



RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

Form H-1
05/2004

APPLICATION TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS

1. Operator name L.C.S. Production Company 2. Operator P-5 No. 479574
(as shown on P-5, Organization Report)

3. Operator Address PO Box 6663 Abilene, TX 79608-6663

4. County Fisher 5. RRC District No. 7B

6. Field Name Raven Creek (Strawn) 7. Field No. 74863600

8. Lease Name Touchstone A 9. Lease/Gas ID No. 32353

10. Check the Appropriate Boxes: New Project Amendment
If amendment, Fluid Injection Project No. F- _____
Reason for Amendment: Add wells Add or change types of fluids Change pressure
Change volume Change interval Other (explain) _____

RESERVOIR DATA FOR A NEW PROJECT

11. Name of Formation Canyon Sand, Palo Pinto Reef & Strawn Lime 12. Lithology Sand & Limestone
(e.g., dolomite, limestone, sand, etc.)

13. Type of Trap Stratigraphic, Structural Anticline 14. Type of Drive during Primary Production Solution Gas
(anticline, fault trap, stratigraphic trap, etc.)

15. Average Pay Thickness 100' 16. Lse/Unit Acreage 160 17. Current Bottom Hole Pressure (psig) 1,500 est

18. Average Horizontal Permeability (mds) 5-5.7 mds 19. Average Porosity (%) 10.7% - 13.9%

INJECTION PROJECT DATA

20. No. of Injection Wells in this application 1

21. Type of Injection Project: Waterflood Pressure Maintenance Miscible Displacement Natural Gas Storage
Steam Thermal Recovery Disposal Other _____

22. If disposal, are fluids from leases other than the lease identified in Item 9? Yes No

23. Is this application for a Commercial Disposal Well? Yes No

24. If for commercial disposal, will non-hazardous oil and gas waste other than produced water be disposed? Yes No

25. Type(s) of Injection Fluid:
Salt Water Brackish Water Fresh Water CO₂ N₂ Air H₂S LPG NORM
Natural Gas Polymer Other (explain) _____

26. If water other than produced salt water will be injected, identify the source of each type of injection water by formation, or by aquifer and depths, or by name of surface water source:

CERTIFICATE
I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that the data and facts stated therein are true, correct, and complete, to the best of my knowledge.

Bonnie Burklund 09/09/2022
Signature Date
Bonnie Burklund (bonnieburklund@gmail.com)
Name of Person (type or print)
Phone 512-799-4057 Fax _____

For Office Use Only Register No. Amount \$

RAILROAD COMMISSION OF TEXAS -- OIL AND GAS DIVISION

Form H-1A

INJECTION WELL DATA (attach to Form H-1)

| | | | | | | | | |
|--|--------------------------------|---------------|---|---|--|-----------------------------------|--------------------|--------------------|
| 1. Operator Name (as shown on P-5) L.C.S. Production Company | | | | | | 2. Operator P-5 No. 479574 | | |
| 3. Field Name Raven Creek (Strawn) | | | | | | 4. Field No. 74863600 | | |
| 5. Current Lease Name Touchstone A | | | | | | 6. Lease/Gas ID No. 32353 | | |
| 7. Lease is 7.5 miles in a Northeast direction from Eskota, TX (center of nearest town). | | | | | | | | |
| 8. Well No. 1 | 9. API No. 151-33107 | 10. UIC No. | 11. Total Depth 5,060' | 12. Date Drilled 02/27/2019 | 13. Base of Usable Quality Water (ft) 100'/USDW 600' | | | |
| 14. (a) Legal description of well location, including distance and direction from survey lines: 1,405 E'ly SL & 1,196' N'ly EL of Sec. 2, Blk 19, T & P Ry Co., | | | | | | | | |
| (b) Latitude and Longitude of well location, if known (optional) Lat. 32.611901 Long. -100.173805 (Nad 83) | | | | | | | | |
| 15. New Injection Well <input checked="" type="checkbox"/> or Injection Well Amendment <input type="checkbox"/> | | | | Reason for Amendment: Pressure <input type="checkbox"/> Volume <input type="checkbox"/> Interval <input type="checkbox"/> Fluid Type <input type="checkbox"/> | | | | |
| Other (explain) _____ | | | | | | | | |
| Casing | Size | Setting Depth | Hole Size | Casing Weight | Cement Class | # Sacks of Cement | Top of Cement | Top Determined by |
| 16. Surface | 8-5/8" | 151' | 12-1/4" | 23# | C | 100 | Surface | Circulation |
| 17. Intermediate | | | | | | | | |
| 18. Long string | 4-1/2" | 5,058' | 7-7/8" | 10.5# | C Lite&C | 285 | 3,051 | Calculation |
| 19. Liner/DV Tool | 4-1/2" | 2,094' | 7-7/8" | 10.5# | C Lite&C | 210 | 485 | Calculation |
| 20. Tubing size 2-3/8" | 21. Tubing depth 3,900' | | 22. Injection tubing packer depth 3,900' | | 23. Injection interval 4,000' to 5,060' | | | |
| 24. Cement Squeeze Operations (List all) | | | Squeeze Interval (ft) | | No. of Sacks | | Top of Cement (ft) | |
| 25. Multiple Completion? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | | 26. Downhole Water Separation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | NOTE: If the answer is "Yes" to Item 25 or 26, provide a Wellbore Sketch | | | |
| 27. Fluid Type Salt Water | | | 28. Maximum daily injection volume for each fluid type (rate in bpd or mcf/d) 2,000 bpd | | 29. Estimated average daily injection volume for each fluid type (rate in bpd or mcf/d) 500 bpd | | | |
| 30. Maximum Surface Injection Pressure: for Liquid 2,000 psig for Gas _____ psig. | | | | | | | | |
| 8. Well No. | 9. API No. | 10. UIC No. | 11. Total Depth | 12. Date Drilled | 13. Base of Usable Quality Water (ft) | | | |
| 14. (a) Legal description of well location, including distance and direction from survey lines: | | | | | | | | |
| (b) Latitude and Longitude of well location, if known (optional) Lat. _____ Long. _____ | | | | | | | | |
| 15. New Injection Well <input type="checkbox"/> or Injection Well Amendment <input type="checkbox"/> | | | | Reason for Amendment: Pressure <input type="checkbox"/> Volume <input type="checkbox"/> Interval <input type="checkbox"/> Fluid Type <input type="checkbox"/> | | | | |
| Other (explain) _____ | | | | | | | | |
| Casing | Size | Setting Depth | Hole Size | Casing Weight | Cement Class | # Sacks of Cement | Top of Cement | Top Determined by |
| 16. Surface | | | | | | | | |
| 17. Intermediate | | | | | | | | |
| 18. Long string | | | | | | | | |
| 19. Liner | | | | | | | | |
| 20. Tubing size | 21. Tubing depth | | 22. Injection tubing packer depth | | 23. Injection interval _____ to _____ | | | |
| 24. Cement Squeeze Operations (List all) | | | Squeeze Interval (ft) | | No. of Sacks | | Top of Cement (ft) | |
| 25. Multiple Completion? Yes <input type="checkbox"/> No <input type="checkbox"/> | | | 26. Downhole Water Separation? Yes <input type="checkbox"/> No <input type="checkbox"/> | | NOTE: If the answer is "Yes" to Item 25 or 26, provide a Wellbore Sketch | | | |
| 27. Fluid Type | | | 28. Maximum daily injection volume for each fluid type (rate in bpd or mcf/d) | | 29. Estimated average daily injection volume for each fluid type (rate in bpd or mcf/d) | | | |
| 30. Maximum Surface Injection Pressure: for Liquid _____ psig for Gas _____ psig. | | | | | | | | |