## RAILROAD COMMISSION OF TEXAS OIL AND GAS DIVISION

Form H-1

05/2004

APPLICATION TO	O INJECT FLUID INT	O A RESERVOIR P	RODUCTIVE	OF OIL OR GAS	03/2004			
1.Operator name L.C.S. Produ (as shown on P-5,	ction Companion	ny	_ 2. Operator	P-5 No. 479574				
3.Operator Address P O Box 66	63 Abilene,	ΓX 79608		<u>.</u>				
4. County Fisher				rict No. $7\mathrm{B}$				
6. Field Name <u>Eskota, North (</u>	Canyon Reef)		_ 7. Field No.	29328500				
8. Lease Name <u>Harvey A</u>			_ 9. Lease/Ga	s ID No30368	·			
10. Check the Appropriate Boxes:	New Project X	Amendment						
If amendment, Fluid Injection Project No. F								
Reason for Amendment: Add wells $\Box$ Add or change types of fluids $\Box$ , $\Box$ Change pressure $\Box$								
Change volume  Change interval  Other (explain)								
		TA FOR A NEW PI						
11. Name of Formation Canyon, Palo Pinto Reef & Strawn 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 260 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 %								
	INJECTIO	N PROJECT DATA	4	<u>,·</u>				
20. No. of Injection Wells in this applicat	ion 1							
21. Type of Injection Project: Waterflood  Pressure Maintenance  Maintenance  Natural Gas Storage								
Steam	☐ Thermal Re		sposal	☐ Other	_			
22. If disposal, are fluids from leases oth	er than the lease ider	tified in Item 9?	Yes □	. No 🗆				
23. Is this application for a Commercial I	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:	•							
	☐ Fresh Water ☐				. 🗆			
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		C 1.C	, , •					
Water will be coming fr	om the Canyo	<u> </u>	• • •					
CERTIFICATE		Bonnie	Burke	lund 05/23/202	22			
I declare under penalties prescribed in Sec. 91.143, Texas Natural Signature Date								
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 that the data and facts stated therein are true, correct, and								
complete, to the best of my knowledge.	are true, correct, and		(	U all.com)				
·		Phone <u>512-79</u>	y-4U3 /	Max <u>JUL - 6 2022</u>	_			
For Office Use Only	Register No.	·	Amount \$					
See Reverse Side for Required Attachments								

## **INSTRUCTIONS FOR FORM H-1**

- Application. File the original Form H-1 application, including all attachments, with Assistant Director, Environmental Services, Railroad Commission of Texas, P. O. Box 12967, Capitol Station, Austin, Texas 78711. File one copy of the application and all attachments with the appropriate Railroad Commission District Office. Include with the original application a non-refundable fee of \$200, payable to the Railroad Commission of Texas. Submit an additional \$150 for each request for an exception to Statewide Rule 46(g)(3) and/or (j)(5)(B).
- Well Logs. Attach the complete electric log or a similar well log for one of the proposed injection
  wells or for a nearby well. Attach any other logging and testing data, such as a cement bond log,
  available for the well that supports this application.
- 3. (a) For a new project, attach a map with surveys marked showing the location and depth of all wells of public record within one-quarter (1/4) mile radius of the proposed injection well(s).
  - (b) For an amendment to add wells to a previous authority, attach a map with surveys marked showing the location and depth of all wells of public record within one-quarter (1/4) mile radius of the additional wells, unless such data has been submitted previously for the project.
  - (c) **Table of Wells**. For those wells in 3(a) or 3(b) that penetrate the top of the injection interval, attach a table of wells showing the dates drilled and their current status. The Commission may adjust or waive this data requirement in accordance with provisions in the "Area of Review" section of Statewide Rule 46 (Rule 46(e)).
- 4. Water Letter. Attach a letter from the Texas Commission on Environmental Quality (TCEQ) or its predecessor or successor agencies for a well within the project area stating the depth to which usable quality water occurs.
- 5. **Form(s) H-1A**. Attach Form H-1A showing each injection well to be used in the project. Up to TWO wells can be listed on each Form H-1A.
- 6. Use of Fresh Water. Attach Form H-7, Fresh Water Data Form, for a new injection project that includes the use of fresh water. An updated Form H-7 must be attached to Form H-1 for an expansion of a previously authorized fresh water injection project unless the fresh water is purchased from a commercial supplier, public entity, or from another operator.
- 7. Plat of Leases, Notice and Hearings
  - (a) <u>Plat of Leases</u>. Attach a plat of leases showing producing wells, injection wells, offset wells and identifying ownership of all surrounding leases within one-half (1/2) mile.
  - (b) Notice.
  - (1) Send or deliver a copy of the application to the owner of record of the surface tract on which the well(s) is located; each Commission-designated operator of any well located within one-half (1/2) mile of the proposed injection well(s); and the clerk of the city and county in which the well(s) is located. If this is the initial application for fluid injection authority for this reservoir, send copies of the application to all operators in the reservoir. Attach a signed statement indicating the date the copies of the application were mailed or delivered and the names and addresses of the persons to whom copies were sent.
  - (2) <u>Attach an affidavit of publication</u> signed by the publisher that notice of the application has been published in a newspaper of general circulation in the county where the well(s) will be located. Notice instructions and forms may be obtained from the Commission's Austin Office, the Commission's website (www.rrc.state.tx.us) or the District Offices. Attach a newspaper clipping of the published notice.
  - (c) <u>Protests and Hearings</u>. An affected person or local government may protest this application. A hearing on the application will be held if a protest is received and the applicant requests a hearing, or if the Commission determines that a hearing is in the public interest. Any such request for a public hearing shall be in writing and contain: (1) the name, mailing address and phone number of the person making the request; and (2) a brief description of how the protestant would be adversely affected by the granting of the application. If the Commission determines that a valid protest has been received, on that a hearing would be in the public interest, a hearing will be held after issuance of proper and timely notice of the hearing by the Commission. If no protest is received within fifteen (15) days of publication or receipt in Austin of the application, the application may be processed administratively.

## 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  3. Field Name Eskota, North (Canyon Reef)  5. Current Lease Name Harvey A  2. Operator P-5 No. 479574  4. Field No. 29328500  6. Lease/Gas ID No. 30368											
3. Field Name Eskota, North (Canyon Reef)  4. Field No. 29328500											
5. Current Lease Name Harvey A  6. Lease/Gas ID No. 30368											
7. Lease is 7.5 miles in a NE direction from Eskota, TX (center of nearest town).  8. Well No. 1 9. APJ No. 151-32759 10. UIC No. 11 Total Depth 5,300' 06/12/2009 (ft) 100'/USDW 600'  14. (a) Legal description of well location, including distance and direction from survey lines: 330' FEL & 890' FSL of Section 3. Blk 19. T&P RR Co. A-392											
(b) Latitude and Longitude of well location, if known (optional) Lat. Long.  15. New Injection Well ☑ or Injection Well Amendment □ Reason for Amendment: Pressure □ Volume □ Interval □ Fluid Type □											
Other (explain)											
Casing	Size	Setting Depth	Hole Size		ight .	Cement Class	# Sacks of Cement	Top of Cement	Top Determined by		
16. Surface 17. Intermediate	8-5/8"	121'	12-1/4"	2	24#	C	75	Surface	Circulation		
18. Long string	4-1/2" 4-1/2"	4,840'	7-7/8"	1	0.5#	C	275	Surface	Circulation		
19. <del>Liner</del> Tool 20. Tubing size	21. Tubing	depth	7-7/8" 22. Injection	on tul	0.5# bing packe	C & C lite	575 23. Injection	Surface	Circulation		
2-3/8"	2-3/8"   3,900'   3,900'						_4,000' to _5,200'				
		ions (List all)				,	No. of Sacks		Top of Cement (ft)		
							vill be no	more thar	100' rat hole		
below the bottom permitted injection interval.											
25. Multiple Completion?  26. Downhole Water Separation?  NOTE: If the answer is "Yes" to Item 25 or 26, provide a Wellbore Sketch  Yes \( \subseteq \text{No \( \omega \)} \)											
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)					
Salt Water			2,000 bpd			1,000 bpd					
2 2 2 2											
30. Maximum Sur 8. Well No.	face Injection 9. API No	on Pressure:	for Liquid 2,000 psig for Gas psig.  10. UIC No.   11. Total Depth   12. Date Drilled   13. Base of Usable Quality Wa					psig.			
		vell location, include			1		, ,	(ft)	or obable Quality Water		
14. (a) Legal des	cription of v	veil location, includ	ing distanc	e and	a direction	from survey lin	es:				
(b) Latitude a	ind Longitud	de of well location,	if known (o	ption	al) Lat.			Long.			
15. New Injection	Well □ o	Injection Well Ar	mendment [		Reason fo		Pressure	Volume 🔲 🏻 in	terval ☐ Fluid Type ☐ ☐		
Casing	Size	Setting Depth	Hole Siz	Cas		Cement	# Sacks of	Top of	Top Determined by		
16. Surface					ight	Class	Cement	Cement	. Sp 2 storring by		
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)			
_4 4 4 4 58 58 5 68 5 68 5 68 5			The state of the s			* 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	isa ta				
in Kilon balanda Karaman I. Jerinat Nag Maraman Jangan Pro			total folia massimilia di Nordani di Nordani			e type and the later					
25. Multiple Completion?  Yes □ No □			26. Downhole Water Separation?  Yes □ No □				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.			

- 1. File as an attachment to Form H-1 to provide injection well data for each application for a new injection well permit or to amend an injection well permit.
- 2. Complete the current field name and number (Items 3 and 4) with the current field designation in Commission records.
- Complete the current lease name and number (Items 5 and 6) with the current lease identification in Commission records for each well in the application. Use separate H-1A Forms for each lease.
- 4. Provide the current well number(s) for existing wells in Item 8. Provide the proposed well numbers for wells that have not yet been drilled.
- 5. Check in Item 15 the appropriate box for a new injection well permit or an amendment to an injection well permit. If an amendment, check-the appropriate boxes for the reason(s) for the application(s) for amendment. If "other" is checked, provide a brief explanation.
- 6. Provide complete well construction information (Items 16 through 26), including all proposed re-completion (e.g. liner, cement squeeze, tubing, packer). Attach additional sheets if necessary. For Item 19, if the liner was not to the surface, indicate both the top and the bottom depth of the liner as the "Setting Depth."