STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

## OIL CONSERVATION DIVISION

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 FORM C-108 7/12/96 Revised 7-1-81

688

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APPI	ICATION	EUB	AUTHORIZATION	TO INJECT

Ι.		X Secondary Recovery Pressure Maintenance Disposal Storage tion qualifies for administrative approval? yes no
II.	Operator:	GREAT WESTERN DRILLING COMPANY (009338)
	Address:	P.O. BOX 1659 MIDLAND, TEXAS 79702
	Contact par	rty: PAT WELCH Phone: (915) 682-5241
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 If yes, giv	expansion of an existing project? X yes one no ve the Division order number authorizing the project 10251.

- 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:
    - Proposed average and maximum daily rate and volume of fluids to be injected;
    - 2. Whether the system is open or closed;
    - 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 geological data on the injection zone including appropriate lithologic detail, geological 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 source 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 source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification

to the best of my knowledge and belief.

Name: GINA HOWARD Title PRODUCTION TECH.

Signature: Date: July 2, 1996

I hereby certify that the information submitted with this application is true and correct

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance 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 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, P. O. Box 2088, Santa Fe, New Mexico 87501 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.

## INJECTION WELL DATA SHEET

	1190' FSL & 990'	FWL 5	188	39E
ELL NO.	TOOTAGE EUCATION	SECTION	TOWNSHIP	RÄNGE
Scher	matic	<u> Ta</u>	bular Data	
,		Surface Casing		
		Size <u>8 5/8</u> "	Cemented wi	th 200 s
		TOC SURFACE		
		Hole size 12 1/4		,
		Intermediate Casing		
		Size N/A	Comented wi	th
		100		
	Depth 500'			
	•	Long string		
		Size <u>5 1/2</u> "	Cemented wit	th 1500
1		TOC SURFACE	feet determined by	CIRCULATE
		Hole size 7 7/8	,	
		Total depth 5400'		
		Injection interval		
		5150 feet to perforated or open-hol	5350	feet
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	Depth 5400'			
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GUIBERSO (bra or describe	2 3/8lined	packer at		
GUIBERSO (bra or describe ther Data	2 3/8 lineo  N  nd and model)  any other casing-tubing	packer at		
GUIBERSO (bra or describe ther Data  Name of	2 3/8 lines  ON  nd and model)  any other casing-tubing  the injection formation	packer at packer at SAN ANDRES	5100 <b>'</b>	
GUIBERSO (bra or describe ther Data Name of	2 3/8 lines  ON  Ind and model)  any other casing-tubing  the injection formation  Field or Pool (if applie	packer at g seal).  SAN ANDRES  cable) S. CARTER (S/	5100 <b>'</b> 'A)	
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GUIBERSO (bra r describe ther Data Name of Name of	2 3/8  2 3/8  2 3/8  2 3/8  2 3/8  2 3/8  2 3/8  2 3/8  2 3/8  2 1ine of the injection formation formation formation field or Pool (if applied a new well drilled for the injection formation for the injection fo	packer at g seal).  SAN ANDRES  cable) S. CARTER (S/	(A)	feet
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of the earlier submittal.

#### OIL CONSERVATION DIVISION

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501

FORM C-108 Revised 7-1-81

APPLICA	ATION FOR AUTHORIZATION TO INJECT
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II.	Operator: GREAT WESTERN DRILLING COMPANY (009338)
	Address: P.O. BOX 1659 MIDLAND, TEXAS 79702
	Contact party: PAT WELCH Phone: (915) 682-5241
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? $\fbox{X}$ yes $\fbox{D}$ no If yes, give the Division order number authorizing the project $\fbox{10251}$ .
<b>v.</b>	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 whic 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:
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and</li> <li>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.).</li> </ol>
VIII.	Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological 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 source known to be immediately underlying the injection interval.
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	I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
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## INJECTION WELL DATA SHEET

Name of the injection formation SAN ANDRES  Name of Field or Pool (if applicable) S. CARTER (S/A)  Is this a new well drilled for injection? XX Yes // No  If no, for what purpose was the well originally drilled?  Has the well ever been perforated in any other zone(s)? List all such perforated interval and give plugging detail (sacks of cement or bridge plug(s) used)	GREAT W	ESTERN DRILLING COM	PANY S. CARTER	(S/A) UNIT	
Schematic    Surface Cosing   Surface Cosing   Size 8 5/8   Cemented with 200   Too SURFACE   Feet determined by CIRCULATE   Hale size 12 1/4     Intermediate Casing   Size N/A   Cemented with 100   Feet determined by Depth 500' Hale size   1/2   Cemented with 1500   Too SURFACE   Feet determined by Depth 500' Hale size   7 7/8   Total depth 5400'   Injection interval   5150   Feet to 5350   Feet (part of comented with 1500   Feet					39E
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	Has the		d in any other zone(s)?	? List all such per	
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of the earlier submittal.

### OIL CONSERVATION DIVISION POST OFFICE BOX 2008 STATE LANG OFFICE BUILDING SANTA FE NEW MEXICO 8/501

FORM C-108 Revised 7-1-81

APPLIC	ATION FOR AUTHORIZATION TO INJECT
I.	Purpose: X Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? yes no
II.	Operator: GREAT WESTERN DRILLING COMPANY (009338)
	Address: P.O. BOX 1659 MIDLAND, TEXAS 79702
	Contact party: PAT WELCH Phone: (915) 682-5241
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? $[X]$ yes $[I]$ no If yes, give the Division order number authorizing the project $\underline{10251}$ .
٧.	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 whice 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:
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and</li> <li>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.).</li> </ol>
VIII.	Attach appropriate geological data on the injection zone including appropriate lithologi detail, geological 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 source known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
х.	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 source 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: GINA HOWARD Title PRODUCTION TECH.
	Signature: July 2, 1996
• If th	the information required under Sections VI, VIII, X, and XI above has been previously itted, it need not be duplicated and resubmitted. Please show the date and circumstance

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

#### 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 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, P. O. Box 2088, Santa Fe, New Mexico 87501 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.

# INJECTION WELL DATA SHEET

GREAT WESTERN DRILLING COMPANY S. CARTER (S/A) UNIT

TELL NO.	FOOTAGE LOCATION			39E
	TOUTAGE EUCATION	SECTION	TOWNSHIP	RANGE
S-h		-		
Schei	matic		bular Data	
}	11	Surface Casing	0	200
		Size 8 5/8 "		
		TOC SURFACE Hole size 12 1/4		CIRCULATE
		Intermediate Casing		
		Size N/A "	Cemented with	
1		TOC f	fect determined by	
	Depth 500'	Hole size		
		Long string		
	,	Size 5 1/2 "	Cemented with	1500
		TOC SURFACE	eet determined by	CIRCULATE
		Hole size 7 7/8	· · · · · · · · · · · · · · · · · · ·	
		Total depth 5400'		
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