production in 1991. Due to the many reasons previously cited, the wells were completed in select sand packages. Since the field was discovered, there have been four field consolidation hearings and 120 Rule 10 downhole commingling permits issued by the Commission for various combinations of fields. Four wells have commingled all 43 productive sands contained within the nine subject fields.

The subject nine fields are all non-associated gas fields which operate under rules providing for 467'-0' well spacing and 40 acre density. Each field also has a rule that designates a correlative interval and a rule that provides for a two-factor allocation formula. The allocation formula is either 95% deliverability and 5% per well or 75% deliverability and

25% per well. Currently, the allocation formula in each of the Bob West Fields is suspended and it is proposed that the allocation formulas remain suspended.

The original bottom hole pressures are similar throughout the Wilcox interval. The data show the Wilcox to be geo-pressured with pressure gradients ranging from 0.8 psi/ft up to 0.85 psi/ft. El Paso ran bottomhole pressure surveys on various sands in three of their recent infill wells. They discovered similar existing pressures in all of the intervals tested. The pressure gradient ranged from a low of 0.33 psi/ft to a high of 0.71 psi/ft. The average pressure gradient was approximately 0.55 psi/ft. Cross-flow between the zones is not expected, as these are tight gas sands and the flowing bottomhole pressure will be much lower than any of the shut-in pressures. In addition, all production is from non-associated gas fields and if cross-flow occurs, there will be no reservoir damage or loss of reserves.

The gas composition is also similar in the various Wilcox zones and contains on average 96% Methane, 3.9% CO₂ and 0.1% N₂. The average gas gravity is 0.60 and the average BTU content is 950 BTU/CF. Formation temperatures are in excess of 300 degrees F.

The produced water in all of the sands does have a calcium carbonate scaling tendency. However, El Paso has been treating this problem for over sixteen years and they have not discovered any un-treatable scaling problems as a result of downhole commingling.

El Paso provided drainage area calculations for twenty one wells in the various fields. The drainage areas range from 8 acres up to a maximum of 61 acres. The average drainage area was calculated to be approximately 23 acres. However, five of the twenty one wells will drain less than 20 acres. El Paso also provided drainage area calculations for fourteen zones completed in two wells. The production was allocated between each completed zone based on downhole spinner surveys. The drainage areas range from 8 acres up to a maximum of 42 acres. The average drainage area for each zone was calculated to be approximately 22 acres. However, seven of the fourteen zones will drain less than 20 acres. The proposed optional twenty acre spacing will also allow for future development in the Bob West Fields area. El Paso will be actively developing the Wilcox interval by drilling infill wells and completing existing wells into additional Wilcox zones.

Incremental reserves will be produced as a result of downhole commingling. This incremental production is a result of a lower combined economic limit for the 43 zones and closer well spacing. El Paso estimates that downhole commingling will result in the recovery of an additional 50 BCFG. In addition, infill drilling down to twenty acre density will also add 50 BCFG, resulting in a total additional recovery of 100 BCFG from the various fields.

El Paso also requests that the filing of P-15's and plats not be required. As acreage is not part of the allocation formula, this request will eliminate unnecessary paperwork.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and there were no protests.
2. The first Bob West Field well was drilled in March 1990 and placed on production in 1991. There are three operators in the nine Bob West Fields and 131 producing wells containing 329 completions. Cumulative production is 786 BCFG and 3 MBO. Current monthly production is 1.0 BCFG.
3. All of the subject fields are classified as non-associated gas and operate under the same rules which provide for 467'-0' well spacing and 40 acre density.
4. To date, 120 Rule 10 exceptions have already been granted for various combinations of the nine subject fields
5. Cross-flow between the zones is not expected, as these are tight gas sands and the flowing bottomhole pressure will be much lower than any of the shut-in pressures
6. Downhole commingling production from these fields will result in the recovery of incremental reserves from the various marginal zones.
7. Gas and water analysis and pressure gradient data support downhole commingling in the various fields.
8. The calculated drainage areas support El Paso's requested optional 20 acre density.
9. Suspension of the allocation formulas in the fields is appropriate because there is a market for any gas produced from the subject fields.

CONCLUSIONS OF LAW

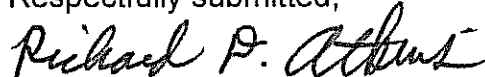
1. Proper notice of this hearing was given to all persons legally entitled to notice.
2. All things have occurred or been accomplished to give the Railroad Commission jurisdiction in this matter.

3. Amending the Field Rules 3 and 4 for the subject Bob West Fields as proposed by El Paso will prevent waste, protect correlative rights and promote development of the field.

EXAMINER'S RECOMMENDATION

Based on the above findings of facts and conclusions of law, the examiner recommends that the Commission amend the Field Rules 3 and 4 for the various Bob West Fields, Starr and Zapata Counties, approve a blanket exception to Statewide Rule 10 to allow downhole commingling and that the allocation formulas in the subject fields remain suspended.

Respectfully submitted,



Richard D. Atkins, P.E.

Technical Hearings Examiner