



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

**OIL & GAS DOCKET NO. 02-0299798**

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**THE APPLICATION OF HILCORP ENERGY COMPANY TO CONSIDER APPROVAL OF UNITIZATION AND ENHANCED RECOVERY AUTHORITY, WEST RANCH (41A/98A CONSOLIDATED) UNIT, WEST RANCH (41-A & 98-A CONS.) FIELD, JACKSON COUNTY, TEXAS**

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**HEARD BY:** Brian Fancher, P.G. – Technical Examiner  
Marshall F. Enquist – Administrative Law Judge

**HEARING DATE:** April 25, 2016  
**SUBMISSION DATE:** June 7, 2016  
**CONFERENCE DATE:** June 21, 2016

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

Brian Sullivan  
Bill Hayenga  
Grace McNally  
Michael Schoetz  
Jay King  
Abel Salazar  
Jill Fisk  
Curtis Smith  
Gatewood Brown

Hilcorp Energy Company

**EXAMINERS' REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Hilcorp Energy Company (Hilcorp) requests Commission approval of the unit agreement for the proposed West Ranch (41A/98A Consolidated) Unit (Unit), and Commission authority for unitization of the Unit for enhanced recovery operations. On April 18, 2016, the Commission received a Notice of Intent to Appear in Protest by Texana Groundwater Conservation District (Texana). A hearing on the merits was held for the captioned docket on April 25, 2016.

No representative on behalf of Texana appeared at the April 25<sup>th</sup> hearing. The application is unopposed. The Examiners recommend that it be approved.

### DISCUSSION OF EVIDENCE

Notice of the captioned docket was sent by U.S. mail to the persons identified on the Certificate of Service attached to the Notice of Hearing dated March 14, 2016 made for the subject application. Notice of the instant case was made by publication in *The Jackson County Herald-Tribune*, a newspaper of general circulation in Jackson County, on the following dates: (1) Wednesday, March 23, 2016; (2) Wednesday, March 30, 2016; (3) Wednesday, April 6, 2016; and (4) Wednesday, April 13, 2016.<sup>1</sup>

The West Ranch (41-A & 98-A Cons.) Field (Field) is located in Jackson County. Effective January 27, 2014, Oil & Gas Final Order No. 02-0292677 created the Field as it stands through a consolidation of multiple independently recognized fields. The Field's governing set of field rules provide as follows: (1) designated correlative interval from 5,708 to 6,265 feet, as shown on the log of the West Jackson Ranch - A – 600 Well (API No. 42-239-33580); (2) 330' lease line spacing and zero between-well spacing for oil or gas wells; (3) 20-acre density for oil or gas wells, and 10-acre optional density; and (4) capacity allowables for all wells in the field.

Hilcorp submitted a copy of its Unit Agreement (UA) and Unit Operating Agreement (UOA) for the Unit.<sup>2,3</sup> The UA conforms with the requirements set forth in Tex. Nat. Resources Code §101, Subchapter B.<sup>4</sup> The UA was executed on January 23, 2015 by a representative of Texas Coastal Ventures, LLC (TCV). The UOA indicates that TCV owns 100% of the working interest in the Unit.<sup>5</sup> The UA was voluntarily entered to establish pooled units for secondary or tertiary recovery operations.<sup>6</sup> The UA was recorded in Harris County on January 23, 2015. The UA indicates that the Unit includes an area of 6,209.81-acres from multiple tract owners. Hilcorp seeks to unitize the subsurface correlative interval from 5,708 to 6,265 feet, as shown on the log of the West Jackson Ranch - A – 600 Well (API No. 42-239-33580). Hilcorp evidenced that 100% of the working interest ownership and 84.3376% of the royalty interest ownership had signed the UA.<sup>7</sup> There are state owned lands in the proposed Unit. The General Land Office elected to participate in the Unit.

There is one active well, numerous inactive wells (identified as shut-in or 14B2 EXT), and numerous injection wells listed on the April 2016 Oil Proration Schedule.<sup>8</sup> Hilcorp previously obtained authority for injection of salt water and carbon dioxide in numerous injection wells on the West Ranch -A- Lease (10962) in the subject field. Those injection wells' permitted injection intervals are within the proposed Unit interval in the subject application.<sup>9</sup> Hilcorp plans to permit roughly 130 injection wells on the Unit.<sup>10</sup> Those injection wells will be

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<sup>1</sup> Hilcorp Exh. Nos. 3E and 3F.

<sup>2</sup> Hilcorp Exh. No. 4.

<sup>3</sup> Hilcorp Exh. No. 5.

<sup>4</sup> Hilcorp Exh. No. 8.

<sup>5</sup> *Id.* Exh. "C".

<sup>6</sup> Hilcorp Exh. No. 8.

<sup>7</sup> Hilcorp Exh. No. 6.

<sup>8</sup> Hilcorp Exh. No. 3C.

<sup>9</sup> Hilcorp Exh. No. 3B.

<sup>10</sup> Hilcorp Exh. No. 23.

utilized for tertiary recovery of hydrocarbons from the Field on the Unit through injection of anthropogenic carbon dioxide. Production from the field occurs through numerous sedimentary sands in the Frio Formation. Presumptively, those sands are primarily carbonate sands based on the foraminiferal markers used to distinguish the Frio Formation.<sup>11</sup> The Field varies in thickness throughout the Unit due to the general four-way closure structure exhibited by structure maps that Hilcorp evidenced.<sup>12</sup> The Field is composed of six major reservoirs and 65 minor reservoirs.

Hilcorp evidenced that roughly 135,000 barrels of oil (BO), 86,464 mmcf of gas (1,000 cubic feet of gas is equivalent to one MCF of gas), and 507,966 barrels of water (BW) have been produced from the Field between 1957 and early 2016.<sup>13</sup> Current production rates from the Field are roughly 360 BO per day, 100 MCF of gas per day, and 10,000 BW per day.

Hilcorp estimates that it will recover an additional 60 million barrels of oil through its proposed enhanced recovery operations on the Unit.<sup>14</sup> The total cost to implement and operate this secondary recovery project is expected to be \$1.8 billion. The value of the oil to be recovered as a result of the unitization is expected to be \$ 3 billion. Hilcorp estimates the enhanced recovery project on the Unit to profit about \$581.05 million. Hilcorp estimates the total severance tax from the project to be about \$138 million. Hilcorp estimates that royalties to the General Land Office will be about \$51.085 million as a result of the project. Finally, Hilcorp estimates that royalties to others associated with the Unit stand to gain a collective total of about \$429.865 million, due to the enhanced recovery project.

#### **FINDINGS OF FACT**

1. Hilcorp Energy Company (Hilcorp) seeks Commission authority to designate the West Ranch (41A/98A Consolidated) Unit (Unit), as a unit for secondary or tertiary recovery purposes in the West Ranch (41-A & 98-A Cons.) Field (Field) in Jackson County, Texas (Subject Application).
2. Sufficient notice of the Subject Application was made on March 14, 2016.
3. Notice of the Subject Application was published in *The Jackson County Herald-Tribune*, a newspaper of general circulation in Jackson County, once per week for four consecutive weeks beginning on Wednesday, March 23, 2016.
4. The Unit consists of multiple tracts which contain 6,209.81-acres.
5. Lands owned by the State of Texas are within the Unit boundaries.
6. The Texas General Land Office elected to participate in the Unit Agreement made for the Unit.

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<sup>11</sup> Hilcorp Exh. No. 11.

<sup>12</sup> Hilcorp Exh. Nos. 12 and 13.

<sup>13</sup> Hilcorp Exh. No. 18.

<sup>14</sup> Hilcorp Exh. No. 26.

7. Hilcorp seeks to designate the correlative interval between the depths of 5,708 to 6,265 feet, as shown on the log of the West Jackson Ranch - A – 600 Well (API No. 42-239-33580) (Unitized Interval).
8. The proposed Unitized Interval is recognized by the Commission as a single field, and is known as the Field through Oil and Gas Final Order No. 02-0292677, effective January 27, 2014.
9. At the time of the hearing, 100% of the working interest ownership and 84.3376% of the royalty interest ownership had signed the unit agreement, executed by Texas Coastal Ventures, LLC (TCV) on January 23, 2015.
10. TCV owns 100% of the working interest in the Unit.
11. Secondary recovery operations are expected to result in the recovery of an estimated 60 million barrels of oil which may otherwise go unrecovered.
12. The total cost to implement and operate the secondary recovery project is expected to be \$1.8 billion.
13. The value of the oil to be recovered as a result of the unitization is expected to be \$3 billion.
14. The cost to conduct secondary recovery operations on the Unit in the proposed Unitized Interval does not exceed the value of additional reserves to be recovered from the proposed Unitized Interval.
15. The Unit Agreement was voluntarily executed by all parties affixing their signatures thereto and no person has been compelled to enter into the agreement.
16. The Unit Agreement binds only those persons who have executed it, their heirs, successors, assigns and legal representatives. The rights of all owners of interests in the field will be protected under the operation of the Unit, regardless of whether an owner signed the Unit Agreement.
17. The owners of interests in the oil and gas under each tract of land within the area reasonably defined by development have been given an opportunity to enter into the Unit on the same yardstick basis as owners of interests in the oil and gas under the other tracts in the Unit.
18. The proposed injection program will move hydrocarbons across lease lines, and unitization is necessary in order to protect the correlative rights of the various interest owners.
19. The unitization agreement is necessary to accomplish the purposes of establishing a Unit to effect secondary recovery operations for water injection and to operate cooperative facilities necessary thereto. Other available or existing methods or

facilities for secondary recovery operations are inadequate for the purpose of secondary recovery.

20. The Unit Agreement does not provide, either directly or indirectly, for the cooperative refining or marketing of crude petroleum, distillate, condensate, or gas, or any by-product thereof.
21. The Unit Agreement is subject to all valid orders, rules and regulations of the Railroad Commission.
22. The Unit Agreement contains no provision regarding the field rules, nor does it limit the amount of production of oil and gas from the unitized area.
23. The Unit Agreement does not release the operator from his obligation to reasonably develop lands or leases as a whole.
24. The Unit Agreement is a voluntary agreement entered into for the purpose of conducting secondary or tertiary recovery operations.
25. The Unit Agreement provides for the location of wells.
26. The Unit Agreement is in the interest of public welfare as being reasonably necessary to prevent waste and to promote conservation.
27. The proposed Unitized Interval described in the Unit Agreement is identified as a single reservoir for Commission purposes and is a suitable reservoir for a secondary or tertiary recovery project.
28. The Unit Agreement contains only the acreage reasonably necessary to accomplish the proposed secondary or tertiary recovery project.

#### CONCLUSIONS OF LAW

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code §81.051
2. All notice requirements have been satisfied. 16 Tex. Admin. Code §1.45
3. Applicant's proposed secondary recovery project satisfies all of the requirements set out in Tex. Nat. Res. Code Ann. §§101.001-052.
4. Approval of the proposed unit agreement for secondary or tertiary recovery operations is in the public interest and is necessary to prevent waste and to promote the conservation of oil or gas or both.

**EXAMINERS' RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the Examiners recommend that the Commission designate the West Ranch (41A/98A Consolidated) Unit as a unit for secondary or tertiary recovery purposes, as proposed by Hilcorp Energy Company.

Respectfully submitted,



Brian Fancher, P.G.  
Technical Examiner



Marshall F. Enquist  
Administrative Law Judge