CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS
Operator: J.M. HUBER CORP. Well: SURRIOR 'A STATE NO.1
Contact: <u>Don Canman</u> Title: <u>P.E.</u> Phone: <u>713.871.447</u>
DATE IN 8.22.96 RELEASE DATE 9.6.96 DATE OUT 9.19.96
Proposed Injection Application is for: WATERFLOOD Expansion Init
Original Order: R Secondary Recovery Pressure Maintenanc
SENSITIVE AREAS X SALT WATER DISPOSAL Commercial W
WIPP Capitan Reef
Data is complete for proposed well(s)? 46 Additional Data Req'd
AREA of REVIEW WELLS
$\frac{3}{2}$ Total # of AOR $\frac{4}{2}$ # of Plugged Wells
Tabulation Complete Schematics of P & A's
Cement Tops Adequate AOR Repair Required
INJECTION FORMATION PERF! 5873 - 6086'
Injection Formation(s) Sw Augus 5500-6100 Compatible Analysis
Source of Water or Injectate Workcamp PROPULED
PROOF of NOTICE
Copy of Legal Notice Information Printed Correctly
Correct Operators Operator
<u>M</u> O Objection Received Set to Hearing Date
NOTES: COURCE of AOR WELLS HAVE GUESTIONASCE CEMENT BU.
ANOTHER SWD WAS PERMITTED IN THE POR IN 1985.
APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL? 45
COMMUNICATION WITH CONTACT PERSON:
1st Contact:TelephonedLetterDate Nature of Discussion
2nd Contact:TelephonedLetter Date Nature of Discussion
3rd Contact: Telephoned Letter Date Nature of Discussion

Oil Conservation Div. 2040 Pacheco St.

STATE OF NEW MEXICO RESOURCES DEPARTMENT Santa Fe, NM 87505

**FORM C-108** 

### APPLICATION FOR AUTHORIZATION TO INJECT

I.	Application qualifies for administrative approval?  Pressure Maintenance  X Disposal  Storage					
II.	OPERATOR: J. M. Huber Corporation					
	ADDRESS: 1900 West Loop South, Suite 1600, Houston, Texas 77027					
	CONTACT PARTY: Donald E. Lanman PHONE: 713/871-447					
Ш.	WELL DATA: Complete the data required on the reverse side of this form for each well processed 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. (See Attached)					
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. (See Attached)					
VII.	Attach data on the proposed operation, including: (See Attached)					
	<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/1 or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval. (See Attached)					
IX.	Describe the proposed stimulation program, if any. (See Attached)					
* 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. (See Attached)					
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. (See Attached)					
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: Donald E. Lanman, P.E.  TITLE: Sr. Staff Petroleum Engineer  SIGNATURE: Lanman DATE: August 19, 1996					
	SIGNATURE: Limal Estama DATE: August 19, 1996					
*	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 circumstance of the earlier submittal.					

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

#### 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, PO Box 2088, Santa Fe, NM 87504-2088 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.



## STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

### OIL CONSERVATION DIVISION HOBBS DISTRICT OFFICE

8/23/96
GOVERNOR

POST OFFICE BOX 1980 HOBBS, NEW MEXICO 88241-1980 (505) 393-6161

OIL CONSERVATION DIVISION P. O. BOX 2088	
SANTA FE, NEW MEXICO 87501	
RE: Proposed:  MC DHC NSL NSP SWD WFX PMX	
Gentlemen:	
I have examined the application for the:  IM Huber Corp Superior A State #1-N 7-15s-35.  Operator Lease & Well No. Unit S-T-R  and my recommendations are as follows:	· @
Yours) very truly	
Jerry Sexton Supervisor, District 1	

/ed

#### J. M. HUBER CORPORATION

OIL AND GAS DIVISION

1900 WEST LOOP SOUTH • SUITE 1600 HOUSTON, TEXAS 77027

(713) 871-4400

August 19, 1996

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Kevin O. Butler & Associates, Inc. Box 1171
Midland, Texas 79702

Re: Conversion of J. M. Huber Corp.'s Superior State "A" #1 Water Disposal Well

#### Gentlemen:

This is notification to you, as a leasehold operator within one-half mile of the subject well's location, that J. M. Huber Corporation proposes to convert the Superior State "A" #1, Section 7, T15S, R35E, Lea County, New Mexico, to a salt water disposal well. Attached are copies of the application for authorization to inject. Any objections or requests for hearing of administrative applications must be filed with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days from the date this application was mailed to you.

Very truly yours,

J. M. HUBER CORPORATION

Donald E. Lanman, P.E.

Senior Staff Petroleum Engineer

DEL/ksj Attachments

#### J. M. HUBER CORPORATION

OIL AND GAS DIVISION
1900 WEST LOOP SOUTH • SUITE 1600 HOUSTON, TEXAS 77027

(713) 871-4400

August 19, 1996

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Great Western Drilling Company Box 1659 Midland, Texas 79702

Re: Conversion of J. M. Huber Corp.'s

Superior State "A" #1 Water Disposal Well

#### Gentlemen:

This is notification to you, as a leasehold operator within one-half mile of the subject well's location, that J. M. Huber Corporation proposes to convert the Superior State "A" #1, Section 7, T15S, R35E, Lea County, New Mexico, to a salt water disposal well. Attached are copies of the application for authorization to inject. Any objections or requests for hearing of administrative applications must be filed with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days from the date this application was mailed to you.

Very truly yours,

J. M. HUBER CORPORATION

Donald E. Lanman, P.E.

Senior Staff Petroleum Engineer

DEL/ksj Attachments

#### **EXHIBIT VI**

## WELLS LOCATED WITHIN 1/2 MILE RADIUS OF REVIEW OF J. M. HUBER SUPERIOR STATE "A" #1

<u>Operator</u>	Lease & Well Name	Location	Total Depth	Current Status
Union Oil Co. of Calif.	State "7" #1	Unit D, Sec. 7, T15S, R35E	10,700'	P&A
J. M. Huber Corporation	James O'Neill St. #1	Unit E, Sec. 7, T15S, R35E	10,500	Prod.
J. M. Huber Corporation	James O'Neill St. #3	Unit F, Sec. 7, T15S, R35E	10,500'	Prod.
J. M. Huber Corporation	Cabot "Q" State #1	Unit L, Sec. 7, T15S, R35E	14,254'	SWD
J. M. Huber Corporation	Superior State #2	Unit L, Sec. 7, T15S, R35E	10,500'	Prod.
J. M. Huber Corporation	Superior State #1	Unit K, Sec. 7, T15S, R35E	10,500'	Prod.
Great Western	Glen Cleveland #2	Unit J, Sec. 7, T15S, R35E	10,618'	Prod.
J. M. Huber Corporation	State "Q" #2	Unit M, Sec. 7, T15S, R35E	10,445'	P&A
Kevin O. Butler & Assoc. (formerly Union Oil Co. of Calif.)	Gulf Federal #1	Unit H, Sec. 12, T15S, R34E	10,703'	SWD
J. M. Huber Corporation	Stoltz Federal #1	Unit J, Sec. 12, T15S, R34E	10,400'	Prod.
Kevin O. Butler & Assoc. (formerly Union Oil Co. of Calif.)	Union "A" Federal #1	Unit P, Sec. 12, T15S, R34E	10,450'	Prod.
J. M. Huber Corporation	James O'Neill State #2	Unit C, Sec. 7, T15S, R35E	10,589'	P&A
J. M. Huber Corporation	Stoltz Federal #2	Unit J, Sec. 12, T15S, R35E	10,430'	P&A

#### **EXHIBIT VII**

#### DATA ON THE PROPOSED OPERATION:

1. Proposed average and maximum daily rate and volume of fluids to be injected.

Average rate: 1800 BWPD Maximum rate: 2500 BWPD

Volume of fluids: Above rate until economic limit is reached

2. Whether the system is open or closed: Closed

3. Proposed average and maximum injection pressure:

Average pressure: 500 psig Maximum pressure: 1000 psig

4. Sources and appropriate analysis of injection fluid from the Lower Wolfcamp formation. See attached analysis.

Compatibility with receiving formation. Formation water from the Lower Wolfcamp is being injected into the San Andres formation in the Huber Stoltz No. 1 (M-Sec. 6, T15S, R35E) and in the Union Gulf Federal No. 1-12 (H-Sec. 12, T15S, R35E) and Cabot "Q" State (L-Sec. 7, T15S, R35E) without any apparent compatibility problems.

5. Chemical analysis of disposal zone formation water. See attached tabulation of analyses taken from various San Andres wells in Lea County, New Mexico.

#### **EXHIBIT VIII**

#### **SUMMARY OF GEOLOGIC DATA:**

The proposed injection zones in the J. M. Huber Superior State "A" #1, located 660' FSL and 1980' FWL, Section 7, T15S, R35E, are in the Permian San Andres Formation; the subject interval occurs from 5873' (-1819') to 6086' (-2032'). (See log for specific intervals.) The respective tops of the San Andres Formation and Glorieta Sand occur at 4550' (-496') and 6224' (-2170'). The overall interval is 213' thick and consists predominantly of brown-to-tan Dolomite with interbedded dense brown-to-tan limestones. The dolomites vary from fine-to-coarsely-crystaline with indicated porosities ranging from 10% to 24% in the injection zones; tight carbonates with interbedded shales bound the proposed injection interval.

Injection of salt water into the proposed interval will not affect shallow fresh-water zones of the tertiary or triassic age units.

#### **EXHIBIT IX**

#### **DESCRIPTION OF PROPOSED STIMULATION PROGRAM**

Acidize perforations 5873' to 6086'.

#### **EXHIBIT XII**

Available geologic and engineering data has been examined and no evidence of open faults or any other hydrologic connection exists between the disposal zone and any underground source of drinking water.

#### **EXHIBIT XIV**

- Great Western Drilling Co. Box 1659 Midland, Texas 79702 (915) 682-5241
- Kevin O. Butler & Associates, Inc. Box 1171 Midland, Texas 79702 (915) 682-1178

#### Affidavit of Publication

STATE OF NE	W MEXICO )	
	)	s
COUNTY OF L	EA )	

Joyce Clemens being first duly sworn on oath Adv. Director deposes and says that he is THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled  Legal Notice					
######################################					
$\textbf{\textit{Chiraly}}. \textit{XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX$					
entire issue of THE LOVINGTON DAILY LEADER and					
not in any supplement thereof, Sheexed **********************************					
SANGE YEAR YOUR WAREN, for one (1) day					
tonsecurive weeks, beginning with the issue of					
July 31 19 96					
and ending with the issue of					
and ending with the issue of July 31 19 96					
And that the cost of publishing said notice is the					
And that the cost of publishing said notice is the sum of \$ 14.86					
And that the cost of publishing said notice is the sum of \$ 14.86  which sum has been (Paid) (Assessed) as Court Costs					
And that the cost of publishing said notice is the sum of \$ 14.86  which sum has been (Paid) (Assessed) as Court Costs  Subscribed and sworn to before me this 12th					
And that the cost of publishing said notice is the sum of \$					

#### **LEGAL NOTICE** To whom it may concern: J.M. Huber Corporation proposes to convert the following well to a produced water disposal well: Superior State "A" #1, Section 7, T15S, R35E, 660' FSL & 1980' FWL, Lea County, New Mexico.

The intended purpose of the injection well is to accept lower Wolfcamp reduced water in the San Andres formation at a depth between 5500-6100'. The estimated maximum injection pressure and rate will be 1000 psi and 2500 BPD, respectively. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2008, Santa Fe, New Mexico 87501. within 15 days from the date of this publication.

Forturther information, contact Donald E. Lanman at J.M. Huber Corporation, 1900 West Loop South, Suite 1600, Houston, Texas 77027, (713) 871-4474. Published in the Lovington Daily Leader July 31, 1996. P. O. BOX 1468 MONAHANS, TEXAS 79756 PH. 943-3234 OR 563-1040

#### 709 W. INDIANA MIDLAND, TEXAS 79701 PHONE 683-4521

#### **RESULT OF WATER ANALYSES**

	LA	ABORATORY NO	796181	
ro: <u>Mr. Joe Harrison</u>	SA	AMPLE RECEIVED	7-24-96	)
110 N. Marienfeld, Ste 380, Midl	and, TX RE	ESULTS REPORTED	7-25-96	)
	79701-4412			
COMPANY J. M. Huber Corporation	LEA	ASE <u>As list</u>	ced	
FIELD OR POOL	Morton			
SECTION BLOCK SURVEY	COUNTYLea	STATE	NM	
SOURCE OF SAMPLE AND DATE TAKEN:				
NO.1 Raw water - taken from tan				
NO.2 Raw water - taken from tan	ık @ windmill (C	).6 mi. E. of (	O'Nie1 #2).	
NO.3 Raw water - taken from wat	er well @ wellh	nead (0.3 mi. V	V. of Stoltz #	<sup>‡</sup> 1).
NO. 4				
		, , , , , , , , , , , , , , , , , , , ,		
REMARKS:				
CHE	MICAL AND PHYSICAL NO. 1	NO. 2	NO. 3	NO 4
Specific Gravity at 60° F.	1.0019	1.0017		NO. 4
	1.0017	1.001/	1.0015	
pH When Sampled pH When Received	7.35	7.42	7.51	
Bicarbonate as HCO <sub>3</sub>	244	312	210	
Supersaturation as CaCO <sub>3</sub>		J12		
Undersaturation as CaCO <sub>3</sub>				
Total Hardness as CaCO <sub>3</sub>	288	350	244	
Calcium as Ca	108	118	84	
Magnesium as Mg	4	13	8	
Sodium and/or Potassium	91	38	28	
Sulfate as SO.	128	103	86	
Chloride as Cl	108	48	31	
Iron as Fe	0.20	0.20	0.20	
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	683	633	448	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0	0.0	0.0	
Resistivity, ohms/m at 77° F.	11.75	13.95	19.70	
Suspended Oil	+		<del></del>	
Filtrable Solids as mg/l	-			
Volume Filtered, ml	6.2		2 /	
Nitrate, as N	6.2	4.4	3.4	
	Results Reported As Milligran	ms Per Liter		
Additional Determinations And Remarks The unders	signed certifies		be true and o	correct to
the best of his knowledge and be				
		<u> </u>		
			111	

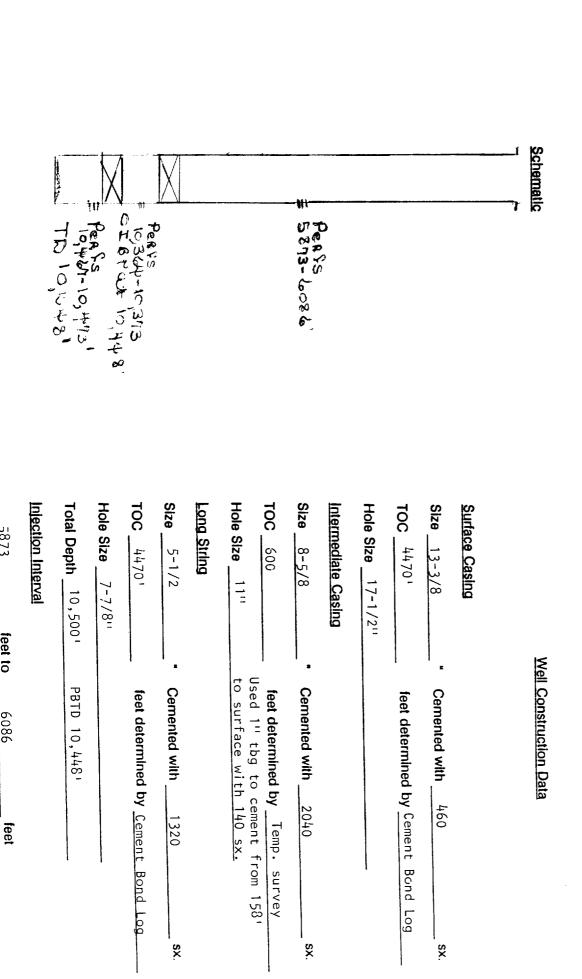
Form No. 3

Waylan C. Martin, M.A.

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## **INJECTION WELL DATA SHEET**

WELL NO. **OPERATOR** J. M. Huber Corporation 660' FSL & 1980' FWL FOOTAGE LOCATION LEASE Superior State "A" SECTION TOWNSHIP RANGE



(perforated or open-hole; Indicate which)

feet to

# INJECTION WELL DATA SHEET

Tubln	Removed pump, rods and tubing from wellbore 2-2093		set in a
	None	(type of internal coating) packer at None	feet
Other	Other type of tubing / casing seal if applicable N/A		į
Other Data	Data		
<del></del>	Is this a new well drilled for injection?	No X	
	If no, for what purpose was the well originally drilled? Oil well - Wolfcamp	ed? Oil well - Wolfcamp	
<b>%</b>	Name of the Injection formation San Andres		
က်	Name of Field or Pool (if applicable) 14/A		
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. 10,467-10,473 CIBP set at 10,4481,	ie(s)? List all such perforated intervals a s) used. 10,467-10,473' CIBP set	at 10,448',
	10,364-10,373' CIBP set at 10,300' with 35'	h 35' cement.	
າຕ່	Give the names and depths of any over or underlying oil of gas zones (pools) in this area.	ing oil of gas zones (pools) in this area.	
	Overlying - none identified		
	Underlying - the Lower Wolfcamp at 10,338'	338'	

Superior "A" State J.M. Huber Corporation OPERATOR LEASE 660' FSL & 1980' FWL 155 35E WELL NO. FOUTAGE LUCATION SECTION TOWNSHIP RANGE Schematic Tabular Data Surface Casing TOC @ 600' Size 13-3/8" @ 440' " Comented with 460 ex. TOC circulated \_\_ feet determined by \_\_\_\_\_ 13% CSG.@ 440' Hole size 17-12" Intermediate Casing Size 8-5/8" @ 4556' # Cemented with 2040 TOC \_\_600' feet determined by Temp Survey Used 1" tbg. to cmt from 158' to Hole size 11" - surface w/140 sx. Long string TOC @ 4470 Size 5½" @ 10,500' Cemented with 1320 85/ "CSG.@ 4556" TOC 44701 \_ feet determined by Cmt Bond Log Hole size <u>7-</u>7/8" Total depth 10,500' PBTD: 10,448' Injection interval feet to (perforated or open-hole, indicate which) Spud: 9/12/84 Complete: 10/29/84 Perforations: 10,364'-373' 10,467'-473' SI under CIBP @ 10,448' Current Status: Producing from Lower Wolfcamp CIBY WA 10,300' W/35 Cm+ CIBP@ 10,448' 5/2 "CSG. @ 10,500" Tubing size \_\_\_\_ \_\_\_\_ lined with \_ \_ packer at (brand and model) (or describe any other casing-tubing seal). Other Data 1. Name of the injection formation \_\_ 2. Name of Field or Pool (if applicable) In this a new well drilled for injection? / Yes If no, for what purpose was the well originally drilled? \_\_ Hos the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Give the depth to and name of any overlying and/or underlyims oil or gos zones (pools) in thin oren.

Dive the depth to and name of any overlying and/or underlyimm oil or gas zones (pools) in

<u> Ex4</u>

this oren.

1	766' FWL & 1874' FNI	LEASE 7	158	35E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
,				WARE
Cal	-	·	•	<del></del>
Schem !	atie		ular Data	
		Surface Casing		•
		Sizo 11-3/4" @ 440" "		
	3/ <sup>#</sup>	TOC Circulated for	eet determined b	y
	11% csa.e 440	Hole size 14-3/4"		
		Intermediate Cosing		
		Size 8-5/8" @4618" "	Cemented will	th 2050
		TOC Circulated fe		
		Hole size 11"	or accermance ()	
	TOC@ 3990'			
		Long string		
		Size $5\frac{1}{2}$ " @ 10,500' "		
	8½"csa. @ 4618	, TOC Fe	et determined by	circulation
TA IT	0 % (SG. @ 4610	Hole size 7-7/8"		afety jt @ 40
A A		Total depth 10,500' P	BTD: 10,451'	
	•	Injection interval		
		feet to		feet
A A.	•	(perforated or open-hole	, indicate which	<u>)</u>
и и		Spud: 8/22/81		
	•	Complete: 10/22/81 Perforations: 10,321'	-401 <sup>†</sup>	
		Current Status: Produ		fcamp
4 9	•	•		
D B	÷			
H B	·			
Ŋ #		!		
#				
m	5½" csq. € 10,50	<b>~</b> ′		
	- 5/2 C3G. @ 10,50	·	•	
Tubing size _	lined	s with		set in a
		(materi	B.L.)	faat
(bran	d and model)	packer st	<u>,</u>	
(or describe	any other casing-tubing	seal).		
Other Data			•	
l. Name of t	he injection formation			
	ield or Pool (if applic			
•		•	7 No.	,
		injection? / Yes /		
If no, fo	r what purpose was the	well originally drilled?		
-	<u> </u>			
4. Has the w	ell ever been perforate	ed in any other zone(a)? ( of cement or bridge plug(a	ist all such per	rforated interv
	braddind oprati (packa	or comone or arrange hrad()	-,	
and give				
				<del></del>

	Corporation	James O'Neill State	<u> </u>	
PERATOR		LEASE	<u> </u>	
CLL NO.	1980' FWL & FNL FOUTAGE LOCATION	7 SECTION	15S TOWNSHIP	35E RANGE
				MAGAL
Schem	nt i c			
			abular Data	
		Surface Casing		(10
		Sizo 13-3/8" @ 424'		·
	= 13 3/8" CSG.@ 4	70C Circulated		у
		Hole size <u>17-1/2"</u>		
		Intermediate Casing		
		Size 8-5/8" @ 4573	Cemented wi	th 2000
		TOC Circulated	feet determined b	у
1 pr	/ TOC @ 3900'	Hole size 11"		
	. **	Long string  Size 5-2" @ 10,498'	N Pamertes 4	1190
) / C	8% "CSG.@ 45"	75 TOC 3900'		
		Hole size 7-7/8"		у
		Total depth 10,500'		•
		total oopth		
	•	Injection interval		
} }.		feet t		feet
) N		(perforated or open-ho	ole, indicate which	1)
3 . 13		Spud: 4/8/84		
1 13		Complete: 6/15/84 Perforations: 10,25	58'-10 373' 10 4	21'-454'
1 17		SI ur	nder CIBP @ 10,40	0'
		Current Status: Pro	oducing, Lower Wo	lfcamp
1 13				
<b>特</b>	•		•	
<del> </del>	CIBP@ 10,400	<b>,</b>		
<b>₩</b>				
1 13	,,,,,			
m	5½"csa@ /	0, <b>4</b> 98	•	
bing mize _	1i	ned with(male	rial)	set in a
	d and model)	pocker o	t	feet
•	any other casing-tub	ing seal).		
			•	
		on		•
Nume of C	told on Pool (if and	licable)		
•		•		<del></del>
		r injection? / Yes		
If no, fo	er what purpose was t	he well originally drilled	)	
•				
llas the w	ell ever been perfor plugging detail (sac	ated in any other zone(s)? ks of cement or bridge plu	/ List all such po ng(s) waed)	erforated interv
•	· · · · <del>· · · · · ·</del> · · · · · · · · ·			
				· - <del></del>

こうしょう かんしゅう かんかい こうきゅう しょうかい また 大変ななる こうしゅうかん アンドラ ないないない

#### WELL DATA SHEET

ease CABOT Q State SWD Nº /	Well No.
ocation NW/2 SW/4 SEC. 7, T-15-5, R-35-E	County LEA State New Mexico
. B. Elev. 4053' . L. Elev. 4041' istance "H" 12'	Date Completed BEGAN INJ: MAY 1985 Formation (s) SAN ANORES
	Initial Production Oil B/D Pump () Flow () Water B/D Other Gas MCF/D
13-3/6 " 48 #	Initial Treatments
N Set @ 363	
9-3/ "CSG. BOWL @ 562'	
TOP OF 5-1/2 CSG.	Workovers
9-56" 36 1404	
Gr. 555 Thd. Set @ 4630	
note 32. 12-74	
PKR 49 "FL" ON OFF TOOL DHSOV @ 5509' CMT. TOP 13 ABOVE	
5560	
PERF 5628 - 6050 (04)	
SEE ATTACHED DETAIL DIAGRAM)	
	Present Production OilB/D
CIBP @ 6410' WI CMT	Pump () Flow () Water B/D Other Gas MCF/D
26 SX PLUG 7890'- 8090'	Present Producing Equipment
26 5x Prug B640'-8840'	
Annon N	Dungan d Mauli
W/ 26 SX ON TOP	Proposed Work
5-1/2" 4 14 : 20	
Gr. J. 55, Kr. Thd. LTC	
Set @ 12.160 W/ Sks. Hole Sz. 7-76"	
PBTD: 6200'	
,	Prepared By <u>MGH</u> Date <u>10.13.9</u>
ABOT "Q" STATE-SWD #1 HWI =	

PERATOR	Corporation	Superior State LEASE		
2 LL NU.	1980' FSL & 810' F	FWL 7 SECTION	15s TOWNSHIP	35E RANGE
Schem	ntic	Te	obular Data	
		Surface Casing		
		Sizo 13-3/8" @ 406 *	Comented with	. 460
	13-36 050.0 40	TOC Circulated	reet determined by	
	<b>78</b> - 416 70	% Hole size 17½"		
1 10	•	Intermediate Casing		
		Size 8-5/8" @ 4600"	Cemented with	1900
		TOC Circulated		
		Hole size 11"	, , , , , , , , , , , , , , , , , , ,	<del></del>
	٠,	Hole Blace		
1	TOC@ 4240	Long string		
M		Size $5\frac{1}{2}$ " @ 10,500 \	Cemented with	1525
Me	8% CSG.@ 4600'	TOC 4240'	feet determined by	Temp Survey
N	- 76	Hole size 7-7/8"		
N		Total depth10,500'	PBTD: 10.456'	
	_			
Ŋ	•	Injection interval		
η.		(perforated or open-ho.	o le indicate which)	feet
A	·		ie, indicate which,	
. 1	,	Spud: 8/17/84 Complete: 9/24/84		
		Perforations: .10,406		
Ŋ		Current Status: Prod	ducing, Lower Wolf	camp
1)				
13			·	
Ŋ				
$\mathbb{N}$				
静				
Ŋ				
	5½"csa.@ 10,50	∞'		
•			•	
ing size _	line	ed with(mater	rial)	set In e
		packer si	t	feet
•	d and model) any other casing-tubi	nn seall.		
	any beneficasing-twois			
er Data		n		
			a'	
Nume of F	ield or Pool (if appl.	icable)		<del></del>
Is this a	new well drilled for	injection?		
		e well originally drilled?		
If no, fo				
If no, fo	•			
Han the w	ell ever been norfers	ted in any other zone(s)? s of cement or bridge plug	List all such peri	orated interva

Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

ERATOR 1	1980' FSL & FWL	LEASE 7	150	25-
LL NO.		SECTION	158 TOWNSHIP	35E RANGE
			· · · · · · · · · · · · · · · · · · ·	
Scheme	ntic	To	bular Data	
TIM	-	Surface Casing	•	
		Sizo 13-3/8" @420' "	Cemented with	560
		TOC <u>circulated</u>	feet determined by	
	13% csq.@ 420	lole size 17½"	····	
1 10		Intermediate Casing	•	
1 10		Size 8-5/8" @ 4576' "	Cemented with	2100
1 113		TOC circulated		
		Hole size 11"		
		Long string		
	55/ <sup>N</sup>	51 6 10 (001	Cemented with	1460
	8% CSG.@ 4576	TOC 5960'		
}		Hole size 7-7/8"	· · · · · · · · · · · · · · · · · · ·	Car Dona Bo
		Total depth 10,500'	PBTD: 10,420'	
1	TOC@ 5960'	Injection interval		
	_	•	n	feet
	•	(perforated or open-hol Spud: 11/13/83	le, indicate which)	
		Complete: 1/4/84		
1 1		Perforations: 10,352	9'-443' SI under	CIBP @ 10.420
		Current Status: Prod	ducing from Lower	Wolfcamp
			•	
∯				
🗱		•		
	- CIBPA 10420'			
₩	CIBP® 10,420' 5½"CSG @ 10,498'			
	5½ CSG @ 10,498		•	
	•		•	
ing size _	line	d with(mater	Y-011	set in a
		packer at	:	feet
	d and model)	•		
	any other casing-tubin	g seal).		
er Data				
Name of th	he injection formation	16 14 14 Jan 19 W.		· · · · · · · · · · · · · · · · · · ·
Name of F	ield or Pool (if appli	cable)		<del></del>
Is this a	new well drilled for	injection?	_7 No	
If no, for	r what purpose was the	well originally drilled?		·
	ell ever been perforat	ed in any other zona(a)?	List all such perf	orated interv
llas the w		or rement of Dridde blud	](#) aggn\	
llas the we	plunging detail (sacks			
ilas the want of and give (	plugging detail (sacks			

**₹•** 

•	€IN.	RETION WELL DATA SHEET		· ·
reat Weste	rn	Glen Cleveland		
PERATOR 2	2080' FSL & FEL	LEASE 7	15s	200
	FOUTAGE LUCATION	SCOTION	TOWNSHILL	35E RANGE
· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·
Schen	ntic	<u>. To</u>	bular Data	
1 1192	<del>-</del>	Surface Casing		•
		Sizo 13-3/8 : 453	Comented wi	th 475
Na		IOC circulated		
	13 % CSG.@ 453	Hole size 17 "	Toda accimined by	
		Intermediate Casing		
		Size 9-5/8" @ 4630' "	Cemented wit	h 1900 .
	•	TOC _circulated	feet determined by	·
		Hole size 124"		
2 2	700 @ 45m'	Long string		
	1500' 9% css.@ 4630'	c- 5k" 0 10 618! "		1200
	9% CSS @ 4630°	Size 5½" @ 10,618' "	· ·	
a 12		TOC 4500	feet determined by	Temp. Survey
<b>a b</b>		Hole size 7-7/8"		
		Total depth 10,618'		
a 17		Injection interval		
<b>3</b> . B			<u>.</u>	
1 1		(perforated or open-ho)	le, indicate which	reet
1 1		Spud: 7/13/84		
1 · 13	· .	Completion: 10/24/84		
1 V		Perforations: 10,300'		11-16
a R		Current Status: Prod	ucing from Lower	wolicamp
1 11		•		
1 9				
1 1/2	•		•	
霎		•		
1 7				
l b				
more	5½"CSG @ 10,618'		•	
nina miza	line	d with		set in a
Dring Bire _		(moter	ial)	
Chran	d and model)	packer at	·	feat
•	any other casing-tubin	g seal).		
			•	
			•	
-	and the second s	ceble)		
	e di	injection?	<del></del>	•
16 aa 6a	r what purpose was the	well originally drilled?		
21 110, 10				

Give the depth to and name of any overlying and/or underlying oil or gas zones (paols) in this area.

Cabot Corpor	ration	"Q" State		
	660' FSL & 520' FWL FOOTAGE LUCATION		15S TOWNSOTP	35E RANGE
Schom	ntic	Tabu	lar Duta	
	N SX, CMT. PLUG	Size 13-3/8" @ 364 "		
	13% CSG@ 364' 25 SX, CMT. PLUG	for circulated fee	et determined by	
7////	25 SX. CMT. PLUG	Size 8-5/8" @ 4618"		
	85/ "csg. cut @ 1478'	TOC fee  Hole size	et determined by _	
	85/"csg.@4618"	Long string Size None " TOC fee		***************************************
1/////		Hole size 7-7/8"  Total depth 10,445'		***************************************
77777	25 9x: CMT, PLUG 6020'-6120'	Injection interval		feet
7////	— 25 9X CMT. PLUG 7250'- 7350'	Spud: 9/24/66 Complete: P & A	indicate which)	
7777	25 SX.CMT PLUG 7980'-8180'	Perforations: None Current Status: P & A	10/31/66	
	50 SX. CMT. PLUG	•		
. (///)	10,245'-445'		• , ,	
Tubing size _	lined	with(materia	1)	set in a
	nd and model)	packer at		feet
	any other casing-tubing	seal).		
	any conce coarny couring			
Other Data				
			<u> </u>	
•	ield or Pool (if applica			· · · · · · · · · · · · · · · · · · ·
3. Is this o	new well drilled for in	njection? / Yes /	No	, · · · · · · · · · · · · · · · · · · ·
If no, fo	or what purpose was the b	well originally drilled?		
4. Hos the want give	ell ever been perforated plugging detail (sacks o	d in any other zone(s)? L of cement or bridge plug(s	ist all such perfo ) used)	orated intervals
5. Give the		y uverlying and/or underly	imy oil or yos zo:	nes (pools) in

DPERATOR	Co. of California	Gulf Federal		· · · · · · · · · · · · · · · · · · ·
	1980' FNL & 660' FEL	12	<b>15</b> S	34E
ELE NO.	FOUTAGE LOCATION	SCRITON	TOWNSHIP	RANGE
Schen				
3011611			abular Data	
	_	Size 11-3/4" @ 376'	M. Composted with	ss 300
	en_//3/ csg@ 376	TOC circulated		. ————
	tu//4 CG@ 3/6	Hole size 15"		
	•	Intermediate Casing		
A		Size 8-5/8" @ 4621	Cemented wil	thn
A		TOC 2575	feet determined by	, calculation
þ		Hole size 11"		
В		Long string		·.
И		Size 5½" @ 10,703'	• Cemented wit	h 400 s
3	F/*	TOC 7000		
Ne	_ 8% CSG. @ 4621'	Hole size _7-7/8"	•	
1		Total depth 10,703		
Jen	√5½°CSG, CUT © <b>561</b> 0'	Injection interval		
井		4621' feet to (perforated or open-ho	o 5610'	feet Open Hol
#		5855' to 6583': per	•	•
11111	-75 EX. CMT. PLUG	Spud: 11/12/64		
	7186' to 7923'	Complete: 12/31/64	in San Andres	
ann er	CIBP@ 10,308' my		er Wolfcamp P & A	in 1972
	15 SX. CMT. ON TOP TOC ( AC, 270'			
/ <del></del>	- CMT. RETAINER			
\ <del> </del> #~	@ 10,396' —PERFS 10,417-424'		•	
The state of the s	SOUGEZED CMT. RETAINER			-
	@ 10,470' PERFS 10,500'-504'	2071	,	,
ma	CIBP@ 10,586	SQ <del>S</del> U.	•	
			• •	
ibing size	2-3/8" lined	with Plastic Applic	ators 501	. set in a
	n Unipacker VI	•	erial) et <u>4500                                    </u>	feet
(bro	nd and model)	•	7300	
r describe	any other casing-tubing	scal).	•	
her Data				
	the injection formation			
•	Field or Pool (if applic			<del></del>
•	a new well drilled for i		<u>/</u> X/ No	
If no, f	or what purpose was the	well originally drilled	? Lower Wolfcam	<u> </u>
	ell was depleted and P			
and give	well over been perforate plugging detail (sacks	of cement or bridge plu	10(8) 8360) <u>10.338</u>	3'-349': 10.417
10,500	'-504'; 10,602'-607'; S	see schematic above fo	or plugging detail	.s

The Lower Wolfcamp @ 10,338' is underlying.

		Stoltz Federal		<del></del>
T WELL NO.	1980' FEL & 2130' : FOUTAGE LOCATION	FSL 12 SECTION	. 15S TOWNSHIP	34E RANGE
Schem	ntic	<u>Ye</u>	bular Data	
<del>ii iin</del>	_ ·	Surface Casing		
		Size 13-3/8" @ 370' "		<del></del>
	13 % CSG. @ 370	TOC Circulated		by
11 114		fiole size 17½"	·	
		Intermediate Casing		
11 11	~~~ 70C@ 36/4'	Size 8-5/8" @ 4330" "	Cemented v	ith <u>200</u>
11 19		TOC 3614		by Temp. Survey
		Hole size 12½"		-
	85 csa.@ 1330	Long string		
		Size 4½" @ 10,400" "		
A For	CMT. SQZ 5472 - 7480	TOC 9750' Hole size 7-7/8"	feet determined	by Temp Survey
N 1 3	/ 54/2 - 7480	Hole size 7-7/8"	iotes in csg. n	ave been repaired .cmt. squeezes fr
N NA		Total depth 10.400'		5472' to 7480'
		Injection interval	•	
[ - []		feet to (perforated or open-ho)	e. indicate whi	feet
				,
	TOCO 9750'	Spud: 12/13/65 Complete: 3/16/66		
	- 100 1130	Perforations: . 10,242		
N N		Current Status: Prod	ucing from Low	er worlcamp
NI NI			•	
	4½"csc @ 10 40	<b>,</b>		
	4½ "css.@ 10,400		•	
			•	set in a
		ed with(mater		set in a
ubing size _	lind	ed with(mater	·ial)	<del></del>
ubing size (bra		ed with pocker at		<del></del>
ubing size (brade)	line and model)	ed with pocker at		<del></del>
ubing size (brainer describe	nd and model) any other casing-tubin	ed with packer at		<del></del>
ubing size (brain or describe ther Data of	nd and model)  any other casing-tubin  the injection formation	ed with		<del></del>
(braing size (brain) or describe other Data of the Name of the Nam	line and model) any other casing-tubir the injection formation Field or Pool (if appl:	ed with		<del></del>
(braing size (braing)	nd and model)  any other casing-tubin  the injection formation  Field or Pool (if appl:	ed with		feet
(braing size (braing)	nd and model)  any other casing-tubin  the injection formation  Field or Pool (if appl:	ed with		feet
(braing size  (braing or describe  ther Data  Name of its  Is this  If no, fi	nd and model) any other easing-tubin the injection formation field or Pool (if appl: a new well drilled for or what purpose was the	ed with	/7 No	perforated interva
(braing size  (braing size)  (braing	nd and model) any other easing-tubin the injection formation field or Pool (if appl: a new well drilled for or what purpose was the	icable)  injection? // Yes  well originally drilled?	/7 No	perforated interva

Reding O, titler Assoc. Inc.

Union 011 Co. of California "A" Federal

DPERATOR

1 766' FSL & FEL 12 158 34E

WELL NO. FOUTAGE LOCATION SECTION TOWNSHIP RANGE

Schematic Tabular Data

Surface Casing

Schomatic	Tabular Data
113/ @ 350'	Surface Casing  Size 11-3/4 @ 350' " Comented with 300 sx.  TOC Circulated feet determined by - Hole size 15"
	Intermediate Casing  Size 8-5/8" @ 4620" Cemented with 400 ax.  TOC 4557' feet determined by Survey  Hole size 11"
TOC @ 4557'  8 % "csq.@ 4620'	Long string  Size $5\frac{1}{2}$ " @ 10,450' " Cemented with 400 sx.  TOC 7680' feet determined by Calculation  Hole size $7-7/8$ "
70C@ 7680'	Total depth 10,450' PBTD: 10,419'  Injection interval  feet to feet (perforated or open-hole, indicate which)
	Spud: 6/26/66 Complete: 8/02/66 Perforations: .10,335'-369', Lower Wolfcamp Current Status: producing
5/2 (SG. @ 10,450'	•

ubing size	lined with	(material)	,	set in a
·		pocker at		feet
(brand and mode	1)	• •		
or describe any other	casing-tubing seal).			
ther Data			÷ ,	
. Name of the injecti	on formation		1	
	ol (if applicable)		'\	
	drilled for injection?		,	•
If no. for what pur	pose was the well origin	ally drilled?		
•				
. Has the well ever t	een perforated in any at clail (sacks of cement o	her rone(s)? List nll r bridge plug(s) used)	such perfor	ated interv

#### WELL DATA SHEET

Lease	James O'Neill State Com	Well No2
Location	660' FNL & 1980' FWL Section 7-T15S-R35E	County Lea State New Mexico
K. B. Elev. G. L. Elev. Distance "H"	4062' 4044' 18'	Date Completed 2/3/83 Formation (s) Morton Wolfcamp
	Plug 65' to suas.	Initial Production Oil 15 B/D Pump (X) Flow () Water 25 B/D Other Gas 24 MCF/D
	11-3/4" 42 # Set @ 397 W/ 525 Sks.	Initial Treatments Perf 2 HPF 10,174-176' & 10,179-184', acidize w/2000 gals 15% HCL.  Perf 10,339-340', 10,343-346', 10,352-353', 10,376-379', 10,382-386', 10,402-406' and 10,410-416' w/2 HPF, acidize w/4500 gals 15% HCL.
	9149 3319-3465 35 5x	No. I consequent to the second
	8-5/8 " 24,28,32#  Gr. S80 Thd. STC  Set @ 4592  W/ 2200 Sks.  Hole Sz. 11"	6/15/95 - Set 5-1/2" CIBP @ 10.000"
	(Cmt circ) Plug 4420'-4645' 25 5x Class H	
	7428-7653' 25 5x Class H	
		Present Production Oil B/D Pump ( ) Flow ( ) Water B/D Other Gas MCF/D
3 8	CIBP @ 10,000'	Present Producing Equipment
: : :	Perf 10,174.10,416'	Proposed Work
	CIBP @ 10,500' w/12' cmt on Lop  5-1/2" 17 #	
•	5-1/2" 17 # Gr.N80,K55Thd.STC Set @ 10,589 ' W/ 1985 Sks. Hole Sz. 7-7/8"	
	• .	
	10,589' otal Depth 10,000'	Prepared By D. Buchanan Date 3/22/91  updated ty DLB 6/16/9

DIVISION COPY

1

SIMULTANEOUS COMPENSATED

Schlumberger

T 1	COMPANY	J. M. HUBER C	CORPORATION	Z
ECAM:				
TS A	WEIL	SUPERIOR A ST	STATE #1	
· -	FIELD	MORTON - WOLF	WOLFCAMP	
EK1	COUNTY	LEA S	STATE	NEW MEXICO
	1980'	FWL, 660' FSL		Other Services:
N	ITA20			BHC
COMPAN FIELD FOCATIO TOCATIO	I SERIAL NO. SEC.	7 15-S	RANGE 35-E	DLL/MSFL
	6.1.		4038	4054 KB 4054
Log Measured From Drilling Measured From.		16 Ft. Above	Above Perm. Datum	D.F. 4053 G.L. 4038
Date	10-2-84			
Run No.	ONE			
Depth-Driller	10500			
Depth-Logger	10501			
8tm. Log Interval	10498			
Toping Interval	8 5/80 LESE	(6)	@	@
Casing-Logger	555		D)	יע
Bit Size	2 7/8			
밁	35			
<u>.</u>	9			
pH Fluid Loss	11 16 m	Ε		Ē
Rm @ Meas. Temp.	┿		(e)	°F (0)
Rmf @ Meas. Temp.	(a)	(a)	(9)	@
Rmc @ Meas. Temp.			<b>®</b>	.F @
Source: Rmf Rmc				
Rm @ BHT	_	. ®	<b>®</b>	°F (Ø
M. Circulation Stopped	0200			
I Logger on Bottom	1200			
	148	3.		<b>4</b> .
Equip. Location	8069 HOBBS			
Recorded By	MCDONALD			
Witnessed By	HORNE	_		-

1090

