

**OIL AND GAS DOCKET NO. 7C-0264718**

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**THE APPLICATION OF COG OPERATING LLC TO CONSOLIDATE THE PEGASUS (SPRABERRY), PEGASUS (WOLFCAMP), PEGASUS (CANYON) AND PEGASUS (PENNSYLVANIAN) FIELDS INTO A NEW FIELD CALLED THE PEGASUS (CONSOLIDATED) FIELD AND TO ADOPT FIELD RULES FOR THE PEGASUS (CONSOLIDATED) FIELD, MIDLAND AND UPTON COUNTIES, TEXAS**

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**HEARD BY:** Richard D. Atkins, P.E. - Technical Examiner

**HEARING DATE:** March 25, 2010

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

Flip Whitworth  
Greg Cloud  
Jayne Krawietz

COG Operating LLC

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

COG Operating LLC ("COG") requests to consolidate four Pegasus Fields into a new field to be known as the Pegasus (Consolidated) Field. The fields proposed for consolidation are as follows:

<b><u>FIELD NAME</u></b>	<b><u>FIELD NUMBER</u></b>
Pegasus (Spraberry)	70279 750
Pegasus (Wolfcamp)	70279 875
Pegasus (Canyon)	70279 075
Pegasus (Pennsylvanian)	70279 500

COG requests that the new field be classified as associated-prorated and that the following Field Rules be adopted:

1. Designation of the field as the entire correlative interval between 6,815 feet and 11,375 feet as shown on the log of the Mobil Producing TX. & N.M. Inc. - Pegasus Field Unit 3, Well No. 156 (API No. 42-329-10082);
2. 467' lease line spacing with no minimum distance between wells;

3. 80 acre proration units with optional 40 acre density;
4. Oil and gas allocation based on 75% acres and 25% per well and that the gas allocation formula be suspended.

COG also requests that the top oil allowable be set at the 1965 Yardstick Allowable of 300 BOPD for an 80 acre well and that the additional wells shown in Attachment A be transferred into the new field.

This application was unopposed and the examiner recommends approval of COG's request for field consolidation and field rules.

### **DISCUSSION OF THE EVIDENCE**

The Pegasus (Spraberry) Field was discovered in January 1952. There are 75 producing oil wells carried on the proration schedule and there is no associated gas field. The field operates under Field Rules providing for 660'-1,320' well spacing, 80 acre oil units and allocation based on 75% acreage and 25% per well. There is no designated interval for the field, but production is from a depth of approximately 8,200 feet. Cumulative production through February 2010 from the field is 17.8 MMBO and 12.2 BCFG.

The Pegasus (Wolfcamp) Field was discovered in January 1952. There are 16 producing oil wells carried on the proration schedule and there is no associated gas field. The field operates under Statewide Rules. There is no designated interval for the field, but production is from a depth of approximately 9,900 feet. Cumulative production through February 2010 from the field is 322.1 MBO and 1.4 BCFG.

The Pegasus (Canyon) Field was discovered in February 1998. There are no producing oil wells and two marginally productive gas wells carried on the proration schedules. The field operates under Statewide Rules and the gas field is classified as associated-exempt. There is no designated interval for the field, but production is from a depth of approximately 10,100 feet. Cumulative production through February 2010 from the field is 16.5 MBO and 1.2 BCFG.

The Pegasus (Pennsylvanian) Field was discovered in April 1951. There are 37 producing oil wells and one shut-in gas well carried on the proration schedules. The field operates under Field Rules providing for 550'-1,320' well spacing, 80 acre density and allocation based on 75% acres and 25% per well. The gas field is classified as associated-49(b). There is no designated interval for the field, but production is from a depth of approximately 10,500 feet. Cumulative production through February 2010 from the field is 17.9 MMBO and 39.4 BCFG.

COG is proposing to consolidate the four Pegasus fields into the Pegasus (Consolidated) Field and classify it as associated-prorated, since there are currently only two marginally productive gas wells and no other gas wells are expected to be completed.

The proposed designated interval for the consolidated field is the entire correlative interval between 6,815 feet and 11,375 feet as shown on the log of the Mobil Producing TX. & N.M. Inc. - Pegasus Field Unit 3, Well No. 156 (API No. 42-329-10082). This interval will include all zones between the top of the Clearfork formation and the base of the Woodford Shale formation, which is also the top of the Devonian formation.

The four Pegasus fields are geographically intermingled and there are no other fields contained within the proposed correlative interval. All of the zones are continuous across the field area and the correlative interval is similar to the one adopted for the Parks (Consolidated) Field, which is located in Midland County approximately twenty miles north of the Pegasus field area. Within the Pegasus field area, there are thirty wells that are currently carried in the Spraberry (Trend Area) and Spraberry Trend Area (Clearfork) Fields. COG requests that the thirty additional wells shown in Attachment A also be transferred into the new field.

Although the Pennsylvanian and Spraberry formations have been waterflooded in the past, all of the formations had a depletion drive as the primary drive mechanism and produced little water. Most of the formations may prove to be productive in future wells, but separate completions in each zone would not be commercial. COG stated that producing all of the reservoirs simultaneously would reduce the abandonment rate for each zone and increase the ultimate recovery of hydrocarbons from all of the reservoirs. Assuming an economic limit of 2 BOPD, an oil price of \$80 per barrel and the exponential decline rate for each reservoir, COG calculated the incremental reserves to be recovered from each infill well to be 25,459 BO. Since COG has plans to drill 400 infill wells, the total additional oil to be recovered from the consolidated field as a result of the entire project is approximately 10 MMBO, thereby preventing waste and promoting conservation.

Minimum well spacing of 467 foot lease line spacing with no minimum distance between wells and 80 acre proration units with optional 40 acre density will provide flexibility in locating wells for future development in the Pegasus area. COG will be actively developing the consolidated interval by drilling infill wells and completing existing wells into additional zones and needs the flexibility to downhole commingle production to increase the economic viability of the wells. To date, there have been fifteen Statewide Rule 10 exceptions approved by the Commission to commingle production from various combinations of the four Pegasus fields.

A multi-factor allocation formula is necessary for the protection of correlative rights pursuant to State Statutes. Therefore, COG proposed a two-factor allocation formula for oil and gas wells based on 75% acres and 25% per well. Since the Pennsylvanian formation occurs between 10,000 feet and 10,500 feet, COG requested that the top oil allowable be set at the 1965 Yardstick Allowable of 300 BOPD for an 80 acre well. In addition, COG requested that the gas well allocation formula be suspended, as there is a 100% market for all the gas produced from the field.

**FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice and there were no protests.
2. The Pegasus (Spraberry) Field is a non-associated oil field which was discovered in January 1952.
  - a. The field operates under Field Rules providing for 660'-1,320' well spacing, 80 acre oil units and allocation based on 75% acreage and 25% per well.
  - b. There are 75 producing oil wells carried on the proration schedule.
  - c. There is no designated interval for the field, but production is from a depth of approximately 8,200 feet.
3. The Pegasus (Wolfcamp) Field is a non-associated oil field which was discovered in January 1952.
  - a. The field operates under Statewide Rules.
  - b. There are 16 producing oil wells carried on the proration schedule.
  - c. There is no designated interval for the field, but production is from a depth of approximately 9,900 feet.
4. The Pegasus (Canyon) Field is an associated field which was discovered in February 1998.
  - a. The field operates under Statewide Rules.
  - b. There are no producing oil wells and two marginally productive gas wells carried on the proration schedules.
  - c. The gas field is classified as associated-exempt.
  - d. There is no designated interval for the field, but production is from a depth of approximately 10,100 feet.
5. The Pegasus (Pennsylvanian) Field is an associated field which was discovered in April 1951.

- a. The field operates under Field Rules providing for 550'-1,320' well spacing, 80 acre density and allocation based on 75% acres and 25% per well.
  - b. There are 37 producing oil wells and one shut-in gas well carried on the proration schedules.
  - c. The gas field is classified as associated-49(b).
  - d. There is no designated interval for the field, but production is from a depth of approximately 10,500 feet.
6. The four Pegasus fields should be consolidated into the Pegasus (Consolidated) Field.
7. The designated interval for the consolidated field should be the entire correlative interval between 6,815 feet and 11,375 feet as shown on the log of the Mobil Producing TX. & N.M. Inc. - Pegasus Field Unit 3, Well No. 156 (API No. 42-329-10082). The correlative interval includes all of the formations contained between the top of the Clearfork formation and the base of the Woodford Shale formation.
8. Wells in the four Pegasus fields produce from the same correlative interval. This interval is similar to the one adopted for the Parks (Consolidated) Field which is located in Midland County approximately twenty miles north of the Pegasus field area.
9. Within the Pegasus field area, there are thirty wells that are currently carried in the Spraberry (Trend Area) and Spraberry Trend Area (Clearfork) Fields. The thirty additional wells shown in Attachment A should be transferred into the new field.
10. Although the Pennsylvanian and Spraberry formations have been waterflooded in the past, all of the formations had a depletion drive as the primary drive mechanism and produced little water. Most of the formations may prove to be productive in future wells, but separate completions in each zone would not be commercial.
11. Assuming an economic limit of 2 BOPD, an oil price of \$80 per barrel and the exponential decline rate for each reservoir, COG calculated the incremental reserves to be recovered from each infill well to be 25,459 BO.
12. Minimum well spacing of 467 foot lease line spacing with no minimum distance between wells and 80 acre proration units with optional 40 acre

density will provide flexibility in locating wells for future development in the Pegasus area.

13. COG will be actively developing the consolidated interval by drilling infill wells and completing existing wells into additional zones and needs the flexibility to downhole commingle production to increase the economic viability of the wells. To date, there have been fifteen Statewide Rule 10 exceptions approved by the Commission to commingle production from various combinations of the four Pegasus fields.
14. Since the Pennsylvanian formation occurs between 10,000 feet and 10,500 feet, the requested top oil allowable based on the 1965 Yardstick Allowable of 300 BOPD for an 80 acre well is appropriate.
15. The proposed two-factor allocation formula for oil and gas wells based on 75% acres and 25% per well will satisfy State Statutes.
16. Classification of the associated gas field as associated-49(b) is not necessary to prevent waste. Associated-prorated status for the gas field is appropriate, since there are currently only two marginally productive gas wells and no other gas wells are expected to be completed.
17. Suspension of the gas allocation formula in the consolidated field is appropriate because there is a market for any gas produced from the field.

#### **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. Consolidation of the fields and adoption of the proposed Field Rules will prevent waste, protect correlative rights, satisfy statutory requirements and promote development of the field.

**EXAMINER'S RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiner recommends that the Commission consolidate the four Pegasus fields into the new field, the Pegasus (Consolidated) Field and adopt permanent Field Rules for the Pegasus (Consolidated) Field, as requested by COG Operating LLC.

Respectfully submitted,

Richard D. Atkins, P.E.  
Technical Hearings Examiner

**ATTACHMENT A**

<b><u>WELL</u></b>	<b><u>API NO.</u></b>	<b><u>LEASE NO.</u></b>	<b><u>FIELD NO.</u></b>
State Glass No. 209	329-35824	37071	85280 300
State Glass No. 206	329-34801	37071	85280 300
State Glass No. 208	329-35691	37071	85280 300
State Glass No. 207	329-34953	37071	85280 300
TXL "R" No. 5	329-35825	38739	85280 300
TXL "U" No. 501	461-03349	15487	85279 200
Ora "B" Holzgraf No. 5406	329-35698	15408	85279 200
Ora "B" Holzgraf No. 5402	329-00916	15408	85279 200
Ora "B" Holzgraf No. 5404	329-34958	15408	85279 200
Ora "B" Holzgraf No. 5407	461-35524	15408	85279 200
Ora "B" Holzgraf No. 5401	461-02803	15408	85279 200
Ora "B" Holzgraf No. 5405	461-34549	15408	85279 200
Muriel No. 5601W	461-02111	15847	85279 200
TXL No. 5	461-35523	15679	85279 200
TXL No. 4	461-34654	15679	85279 200
Wilson No. 14	461-34956	15989	85279 200
Wilson No. 15	461-35548	15989	85279 200
TXL "CC" No. 1	461-34653	15695	85279 200
Blackwell No. 2	461-34652	15647	85279 200
Blackwell No. 3	461-34955	15647	85279 200
Blackwell No. 4	461-35313	15647	85279 200
Blackwell No. 4701	461-32879	15647	85279 200
Blackwell No. 5	461-35583	15647	85279 200
TXL "SS" No. 4602	461-33092	15652	85279 200
Virgil Powell No. 4210	461-03287	15265	85279 400
Virgil Powell "B" No. 4805	461-33008	15506	85279 200
Virgil Powell "B" No. 4806	461-33091	15506	85279 200
Virgil Powell "B" No. 4807	461-36362	15506	85279 200
TXL "G" No. 4005	461-03343	15249	85279 400
TXL "I" No. 2605	461-34571	15625	85279 400