



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

November 26, 1973

I. R. TRUJILLO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

SWD-151

Hardin-Houston, Inc.
P. O. Box 4188
Odessa, Texas 79760

Gentlemen:

Your application to Dispose of Salt Water by Injection into a Porous Formation (Form C-108) dated November 1, 1973, has been considered for administrative approval. However, the application is confusing and believed inadequate for approval without a hearing. For example: your submitted Form C-108 does not specify either tubing size or setting depth, whereas the diagrammatic sketch indicates 2 7/8 inch tubing would be set at 2600 feet, open ended. Form C-108 further states that injection will not be "through tubing, casing or annulus." This form also gives the Top of Formation at 2630' and Bottom of Formation at 2635', while the proposed interval of injection is 2630' to 2685'. The plat indicates Top of Delaware is at 1894' and that a bridge plug will be set at 2664' with perforations extending up to 2614'. According to files in this office, the only well located in the description given by your application is a 12,000' dry hole originally drilled as a Morrow test. Reports in this well file indicate there were perforations in the Cherry Canyon. Your submitted Form C-108 reflects neither of these conditions. Furthermore, the plat required by Rule 701-B-1 does not show the location of the well in question. Are there also other well locations which should be shown hereon?

Kindly review your application and upon determining precisely what is intended here, advise this office accordingly. In the event you wish to reapply, please understand the above described inconsistencies do not include all of the deficiencies in your initial application. Further action in this case will be held in abeyance until such time as you provide data which will permit approval.

Yours truly,

CARL ULVOG
Senior Petroleum Geologist

CU/og

cc: Oil Conservation Commission
Artesia

HARDIN-HOUSTON, INC.

2 - WAY RADIO EQUIPPED

P. O. BOX 102

HOBBS, NEW MEXICO 88240

PHONES:

HOBBS (505) 393-5013 OR 393-2714

NEW MEXICO
SCC PERMIT 665
ICC PERMIT
MC-112901
RRC-17787



NOVEMBER 29, 1973

CARL ULVOG
OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DEAR SIR:

WE ARE RETURNING FORM C-108 AFTER HAVING MADE A FEW
CORRECTIONS.

WE WOULD LIKE TO REQUEST A HEARING TO CLEAR ALL CONFUSING
POINTS AND OTHER DEFICIENCIES IN THE INITIAL APPLICATION.
PLEASE ADVISE OF THE TIME AND PLACE.

WE HOPE TO PROVIDE ALL FURTHER INFORMATION NECESSARY TO
EXPEDITE APPROVAL AT THAT TIME.

SINCERELY YOURS,

HARDIN-HOUSTON, INC.

Stan Israel

STAN ISRAEL

SA/AE

*12/11
10-2-74 J. Cepeda
Stan Israel
SWP*

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Hardin-Houston, Inc.		ADDRESS P. O. Box 4188, Odessa, Texas 79760	
LEASE NAME Apache State	WELL NO. #1	FIELD South Carlsbad	COUNTY Eddy
LOCATION UNIT LETTER G ; WELL IS LOCATED 1980 FEET FROM THE North LINE AND 1980 FEET FROM THE East LINE, SECTION 16 TOWNSHIP 23-S RANGE 26-E NMPM.			

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13 3/8	638	700sx		
INTERMEDIATE	9 5/8	5408	1800sx		
LONG STRING	---	---			
TUBING	---	---	NAME, MODEL AND DEPTH OF TUBING PACKER ---		

NAME OF PROPOSED INJECTION FORMATION Delaware		TOP OF FORMATION 2614'	BOTTOM OF FORMATION 2640'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES? Perforations	PROPOSED INTERVAL(S) OF INJECTION 2614-2640
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? To test Delaware for production		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 10 sx at 2570', 60 sx at 1789', 70sx at 664', 10sx at Top. Also Cast iron briqe plug at 1789'.			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 435'	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 2675'	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 11,800'	

ANTICIPATED DAILY INJECTION VOLUME (BBLs.) 200	MINIMUM 800	MAXIMUM 800	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 600
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE No			WATER TO BE DISPOSED OF Salt Water	NATURAL WATER IN DISPOSAL ZONE Salt Water	ARE WATER ANALYSES ATTACHED? No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Buck Valentine, Carlsbad, New Mexico	
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LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL None-----Only lease holders	
---	--

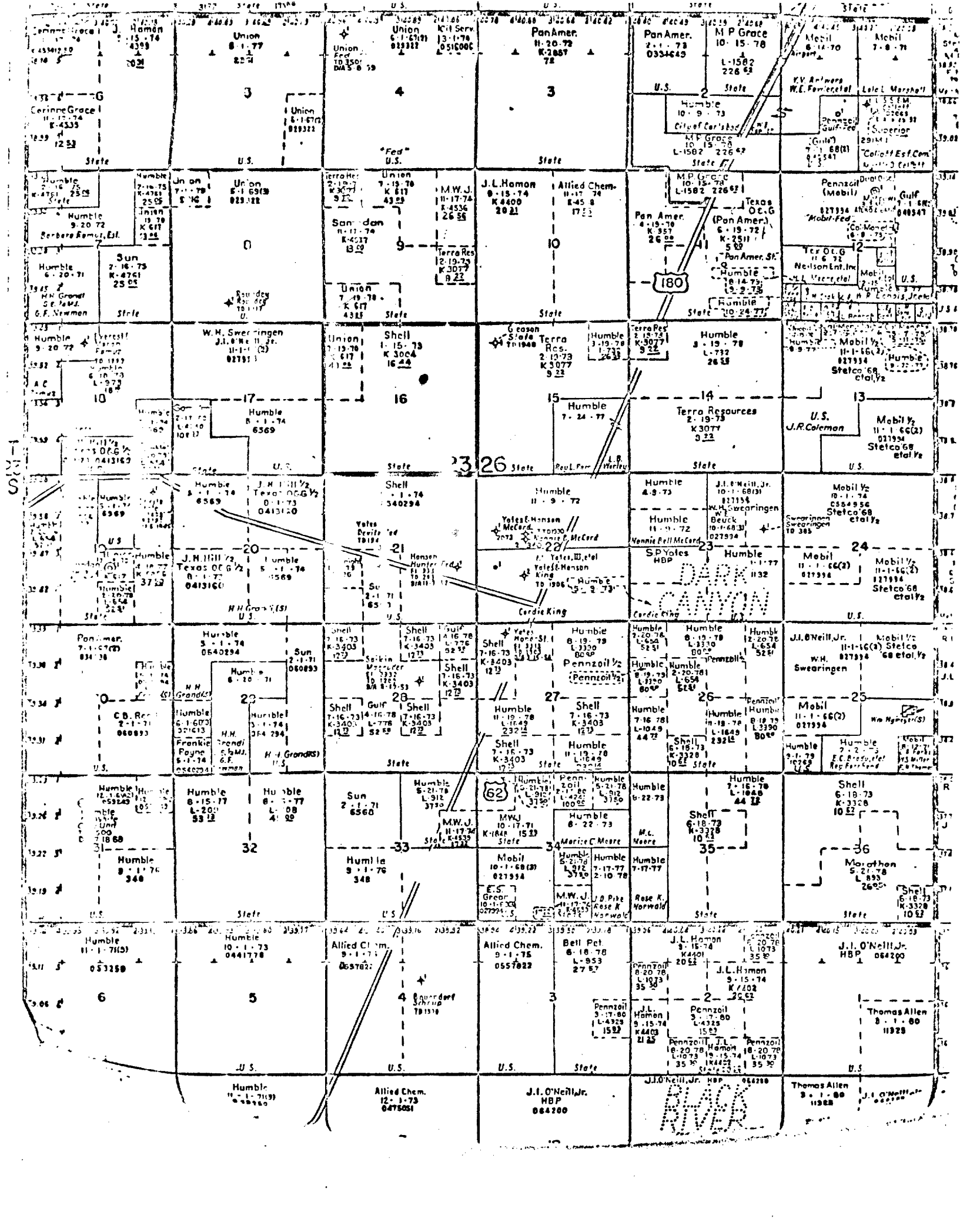
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL None
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Yes	PLAT OF AREA Yes	ELECTRICAL LOG Yes
		DIAGRAMMATIC SKETCH OF WELL Yes

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

(Signature)

Secretary/Treasurer
(Title)November 1, 1973
(Date)

NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.



180

180

DARK CANYON

RIVER

Map showing land parcels with owner names, acreage, and other details. The map is divided into a grid of numbered sections. Key features include: Highway 180 running vertically through the center-right; Highway 62 running horizontally through the center; 'DARK CANYON' and 'RIVER' labeled on the map; various owner names such as Union, Pan Amer, Humble, J.L. Homon, Allied Chem, and others; and acreage values listed for many parcels. The map is oriented with North at the top.

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

2000-151

Date 2/25/73

OPERATOR <i>Hardin-Houston, Inc.</i>		ADDRESS <i>P. O. Box 4188, Odessa, Texas 79760</i>	
LEASE NAME <i>Apache-State</i>	WELL NO. <i>#1</i>	FIELD <i>South Carlsbad</i>	COUNTY <i>Eddy</i>
LOCATION UNIT LETTER <i>G</i> ; WELL IS LOCATED <i>1980</i> FEET FROM THE <i>North</i> LINE AND <i>1980</i> FEET FROM THE <i>East</i> LINE, SECTION <i>16</i> TOWNSHIP <i>23-S</i> RANGE <i>26E</i> NMPM.			

CASING AND TUBING DATA

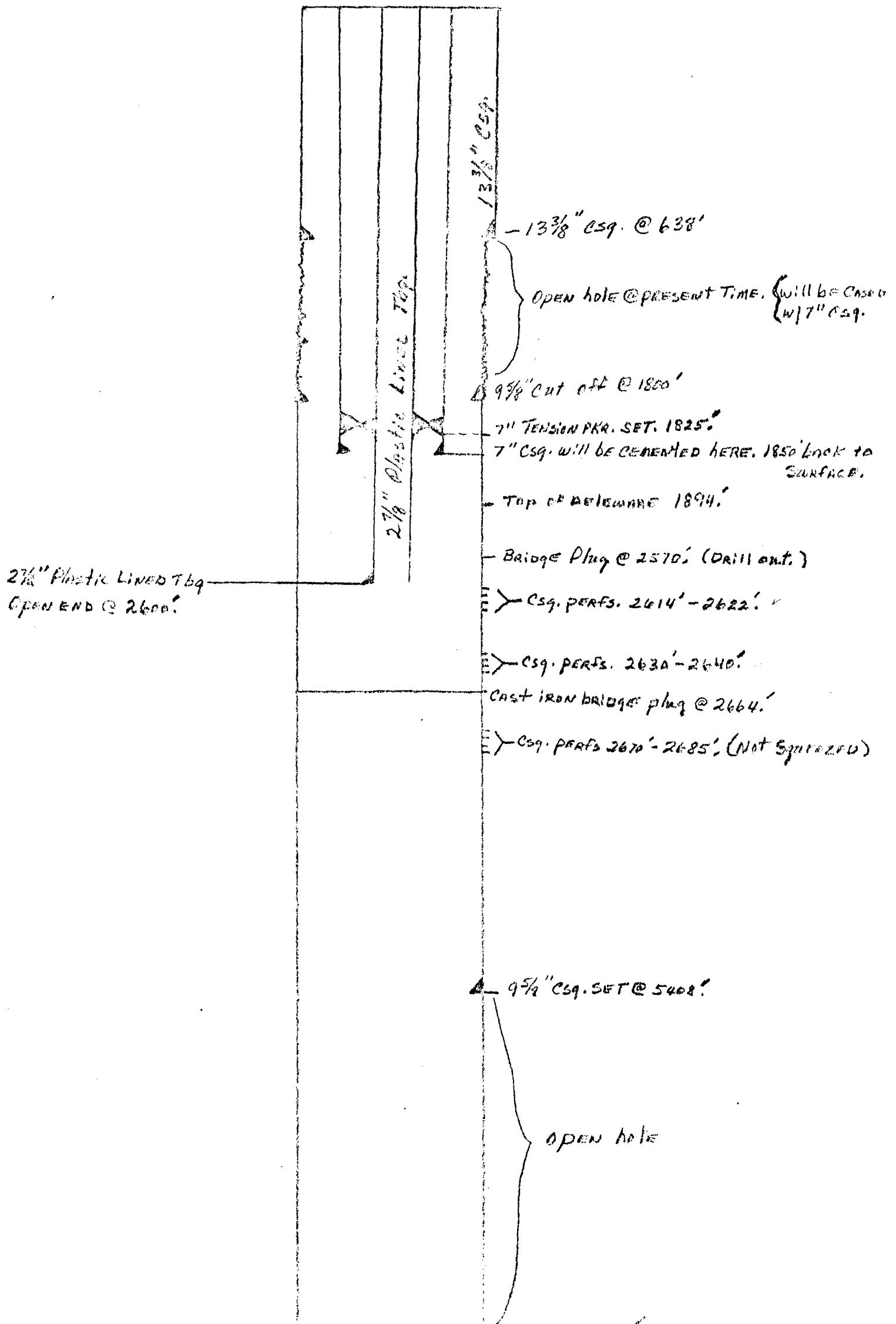
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	<i>13 3/8</i>	<i>638</i> ✓	<i>700 sx</i>		
INTERMEDIATE	<i>9 5/8</i>	<i>5408</i> ✓	<i>1800 sx</i>		
LONG STRING	---	---			
TUBING	---	---	NAME, MODEL AND DEPTH OF TUBING PACKER ---		
NAME OF PROPOSED INJECTION FORMATION <i>Deleware</i>			TOP OF FORMATION <i>1894</i> ✓		BOTTOM OF FORMATION <i>5146</i> ✓
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <i>Tubing</i>		PERFORATIONS OR OPEN HOLE? <i>Perforations</i>	PROPOSED INTERVAL(S) OF INJECTION <i>2614-2640</i> ✓		
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <i>No</i>	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <i>To test Deleware & Morrow for production</i>			HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <i>Yes</i>	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <i>10 sx @ 2570', 60sx @ 1789', 70sx @ 664', 10sx at Top. Cast ironbridge plug @ 1789</i>					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <i>435</i>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <i>2675'</i>		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <i>11800'</i>	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) <i>200</i>	MINIMUM <i>800</i>	MAXIMUM <i>800</i>	OPEN OR CLOSED TYPE SYSTEM <i>Closed</i>	IS INJECTION TO BE BY GRAVITY OR PRESSURE? <i>Pressure</i>	APPROX. PRESSURE (PSI) <i>600</i>
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - <i>Yes</i>			WATER TO BE DISPOSED OF <i>Salt Water</i>	NATURAL WATER IN DISPOSAL ZONE <i>Salt Water</i>	ARE WATER ANALYSES ATTACHED? <i>No</i>
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <i>Buck Valentine Carlsbad, New Mexico</i>					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <i>None--Only Lease Holders Cities Service</i>					
<i>Samedan</i>					
<i>Terra Resources</i>					
<i>Jake L. Hamon</i>					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? <i>Yes</i>		SURFACE OWNER <i>Yes</i>		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <i>Yes</i>	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) <i>Yes</i>		PLAT OF AREA <i>Yes</i>		ELECTRICAL LOG <i>Yes</i>	
				DIAGRAMMATIC SKETCH OF WELL <i>Yes</i>	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

J. P. Chandler (Signature) *Treasurer* (Title) *November 1, 1973* (Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well. not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

J.M. Huber Corp. - Apache-STATE #1 EDDY Co. N. MEX
 (HARDIN-HOUSTON SALT WATER DISPOSAL WELL #1) CONVERTED



ILLEGIBLE

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION, C. C.

Form C-100
Revised 5 1973

OPERATOR Hardin-Houston, Inc.		ADDRESS P. O. Box 4188, Odessa, Texas 79760	
LEASE NAME Apache State	WELL NO. #1	FIELD South Carlsbad	COUNTY Eddy
LOCATION UNIT LETTER G ; WELL IS LOCATED 1980 FEET FROM THE North LINE AND 1980 FEET FROM THE East LINE, SECTION 16 TOWNSHIP 23-S RANGE 26-E NMPM.			

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13 3/8	638	Unknown 700	Unknown surface	
INTERMEDIATE	9 5/8	5408	Unknown 1800		
LONG STRING	---	---			
TUBING	2 7/8"	2600	NAME, MODEL AND DEPTH OF TUBING PACKER --- @ 1825		

NAME OF PROPOSED INJECTION FORMATION Delaware		TOP OF FORMATION 2630' 1894'	BOTTOM OF FORMATION 2635' 5146
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? No Tubing		PERFORATIONS OR OPEN HOLES perforations	PROPOSED INTERVAL(S) OF INJECTION 2630-2685 2614-40
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? To test Delaware for production		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No Yes

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF AN INTERVAL EACH 10 sx at 2570' - 2670' - 85' 60 sx at 1769' - 78 sx at 664' 10 sx at 2664' Also Cast iron bridge plug at 1769'			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 435'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 1950	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 2673' 11,800'
ANTICIPATED DAILY INJECTION VOLUME (BBL/D.) 200	MINIMUM 200	MAXIMUM 800	OPEN OR CLOSED TYPE SYSTEM Closed
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Salt Water		IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	
APPROX. PRESSURE (PSI) 600		ARE WATER ANALYSES ATTACHED? No	

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Buck Valentine, Carlsbad, New Mexico	
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL None----Only lease holders	

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL None
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Yes	PLAT OF AREA Yes	ELECTRICAL LOG Yes
		DIAGRAMMATIC SKETCH OF WELL Yes

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Jef Chandler Secretary/Treasurer November 1, 1973
(Signature) (Title) (Date)

NOTE: Should waivers from the surface owner and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

ILLEGIBLE

105K plug
C surface

RECEIVED

NOV - 5 1973

O. C. C.
ARTERIA, OFFICE

13 7/8" @ 638-700

13 7/8" @ 638'

705K plug
664

← OPEN hole
1800' 9 5/8" Retrieved

7" or 8 3/4" - 1850

605K plug
1789

9 5/8" Cut off here 1810'

1854' TOP OF DELEWICK LIME

200' DELEWICK SAND

2 7/8" Plastic lined
they set @ 2600

105K cement
CIBP C 2570

R 2624-22
2630-40

2630'
Acid. 2630-2685' (TV holes)

Treated w/ 300 gals Oxidant
Acid

CIBP 2664

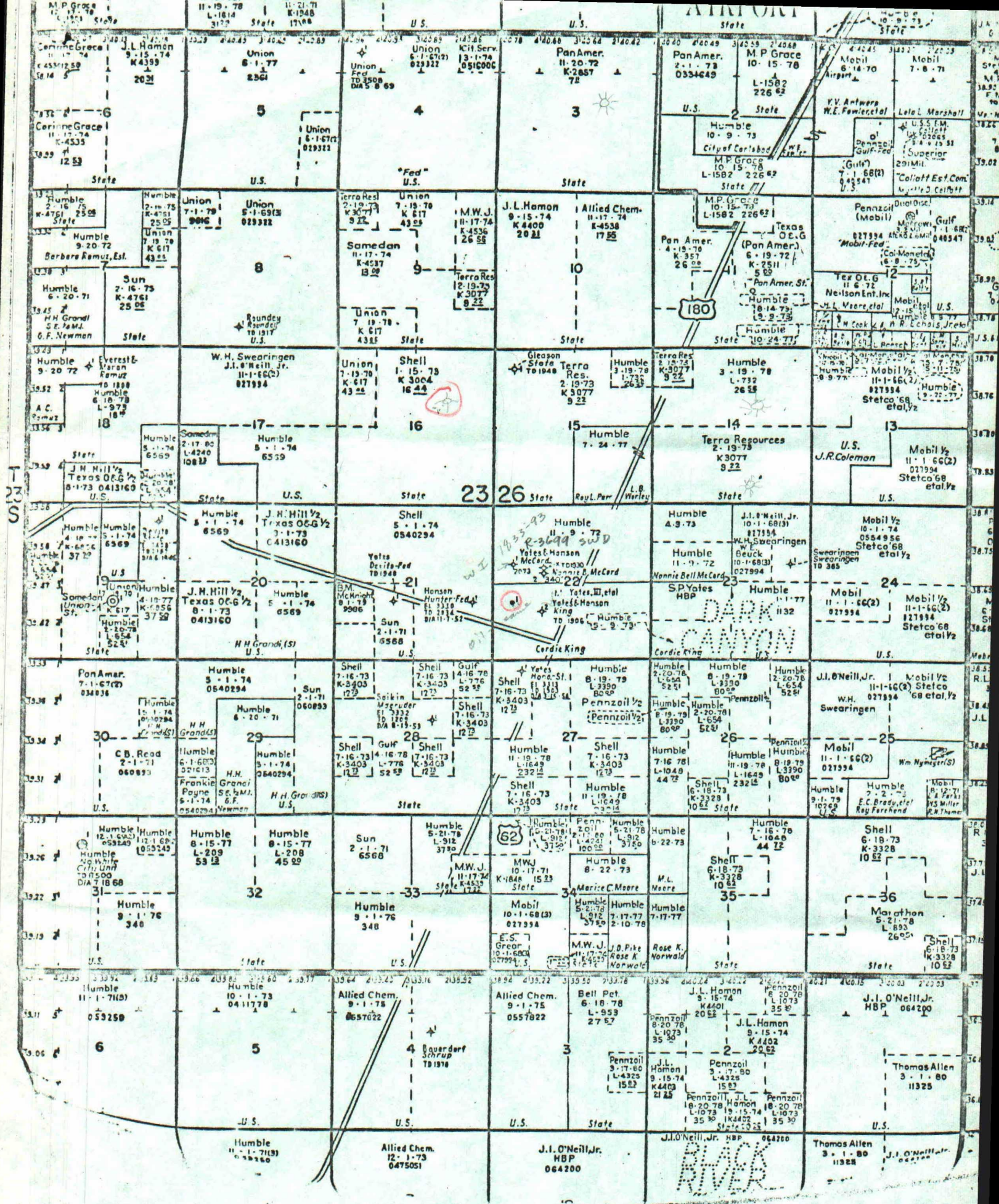
CIBP-2664

2685'
2670-85

CIBP C 5000

RTD 120' 505X

9 5/8" @ 5408'



HARDIN-HOUSTON, INC.

2 - WAY RADIO EQUIPPED

P. O. BOX 102

HOBBS, NEW MEXICO 88240

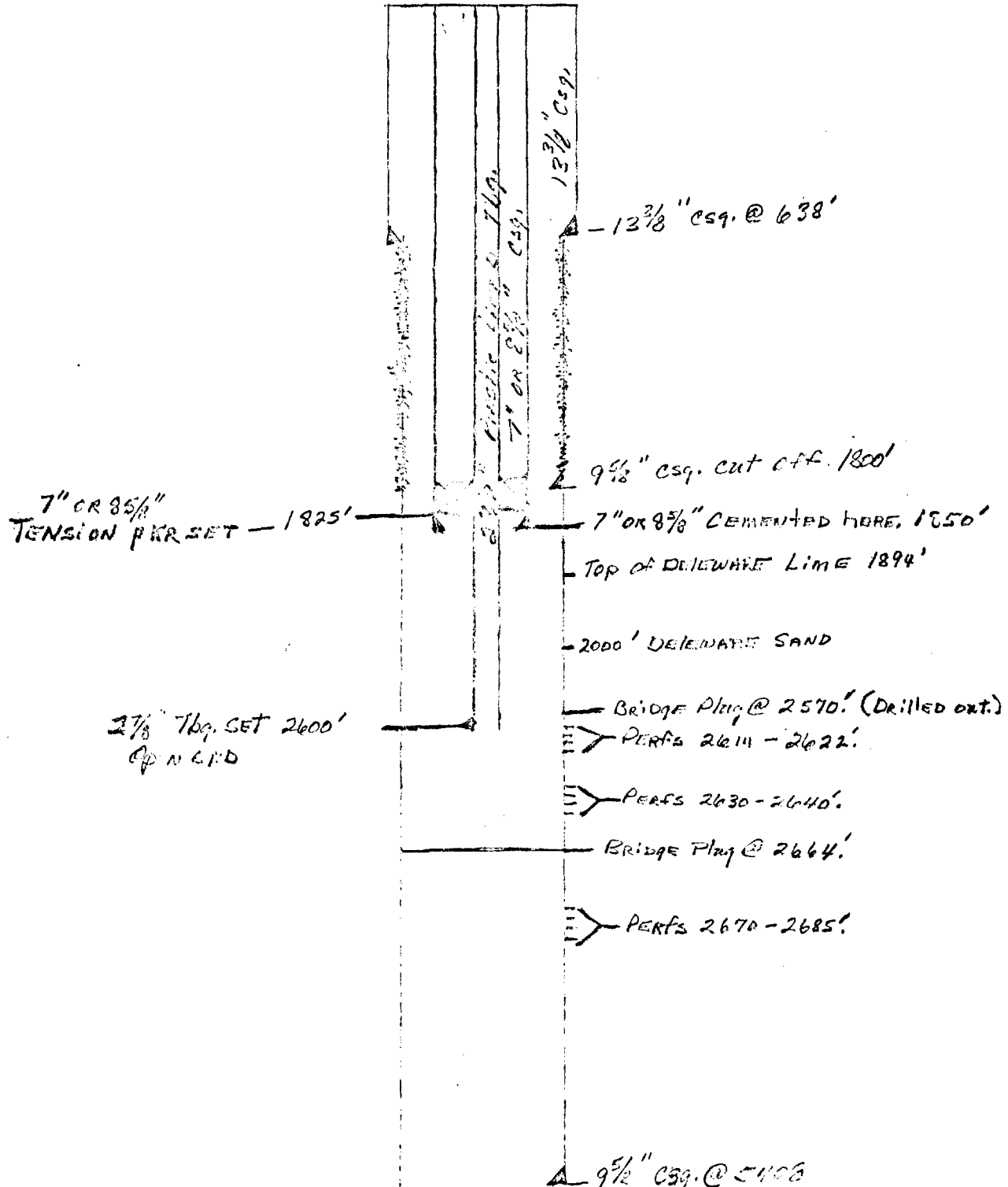
PHONES:

HOBBS (505) 393-5013 OR 393-2714

NEW MEXICO
SCC PERMIT 665
ICC PERMIT
MC-112901
RRC-17787

J. M. HUBER Corp. - Apache - State #1 EDDY Co. N.MEX.

(HARDIN-HOUSTON SALT WATER DISPOSAL WELL #1) CONVERTED



MTD 12-20

TANK TRUCKS — KILL TRUCKS — HOT OIL UNITS — STEAMER — FRAC TANK RENTALS



COMPANY		J. M. HUBER CORPORATION		RECEIVED	
WELL		APACHE ST. NO. 1		NOV - 5 1973	
FIELD		SOUTH CARLSEAD			
STATE		NEW MEXICO		COUNTY EDDY O. C. C.	
LOCATION:		1980' FN & EL		ARTESIAN OFFICE	
SEC. 16		TWP. 23-S		RGE. 26 E	
PERMANENT DATUM:		G.L.		ELEV. 3348'	
LOG MEASURED FROM		K.B.		17 FT. ABOVE PERM. DATUM	
DRILLING MEASURED FROM		K.B.		ELEV.: K.B. 3365'	
				D.F. 3364'	
				G.L. 3348'	
DATE		4-27-73			
RUN NO.		ONE			
TYPE LOG		GAMMA RAY-NEUTRON			
DEPTH-DRILLER		5408'			
DEPTH-LOGGER		5405'			
BOTTOM LOGGED INTERVAL		2900'			
TOP LOGGED INTERVAL		1900'			
TYPE FLUID IN HOLE		WATER			
MAX. REC. TEMP., DEG. F.					
RECORDED BY		THOMPSON			
WITNESSED BY		MR. SUTHERLAND			
RUN NO.		DATE		TIME	
1		4-27-73		10:00	
2		4-27-73		11:00	
3		4-27-73		12:00	
4		4-27-73		1:00	
5		4-27-73		2:00	
6		4-27-73		3:00	
7		4-27-73		4:00	
8		4-27-73		5:00	
9		4-27-73		6:00	
10		4-27-73		7:00	
11		4-27-73		8:00	
12		4-27-73		9:00	
13		4-27-73		10:00	
14		4-27-73		11:00	
15		4-27-73		12:00	
16		4-27-73		1:00	
17		4-27-73		2:00	
18		4-27-73		3:00	
19		4-27-73		4:00	
20		4-27-73		5:00	
21		4-27-73		6:00	
22		4-27-73		7:00	
23		4-27-73		8:00	
24		4-27-73		9:00	
25		4-27-73		10:00	
26		4-27-73		11:00	
27		4-27-73		12:00	
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35		4-27-73		8:00	
36		4-27-73		9:00	
37		4-27-73		10:00	
38		4-27-73		11:00	
39		4-27-73		12:00	
40		4-27-73		1:00	
41		4-27-73		2:00	
42		4-27-73		3:00	
43		4-27-73		4:00	
44		4-27-73		5:00	
45		4-27-73		6:00	
46		4-27-73		7:00	
47		4-27-73		8:00	
48		4-27-73		9:00	
49		4-27-73		10:00	
50		4-27-73		11:00	
51		4-27-73		12:00	
52		4-27-73		1:00	
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55		4-27-73		4:00	
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61		4-27-73		10:00	
62		4-27-73		11:00	
63		4-27-73		12:00	
64		4-27-73		1:00	
65		4-27-73		2:00	
66					