

DATE IN 05/06/09	SUSPENSE	ENGINEER W. Jones	LOGGED IN 05/06/09	TYPE SWD	APP NO. PKAA0912649761
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ABOVE THIS LINE FOR DIVISION USE ONLY

RECEIVED NEW MEXICO OIL CONSERVATION DIVISION

2009 MAY 6 AM 11 38

1220 South St. Francis Drive, Santa Fe, NM 87505



30-015-32876
Henry #003
CHI Operating
4378

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☒ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

5-6
15
5-21-09

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Robin Ascew
Print or Type Name

Robin Ascew
Signature

Regulatory Clerk 5-4-09
Title Date

robina@chienergyinc.com
e-mail Address

Injection Permit Checklist (7/8/08)

Case _____ R- SWD WFX _____ PMX _____ IPI _____ Permit Date _____ UIC Qtr _____

Wells 1 Well Name: Strawn Henry No. 3

API Num: (30-) 015-32876 Spud Date: _____ New/Old: _____ (UIC primacy March 7, 1982)

Footages 990 FSL & 1850 FWL Unit N Sec 22 Tsp 22S Rge 27E County Eddy

Operator: CHI OPERATING INC. Contact Robin Askeew

OGRID: 4378 RULE 40 Compliance (Wells) 4/119 (Finan Assur) 1

Operator Address: P.O. Box 1799 midland, TX 79702

Current Status of Well: Released Rig 10/14/03 T&A'd 2-20-08 CIBP@ 10,490

Planned Work to Well: _____		Planned Tubing Size/Depth: _____			
	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method	
Existing _____ Surface	<u>17 1/2 13 3/8</u>	<u>224'</u>	<u>200 SXS</u>	<u>Surface</u>	
Existing _____ Intermediate	<u>12 1/4 9 5/8</u>	<u>5455'</u>	<u>650 + 600 SXS</u>		
Existing _____ Long String	<u>8 3/4 5 1/2</u>	<u>12,115'</u>	<u>955 SXS</u>	<u>7000'</u>	

DV Tool _____ Liner _____ Open Hole _____ Total Depth _____ PBTD _____

Well File Reviewed Yes 5-27-09

Diagrams: Before Conversion _____ After Conversion _____ Elogs in Imaging File: LL, FDC, CNL

Intervals:	Depths	Formation	Producing (Yes/No)
Above (Name and Top)	<u>8871</u>	<u>Wolfcamp</u>	
Above (Name and Top)	<u>9654</u>	<u>Canyon</u>	
Injection.....			
Interval TOP:	<u>10,512'</u>	<u>Carlsbad</u>	<u>Yes</u> <u>10,510-556</u>
Interval BOTTOM:	<u>10,600'</u>	<u>"</u>	
Below (Name and Top)	<u>10,680</u>	<u>Atoka</u>	

OCD
ARTESIA

Fee land

inject@
10512'-10,600'

Sensitive Areas: Capitan Reef _____ Cliff House _____ Salt Depths _____

.... Potash Area (R-111-P) _____ Potash Lessee _____ Noticed? _____

Fresh Water: Depths: 0-200' Wells(Y/N) Y Analysis Included (Y/N): Y Affirmative Statement _____

Salt Water: Injection Water Types: _____ Analysis? _____

Injection Interval: Water Analysis: Yes Hydrocarbon Potential _____

Notice: Newspaper(Y/N) Y Surface Owner William Weems Mineral Owner(s) _____

RULE 701B(2) Affected Parties: _____

Area of Review: Adequate Map (Y/N) _____ and Well List (Y/N) _____

Active Wells _____ Num Repairs _____ Producing in Injection Interval in AOR _____

..P&A Wells _____ Num Repairs _____ All Wellbore Diagrams Included? _____

Questions to be Answered:
Carlsbad Strawn

Devon well is a gas producer

Required Work on This Well: _____ Request Sent _____ Reply: _____

AOR Repairs Needed: _____ Request Sent _____ Reply: _____

_____ Request Sent _____ Reply: _____

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: CHI Operating Inc.
ADDRESS: Post Office Box 1799 Midland TX 79702
CONTACT PARTY: Robin Askew, Regulatory Clerk PHONE: _____
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes X No
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Robin Askew TITLE: Regulatory Clerk
SIGNATURE: [Signature] DATE: 5-4-09
E-MAIL ADDRESS: robina@chienergyinc.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

OPERATOR: _____ CHI OPERATING, INC. _____

WELL NAME & NUMBER: _____ HENRY #3 _____

WELL LOCATION: _____ 990 FSL & 1650 FWL _____ N _____ 22 _____ 22S _____ 27E _____
FOOTAGE LOCATION _____ UNIT LETTER _____ SECTION _____ TOWNSHIP _____ RANGE _____

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA
Surface Casing

Hole Size: _____ 1 7/2 _____ Casing Size: _____ 13 3/8 _____

Cemented with: _____ 475 _____ sx. _____ or _____ ft³

Top of Cement: _____ SURFACE _____ Method Determined: _____ CIRC _____

Intermediate Casing

Hole Size: _____ 12 1/4 _____ Casing Size: _____ 9 5/8 _____

Cemented with: _____ 1250 _____ sx. _____ or _____ ft³

Top of Cement: _____ SURFACE _____ Method Determined: _____ CIRC _____

Production Casing

Hole Size: _____ 8 3/4 _____ Casing Size: _____ 5 1/2 _____

Cemented with: _____ 955 _____ sx. _____ or _____ ft³

Top of Cement: _____ 7000' _____ Method Determined: _____ CBL _____

Total Depth: _____ 12,115' _____

Injection Interval

_____ PERF 10,512 _____ feet to _____ 10,600 _____

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8 Lining Material: plastic coated

Type of Packer: Arrowset 1-X

Packer Setting Depth: was set @ 10,416, pulled and stored

Other Type of Tubing/Casing Seal (if applicable): 5 1/2 CIBP set @ 10,450'

Additional Data

1. Is this a new well drilled for injection? Yes X No

If no, for what purpose was the well originally drilled? OIL & GAS PRODUCTION

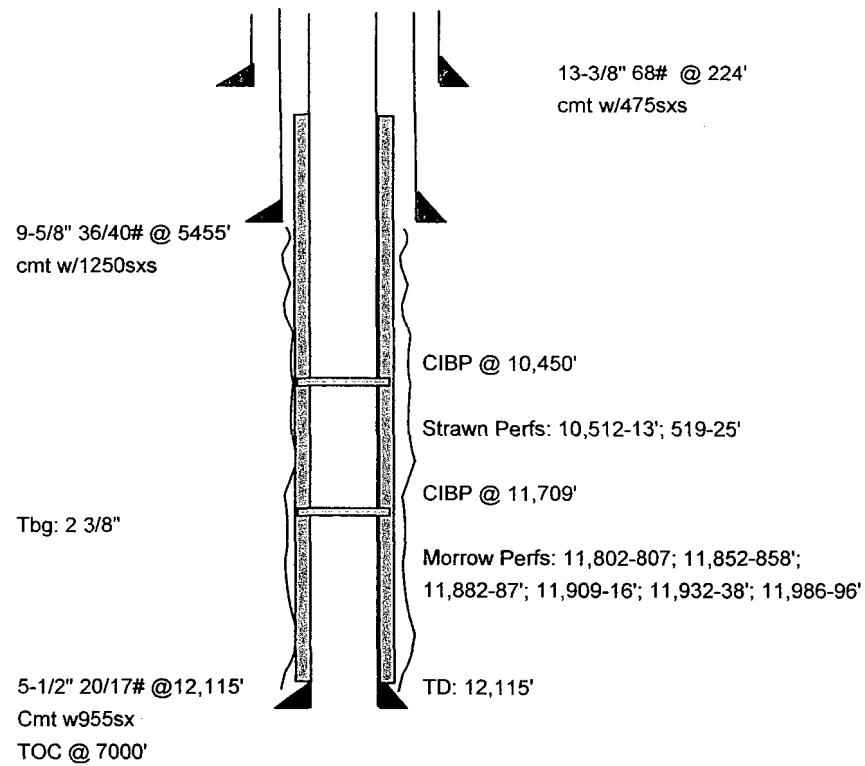
2. Name of the Injection Formation: STRAWN

3. Name of Field or Pool (if applicable): CARLSBAD STRAWN

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. See Schematic

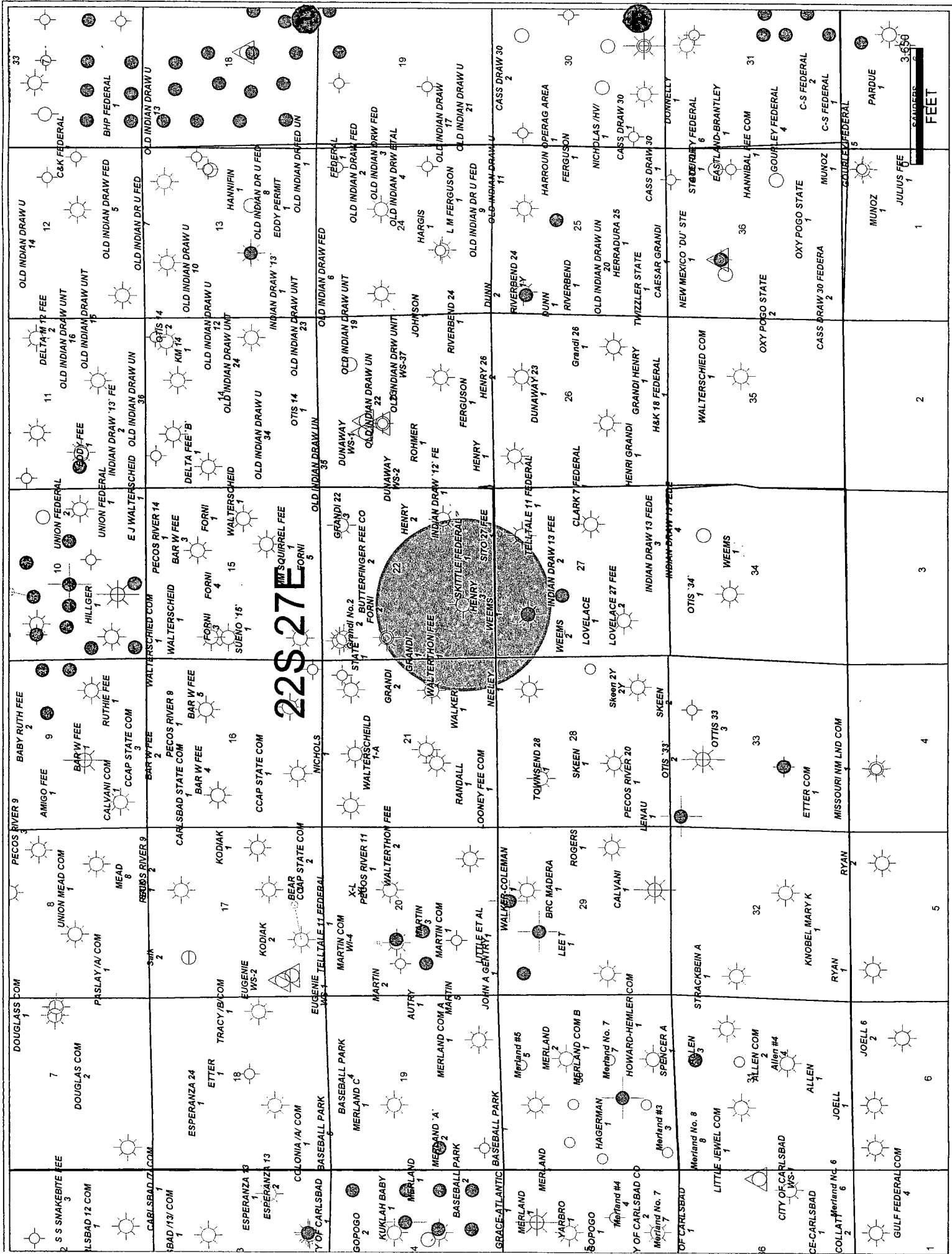
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

Henry #3



ATTACHMENT V

Map that identifies all wells of public record within two miles of each proposed injection well, and the area of review one-half radius around each proposed injection well.



ATTACHMENT VI

Data on all wells of public record within the area of review.
There are no plugged wells that penetrated the proposed
injection zone within the area of review.

WELL NAME	LOCATION	SPUD DATE	SUR CSG	INT CSG	PROD CSG	COMPLETION
Devon Energy #1 Weems	27C-22S-27E	5/16/1984	13 3/8" @ 455' 1000sxs	9 5/8" @ 5505' 2575sxs	5 1/2" @ 12,032' 715sxs	10,510-556' Strawn Gas



water issue

ATTACHMENT VII

1. Proposed average of 500 bbls per day and Maximum of 1000 bbls per day of injected fluids at a rate of one bbl per min.
2. System will be closed.
3. Average anticipated pressure of 600 psi and maximum of 900 psi.
4. Source of produced water is re-injected water from offsetting leases.
5. Water analysis is attached.

Attn: Gary Womack
Fax # 1-432-687-2662

B J Services Water Analysis

Artesia District Laboratory
(505)-746-3140

Date: 10-Feb-04
Company: CHI Operating
Lease: Henry
State: NM
Depth:

Test #:
Well #: #3 ✓
County: Eddy
Formation: Strawn
Source:

*Injection
water
Analysis*

pH	6.24	Temp (F):	57.7
Specific Gravity	1.085		

<u>CATIONS</u>	mg/l	me/l	ppm
Sodium (calc.)	35553	1546.5	32768
Calcium	6336	316.2	5839
Magnesium	753	62.0	604
Barium	< 25	---	---
Potassium	< 10	---	---
Iron	230	8.3	212

<u>ANIONS</u>			
Chloride	68400	1929.5	63041
Sulfate	184	3.8	170
Carbonate	< 1	---	---
Bicarbonate	342	5.6	315

Total Dissolved Solids(calc.) 111798 103040

Total Hardness as CaCO₃ 18924 378.1 17441

COMMENTS: Resistivity (ohm-meters--calc.) 0.111885

SCALE ANALYSIS:

CaCO₃ Factor 2164309 Calcium Carbonate Scale Probability-> Probable
CaSO₄ Factor 1267160 Calcium Sulfate Scale Probability ---> Remote

Stiff Plot



ATTACHMENT VIII

The proposed injection zone is porous dolomite limestone. There is possible drinking water in the surface sands at a depth of 0-200 feet. There is no known source underlying the injection interval.

ATTACHMENT IX

1) Acidize with 5000 gals 15% NeFe HCL.

ATTACHMENT XI

There is no active fresh water well within one mile of the proposed disposal well.

ATTACHMENT XIV

PROOF OF NOTICE

Leasehold operators within one-half mile of the well location are: Santa Fe Energy was provided a copy of our application by certified mail. Proof of notice is enclosed. The surface owner is William A. Weems.

PROOF OF PUBLICATION

Proof of publication is from the Artesia Daily Press.

Copies of the application have been sent to:

Devon Energy Corporation
20 North Broadway
Oklahoma City, OK 73102-8260

Certified Mail #
7007 0220 0002 4967 2147

William A. Weems
13803 Baytree
Sugarland, Texas 77478

7007 0220 0002 4967 2154

ATTACHMENT XII

All available geologic and engineering data have been examined and there is no evidence of open faults or any other hydrologic connection between the disposal zone and source of drinking water.

Affidavit of Publication

NO. 20245

STATE OF NEW MEXICO

County of Eddy:

GARY D. SCOTT being duly

sworn, says: That he is the PUBLISHER of The

Artesia Daily Press, a daily newspaper of general
circulation, published in English at Artesia, said county
and county and state, and that the here to attached

Legal Notice

was published in a regular and entire issue of the said
Artesia Daily Press, a daily newspaper duly qualified
for that purpose within the meaning of Chapter 167 of
the 1937 Session Laws of the state of New Mexico for
5 Consecutive week/days on the same

day as follows:

First Publication	June 12, 2008
Second Publication	June 13, 2008
Third Publication	June 15, 2008
Fourth Publication	June 17, 2008
Fifth Publication	June 18, 2008

Subscribed and sworn to before me this

18th Day June 2008

Kimberly J. Combs
Notary Public, Eddy County, New Mexico

My Commission expires April 5, 2011

Copy of Publication:

Notice of Application for Fluid Injection Well Permit
Chi Operating, Inc., c/o Gary Womack 432-685-5001, P.O. Box 1799, Midland, TX 79702 is applying to the NMOCD for a permit to inject fluid into a formation which is production of oil and gas. The applicant proposes to inject fluid into the Strawn Henry #3. The proposed injection well is located in Section 22, T22S, R27E in the Carlsbad Strawn Field, Eddy Co., NM. Fluid will be injected into strata in the subsurface depth interval from 10,512 - 10,600'. Interested parties must file objections or requests for hearing With the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days. Published in the Artesia Daily Press, Artesia, N.M. June 12, 13, 15, 17, 18, 2008
Legal 20245

Notice of Application for Fluid Injection Well Permit

Chi Operating, Inc., c/o Gary Womack 432-685-5001, P.O. Box 1799, Midland, TX 79702 is applying to the NMOCD for a permit to inject fluid into a formation which is production of oil and gas. The applicant proposes to inject fluid into the Strawn Henry #3. The proposed injection well is located in Section 22, T22S, R27E in the Carlsbad Strawn Field, Eddy Co., NM. Fluid will be injected into strata in the subsurface depth interval from 10,512 – 10,600'

Interested parties must file objections or requests for hearing With the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

709 W. INDIANA
MIDLAND, TEXAS 79701
FAX (432) 682-8819