CASE 6611: CABOT CORP. FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO

CASE NO.

6611

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

October 8, 1980

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

Cabot Exploration Corporation
P. O. Box 5001
Pampa, Texas 79065

Case 6611

Re: Order No. R-6101
Injection Pressure Increase
J. L. Reed No. 1 SWD

Gentlemen:

After reviewing additional tests run on your Reed Well No. 1, you are hereby allowed to increase the surface injection pressure to 2250 psi. Higher injection pressure may be granted if a stabilized step rate test demonstrates a higher fracture pressure.

Please call Jerry Sexton in our Hobbs office if you have further inquiries.

Yours very truly,

JOE D. RAMEY
Director

JDR/MH/fd

Memo

From

R. L. STAMETS
Technical
Support Chief

To 10-6-80

Discussions w. Mr Jerry Sexton. Expect pressure dissapation in reservoir before reaching Lowe C #1 well. Also this is produced water and oil depletion in the reservoir should keep things in balance.

Authorize increase to 2250 psi. Higher pressure may be granted if a stabilized step rate demonstrates a higher frac pressure

OIL CONSERVATION DIVISION SANTA FE

CABOT CORPORATION P. O. BOX 5001, PAMPA, TEXAS 79065

CABLE ADDRESS "CABLAK" PAMPA
PHONE 669 – 2571 (AREA CODE 806)

September 29, 1980

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Attention: Mr. Richard L. Stamets

Gentlemen:

Order R-6101

Reference is made to our recent conversation in which you pointed out to me that subject order limited our Reed No. 1 to 1200 psi injection pressure because of concern over the plugged well H. L. Lowe "C" No. 1.

Attached is additional information about the Lowe "C" No. 1 and also recent injection rate test of our Reed No. 1 that was conducted by Well Test Engineering of New Mexico of Hobbs, New Mexico on September 22, 1980.

No attempt was made to complete Lowe "C" No. 1 in Devonian. The interval 11,410 - 11,437 was extremely tight and nonproductive. It was completed 10,000 - 10,037 and shortly produced by pump. An attempt was then made to complete in 18' of 9,406 - 9,491. This zone also was tight and nonproductive. The well was temporarily abandoned for a while then it was converted to water injection. The injection pressure was also 2,000 psi. (Ref. Cabot's letter dated 11/21/67 to New Mexico Oil Conservation Commission, Hobbs, Attention: Mr. Erich Engbrecht)

This well is almost exactly one-half mile from our Reed No. 1 injection well. Water from the Reed No. 1 will not reach the Lowe "C" because of the very low permeabilities and the size of the Devonian formation. Reference attached test on our Reed No. 1 which proves no creation of a formation fracture up to injection rate of 2700 BPD at 2700 psi tubing pressure. Since injection is down 2-3/8" tubing, the pressure required to overcome friction is 850 psi. Therefore, the formation only "sees" 1850 psi adjusted plus 5654 psi hydrostatic head of the 8.8#/gal. salt water. This total (7504 BHP) results in a calculated 0.6 psi/ft. gradient; this is less than it normally takes to frac the Devonian in that area.

The attached sketch on the Lowe "C" No. 1 shows you that there is plenty of cement and bridge plug inside and cement outside of the casing to prevent any migration upward. Water was injected with all zones open for several years. Therefore, there is no pressure differential except difference in head to cause any flow from one zone to another. The permeability is so low that there will not be any counter flow.

Therefore, we respectfully request that our pressure limit on Order R-6101 be administratively raised to 2500 psi.

Please advise.

Sincerely,

George A. Forrest

George A. Forrest
Regional Production
Engineer

GAF:lp

Enc.

cc: New Mexico Conservation Commission
P. O. Box 1980
Hobbs, New Mexico
Attn: Jerry Sexton, District Director

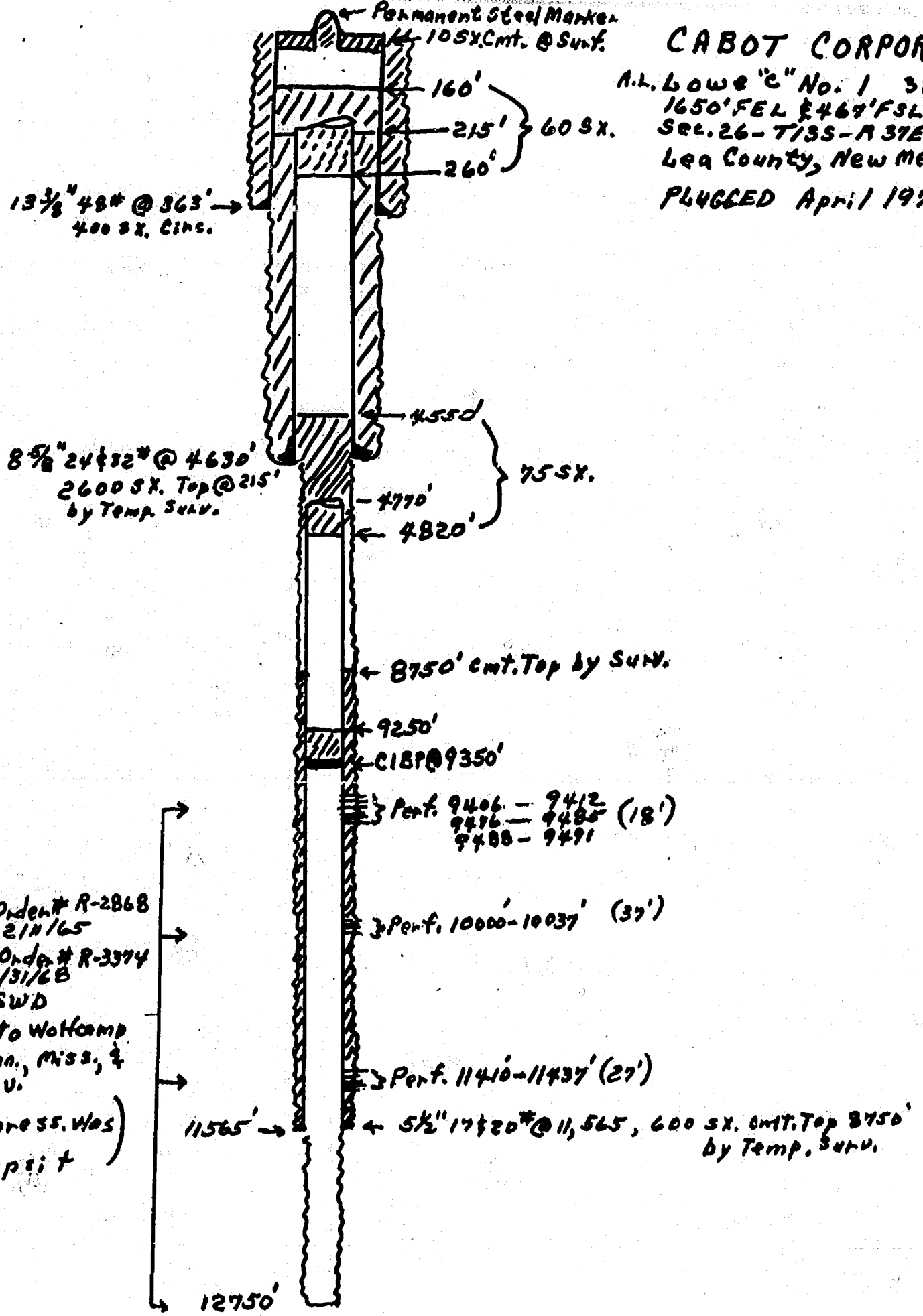
H. L. LOWE "C" NO. 1

3/27/58	11,412 - 11,437 swb dry. Ac. & Frac to 7,300 psi tbg. press. @ 2 BPM, then swb dry. Set CIBP @ 10,300'.
4/1/58	10,000 - 10,037 Ac. w/1500 gal M.A. 5600 psi @ 1.9 BPM. Potentialed 528 BOPD thru 22/64" ck FTP 500#.
4/4/58	BHP test 10,113 was 3897 psi.
10/16/58	BHP test was 3637 psi.
6/22/59	Installed pumping unit, sucker rods, pump.
1/20/62	Pump test 9 BOPD, 90 BWPD, 15.5 MCFD.
1/21/63	Pump Test 6 BOPD, 102 BWPD, 12.3 MCFD.
1/28/64	Pump Test 5 BOPD, 105 BWPD, 9.6 MCFD.
7/64	Cumulative oil from 10,000 - 10,037 interval approx. 90,000 barrels. CIBP set @ 9550', perforated 9406 - 9412, 9476 - 9485, and 9488 - 9491 on 6/29/64. Ac. 1000 gal max. press. 4000 psi, then on 7/14/64 ac. 3000 gal max. press. 4800 avg. press. 4100 @ 2.2 BPM. Swab tested 30 BFPD with 85% water cut. Temporarily abandoned.
8/65	Permission was received to convert to S.W.D. (Order No. R-2868 dated 2/11/65) so CIBP was drilled out at 9550' and water was disposed into perforations from 9406 - 10,037.
11/67	Refer to Cabot's letter dated 11/21/67 to New Mexico Oil Conservation Commission, Hobbs (Attn: Mr. Erich Engbrecht) stating injection pressure into Wolfcamp Zone was 2000 psi.
1/31/68	Commission Order #R-3374 allowed Cabot to drill out plugs and inject water in Wolfcamp, Pennsylvanian, Mississippian, and Devonian formations in the overall intervals from 9406 - 12,690'.
2/13/68 to 3/15/68	Drilled out to 12,750', Ac. with 3000 gal. Max. press. 3000 psi and commenced injection. (See Form C-103 approved 3/15/68)
4/75	Well was plugged and abandoned.

CABOT CORPORATION

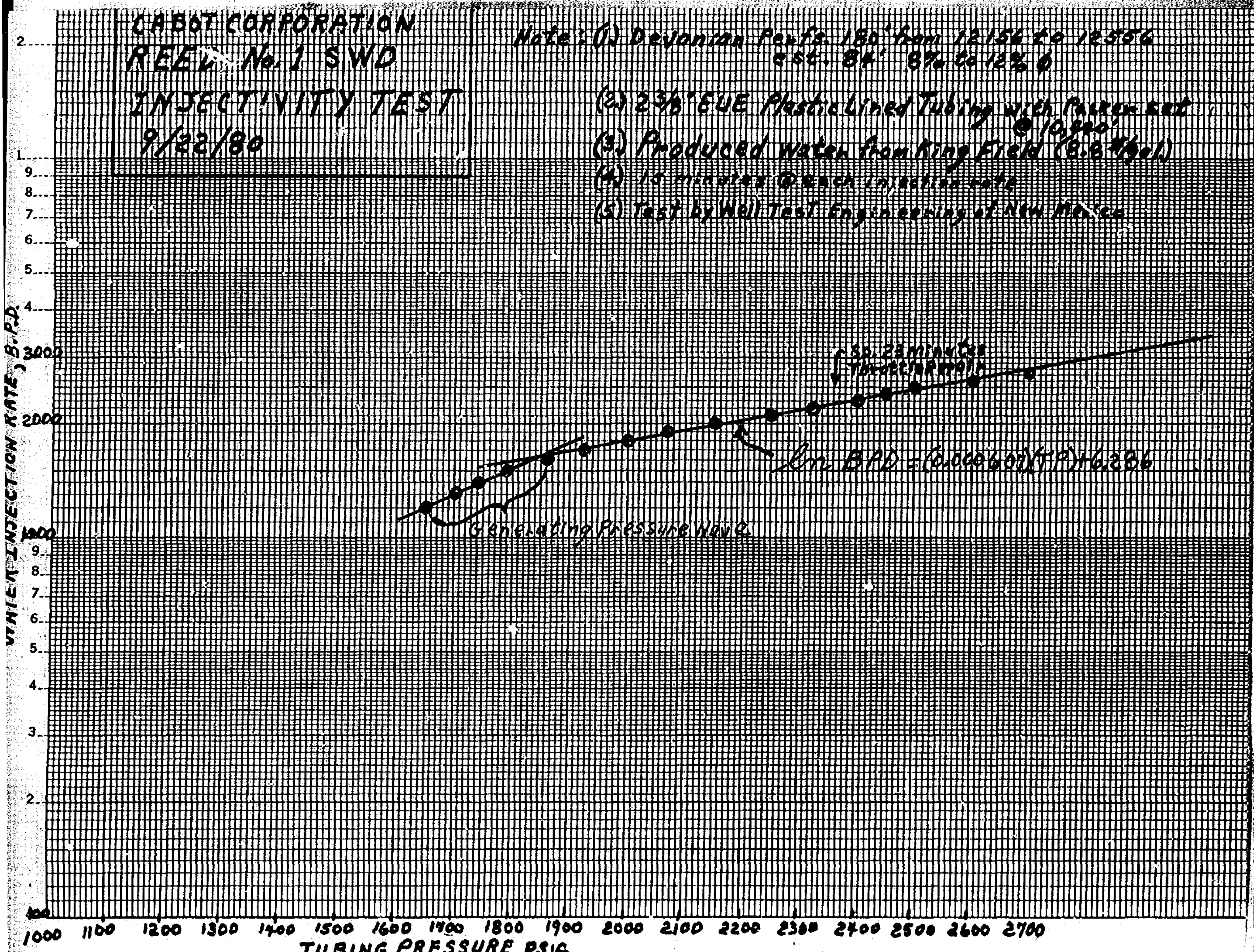
A.L. Lowe "C" No. 1 3867' RDB
1650' FEL & 467' FSL
Sec. 26 - T 13S - R 37E,
Lea County, New Mexico

PLUGGED April 1975

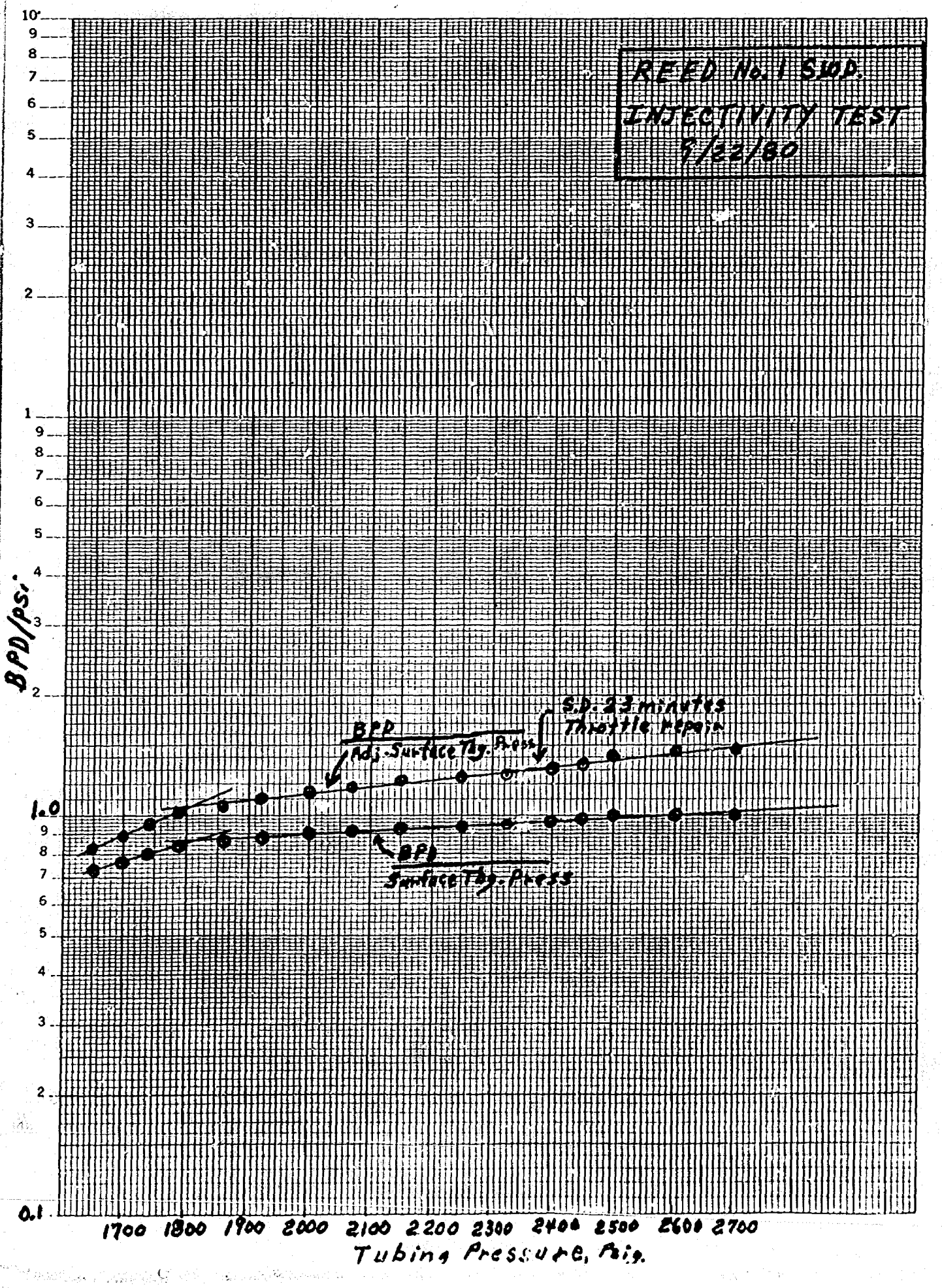


REED No. 1 S.W.D.
INJECTIVITY TEST 9/22/80

Surface 2-3/8" Tbg. Press., psig	$P_{friction}$ in 10,440' of Tubing	Adj. Surf. Tbg. Press. (Tbg. Press. - $P_{friction}$)	15-minute Steps 8.8#/gal - Salt Water Injection Rate BPD	BPM	Hyd. Head = 8.8#/Gal x .052 x 12356' - 5654 psi Calc. BPH = Adj. Surf. Tbg. Press. + Hyd. Head	BPD psi Surf. Tbg. Press.	BPD psi Adj. Surf. Tbg. Press.
Preinjection for 2-1/2 days at 1700 BPD rate just before test engine had gone down and tubing pressure was 1450 psi; therefore, first points will be generating pressure wave. Exact 15-minute steps were used during test.							
1650	210	1440	1200	0.8328	7094	0.727	0.833
1700	245	1455	1300	0.9022	7109	0.765	0.893
1740	276	1464	1400	0.9716	7118	0.805	0.956
1790	303	1487	1500	1.0410	7141	0.838	1.009
1860	339	1521	1600	1.1104	7175	0.860	1.052
1925	386	1539	1700	1.1798	7193	0.883	1.105
2000	418	1582	1800	1.2492	7236	0.900	1.138
2070	460	1610	1900	1.3186	7264	0.918	1.180
2150	512	1638	2000	1.3880	7292	0.930	1.221
2250	553	1697	2100	1.4574	7351	0.933	1.237
2325	590	1735	2200	1.5268	7389	0.946	1.268
Shifted gear to get higher rate - down 23 minutes for throttle repair - lost 100# pressure.							
2400	642	1758	2300	1.5962	7412	0.958	1.308
2450	679	1771	2400	1.6656	7425	0.980	1.355
2500	730	1770	2500	1.7360	7424	1.000	1.412
2600	783	1817	2600	1.8044	7471	1.000	1.431
2700	850	1850	2700	1.8738	7504	1.000	1.459
Ran out of water.			2800				
Total water injected = 340 barrels							



CABOT CORPORATION
REEL No. 1 SWD
INJECTIVITY TEST
9/22/80
Note: (1) Devonian Perfs. 180' from 12156 to 12556
est. 84' 8% to 12% ϕ
(2) 2 3/8" EUE Plastic Lined Tubing with Packer set @ 10,900'
(3) Produced water from King Field (8.8 #/gal)
(5) Test by Well Test Engineering of New Mexico
Generating Pressure Wave
ln BPD = (0.000601)(TP) + 6.286
WATER INJECTION RATE, B.P.D.
1000
2000
3000
1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700
TUBING PRESSURE, PSIG


REED No. 1 SWD.
INJECTIVITY TEST
5/22/80
BPD/PSI
10
9
8
7
6
5
4
3
2
1
9
8
7
6
5
4
3
2
1.0
9
8
7
6
5
4
3
2
0.1
BPD
Adj. Surface Inj. Press
BPD
Surface Inj. Press
S.D. 23 minutes
Throttle Repair
1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700
Tubing Pressure, Psig.

COPY

CABOT CORPORATION

BOX 4395

MIDLAND, TEXAS

November 21, 1967

New Mexico Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico

Attention: Mr. Erich Engbrecht

Dear Sir:

At the present time Cabot operates the Lowe "C" No. 1, a salt water disposal well located in the King Field, Lea County, New Mexico. This well is disposing of produced water into the Wolfcamp zone at 2000 PSI pump pressure.

We are currently considering converting this well to a Devonian zone salt water disposal well. If this is done, would you please notify us what forms and plats must be filed. Please send copies of the necessary forms.

Will it be necessary to have a hearing on this or will it be given administrative approval?

Your attention to this matter is greatly appreciated.

Yours truly,

Jim McPeters
Dist. Engineer

FOR: DICK
FROM: JERRY

STEP RATE TEST

DIETZGEN CORPORATION
MADE IN U.S.A.

Max Pressure 2250 w/out weight

MAY OR MAY NOT BE FRACTURE

SURFACE PRESSURE

SLOPE BETWEEN 2 POINTS

Well Test Engineering
Step Rate test
Cabot Corp.
J.L. Reed #1 swd

Pressures have been Adjusted for friction
10,470' 2⅜" tbg Plastic lined

Test Interrupted (23 min)

915-337-5937

FRICTION PRESSURE WAS NOT CAL. CORRECTLY

BPD

1200 psi limitation placed on well because plugging below 6000 feet in some of the wells within ½ mile is not thourough.

RL

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6611
Order No. R-6101

APPLICATION OF CABOT CORP. FOR
SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 8, 1979, at Santa Fe, New Mexico, before Examiner R. L. Stamets.

NOW, on this 10th day of September, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Cabot Corporation, is the owner and operator of the Reed Well No. 1, located in Unit H of Section 35, Township 13 South, Range 37 East, NMPM, King Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Devonian formation, with injection into the perforated interval from approximately 12,156 feet to 12,574 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 10,600 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 1200 psi.

(6) That the Director of the Division should be

authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Devonian formation.

(7) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(9) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Cabot Corporation, is hereby authorized to utilize its Reed Well No. 1 located in Unit H of Section 35, Township 13 South, Range 37 East, NMPM, King Field, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 10,600 feet, with injection into the perforated interval from approximately 12,156 feet to 12,574 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pressure limiting device which will limit the well-head pressure on the injection well to no more than 1200 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Devonian formation.

(4) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Division's Hobbs district office of the

failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

og/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
25 July 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Cabot Corp. for salt water disposal, Lea County, New Mexico. CASE 6611

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

MR. NUTTER: We'll call next Case Number 6611.

MR. PADILLA: Application of Cabot Corporation for salt water disposal, Lea County, New Mexico.

MR. NUTTER: Applicant has requested the continuance of this case.

It will be continued to the Examiner Hearing scheduled to be held at this same place at 9:00 o'clock a. m. August 8th, 1979.

(Hearing concluded.)

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6611, heard by me on 9/25, 1979.

Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
25 July 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Cabot Corp. for salt water disposal, Lea County, New Mexico.) CASE 6611

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

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It will be continued to the Examiner Hearing scheduled to be held at this same place at 9:00 o'clock a. m. August 8th, 1979.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3011 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6611, heard by me on 7/25 19 79.

, Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3011 Plaza Blanca, (505) 471-2462
Santa Fe, New Mexico 87501

MONTGOMERY, ANDREWS & HANNAHS
PROFESSIONAL ASSOCIATION
ATTORNEYS AND COUNSELORS AT LAW
325 PASEO DE PERALTA
POST OFFICE BOX 2307
SANTA FE, NEW MEXICO 87501

TELEPHONE 505-982-3873

TELECOPY 505-982-4289

August 3, 1979

New Mexico Energy and
Minerals Department
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico 87503

Re: NMOCC Case No. 6617 - Application of El Paso Natural Gas Company for Downhole Commingling, Rio Arriba County, New Mexico.

Gentlemen:

Please be advised that David T. Burleson of the office of General Counsel of El Paso Natural Gas Company, El Paso, Texas, is associated with our firm for the presentation of evidence and argument in the above-referenced case.

Sincerely,

Owen M. Lopez

OML:to

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
8 August 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Cabot Corp. for salt water disposal, Lea County, New Mexico.

CASE 6611

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to theDivision
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant: Conrad Coffield, Esq.
HINKLE, COX, EATON, COFFIELD & HENSLEY
Midland, Texas

I N D E X

ROBERT N. JOHNSON

E X H I B I T S

MR. STAMETS: We'll call next Case 6611.

MR. PADILLA: Application of Cabon Corporation for salt water disposal, Lea County, New Mexico.

MR. COFFIELD: Conrad Coffield with the Hinkle Law Firm of Midland, Texas, appearing on behalf of Cabot Corporation.

I have one witness.

(Witness sworn.)

ROBERT N. JOHNSON

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. COFFIELD:

Q. Mr. Johnson, for the record, would you please state your name, address, occupation, and employer?

A. My name is Robert N. Johnson. I'm from Pampa, Texas, and my employer is Cabot Corporation.

Q. What do you do for Cabot Corporation?

A. I'm a petroleum engineer.

Q. Mr. Johnson, are you familiar with Cabot Corporation's application in this case?

A. Yes, I am.

Q. And have you previously testified before the Division as an engineer?

A. No, I have not.

Q. For the Examiner, would you please briefly outline your educational background and work experience?

A. Yes, sir. I graduated in 1955 from Texas A&M University; spent four years in the Air Force and was employed by Amoco, or then PanAmerican, for ten years, until 1970, and since 1970 I've been employed by Cabot Corporation as a petroleum engineer, in both cases.

Q. And you are familiar with this particular property and the engineering aspects involved in this case?

A. Yes, I am.

MR. COFFIELD: Mr. Examiner, is the witness considered qualified?

MR. STAMETS: Mr. Johnson, what was your degree from A&M?

A. Petroleum engineering.

MR. STAMETS: And what fields of endeavor in petroleum engineering did you work in with Amoco? And your current employment?

A. I've worked for both Amoco and Cabot Corporation as a reservoir engineer and a production engineer.

MR. STAMETS: Okay, in what areas of the country?

A. West Texas and New Mexico.

MR. STAMETS: The witness is considered qualified.

Q. (Mr. Coffield continuing) Mr. Johnson, briefly what is it that Cabot seeks by its application in this case?

A. Cabot seeks in this application to dispose of Devonian water in the Reed No. 1 in the Devonian interval perforated 12156 to 12574 in the King Field, Lea County.

Q. Is that in the Reed No. 1 Well?

A. Yes, Reed No. 1 Well.

Q. Located in Unit H of Section 35?

A. Section 35, Township 13 South, Range 37 East, in, as I said, the King Field.

Q. All right. Mr. Johnson, please refer to this packet which has been marked as Exhibits One to Seven and first referring to what's been marked as Exhibit One, would you explain that, please?

A. Yes. Exhibit One is a property ownership map. Two circles shown on it, one with a 2-mile radius; the inner one with 1/2-mile radius.

The red shaded circles are indicative of the locations of all wells within a 2-mile radius that have penetrated the proposed Devonian disposal interval, and I've shown the proposed Reed No. 1 disposal well as a red shaded

triangle.

Q. And what, what is the situation with respect to the circles that you show within the smaller circle?

A. The 1/2-mile radius -- the wells within the 1/2-mile radius, I have also prepared schematics of these wells, and they will appear as a later exhibit.

Q. Is Cabot Corporation the operator of the property on which the injection -- proposed injection well is located?

A. That is correct.

Q. Mr. Johnson, would you give a history, briefly, of this injection well?

A. Yes. The Reed No. 1 was completed in the Devonian formation in August of 1956 and potentialed for 600 barrels per day from open hole interval. The open hole interval is from approximately 12,590 feet to 12,670 feet.

In succeeding years it was plugged back progressively until it was perforated in the top of the Devonian at 12,156. And in January of 1978 it was producing 5 barrels of oil and 125 barrels of water per day from the Devonian.

The Pennsylvanian formation was tested and the Mississippian formation was tested, and it was recompleted in the Mississippian formation then and is now presently producing approximately 100 Mcf of gas a day.

Q. Okay, Mr. Johnson, would you please refer to Exhibit Two in this packet and describe what that represents?

A. Exhibit Two is the well log of the Reed No. 1, which is our proposed Devonian disposal well. It's an electric log and it shows -- I'd like to point out the top of the Devonian is at 12,156; total depth is 12,670 feet. The casing is set at 12,590 feet and the -- we'll get into this in a later exhibit, but the open hole interval is presently squeezed and it is now perforated in the Devonian in a gross interval from 12,156 to 12,574 feet.

The log shows, although it's not a porosity log, the lithology would indicate porosity from the top of the Devonian all the way down to the total depth of the hole.

Q. To your knowledge is there a complete copy of a well log on this well on file with the Division?

A. Yes, sir, there should be.

Q. Mr. Johnson, are there other possible producing zones in this -- in this well?

A. Well, as I mentioned, we've already tested the Pennsylvanian zone and it was not commercial and we did recomplete in the Mississippian, which is barely commercial, 100 Mcf a day.

Q. Those are the only other possibilities?

A. Only other possibilities.

Q. Would you please go to what's been marked as Exhibit Three in this packet and discuss this exhibit; describe it.

A. Exhibit Number Three is a wellbore schematic of the Reed No. 1 as we propose to complete it as a Devonian disposal well.

The present perforations in the Pennsylvanian at 10,755 to 794 have already been squeezed. The schematic shows the present completion interval in the well of 11,421 to 471 in the Mississippian. These perforations will be squeezed.

The sketch does not show the cement retainer at the casing shoe, and we are undecided at this time whether or not to drill that cement retainer out and expose additional Devonian formation in the open hole interval.

The proposed tubular arrangement in the disposal well, we would set 2-3/8ths inch plastic-lined tubing on a Baker Model "D" packer at approximately 10,600 feet and load the annulus with corrosion-inhibited fresh water and put a pressure gauge on the annulus to monitor the downhole condition of the well, and proceed to inject down the 2-3/8ths inch tubing into the Devonian zone.

Q. All right, let's go to Exhibit Four, please, and explain what Exhibit Four represents.

A. Exhibit Number Four is -- are schematics of all the plugged and abandoned wells within that 1/2-mile circle that I showed on Exhibit One.

The first one, the Cabot Fleet No. 1, is not -- technically doesn't belong in this section because it is our present San Andres salt water disposal well, but I have included it in here because it will -- it will be plugged and abandoned when we -- when we develop another salt water disposal interval.

I might mention here that this well does have mechanical difficulties and that's why we are applying for an alternate location to dispose of our salt water.

Now the zones below the San Andres in my opinion have already been plugged satisfactorily to preclude any danger to the overlying formation from a Devonian disposal.

The second one, the Cabot Fleet No. 4, was formerly a San Andres disposal well and was plugged and abandoned in 1975, in September of 1975.

MR. STAMETS: Is there an indicated top of cement on the 5-1/2 casing in that well?

A. Which well is that, sir? Cabot Fleet 4?

MR. STAMETS: Yes.

A. Cabot Fleet No. 4 has a top of cement at approximately 9000 feet, and that's an estimate.

The Cabot Fleet No. 3 was a former Devonian well, and the records available to me indicate that it has been plugged and abandoned in a satisfactory manner.

Cabot Reed No. 4 was a former Devonian well, and I believe it has been plugged in an adequate manner.

Cabot Reed No. 3, former Devonian producer. I believe it has been plugged adequately.

Cities Service State "AB" No. 1 was a deep test; however, I do -- in my opinion it did not penetrate the Devonian and was drilled and abandoned in 1952. The actual plugging records on this well were not available to me but if it has been -- if it has been plugged similar to the other wells that I show plugged, I believe it won't represent any danger to the overlying formation.

The Cabot Lowe No. 1 was similarly drilled to a formation over -- not penetrating the Devonian in 1952, and I believe, also, that if it had been plugged similar to the other wells, that it would not represent any danger to the overlying formation.

Cabot Lowe C No. 1 was a Devonian test; plugged in 1975; plugging records are not available to me on this well, but similarly, if it has been plugged similar to the other wells, I believe that it also will not represent any danger to the overlying formation.

I might point out to you also that this well was also formerly a Devonian salt water disposal well; however, it had approximately 1200 feet of open hole in the Devonian and it was not satisfactory for the reason that this large amount of open hole caved in on us.

The Cotton Lowland No. 2 is a recent deep test in the area; plugged in May of 1979. The plugging records were not available to me; however, the sccut -- geological scout ticket did show that several 100-sack cement plugs were placed in the hole from the TD of 12,675 up to the base of the 5-1/2 inch production string; that it was run for a test in the San Andres. So I believe that also represents adequate protection for the overlying formation.

The Cabot Lowe B No. 1, a deep test in the Devonian, plugged in 1967. The records were not available to -- plugging records were not available to me, but I also believe that if it had been plugged similar to the wells that I have shown on these schematics, that this will be adequate protection for the overlying formation.

Q. Mr. Johnson, is it your opinion, then, and belief, that all of these wells that you've just discussed were plugged and abandoned in accordance with the appropriate Oil Conservation Division requirements and guidelines?

A. It's my belief that they were, yes.

Q. Okay, Mr. Johnson, refer to what has been marked as Exhibit Five and describe what it shows.

A. Exhibit Five is a tabular summary of all wells drilled within a 1/2-mile radius of the proposed No. 1 Reed salt water disposal well, and which also penetrated the disposal zone, the Devonian disposal zone.

The tabular summary is broken down into a summary of the well operator, lease, and its location, the surface casing, cement used, intermediate casing and cement used, production casing, cement used, and where the cement wasn't circulated, what the top of the cement was. It also shows the total depth and formation in which the well was originally completed and the remark section, I've shown whether the well has been plugged or is presently producing, and the intervals from which it's producing from.

I might point out that several of these wells, since the categories overlapped, are also shown in the sketches.

Q. Okay, Mr. Johnson, what kind of fluid will you be injecting and what is the source of that fluid in this well?

A. The fluids that we'll be injecting into the Reed No. 1 is the Devonian water. It will be -- and the Wolfcamp water, a small amount of Wolfcamp water. It

will be being obtained from the three wells, three producing wells I -- three or four producing wells I show here on the exhibit.

Q. On Exhibit Five?

A. On Exhibit Five, yes. I'll point out to you the Reed No. 2 is one location north of the proposed disposal well and it presently is capable of 79 barrels of oil and 900 barrels of water a day.

The Cabot Fleet No. 2, two locations south of the proposed disposal well, is presently capable of 19 barrels of oil and 805 barrels of water per day from the Devonian.

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And the Cabot State C No. 2, which is a former Devonian well but is now producing from the Wolfcamp at a rate of 7 barrels of oil and 9 barrels of water per day.

Q. Mr. Johnson, refer to what has been marked as Exhibit Six and discuss this and explain what this shows.

A. Exhibit Number Six is a water analysis from the -- for the waters that will be injected into the Reed No. 1. The water shown here is representative of the Wolf-

camp. It comes from the only source of Wolfcamp water that will be disposed of, and that's the State Z No. 2, approximately 9 barrels of water a day.

And the column on the right shows typical Devonian water which is obtained from the Reed No. 2, and will represent the analysis for approximately 2600 barrels of water a day that we'll be injecting into the Reed No. 1.

Q. In the analysis of these waters involved, Mr. Johnson, does it appear that the fluids will be compatible?

A. Yes. The second part of this exhibit shows the compatibility test that was run for us. It's been run at two temperatures, 60 degrees, and an approximation of the bottom hole temperature of 160 degrees.

Both these analyses show negative scaling tendencies for the worst kind of scale, which would be your calcium sulfate scale.

It shows a positive scaling tendency for calcium carbonate, which is -- which is soluble in acid and therefore I feel it's not -- not as great a threat as the other types of scale.

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that in any case the scaling problem will not be of overriding concern.

Q. Do you expect to inject the -- this produced salt water under pressure?

A. Yes. I expect that some pressure will be used, although the level of the pressure that we'll encounter, I can't definitely say at this time. I believe it will be less, though, than what we are presently encountering in disposing of water into the San Andres.

Q. All right, Mr. Johnson, I believe you've already noted, of course, that there are wells in the immediate area which are producing from the same formation into which you propose to inject this produced salt water.

Would you please briefly discuss for the Examiner the effect that you expect upon -- or might expect on the offset Devonian production?

A. Yes. When you're injecting water of the volumes we're considering into a producing zone, you can have three effects.

You could see a beneficial effect. You could see a harmful effect, or you could see no effect. And in view of the thickness of the Devonian and its fractured nature, and the fact that it is an active water-drive formation, I believe that the probability is that we will see no effect in our offset producers, particularly in view

of the fact that the offset Devonian producers are producing such a great -- at such a high water cut already.

Q. And is it your opinion that because of the thickness of the Devonian formation in this area that the effects, whatever they might be, if they were either beneficial or harmful, it would be slow to show up?

A. Yes, the thickness of the formation would tend to slow down any effect.

Q. Mr. Johnson, do you already have the equipment necessary in order to inject under pressure in this location?

A. Yes, we do.

Q. What is this -- where is it now?

A. Where is it physically located? It's --

Q. My question to you is, are you going to be using the same equipment that you already are using in your disposal operations now?

A. Yes, we are.

Q. And I believe you've already stated this, but let me ask you again in case I missed it, will the casing and tubing annulus be filled with an inert fluid?

A. Yes, inhibited fresh water.

Q. And you did say that you will have a pressure gauge attached?

A. Yes, I did.

Q. And, Mr. Johnson, are you aware of the requirements of the Division that there's to be no surface injection pressure on a project of this type which is greater than .2 psi per foot of depth to the top of the injection zone?

A. Yes, I am.

Q. And will -- is it your opinion that your proposed project will be within these guidelines?

A. Yes, that guideline works out to 2430 pounds surface injection pressure, and I believe we will adequately dispose of our water with pressure below that -- that level.

Q. All right. Please go to what has been marked as Exhibit Seven in this packet and describe this to the Examiner.

A. Exhibit Seven is consent agreements by the offset operator, which is Kerr-McGee Corporation. They have attested here that they have no objection to our disposal of water into the Reed No. 1.

And the second is the okay by the surface owner on the Reed lease, Mr. McCrory. I might point out here that Mr. McCrory said that he has no -- no objection to off-lease disposal, or disposal of off-lease water, from the State C and Lowe wells, located nearby.

The Lowe lease no longer produces and I'm

sure that Mr. McCrory meant to include the Fleet lease, and if --

Q. Can you obtain a clarification of --

A. If the Commission desires, I can obtain a cleaner okay from Mr. McCrory.

Q. Mr. Johnson, in your opinion is the proposed injection well cased and cemented in such a fashion that there's no danger, prospective danger, to oil, gas, or fresh water formations or reservoirs which might be encountered?

A. Yes, I do.

Q. Were these Exhibits One through Seven prepared by you or under your supervision?

A. Yes, sir, they were.

Q. Will Cabot notify the Oil Conservation Division of the date of commencement of this injection operation and keep accurate records and report monthly to the Division the volume of fluids injected and the injection pressures?

A. Yes, they will.

Q. In your opinion will the approval of this application be in the interest of conservation, prevention of waste, and protection of correlative rights?

A. Yes, I do.

MR. COFFIELD: Mr. Examiner, I move the

admission of Exhibits One through Seven.

MR. STAMETS: These exhibits will be admitted.

MR. COFFIELD: And I have no other questions of Mr. Johnson at this time.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Johnson, Exhibit Number Three indicates the Mississippian is yet to be squeezed. Is that the situation there?

A. Yes. The Mississippian is presently producing approximately 100 Mcf a day of gas, and we will squeeze the Mississippian.

Q. I notice the packer is going to be set at 10,600 feet, which is a couple thousand feet above the injection interval. Will this present any problem when this well is to be plugged and abandoned finally, due to scale buildup between that point and the top of the injection interval?

A. Well, the Baker Model D is a permanent packer, so any buildup of scale below a permanent packer would not be of as great concern as if it were a removable packer.

Q. How would you -- well, let me rephrase it.

Normally, we require a bridge plug be set immediately above the injection interval with some cement on top of that. Do you feel like you'll be able to get into this well at the conclusion of injection and plug it in such a manner?

A. Under this setup, if I were contemplating abandonment, I would pump cement down the tubing and into the disposal interval. Would that be satisfactory?

Q. That sounds like a satisfactory alternative.

Now, on several of the pages of Exhibit Four you indicated that there were no records available. Did you check the records of the Oil Conservation Division either in Hobbs or here in Santa Fe?

A. No, sir, I didn't have the opportunity, but we'd be glad to do that if you so require.

Q. All right, I would suggest that you do that before you leave today, if you have time.

A. Okay.

Q. We do have identical records here in our record section. You can probably take care of this in a matter of minutes.

A. Okay. Would you like me to revise the schematics?

Q. Yes, if you would, that would be fine.

A. Okay. I'll be glad to do it.

Q. Let us give you one set of these back and you may do that on this set.

MR. STAMETS: Are there any other questions of the witness?

MR. PADILLA: I have one question.

MR. STAMETS: Mr. Padilla.

CROSS EXAMINATION

BY MR. PADILLA:

Q. On the waiver from Kerr-McGee, where is Mr. C. Allen Roberts located?

A. I believe he's in the Amarillo office; could be in -- could be in Oklahoma City.

I did not get that waiver; that's why I'm a little hazy on his location.

MR. PADILLA: Okay, thank you.

RECROSS EXAMINATION

BY MR. STAMETS:

Q. One other question, Mr. Johnson. I presume that this well would be under more or less constant supervision. How often do you have a pumper in this area? To inspect the wells?

A. Our pumper is in this area daily and this

is his major responsibility, so he does spend most of that day in the King Field.

Q. Okay, and Cabot would notify the District office of the Division of any failure of the packer, tubing casing in this injection well?

A. Yes, sir.

MR. STAMETS: Any other questions of the witness? He may be excused.

Anything further in this case?

MR. COFFIELD: No, sir.

MR. STAMETS: The case will be taken under advisement.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-4462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, from notes taken by me at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6644 heard by me on 8-8 1977.
Richard L. Stamets, Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
8 August 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Cabot Corp. for salt water disposal, Lea County, New Mexico.

CASE 6611

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to theDivision
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant: Conrad Coffield, Esq.
HINKLE, COX, EATON, COFFIELD & HENSLEY
Midland, Texas

I N D E X

ROBERT N. JOHNSON

E X H I B I T S

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

MR. STAMETS: We'll call next Case 6611.

MR. PADILLA: Application of Cabon Corporation for salt water disposal, Lea County, New Mexico.

MR. COFFIELD: Conrad Coffield with the Hinkle Law Firm of Midland, Texas, appearing on behalf of Cabot Corporation.

I have one witness.

(Witness sworn.)

ROBERT N. JOHNSON

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. COFFIELD:

Q. Mr. Johnson, for the record, would you please state your name, address, occupation, and employer?

A. My name is Robert N. Johnson. I'm from Pampa, Texas, and my employer is Cabot Corporation.

Q. What do you do for Cabot Corporation?

A. I'm a petroleum engineer.

Q. Mr. Johnson, are you familiar with Cabot Corporation's application in this case?

A. Yes, I am.

Q And have you previously testified before the Division as an engineer?

A No, I have not.

Q For the Examiner, would you please briefly outline your educational background and work experience?

A Yes, sir. I graduated in 1955 from Texas A&M University; spent four years in the Air Force and was employed by Amoco, or then PanAmerican, for ten years, until 1970, and since 1970 I've been employed by Cabot Corporation, as a petroleum engineer, in both cases.

Q And you are familiar with this particular property and the engineering aspects involved in this case?

A Yes, I am.

MR. COFFIELD: Mr. Examiner, is the witness considered qualified?

MR. STAMETS: Mr. Johnson, what was your degree from A&M?

A Petroleum engineering.

MR. STAMETS: And what fields of endeavor in petroleum engineering did you work in with Amoco? And your current employment?

A I've worked for both Amoco and Cabot Corporation as a reservoir engineer and a production engineer.

MR. STAMETS: Okay, in what areas of the country?

A. West Texas and New Mexico.

MR. STAMETS: The witness is considered qualified.

Q. (Mr. Coffield continuing) Mr. Johnson, briefly what is it that Cabot seeks by its application in this case?

A. Cabot seeks in this application to dispose of Devonian water in the Reed No. 1 in the Devonian interval perforated 12156 to 12574 in the King Field, Lea County.

Q. Is that in the Reed No. 1 Well?

A. Yes, Reed No. 1 Well.

Q. Located in Unit H of Section 35?

A. Section 35, Township 13 South, Range 37 East, in, as I said, the King Field.

Q. All right. Mr. Johnson, please refer to this packet which has been marked as Exhibits One to Seven and first referring to what's been marked as Exhibit One, would you explain that, please?

A. Yes. Exhibit One is a property ownership map. Two circles shown on it, one with a 2-mile radius; the inner one with 1/2-mile radius.

The red shaded circles are indicative of the locations of all wells within a 2-mile radius that have penetrated the proposed Devonian disposal interval, and I've shown the proposed Reed No. 1 disposal well as a red shaded

triangle.

Q And what, what is the situation with respect to the circles that you show within the smaller circle?

A. The 1/2-mile radius -- the wells within the 1/2-mile radius, I have also prepared schematics of these wells, and they will appear as a later exhibit.

Q Is Cabot Corporation the operator of the property on which the injection -- proposed injection well is located?

A. That is correct.

Q Mr. Johnson, would you give a history, briefly, of this injection well?

A. Yes. The Reed No. 1 was completed in the Devonian formation in August of 1956 and potentialed for 600 barrels per day from open hole interval. The open hole interval is from approximately 12,590 feet to 12,670 feet.

In succeeding years it was plugged back progressively until it was perforated in the top of the Devonian at 12,156. And in January of 1978 it was producing 5 barrels of oil and 125 barrels of water per day from the Devonian.

The Pennsylvanian formation was tested and the Mississippian formation was tested, and it was recompleted in the Mississippian formation then and is now presently producing approximately 100 Mcf of gas a day.

Q Okay, Mr. Johnson, would you please refer to Exhibit Two in this packet and describe what that represents?

A. Exhibit Two is the well log of the Reed No. 1, which is our proposed Devonian disposal well. It's an electric log and it shows -- I'd like to point out the top of the Devonian is at 12,156; total depth is 12,670 feet. The casing is set at 12,590 feet and the -- we'll get into this in a later exhibit, but the open hole interval is presently squeezed and it is now perforated in the Devonian in a gross interval from 12,156 to 12,574 feet.

The log shows, although it's not a porosity log, the lithology would indicate porosity from the top of the Devonian all the way down to the total depth of the hole.

Q To your knowledge is there a complete copy of a well log on this well on file with the Division?

A. Yes, sir, there should be.

Q. Mr. Johnson, are there other possible producing zones in this -- in this well?

A. Well, as I mentioned, we've already tested the Pennsylvanian zone and it was not commercial and we did recomplete in the Mississippian, which is barely commercial, 100 Mcf a day.

Q Those are the only other possibilities?

A. Only other possibilities.

Q. Would you please go to what's been marked as Exhibit Three in this packet and discuss this exhibit; describe it.

A. Exhibit Number Three is a wellbore schematic of the Reed No. 1 as we propose to complete it as a Devonian disposal well.

The present perforations in the Pennsylvanian at 10,755 to 794 have already been squeezed. The schematic shows the present completion interval in the well of 11,421 to 471 in the Mississippian. These perforations will be squeezed.

The sketch does not show the cement retainer at the casing shoe, and we are undecided at this time whether or not to drill that cement retainer out and expose additional Devonian formation in the open hole interval.

The proposed tubular arrangement in the disposal well, we would set 2-3/8ths inch plastic-lined tubing on a Baker Model "D" packer at approximately 10,600 feet and load the annulus with corrosion-inhibited fresh water and put a pressure gauge on the annulus to monitor the downhole condition of the well, and proceed to inject down the 2-3/8ths inch tubing into the Devonian zone.

Q. All right, let's go to Exhibit Four, please and explain what Exhibit Four represents.

A. Exhibit Number Four is -- are schematics of all the plugged and abandoned wells within that 1/2-mile circle that I showed on Exhibit One.

The first one, the Cabot Fleet No. 1, is not -- technically doesn't belong in this section because it is our present San Andres salt water disposal well, but I have included it in here because it will -- it will be plugged and abandoned when we -- when we develop another salt water disposal interval.

I might mention here that this well does have mechanical difficulties and that's why we are applying for an alternate location to dispose of our salt water.

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And the second is the okay by the surface owner on the Reed lease, Mr. McCrory. I might point out here that Mr. McCrory said that he has no -- no objection to off-lease disposal, or disposal of off-lease water, from the State C and Lowe wells, located nearby.

The Lowe lease no longer produces and I'm

sure that Mr. McCrory meant to include the Fleet lease, and if --

Q. Can you obtain a clarification of --

A. If the Commission desires, I can obtain a cleaner okay from Mr. McCrory.

Q. Mr. Johnson, in your opinion is the proposed injection well cased and cemented in such a fashion that there's no danger, prospective danger, to oil, gas, or fresh water formations or reservoirs which might be encountered?

A. Yes, I do.

Q. Were these Exhibits One through Seven prepared by you or under your supervision?

A. Yes, sir, they were.

Q. Will Cabot notify the Oil Conservation Division of the date of commencement of this injection operation and keep accurate records and report monthly to the Division the volume of fluids injected and the injection pressures?

A. Yes, they will.

Q. In your opinion will the approval of this application be in the interest of conservation, prevention of waste, and protection of correlative rights?

A. Yes, I do.

MR. COFFIELD: Mr. Examiner, I move the

admission of Exhibits One through Seven.

MR. STAMETS: These exhibits will be admitted.

MR. COFFIELD: And I have no other questions of Mr. Johnson at this time.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Johnson, Exhibit Number Three indicates the Mississippian is yet to be squeezed. Is that the situation there?

A. Yes. The Mississippian is presently producing approximately 100 Mcf a day of gas, and we will squeeze the Mississippian.

Q. I notice the packer is going to be set at 10,600 feet, which is a couple thousand feet above the injection interval. Will this present any problem when this well is to be plugged and abandoned finally, due to scale buildup between that point and the top of the injection interval?

A. Well, the Baker Model D is a permanent packer, so any buildup of scale below a permanent packer would not be of as great concern as if it were a removable packer.

Q. How would you -- well, let me rephrase it.

Normally, we require a bridge plug be set immediately above the injection interval with some cement on top of that. Do you feel like you'll be able to get into this well at the conclusion of injection and plug it in such a manner?

A. Under this setup, if I were contemplating abandonment, I would pump cement down the tubing and into the disposal interval. Would that be satisfactory?

Q. That sounds like a satisfactory alternative.

Now, on several of the pages of Exhibit Four you indicated that there were no records available. Did you check the records of the Oil Conservation Division either in Hobbs or here in Santa Fe?

A. No, sir, I didn't have the opportunity, but we'd be glad to do that if you so require.

Q. All right, I would suggest that you do that before you leave today, if you have time.

A. Okay.

Q. We do have identical records here in our record section. You can probably take care of this in a matter of minutes.

A. Okay. Would you like me to revise the schematics?

Q. Yes, if you would, that would be fine.

A Okay. I'll be glad to do it.

Q Let us give you one set of these back and you may do that on this set.

MR. STAMETS: Are there any other questions of the witness?

MR. PADILLA: I have one question.

MR. STAMETS: Mr. Padilla.

CROSS EXAMINATION

BY MR. PADILLA:

Q On the waiver from Kerr-McGee, where is Mr. C. Allen Roberts located?

A I believe he's in the Amarillo office; could be in -- could be in Oklahoma City.

I did not get that waiver; that's why I'm a little hazy on his location.

MR. PADILLA: Okay, thank you.

RECROSS EXAMINATION

BY MR. STAMETS:

Q One other question, Mr. Johnson. I presume that this well would be under more or less constant supervision. How often do you have a pumper in this area? To inspect the wells?

A Our pumper is in this area daily and this

is his major responsibility, so he does spend most of that day in the King Field.

Q. Okay, and Cabot would notify the District office of the Division of any failure of the packer, tubing casing in this injection well?

A. Yes, sir.

MR. STAMETS: Any other questions of the witness? He may be excused.

Anything further in this case?

MR. COFFIELD: No, sir.

MR. STAMETS: The case will be taken under advisement.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, from notes taken by me at the time of the hearing.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. ____ heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (505) 471-2463
Santa Fe, New Mexico 87501

LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
STUART D. SHANOR
C. D. MARTIN
PAUL J. KELLY, JR.
JAMES H. BOZARTH

DOUGLAS L. LUNSFORD
PAUL M. BOHANNON
J. DOUGLAS FOSTER
K. DOUGLAS PERRIN
C. RAY ALLEN
JACQUELINE W. ALLEN
T. CALDER EZZELL, JR.
WILLIAM B. BURFORD
JOHN S. NELSON
RICHARD E. OLSON

LAW OFFICES
HINKLE, COX, EATON, COFFIELD & HENSLEY
1000 FIRST NATIONAL BANK TOWER
POST OFFICE BOX 3580
MIDLAND, TEXAS 79702
(915) 683-4691

OF COUNSEL
CLARENCE E. HINKLE

W. E. BONDURANT, JR. (1914-1973)

ROSWELL, NEW MEXICO OFFICE
600 HINKLE BUILDING
(505) 622-6510

ONLY ATTYS. COFFIELD, MARTIN, BOZARTH, BOHANNON, FOSTER, ALLEN, ALLEN & BURFORD LICENSED IN TEXAS

October 10, 1979

Mr. Bob Johnson
Cabot Corporation
Post Office Box 1101
Pampa, Texas 79065

Re: Oil Conservation Division
Case No. 6611 -- Order
No. R-6101, Salt Water
Disposal Well

Dear Bob:

Yesterday I spoke by phone with Dick Stamets with the Oil Conservation Division in connection with the above referenced case. He discussed the fact that Order R-6101 dated September 10, 1979 provides that the wellhead pressure in the injection well is to be no more than 1200 psi. He indicated that you have directed his attention to the fact that this is 1/2 the pressure which Cabot had requested be authorized in connection with this particular well.

Mr. Stamets says that upon his review of the file, he notes that there are certain wells in the vicinity of the injection well which have not been plugged in a manner which is satisfactory to him. It is because of this unacceptable plugging program that the pressure limitation has been imposed as written in Order R-6101 as it now exists. Per my discussion with him, Mr. Stamets tells me that if Cabot is able to either correct the plugging deficiencies to his satisfaction or alternatively convince him that the wells with which he is concerned are not a problem, the Order could be amended to authorize an increased pressure on the injection well.

I made no attempt to identify precisely which wells he feels are not acceptably plugged. Instead, I told him that I would pass the information on to you and suggest that you

contact him directly on the matter of which wells are involved. You can perhaps then go over with him possible remedial action which may be taken in connection with those wells or otherwise identify the type of data which he will require to show that the condition of the wells is, in fact, satisfactory without further work.

If I can be of any assistance in connection with any of this procedure, please do not hesitate to call.

With best regards.

Very truly yours,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

Conrad E. Coffield

CEC:rh

xc: Mr. Richard L. Stamets
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

xc: Mr. Ed Nail
Cabot Corporation
One Houston Center, Suite 1000
Houston, Texas 77002

CABOT

CABOT CORPORATION P. O. BOX 1101, PAMPA, TEXAS 79065

CABLE ADDRESS "CABLAK" PAMPA
PHONE 669 – 2581 (AREA CODE 806)

October 2, 1979

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

RE: Case No. 6611
Order No. R-6101

Dear Sirs:

In the above referenced case, testimony was heard to the effect that surface injection pressure was to be limited to a maximum of 0.2 psi per foot of depth to the top of the injection zone at 12,156 feet, or 2430 psi.

No opposition was heard to this pressure limitation, yet the above referenced order specifies a lower limit of 1200 psi.

If there has been no change in the pressure limit guideline, we would appreciate receiving a revised order specifying the original limit as 2430 psi.

Very truly yours,

R. N. Johnson

RNJ:cc
Enclosure

RECEIVED
OCT 05 1979
OIL CONSERVATION DIVISION
SANTA FE

Talked to Conrad Coffield 10-9-79 explained there were some P&A wells I was concerned with and that was the reason for the lower pressure. He will relay to Mr Johnson
1125

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

September 12, 1979

Mr. Conrad E. Coffield
Hinkle, Cox, Eaton, Coffield
& Hensley
Attorneys at Law
P. O. Box 3580
Midland, Texas 79702

Re: CASE NO. 6611
ORDER NO. R-6101

Applicant:

Cabot Corp.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD
Artesia OCD x
Aztec OCD

Other

RECEIVED
OCT 0 1979
OIL CONSERVATION DIVISION
SANTA FE

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6611
Order No. R-6101

APPLICATION OF CABOT CORP. FOR
SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 8, 1979, at Santa Fe, New Mexico, before Examiner R. L. Stamets.

NOW, on this 10th day of September, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Cabot Corporation, is the owner and operator of the Reed Well No. 1, located in Unit H of Section 35, Township 13 South, Range 37 East, NMPM, King Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Devonian formation, with injection into the perforated interval from approximately 12,156 feet to 12,574 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 10,600 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 1200 psi.

(6) That the Director of the Division should be

authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Devonian formation.

(7) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(9) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Cabot Corporation, is hereby authorized to utilize its Reed Well No. 1 located in Unit H of Section 35, Township 13 South, Range 37 East, NMPM, King Field, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 10,600 feet, with injection into the perforated interval from approximately 12,156 feet to 12,574 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pressure limiting device which will limit the well-head pressure on the injection well to no more than 1200 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Devonian formation.

(4) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Division's Hobbs district office of the

failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

og/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

September 12, 1979

Re: CASE NO. 6611
ORDER NO. R-6101

Applicant:
Cabot Corp.

Mr. Conrad E. Coffield
Hinkle, Cox, Eaton, Coffield
& Hensley
Attorneys at Law
P. O. Box 3580
Midland, Texas 797[illegible]

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

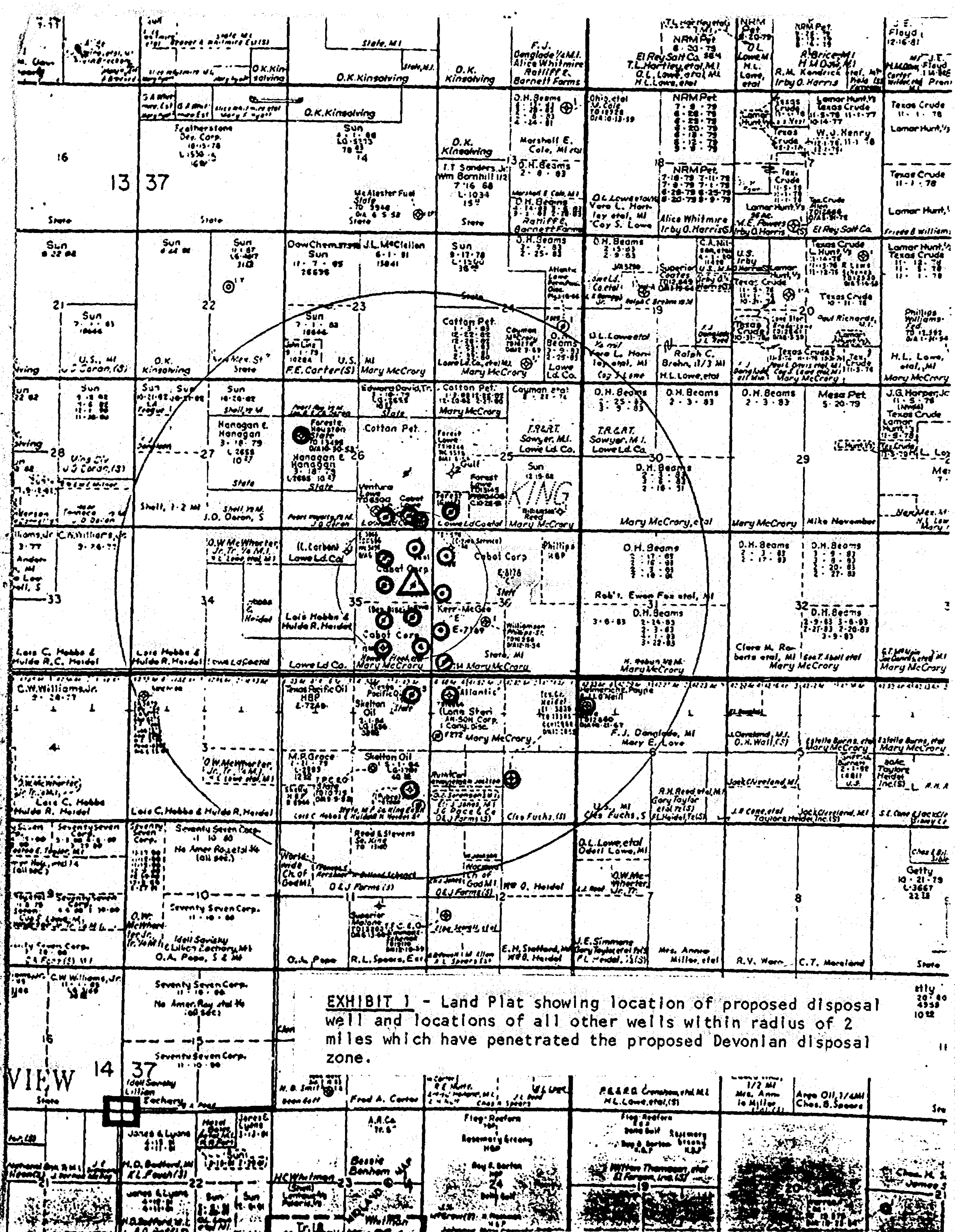
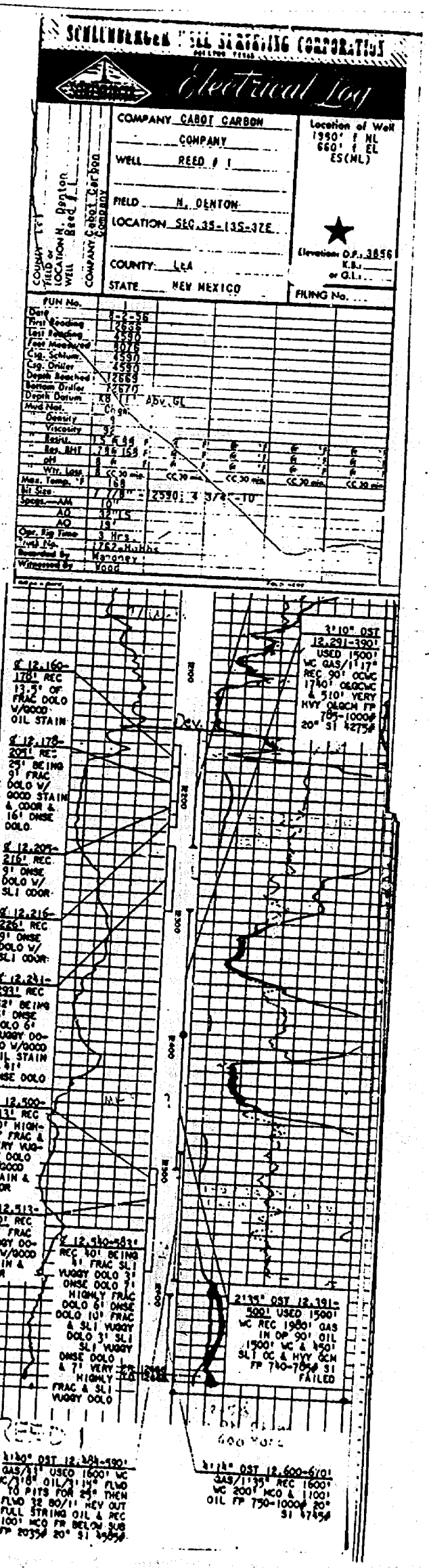


EXHIBIT 1 - Land Plat showing location of proposed disposal well and locations of all other wells within radius of 2 miles which have penetrated the proposed Devonian disposal zone.

EXHIBIT 2 - Well Log, Reed No. 1, proposed disposal well.



BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBITS NO. 1 To 7
CASE NO. 6611
Submitted by Cabot
Hearing Date 8/8/79

* P & A DATA ADDED Ex 1
RNJ 8-8-79

EXHIBIT 3 - Wellbore schematic, Reed No. 1, proposed disposal well.

CABOT REED NO. 1 3856 RDB
1980' FNL & 660' FEL 35-13-37

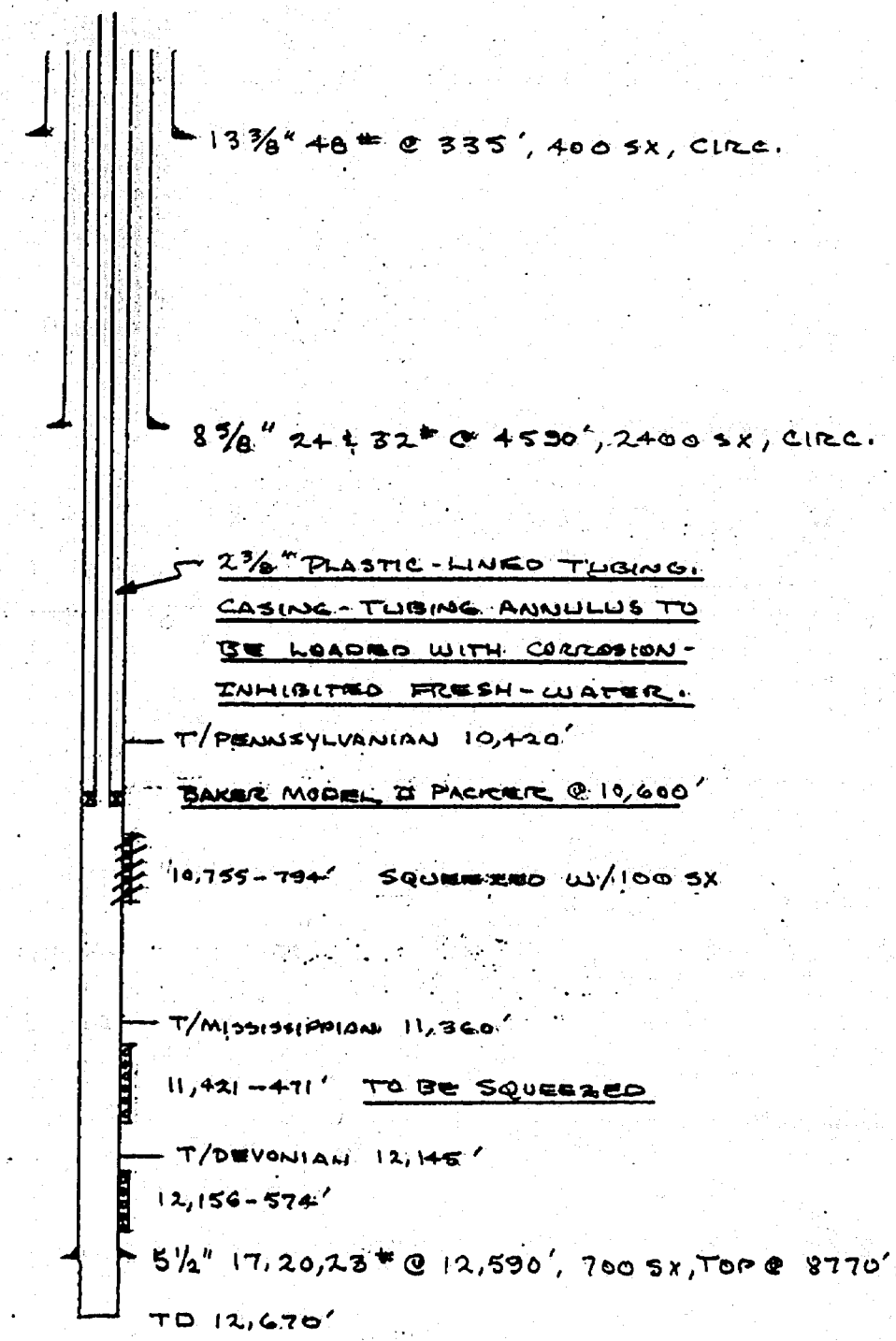
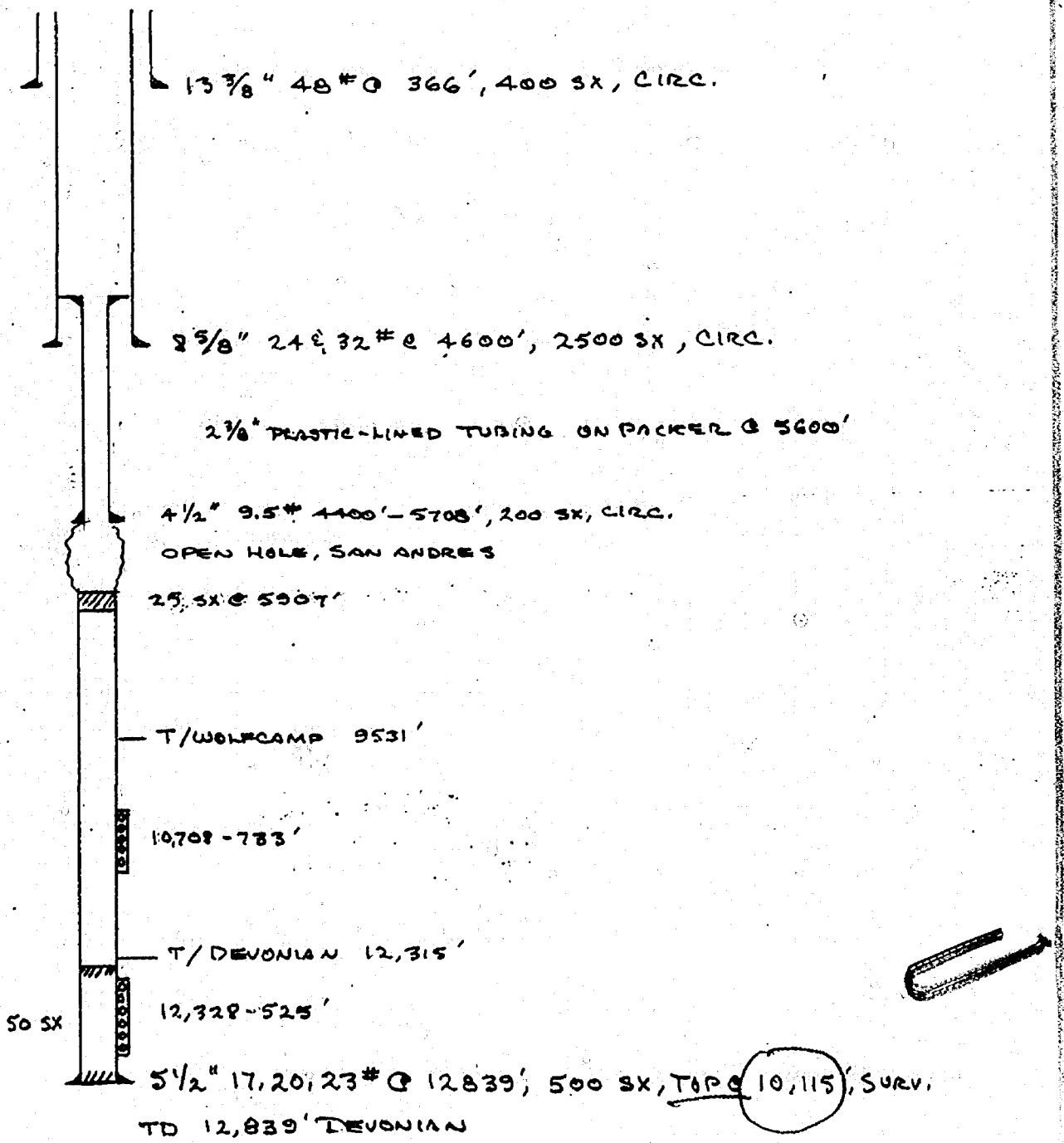
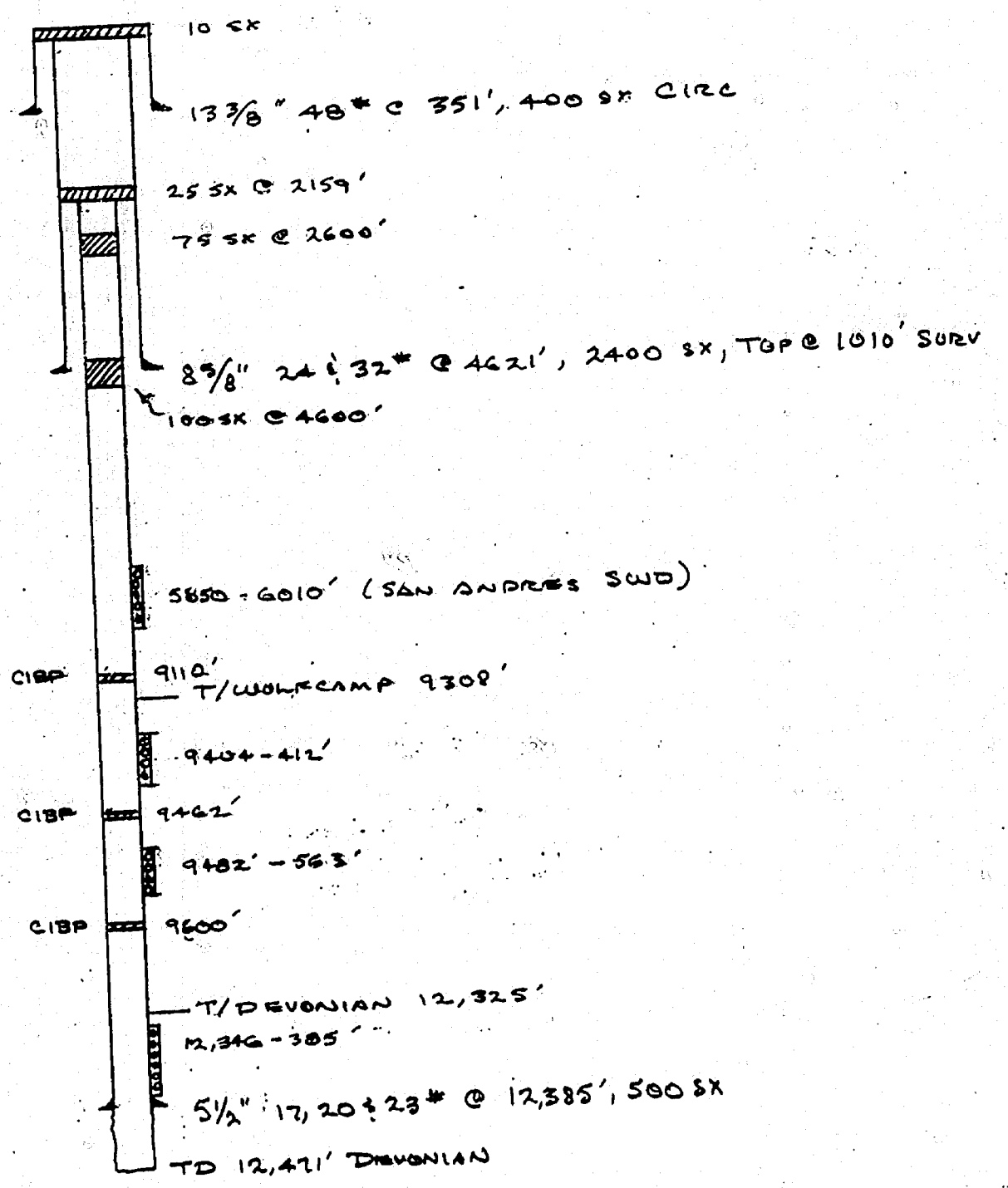


EXHIBIT 4 - Wellbore schematics of all plugged and abandoned wells within 1/2 mile radius of Reed No. 1.

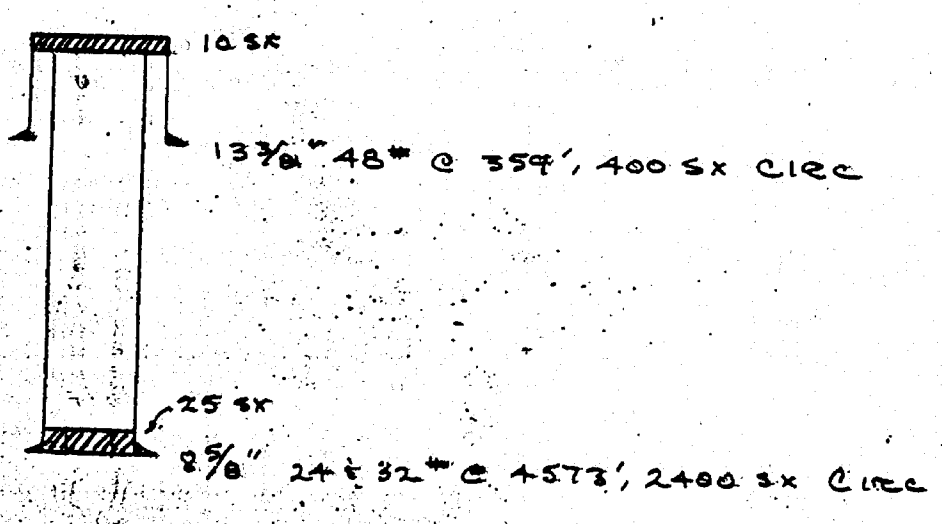
CABOT FLEET No. 1 3875' RDB
660' FEL & 1980' FSL 35-13-37
P&A 1-70
REENTERED 1975 FOR SAN ANDRES SWD
TO BE PLUGGED AND ABANDONED

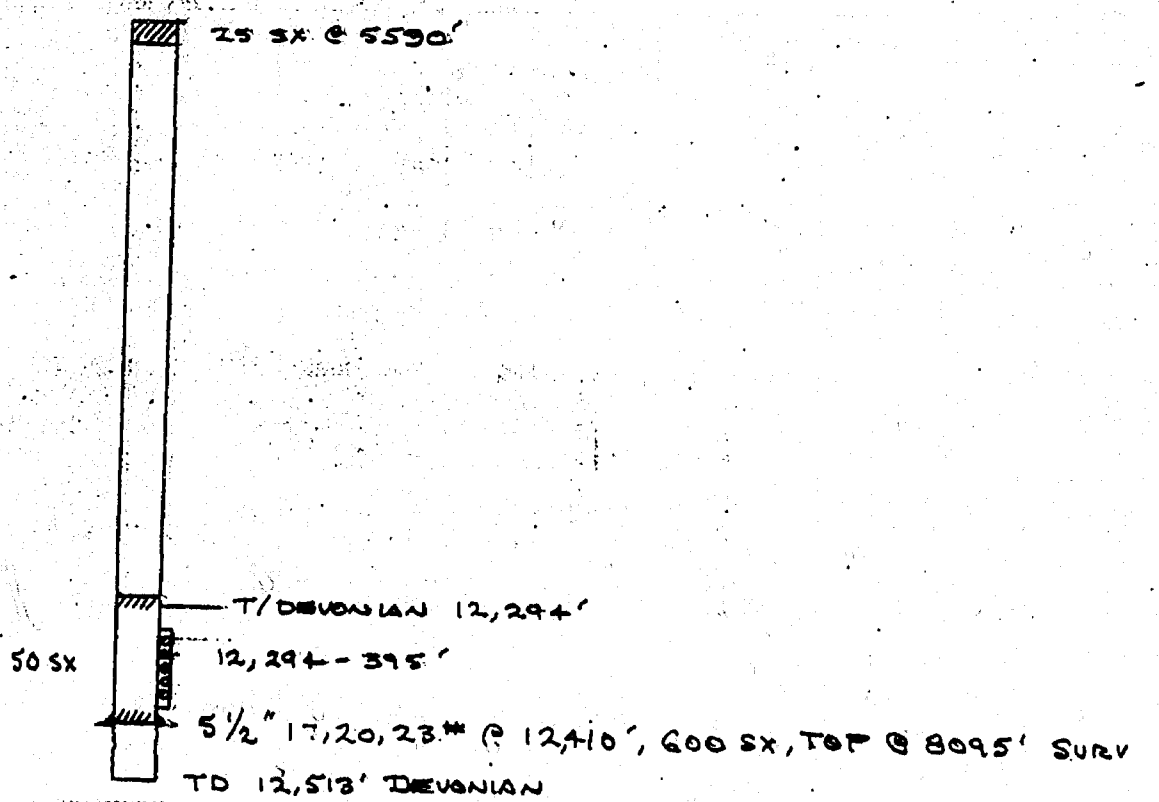


CABOT FLEET NO. 4 — 3860' RDB
1650' FEL & 990' FSL — 35-13-37
TA 11-58
CONVERTED TO SWD SAN ANDRES 6-60
PEA 9-75

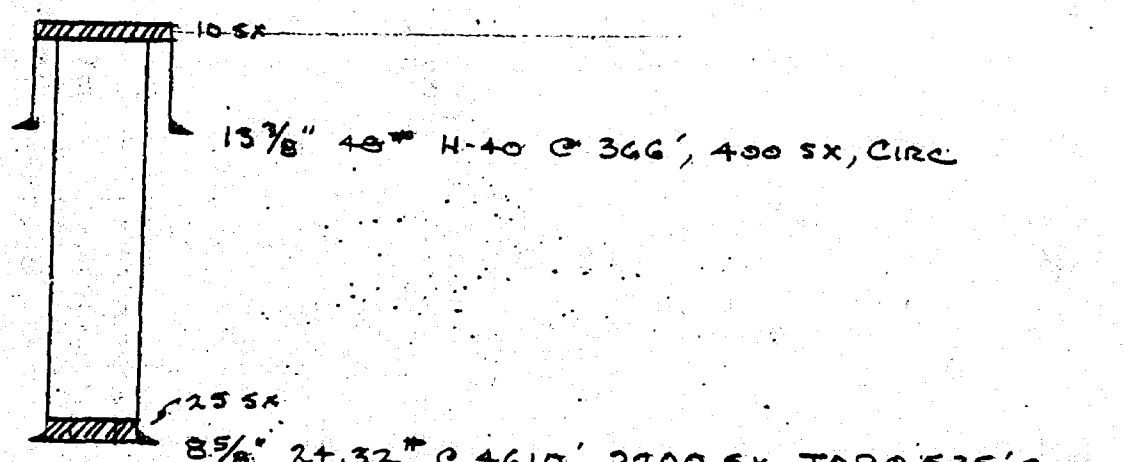


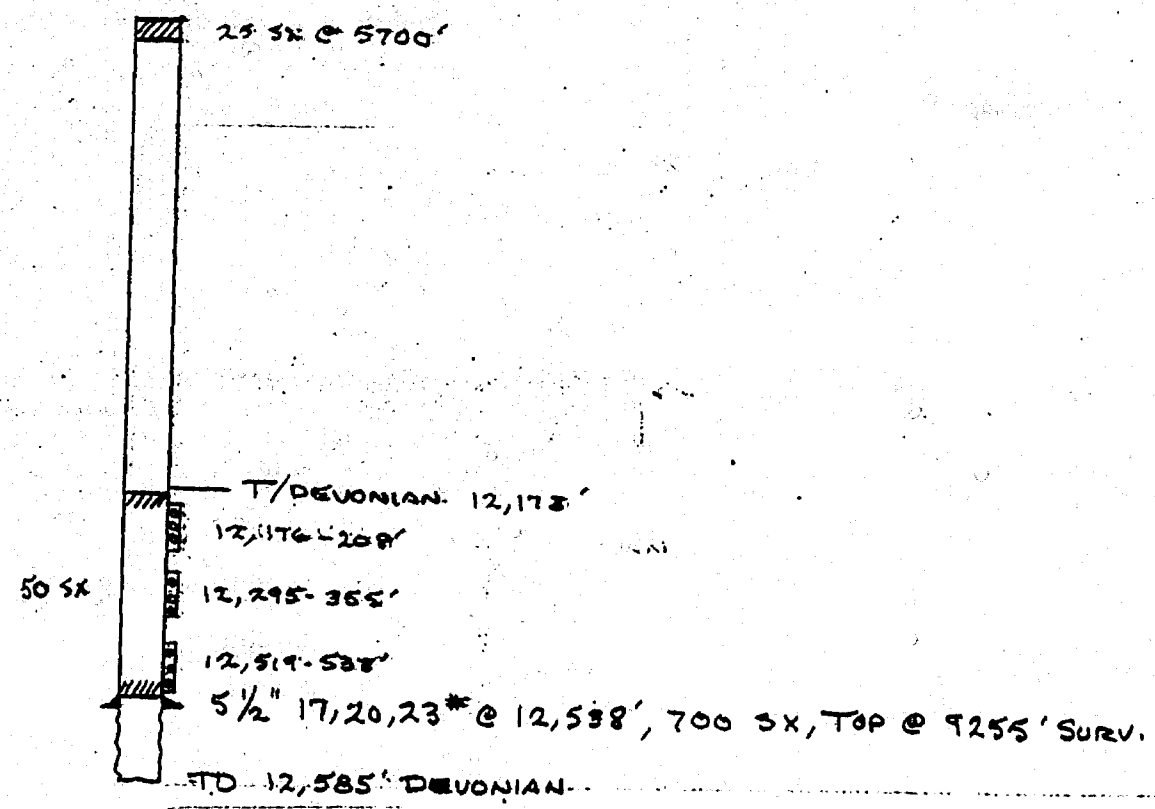
CABOT FLEET No. 3 3858' RDB
1650' FEL & 1930' FSL 35-13-37
P&A 1-70



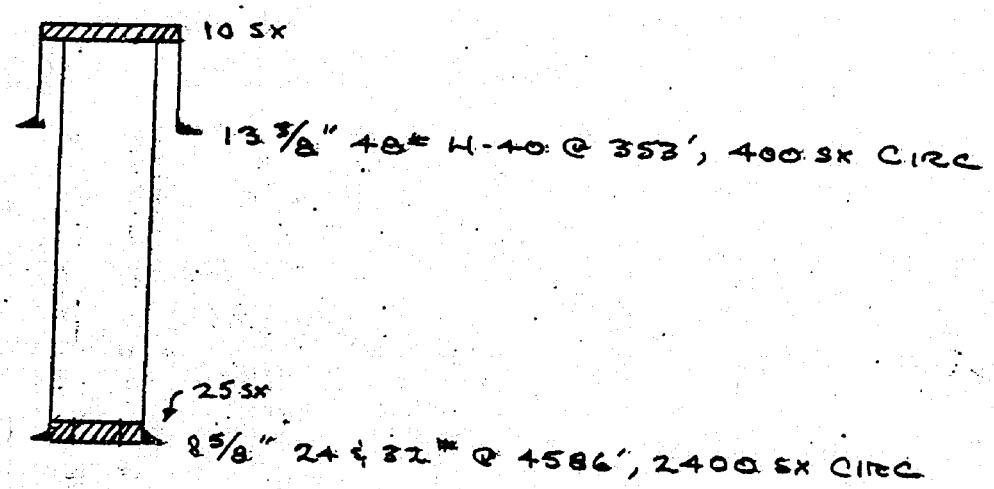


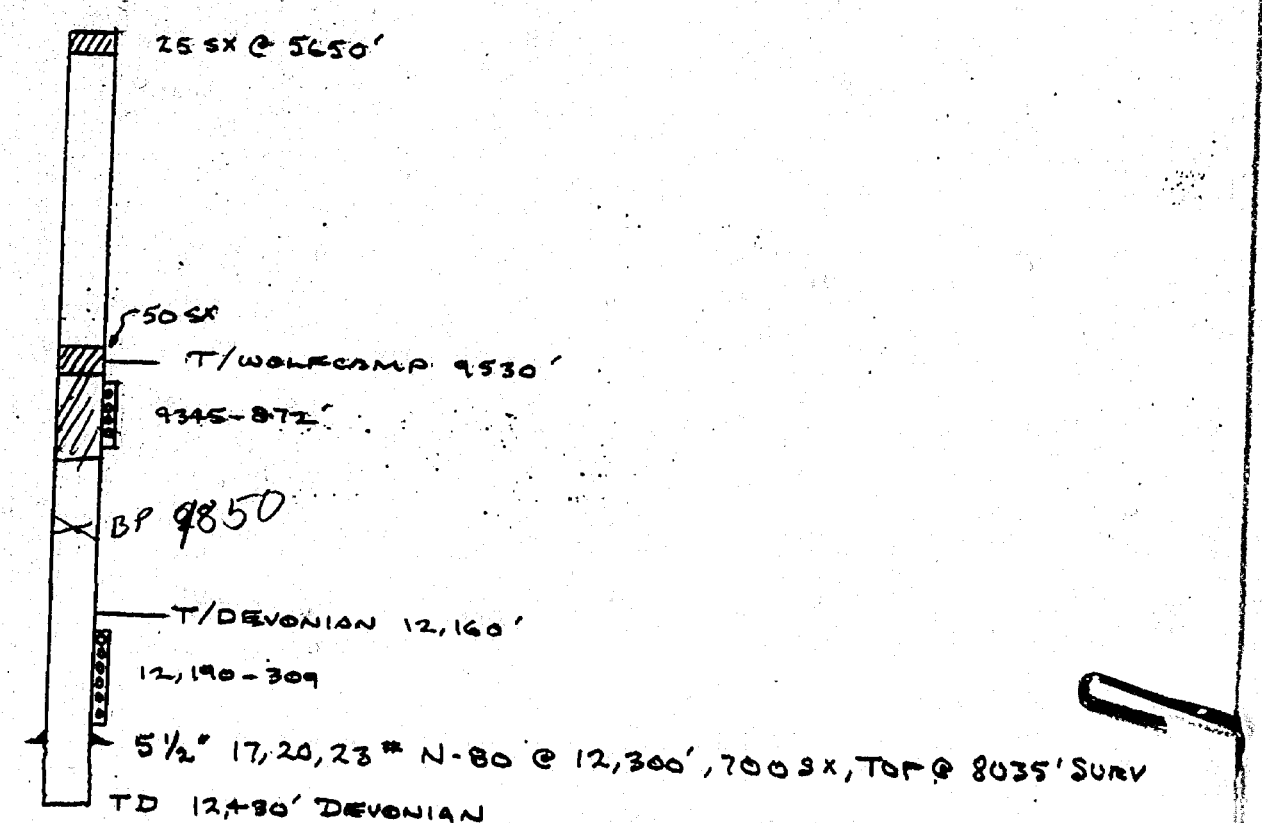
CABOT REED No. 4 3863' RDB
990'FNL & 1650 FEL 35-13-37
P&A 12-69





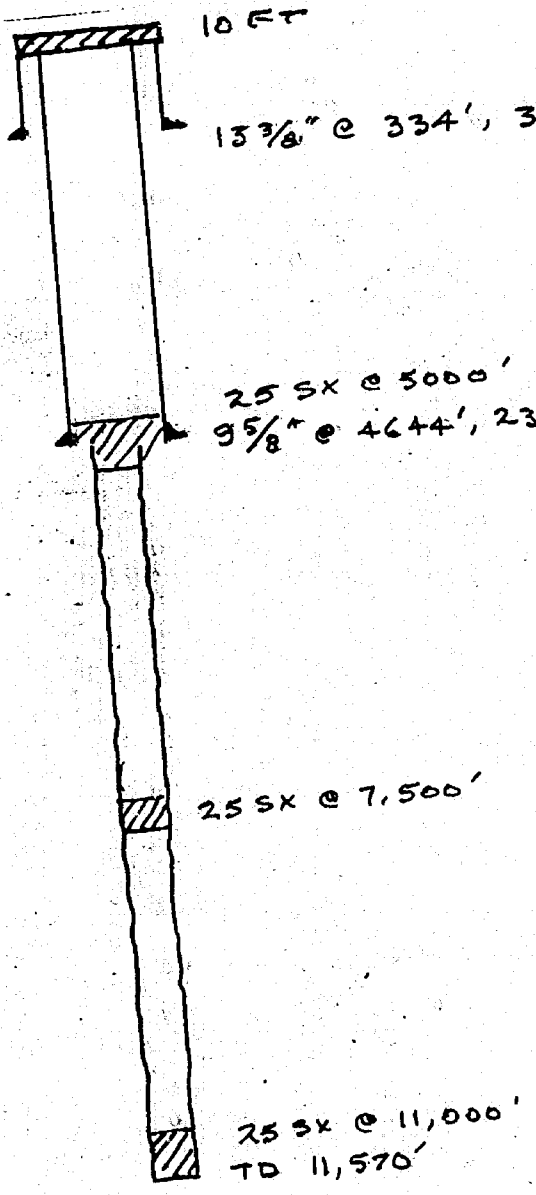
CABOT REED No. 3 3861' RDB
1980' FNL & 1650' FEL 35-13-37
P&A 1-70



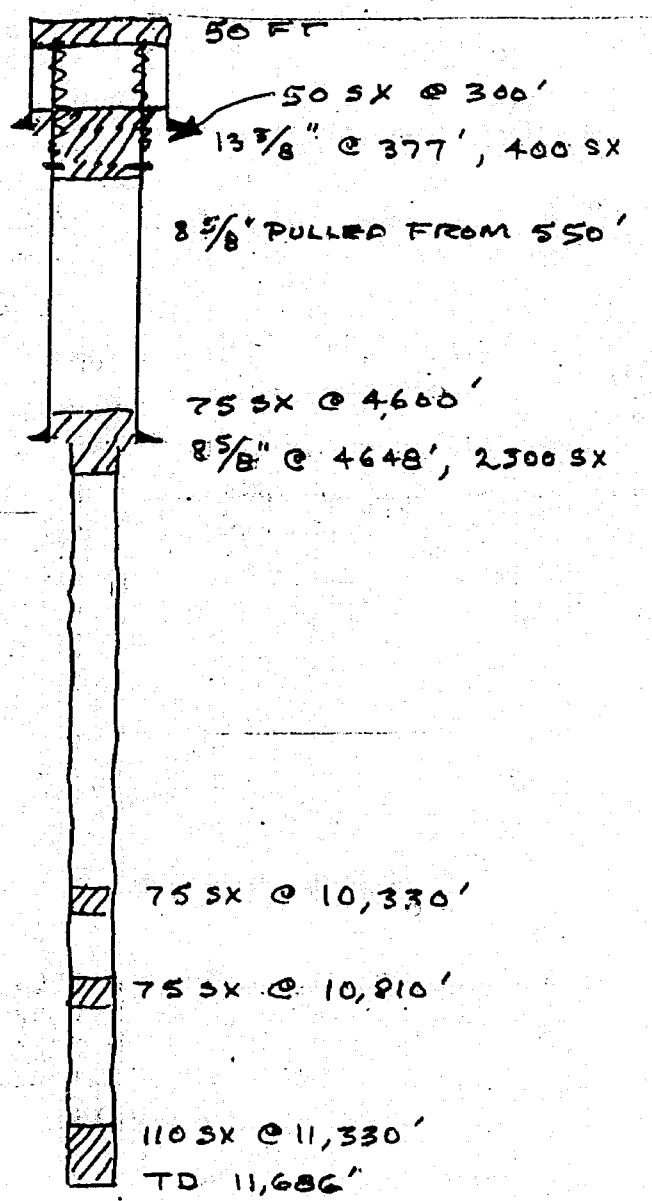


(7)

CITIES SERVICE STATE "AB" No.1 3857' DF
660' FN & WL 36-13-37
P & A 7-52 ~~(RECORDS NOT AVAIL.)~~

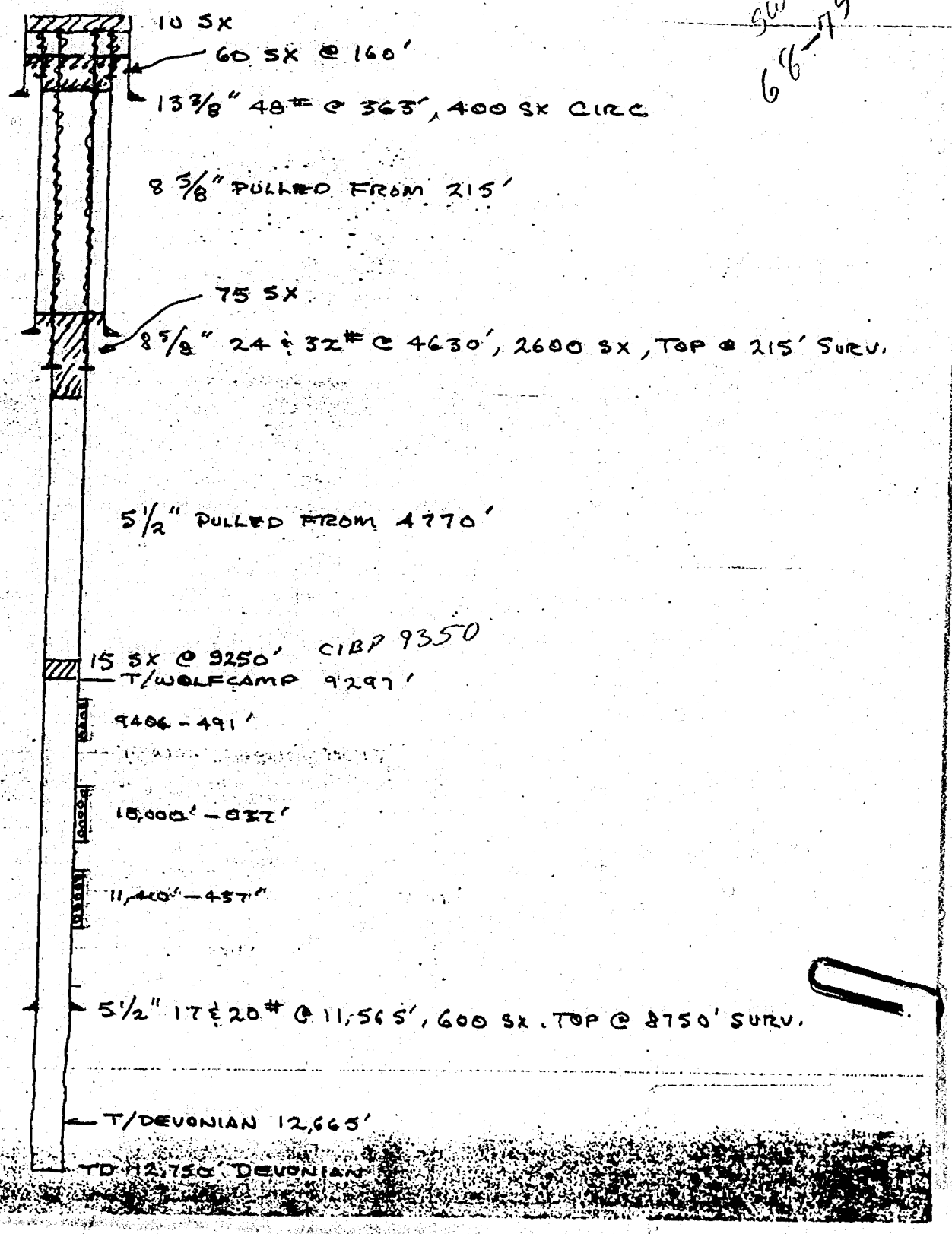


CABOT LOWE No.1 3865' DF
810' FN & 2310' FWL 35-13-37
P&A 7-56 ~~(RECORDS NOT AVAIL.)~~



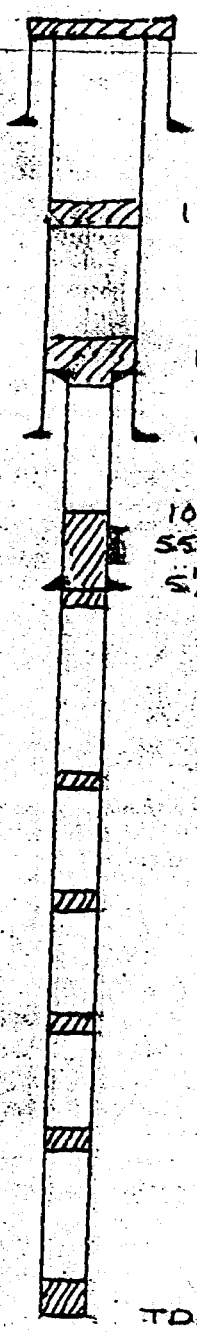
CABOT LOWE "C" No. 1 3867' RDB
1650' FEL & 467' FSL 26-13-37
CONVERTED TO SWD WOLFCAMP 7-64
CONVERTED TO SWD WOLFCAMP-DEVONIAN 2-68
P & A 4-75 ~~(REGISTER NOT AVAIL.)~~

SWD
6615



COTTON LOWE LAND No. 2 3869 RDB
330' FSL & 500' FEL 26-1.3-37
P&A 5-79 (~~RECORDS NOT AVAIL.~~) *

* INTENT (RECENT WELL, RECORDS NOT YET ON FILE, VERBAL APPROVAL 3-6-79.)



100 SX PLUGS @ 12,675', 11,370', 10,150', 9360', 7890', 6040',

CABOT LOUIE "B" No. 1 3868' RDB
467' FSL & 850' FEL 26-13-37
P & A 3-67 ~~(RECORDS NOT AVAIL.)~~

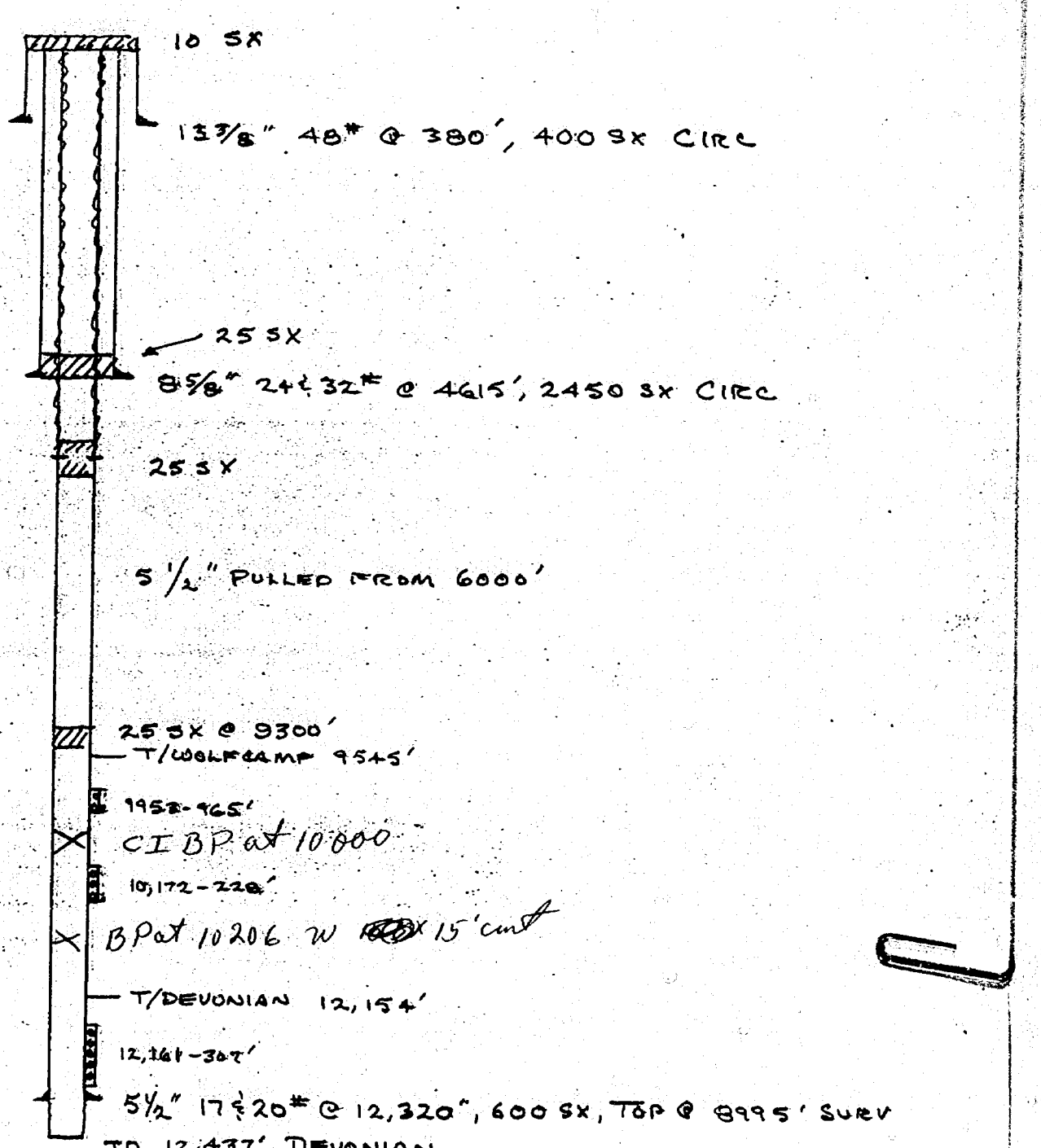


EXHIBIT 5 - Tabular summary of all wells within 1/2 mile radius of Reed No. 1 which penetrate the proposed Devonian disposal zone.

WELL OPERATOR, LEASE AND LOCATION	SURFACE CASING AND CEMENT	INTERMEDIATE CASING AND CEMENT	PRODUCTION CASING AND CEMENT	TOTAL DEPTH	REMARKS
CABOT LOWE "C" NO 1 1650' FEL & 467' FSL 26-13-37 LEA Co, N.M.	13 3/8, 48# @ 363, 400 SX CIRC	8 5/8, 24 & 32# @ 4630, 2600 SX TOP @ 25, SURV	5 1/2, 17 & 20# @ 11565, 600 SX TOP @ 8750, SURV.	12,750 DEVONIAN	FORMER WOLF[illegible] SWD WELL, P[illegible]
COTTON LOWE LAND NO. 2 330' FSL & 300' FEL 26-13-37 LEA Co, N.M.	13 3/8, 51.5# @ 321, 420 SX CIRC	8 5/8, 24 & 32# @ 4700, 1850 SX CIRC	5 1/2, 15.5# LINER @ 4351-5719 225 SX CIRC	12,675 DEVONIAN	P & A 5-79 [illegible]
CABOT LOWE "B" NO 1 467' FSL & 950' FEL 26-13-37 LEA Co, N.M.	13 3/8, 48# @ 381, 400 SX CIRC	8 5/8, 24 & 32# @ [illegible] 2150 SX CIRC	5 1/2, 17 & 20# @ 11,310, 600 SX TOP @ 8965, SURV	12,492 DEVONIAN	P & A 3-67 [illegible]
CABOT FLEET NO 4 1650' FEL & 990' FSL 35-13-37 LEA Co, N.M.	13 3/8, 48# @ 351, 400 SX CIRC	8 5/8, 24 & 32# @ 4631, 2400 SX TOP @ 10, SURV	5 1/2, 17, 20, 23# @ 12,384, 500 SX TOP @ 9000, ESt	12,4[illegible] DEVONIAN	FORMER SWD AN[illegible] WELL, P & A [illegible]
CABOT FLEET NO 3 1650' FEL & 1930' FSL 35-13-37 LEA Co, N.M.	13 3/8, 48# @ 358, 400 SX CIRC	8 5/8, 24 & 32# @ 4573, 2400 SX CIRC	5 1/2, 17, 20, 23# @ 11,410, 600 SX TOP @ 8095, SURV	12,513 DEVONIAN	P & A 1-70

of all wells within 1/2 mile
enetrate the proposed Devonian

Surface Casing and Cement	Intermediate Casing and Cement	Production Casing and Cement	Total Depth	Remarks
13 3/8 [illegible] @ [illegible] [illegible] SX [illegible]	8 5/8 24 & 32# @ 2630 2100 SX TOP @ 25 SURV	5 1/2 14 & 20# @ 11565 600 SX TOP @ 8750 SURV	12,750 DEVONIAN	FORMER WOLFCAMP-DEVONIAN SWD WELL P&A 4-75
13 3/8 [illegible]	8 5/8 24 [illegible]	5 1/2 15.5# LINER @ 435[illegible] 575 [illegible] 225 SX CIRC	12,675 DEVONIAN	P&A 5-79
[illegible]	[illegible]	5 1/2 17 & 20# @ 12520 1600 SX TOP @ 8845 SURV	12,432 DEVONIAN	P&A 3-67
[illegible]	[illegible]	5 1/2 17 & 23# @ 12,33[illegible] 500 SX TOP @ 9000 TEST	12,4[illegible] DEVONIAN	FORMER SAN ANDRES SWD WELL P&A 9-75
[illegible]	[illegible]	5 1/2 17, 20 & 23# @ 12,410 600 SX TOP @ 8095 SURV	12,513 DEVONIAN	P&A 1-40

CABOT REED No. 3 1980' FNL & 1650' FEL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 353', 400 SX, Circ	8 5/8" 24-32# @ 4586', 2400 SX Circ	5 1/2" 17,20,23# @ 12,300', 700 SX Top @ 8035', Surv.	12,430 DEVONIAN	P & A 1-70
CABOT REED No. 4 990' FNL & 1650' FEL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 366', 400 SX Circ	8 5/8" 24-32# @ 4610', 2200 SX Top @ 538', Surv.	5 1/2" 17,20,23# @ 12,530', 700 SX Top @ 9155', Surv.	12,585 DEVONIAN	P & A 12-69
CABOT REED No. 2 660' FNL & 660' FEL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 325', 350 SX Circ	8 5/8" 24-32# @ 4591', 2100 SX Circ	5 1/2" 17,20,23# @ 12,448', 350 SX Top @ 10,600' Est.	12,590 DEVONIAN	Producing Devon (19.30 & 900 B
CABOT FLEET No. 1 660' FEL & 1980' FSL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 362', 400 SX Circ	8 5/8" [illegible] @ 4606', 2165 SX Circ	5 1/2" 17,20,23# @ 12,839', 500 SX Top @ 10,115', Surv.	12,839 DEVONIAN	Currently San A [illegible]
CABOT FLEET No. 2 330' FEL & 990' FSL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 369', 400 SX Circ	8 5/8" 24-32# @ 4582', 2400 SX Circ	5 1/2" 17,20,23# @ 12,520', 700 SX Top @ 9,860', Surv.	12,625 DEVONIAN	Producing Devo (19.30 & 805 BW
CABOT STATE "C" No. 1 2310' FNL & 330' FWL 36-13-37, LEA Co., N.M.	13 3/8" 48# @ 326', 300 SX Circ	8 5/8" 24 & 32# @ 4580', 2100 SX Circ	5 1/2" 17,20,23# @ 12,065', 600 SX Top @ 9495', Surv.	12,249 DEVONIAN	Producing Devoni (14.30 & 890 BW

13 3/8" 48# @ 3?? [illegible], 400 SX) CIRC	8 5/8" 24 & 32# @ 4586', 2400 SX CIRC	5 1/2" 17, 20, 23# @ 12,300', 700 SX TOP @ 8035', SURV.	12,430 DEVONIAN	P & A 1-70
13 3/8" 48# @ [illegible], 400 SX) CIRC	8 5/8" 24 & 32# @ 46[illegible]', 2200 SX TOP @ [illegible]33', SURV.	5 1/2" 17, 20, 23# @ 12,530', 700 SX TOP @ 9155', SURV.	12,583 DEVONIAN	P & A 12-69
13 3/8" 48# @ [illegible], 350 SX) [illegible]	8 5/8" 24 & 32# @ 45[illegible]', 1100 SX [illegible]	5 1/2" 17, 20, 23# @ 12,440', 350 SX TOP @ 10,600' EST.	12,590 DEVONIAN	PRODUCING DEVONIAN 8-79 (7 BO & 900 BWPD)
[illegible] 48# @ [illegible] 400 SX [illegible]	[illegible] @ 46[illegible], [illegible] SX [illegible]	5 1/2" 17, 20, 23# @ 12,835', 500 SX TOP @ 10,[illegible]', SURV.	12,835 DEVONIAN	CURRENTLY SAN ANDRES SWD WELL - TO BE ABANDONED
13 3/8" 48# @ [illegible], 400 SX) CIRC	8 5/8" 24 & 32# @ 4586', 2200 SX CIRC	5 1/2" 17, 20, 23# @ 12,520', 700 SX TOP @ 9480', SURV.	12,625 DEVONIAN	PRODUCING DEVONIAN 8-79 (15 BO & 805 BWPD)
13 3/8" 48# @ 32?', 300 SX) CIRC	8 5/8" 24 & 32# @ 4586', 2100 SX) CIRC	5 1/2" 17, 20, 23# @ 12,065', 600 SX TOP @ 9495', SURV.	12,249 DEVONIAN	PRODUCING DEVONIAN 8-79 (14 BO & 890 BWPD)

CABOT STATE "C" No. 2 990' FNL & 440' FWL 36-13-37, LEA CO., N.M.	13 3/8" 48# @ 353', 350 SX, CIRC.	8 5/8" 24 & 32# @ 4586', 720 SX TOP @ 1350', SURV.	5 1/2" 17, 20, 23# @ 12,545', 700 SX TOP @ 9670', SURV.	12,615' DEVONIAN	PRODUCING WOL[illegible] (7 BO & 9 BW[illegible]
KERR-McGEE STATE "E" No. 1 1650' FSL & 330' FWL 36-13-37, LEA CO., N.M.	13 3/8" @ 355', 380 SX, CIRC.	NONE	5 1/2" @ 12,678', 850 SX, TOP @ 9000', EST.	12,688' DEVONIAN	PRODUCING DEVON[illegible] (10 BO & 26 BW[illegible]

2 ... M	13 3/8" 48# @ 353', 350 SX, CIRC.	8 5/8" 24 & 32# @ 4586', 1720 SX, TOP @ 1350' SURV.	5 1/2" 17, 20, 23# @ 12,545', 700 SX, TOP @ 9070' SURV.	12,615' DEVONIAN	PRODUCING WOLFCAMP (7 BO & 9 BWPD) 8-79
1 ... M	13 3/8" @ 355', 380 SX, CIRC.	NONE	5 1/2" @ 12,678', 850 SX, TOP @ 9000', EST.	12,685' DEVONIAN	PRODUCING DEVONIAN (10 BO & 26 BWPD) 3-79

EXHIBIT 6 - Water analysis reports for Wolfcamp and Devonian Formations.

1342-A

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-749

To Cabot Corporation
Box 1101
Pampa, Texas 79065
ATTN: Mr. Bob Kelley

Date 7-31-79

Submitted by

Well No. As Marked Depth Date Rec. 7-31-79

County Field Formation As Marked

	State "C" #2	J.L. Reed #2		
	Wolfcamp	Devonian		
Resistivity	0.055 @ 74°F.	0.112 @ 74°F.		
Specific Gravity	1.118	1.063		
pH	6.6	7.3		
Calcium (Ca)	11,000	3,350		
Magnesium (Mg)	300	300		*MPL
Chlorides (Cl)	106,000	52,000		
Sulfates (SO_4)	530	360		
Bicarbonates (HCO_3)	120	195		
Soluble Iron (Fe)	Nil	Nil		

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc: Encl: G-Scale Analysis

HALLIBURTON COMPANY

By W. L. Brewer
CHEMIST

GENERAL SCALE PROGRAM
MIXING TWO WATERS

CABOT CORP.
WATER #1=STATE"C"#2 WATER #2=J.L.REED #2

TEMPERATURE(F)= 60.	CONCENTRATION(MG/L)	
TYPE OF IONS	WATER #1	WATER #2
SODIUM	55886.	29573.
CALCIUM	11000.	3350.
MAGNESIUM	300.	300.
IRON(FERROUS)	0.	0.
IRON(FERRIC)	0.	0.
CHLORIDE	106000.	52000.
BICARBONATE	120.	195.
CARBONATE	0.	0.
SULFATE	530.	360.
TOTAL DISSOLVED SOLIDS	173836.	85278.
PH	6.6	7.3
SPECIFIC GRAVITY	1.118	1.063

TYPE OF SCALE	AMT FORMED (GMS/L)	AMT SOLUBLE (GMS/L)	SCALE INDEX	SCALING TENDENCY
100.0 % WATER #1 0.0 % WATER #2				
CALCIUM SULFATE	0.950	1.888	-0.938	NEGATIVE
CALCIUM CARBONATE	———	———	0.268	POSITIVE
90.0 % WATER #1 10.0 % WATER #2				
CALCIUM SULFATE	0.919	2.026	-1.107	NEGATIVE
CALCIUM CARBONATE	———	———	0.236	POSITIVE
80.0 % WATER #1 20.0 % WATER #2				
CALCIUM SULFATE	0.889	2.171	-1.282	NEGATIVE
CALCIUM CARBONATE	———	———	0.205	POSITIVE
70.0 % WATER #1 30.0 % WATER #2				
CALCIUM SULFATE	0.859	2.311	-1.452	NEGATIVE
CALCIUM CARBONATE	———	———	0.180	POSITIVE
60.0 % WATER #1 40.0 % WATER #2				
CALCIUM SULFATE	0.828	2.495	-1.667	NEGATIVE
CALCIUM CARBONATE	———	———	0.155	POSITIVE
50.0 % WATER #1 50.0 % WATER #2				
CALCIUM SULFATE	0.798	2.699	-1.901	NEGATIVE
CALCIUM CARBONATE	———	———	0.136	POSITIVE
40.0 % WATER #1 60.0 % WATER #2				
CALCIUM SULFATE	0.767	2.910	-2.143	NEGATIVE
CALCIUM CARBONATE	———	———	0.125	POSITIVE
30.0 % WATER #1 70.0 % WATER #2				
CALCIUM SULFATE	0.737	3.139	-2.402	NEGATIVE
CALCIUM CARBONATE	———	———	0.119	POSITIVE
20.0 % WATER #1 80.0 % WATER #2				
CALCIUM SULFATE	0.706	3.403	-2.697	NEGATIVE
CALCIUM CARBONATE	———	———	0.126	POSITIVE
10.0 % WATER #1 90.0 % WATER #2				
CALCIUM SULFATE	0.676	3.713	-3.037	NEGATIVE
CALCIUM CARBONATE	———	———	0.153	POSITIVE
0. % WATER #1 100.0 % WATER #2				
CALCIUM SULFATE	0.645	4.066	-3.421	NEGATIVE
CALCIUM CARBONATE	———	———	0.201	POSITIVE

HALLIBURTON

"NOTICE, THIS REPORT IS BASED ON SOUND ENGINEERING PRACTICES, BUT BECAUSE OF VARIBLE WELL CONDITIONS AND OTHER INFORMATION WHICH MUST BE RELIED UPON HALLIBURTON MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY OF THE DATA OR OF ANY CALCULATIONS OR OPINIONS EXPRESSED HEREIN. YOU AGREE THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS

GENERAL SCALE PROGRAM
MIXING TWO WATERS

CABOT CORPORATION
#1=STATE "C" #2, #2=J. E. REED #2

TEMPERATURE (F) = 160°

TYPE OF IONS	CONCENTRATION (MG/L) WATER #1	WATER #2
SODIUM	55886.	29573.
CALCIUM	11000.	3350.
MAGNESIUM	300.	300.
IRON (FERROUS)	0.	0.
IRON (FERRIC)	0.	0.
CHLORIDE	106000.	52000.
BICARBONATE	120.	195.
CARBONATE	0.	0.
SULFATE	530	360.
TOTAL DISSOLVED SOLIDS	173836.	85778.
PH	6.8	7.3
SPECIFIC GRAVITY	1.118	1.063

TYPE OF SCALE	AMT FORMED (GMS/L)	AMT SOLUBLE (GMS/L)	SCALE INDEX	SCALING TENDENCY
100.0 % WATER #1 0.0 % WATER #2				
CALCIUM SULFATE	0.1960	1.883	-0.933	NEGATIVE
CALCIUM CARBONATE	———	———	1.836	POSITIVE
90.0 % WATER #1 10.0 % WATER #2				
CALCIUM SULFATE	0.919	2.007	-1.088	NEGATIVE
CALCIUM CARBONATE	———	———	1.737	POSITIVE
80.0 % WATER #1 20.0 % WATER #2				
CALCIUM SULFATE	0.889	2.141	-1.252	NEGATIVE
CALCIUM CARBONATE	———	———	1.654	POSITIVE
70.0 % WATER #1 30.0 % WATER #2				
CALCIUM SULFATE	0.859	2.286	-1.428	NEGATIVE
CALCIUM CARBONATE	———	———	1.618	POSITIVE
60.0 % WATER #1 40.0 % WATER #2				
CALCIUM SULFATE	0.828	2.441	-1.613	NEGATIVE
CALCIUM CARBONATE	———	———	1.583	POSITIVE
50.0 % WATER #1 50.0 % WATER #2				
CALCIUM SULFATE	0.799	2.614	-1.817	NEGATIVE
CALCIUM CARBONATE	———	———	1.556	POSITIVE
40.0 % WATER #1 60.0 % WATER #2				
CALCIUM SULFATE	0.762	2.809	-2.041	NEGATIVE
CALCIUM CARBONATE	———	———	1.544	POSITIVE
30.0 % WATER #1 70.0 % WATER #2				
CALCIUM SULFATE	0.737	3.021	-2.285	NEGATIVE
CALCIUM CARBONATE	———	———	1.535	POSITIVE
20.0 % WATER #1 80.0 % WATER #2				
CALCIUM SULFATE	0.706	3.269	-2.563	NEGATIVE
CALCIUM CARBONATE	———	———	1.541	POSITIVE
10.0 % WATER #1 90.0 % WATER #2				
CALCIUM SULFATE	0.676	3.564	-2.888	NEGATIVE
CALCIUM CARBONATE	———	———	1.571	POSITIVE
0.0 % WATER #1 100.0 % WATER #2				
CALCIUM SULFATE	0.645	3.905	-3.260	NEGATIVE
CALCIUM CARBONATE	———	———	1.621	POSITIVE

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SERVICES

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EXHIBIT 7 - Consents by offset operator and Reed Lease surface owner.

Kerr McGee has no objection to the disposal of water in the Devonian formation in the J. L. Reed No. 1 well located 1980' FNL and 660' FEL of Section 35, Township 13S, Range 37E, Lea County, New Mexico, operated by Cabot Corporation.

C. Alan Robert

for Kerr McGee

JAMES R. McCRORY
ATTORNEY AT LAW
SUITE 444
200 LOMAS NW
ALBUQUERQUE, NEW MEXICO

TELEPHONE:
505 / 247-8883

MAILING ADDRESS:
P. O. BOX 25764
ZIP 87125

August 3, 1979

Bob Johnson
Cabot Corporation
Box 1101
Pampa, Texas 79065

Dear Mr. Johnson:

I represent Mary Ruth McCrory in regard to her interest described below.

On behalf of Mary Ruth McCrory, I consent to the use of the J. L. Reed oil well located 1980' from the north and 660' from the east lines of Section 35, T 13 S, R 37 E, N.M.P.M., Lea County, New Mexico for the injections of salt water into the Devonian formation from the State C and Lowe wells located nearby.

Yours truly,

James R. McCrory

JRM/ls

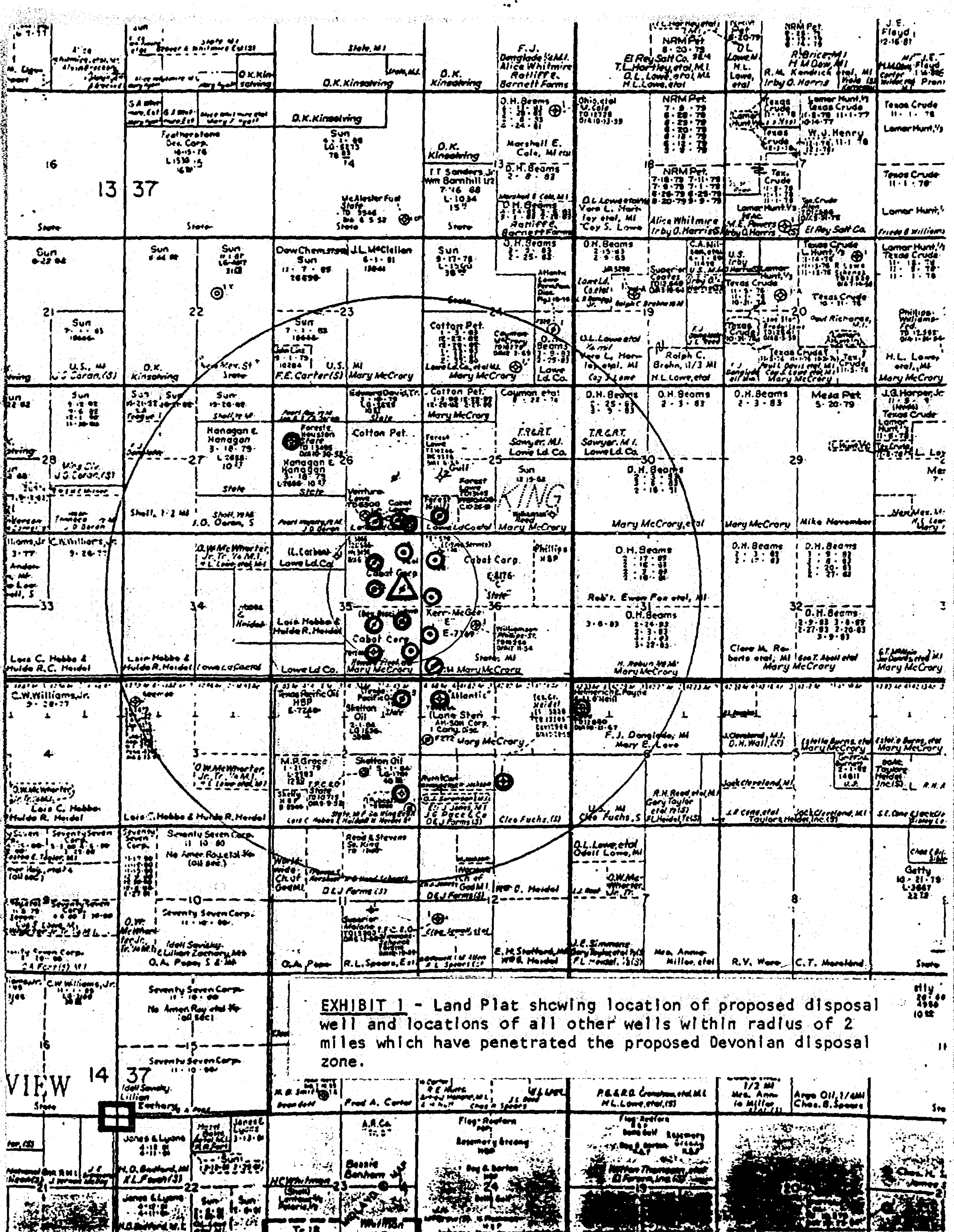
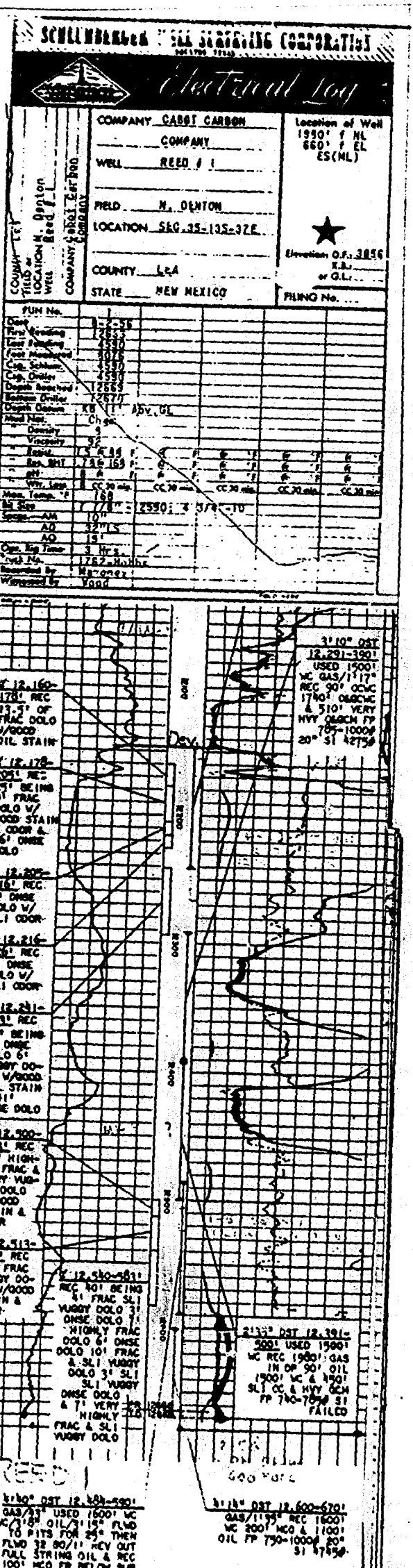


EXHIBIT 1 - Land Plat showing location of proposed disposal well and locations of all other wells within radius of 2 miles which have penetrated the proposed Devonian disposal zone.

EXHIBIT 2 - Well Log, Reed No. 1, proposed disposal well.



BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 1 to 7
CASE NO. 6611
Submitted by Cabot
Hearing Date 8/8/79

EXHIBIT 3 - Wellbore schematic, Reed No. 1, proposed disposal well.

CABOT REED NO. 1 3856 RDB
1980' FNL & 660' FEL 35-13-37

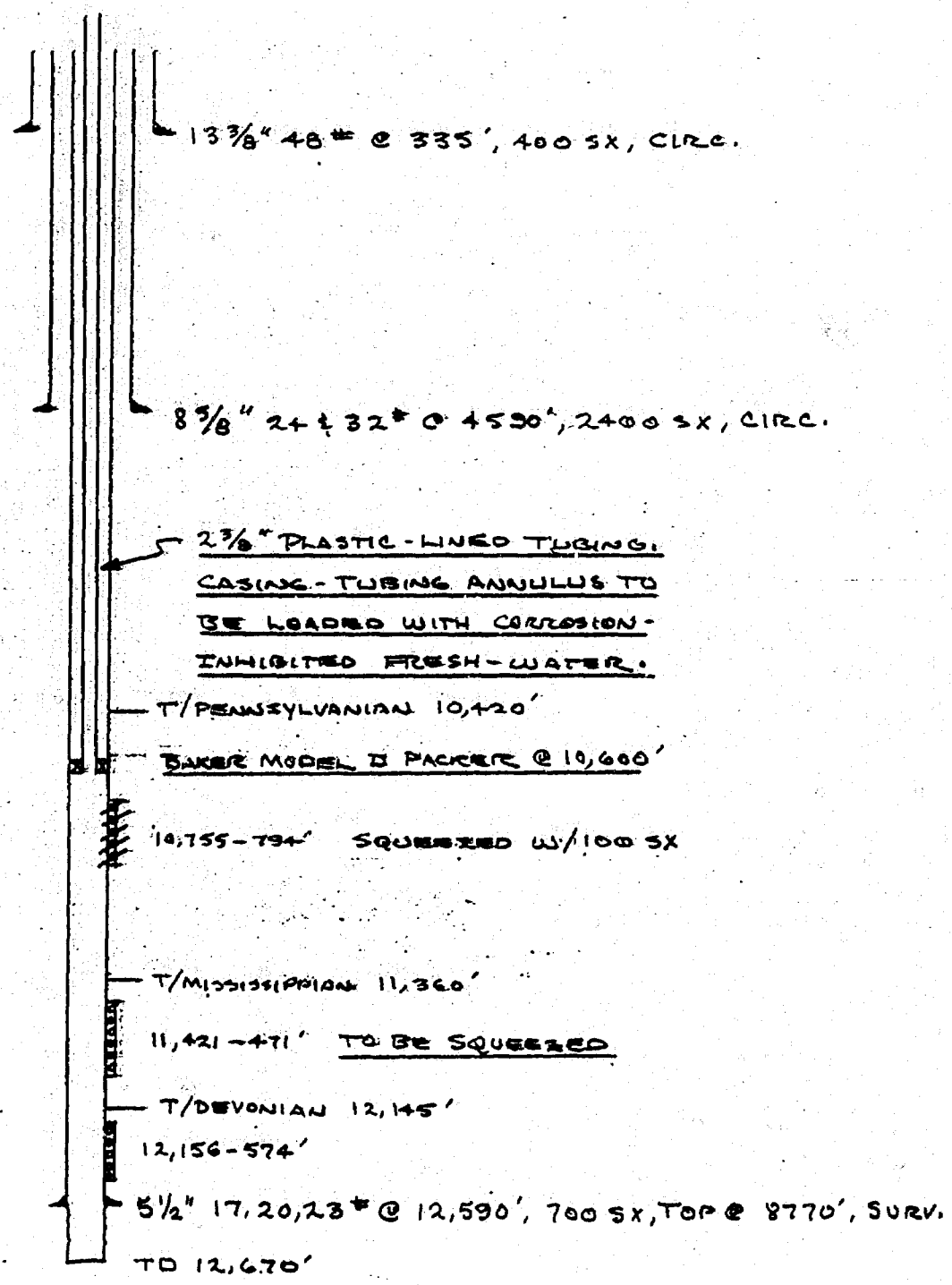
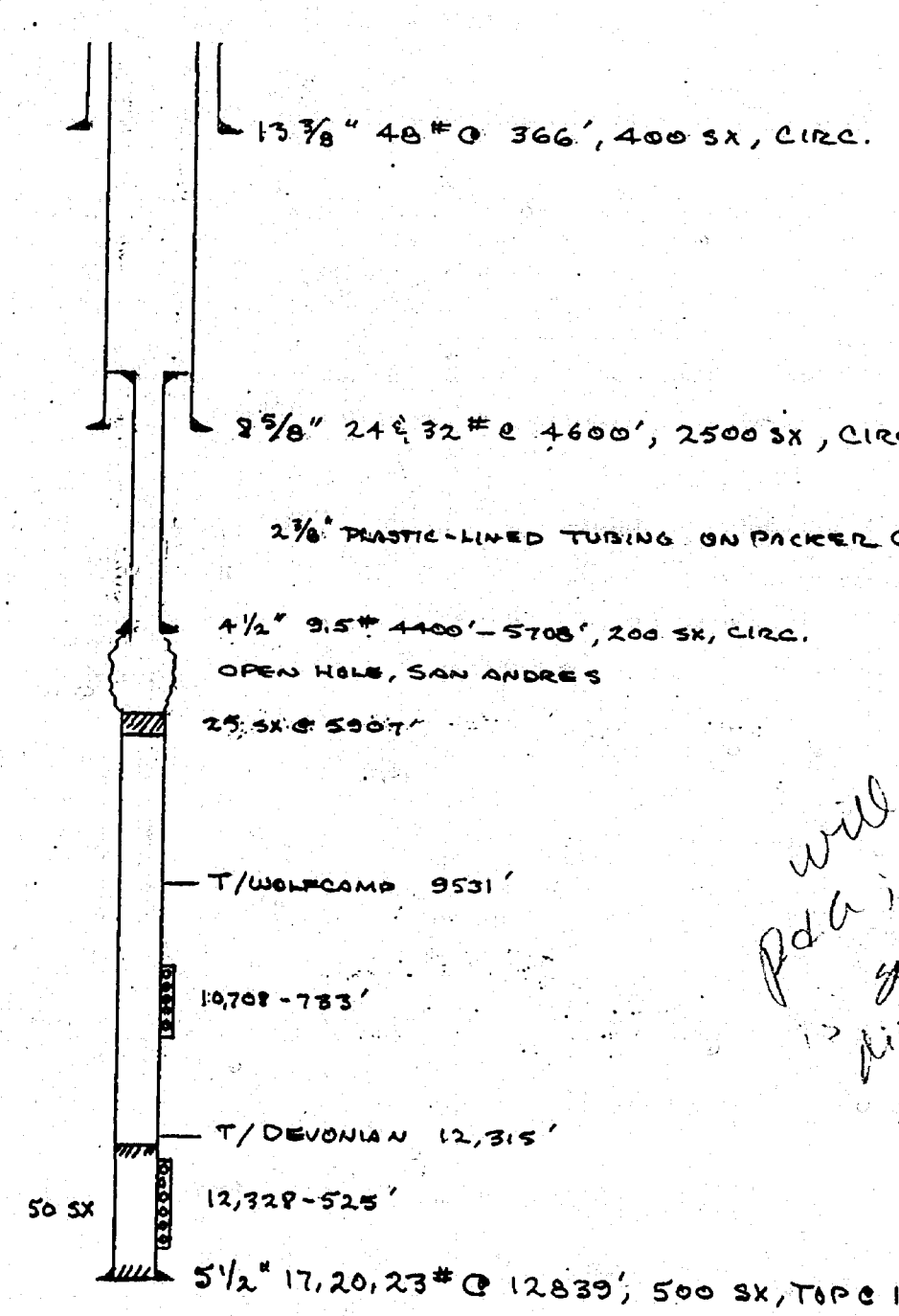


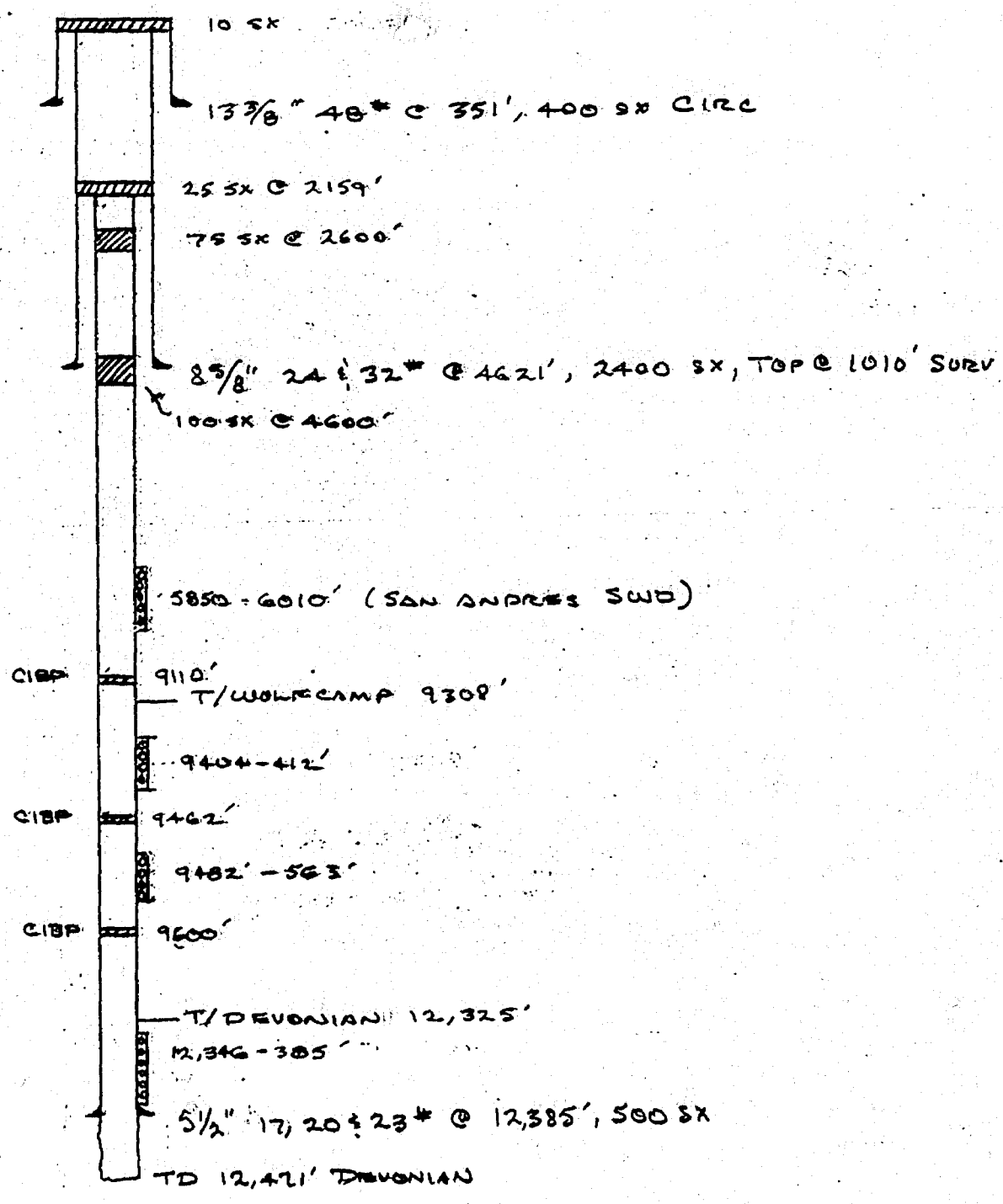
EXHIBIT 4 - Wellbore schematics of all plugged and abandoned wells within 1/2 mile radius of Reed No. 1.

CABOT FLEET No. 1 3875' RDB
660' FEL & 1980' FSL 35-13-37
P&A 1-70
REENTERED 1975 FOR SAN ANDRES SWD
TO BE PLUGGED AND ABANDONED

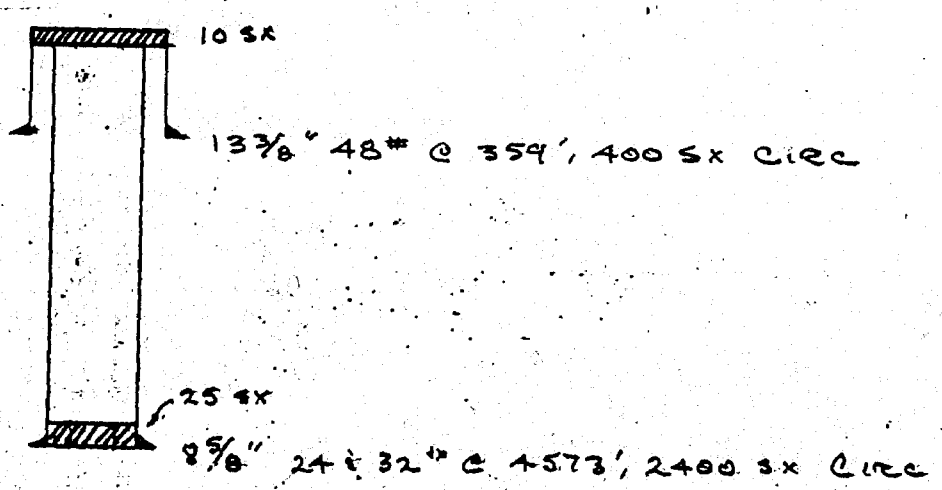


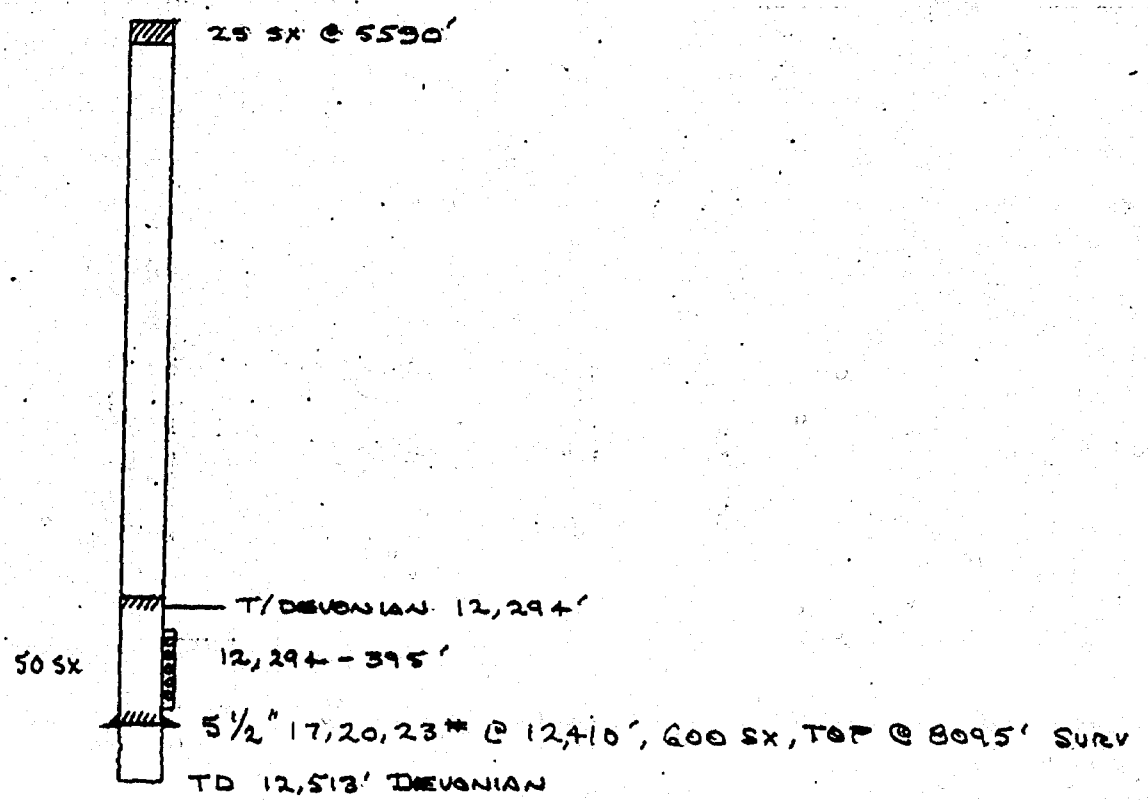
will be P&A; present use is salt water disposal well.

CABOT FLEET NO. 4 3860' RDB
1650' FEL & 990' FSL 35-13-37
TA 11-58
CONVERTED TO SWD SAN ANDRES 6-60
P&A 9-75

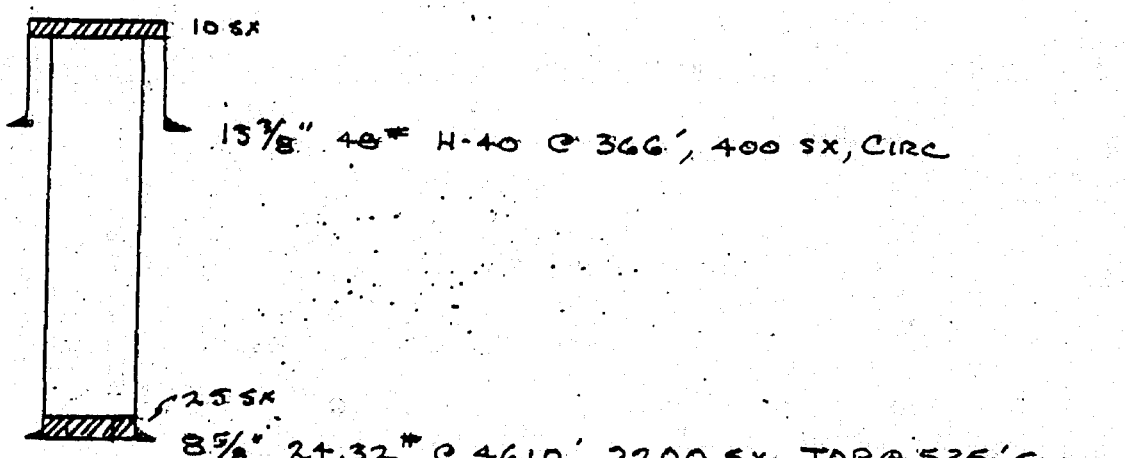


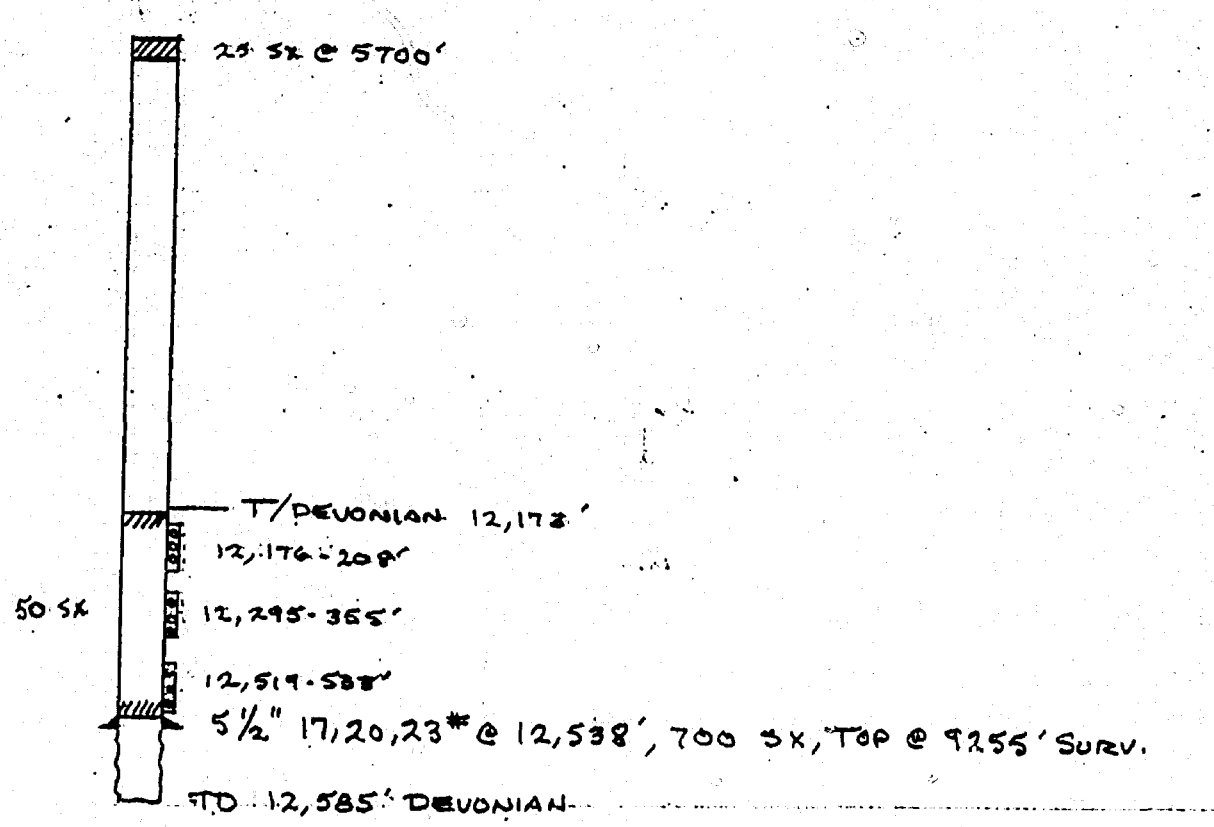
CABOT FLEET No. 3 3858' RDB
1650' FEL & 1930' FSL 35-13-37
P&A 1-70



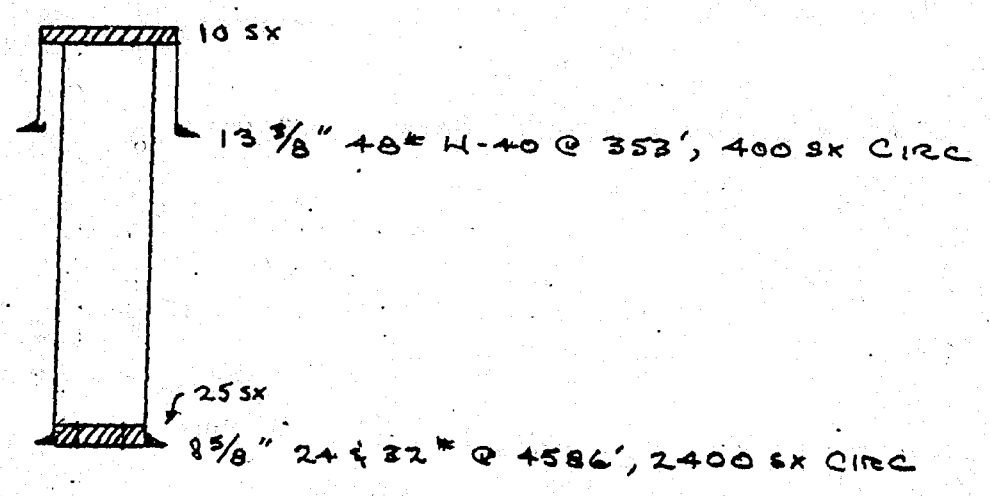


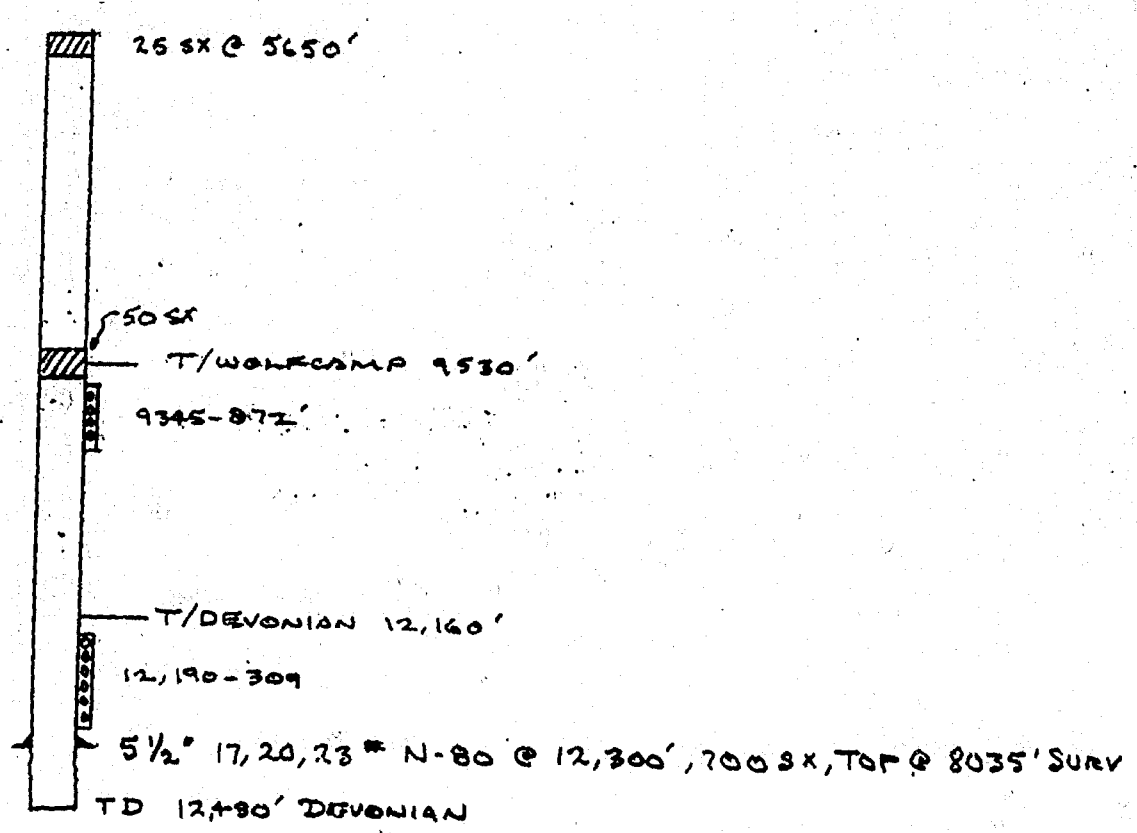
CABOT REED No. 4 3863' RDB
990' FNL & 1650 FEL 35-13-37
P&A 12-69



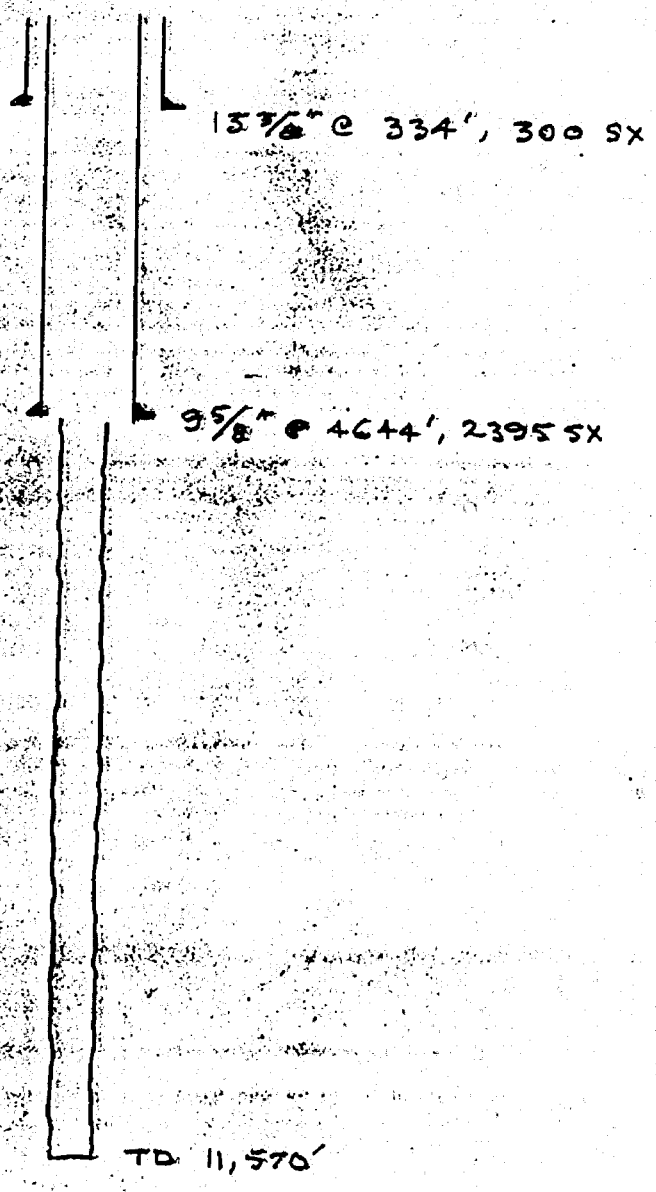


CABOT REED No. 3 3861' RDB
1980' FNL & 1650' FEL 35-13-37
P&A 1-70

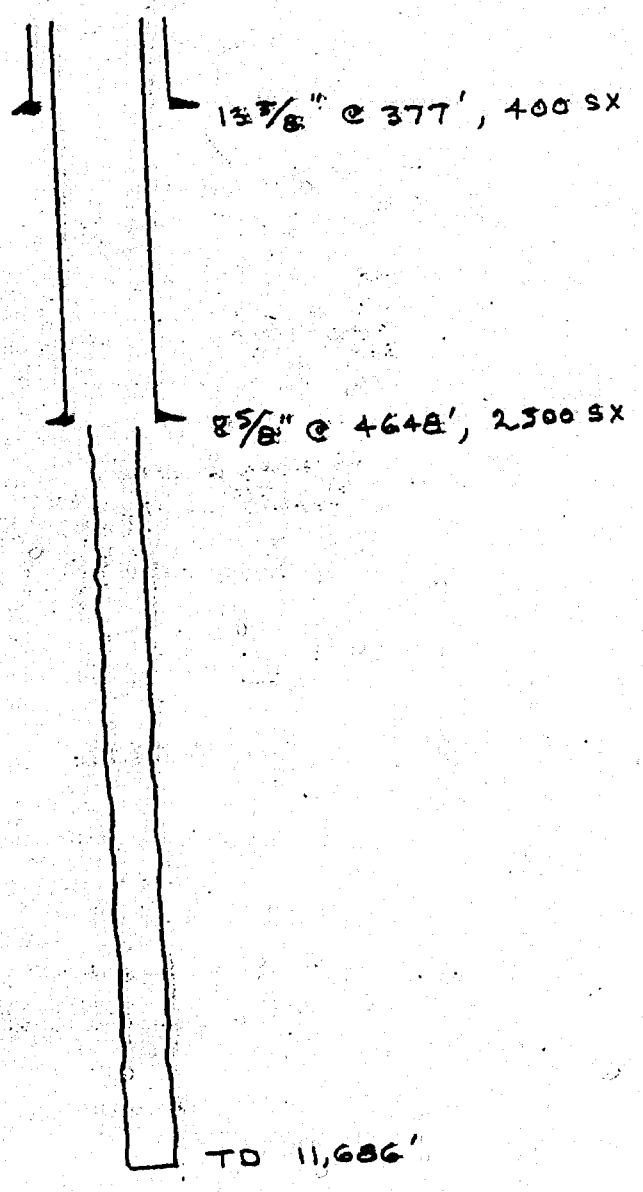




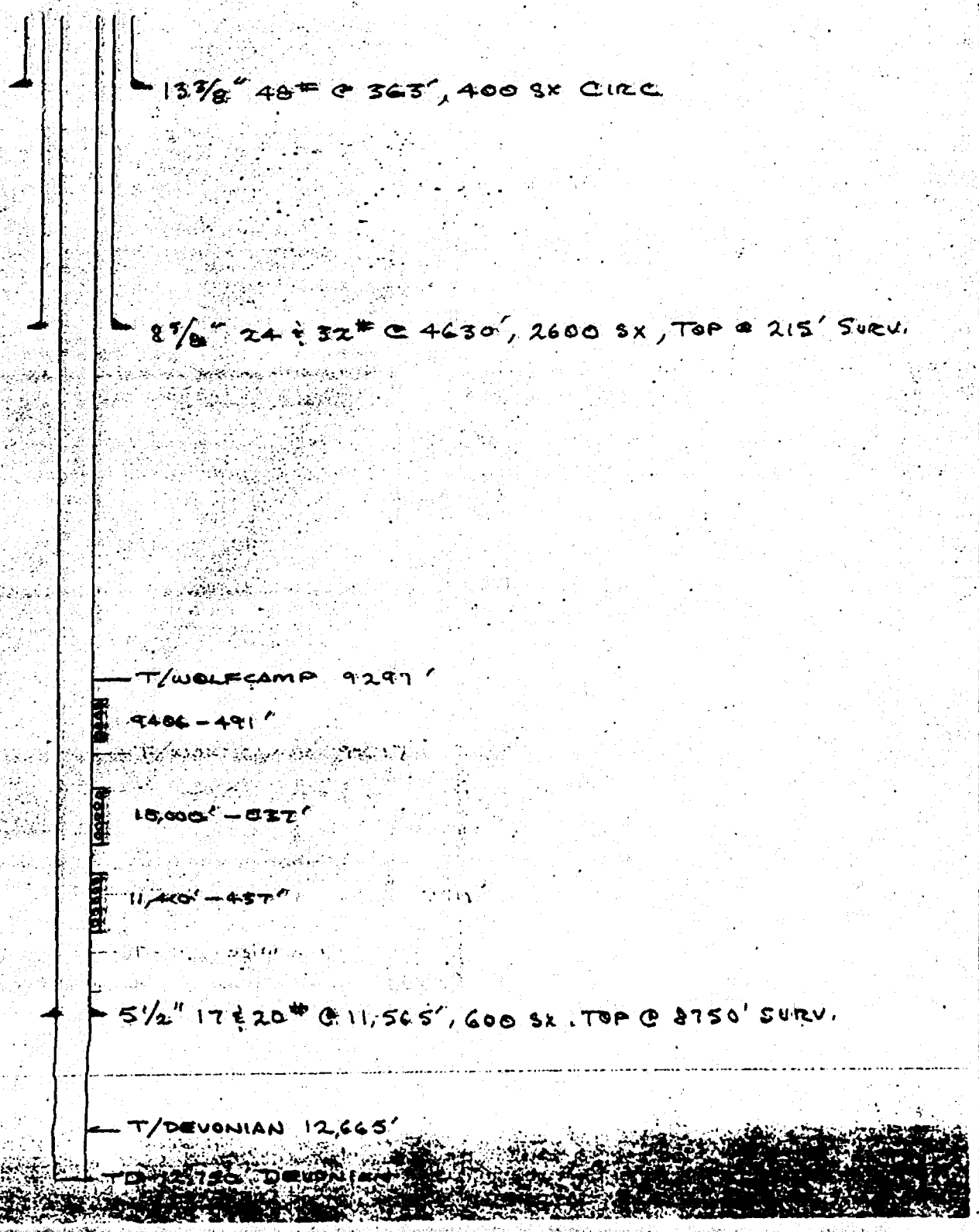
CITIES SERVICE STATE "AB" No. 1 3857' DF
660' FN & WL 36-13-37
P & A 7-52 (RECORDS NOT AVAIL.)



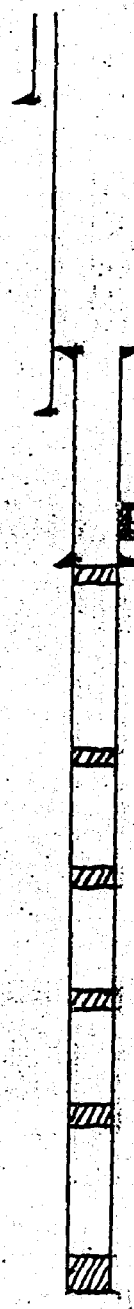
CABOT LOWE No.1 3865' DF
810' FN & 2310' FWL 35-13-37
P&A 7-56 (RECORDS NOT AVAIL.)



CABOT LOWE "C" No. 1 3867' RDB
1650' FEL & 467' FSL 26-13-37
CONVERTED TO SWD WOLFCAMP 7-64
CONVERTED TO SWD WOLFCAMP-DEVONIAN 2-68
P&A 4-75 (RECORDS NOT AVAIL.)



COTTON LOUIE LAND No. 2 3869 RDB
330' FSL & 500' FEL 26-13-37
P&A 5-79 (RECORDS NOT AVAIL.)



13 3/8" 54.5# @ 441', 420 sx CIRC

8 5/8" 24 & 32# @ 4700', 1850 sx CIRC

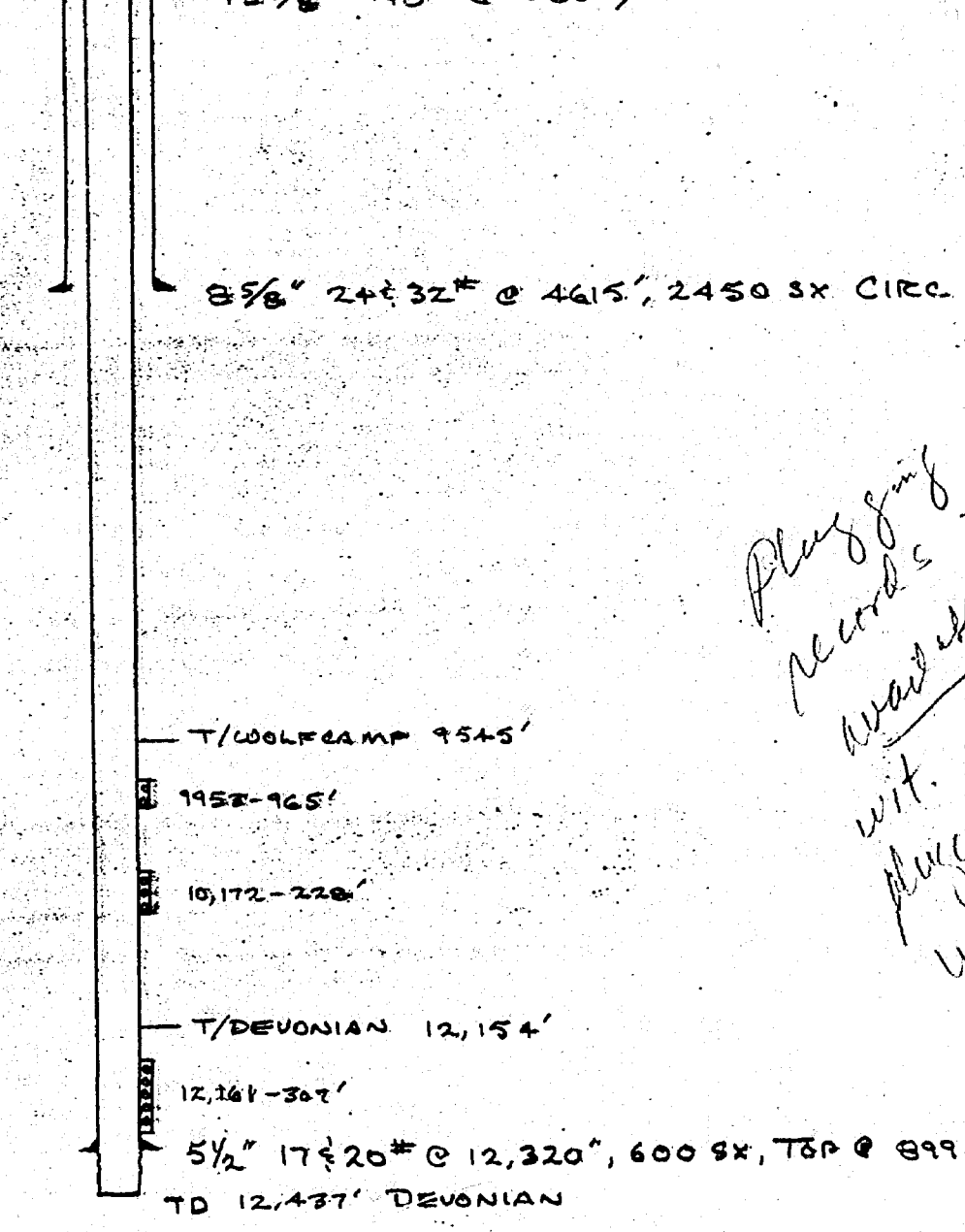
5591-602' SAN ANDRES

5 1/2" 15.5# @ 4351'-5719', 220 sx CIRC

100 sx PLUGS @ 12,675', 11,370', 10,150',
9360', 7890', 6040',

TD 12,675'

CABOT LOWE "B" No. 1 3868' RDB
467' FSL & 850' FEL 26-13-37
P & A 3-67 (RECORDS NOT AVAIL.)



Plugging records not available but wit. feels adequate like other wells.

EXHIBIT 5 - Tabular summary of all wells within 1/2 mile radius of Reed No. 1 which penetrate the proposed Devonian disposal zone.

WELL OPERATOR, LEASE AND LOCATION	SURFACE CASING AND CEMENT	INTERMEDIATE CASING AND CEMENT	PRODUCTION CASING AND CEMENT	TOTAL DEPTH	REMARKS
CABOT LOWE "C" NO. 1 1650' FEL & 467' FSL 26-13-37, LEA CO., N.M.	13 3/8" 48# @ 363', 400 SX CIRC.	8 5/8" 24 & 32# @ 4630', 2600 SX, TOP @ 2450, SURV.	5 1/2" 17 & 20# @ 11,365', 600 SX TOP @ 8750, SURV.	12,780' DEVONIAN	FORMER WOW SWD WELL [illegible]
COTTON LOWE LAND NO. 2	13 3/8" 54.5# @ 421', 420 SX, CIRC.	8 5/8" 24 & 32# @ 4700', 1850 SX, CIRC.	5 1/2" 15.5# LINER @ 4551-5[illegible], 225 SX CIRC.	12,647' DEVONIAN	P & A 5-79 [illegible]
CABOT LOWE "B" NO. 1 467' FSL & 850' FEL 26-13-37, LEA CO., N.M.	13 3/8" 48# @ 383', 400 SX CIRC.	8 5/8" 24 & 32# @ 46[illegible]', 2450 SX CIRC.	5 1/2" [illegible]# @ 12,326', 600 SX TOP @ 8[illegible], SURV.	12,432' DEVONIAN	P & A 3-67 [illegible]
CABOT FLEET NO. 4 1650' FEL & 990' FSL 35-13-37, LEA CO., N.M.	13 3/8" 48# @ 35[illegible]', 400 SX CIRC.	8 5/8" 24 & 32# @ 4[illegible]', 2400 SX, TOP @ [illegible], SURV.	5 1/2" 17, 20, 23# @ 12,389', 500 SX, TOP @ 9000, EST.	12,[illegible] DEVONIAN	FORMER SWD WELL, P & A [illegible]
CABOT FLEET NO. 3 1650' FEL & 1930' FSL 35-13-37, LEA CO., N.M.	13 3/8" 48# @ 358', 400 SX CIRC.	8 5/8" 24 & 32# @ 4513', 2400 SX, CIRC.	5 1/2" 17, 20, 23# @ 12,410', 600 SX TOP @ 8045, SURV.	12,513' DEVONIAN	P & A [illegible]

...mary of all wells within 1/2 mile
...ich penetrate the proposed Devonian

Surface Casing and Cement	Intermediate Casing and Cement	Production Casing and Cement	Total Depth	Remarks
13 3/8" 48# @ 353', 400 SX, Circ	8 5/8" 24 & 32# @ 4630', 2600 SX, Top @ 1245 Surv.	5 1/2" 17 & 20# @ 11565', 600 SX, Top @ 8750, Surv.	12750 Devonian	Former Wolfcamp-Devonian SWD Well. P & A 4-75
13 3/8" 54.5# @ 4[illegible], 420 SX, Circ	8 5/8" 24 & 32# @ 4150', 1350 SX, Circ	5 1/2" 15.5# Liner @ 4331-5719, 225 SX Circ	12675 Devonian	P & A 5-79
13 3/8" 48# @ [illegible], 400 SX, Circ	8 5/8" 24 & 32# @ 4[illegible]5', [illegible]50 SX, Circ	5 1/2" 17 & 20# @ 11320', 600 SX, Top @ 8945, Surv.	12432 Devonian	P & A 3-67
13 3/8" 48# @ [illegible], [illegible]50 SX, Circ	8 5/8" 24 & 32# @ 4[illegible]', 2600 SX, Top @ [illegible] Surv.	5 1/2" 17, 20 & 23# @ 12389', 500 SX, Top @ 9000, Est.	12[illegible] Devonian	Former San Andres SWD Well. P & A 9-75
13 3/8" 48# @ 359', 400 SX, Circ	8 5/8" 24 & 32# @ 4512', 2400 SX, Circ	5 1/2" 17, 20 & 23# @ 11410', 600 SX, Top @ 8045, Surv.	12513 Devonian	P & A 1-70

[illegible] - Buff
[illegible] - Green
[illegible] - White

CABOT REED No. 3 1980' FNL & 1650' FEL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 353', 400 SX, Circ.	8 5/8" 24 & 32# @ 4586', 2400 SX Circ.	5 1/2" 17, 20, 23# @ 12,300', 700 SX Top @ 8035', Surv.	12,430' DEVONIAN	P & A 1-70
CABOT REED No. 4 990' FNL & 1650' FEL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 366', 400 SX, Circ.	8 5/8" 24 & 32# @ 4618', 2200 SX Top @ 535', Surv.	5 1/2" 17, 20, 23# @ 12,538', 700 SX Top @ 9155', Surv.	12,583' DEVONIAN	P & A 12-69
CABOT REED No. 2 660' FNL & 660' FEL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 325', 350 SX, Circ.	8 5/8" 24 & 32# @ 4591', 2100 SX, Circ.	5 1/2" 17, 20, 23# @ 12,440', 350 SX Top @ 10,000' Est.	12,540' DEVONIAN	Producing Devo[nian] (7930 & 900 [illegible]
CABOT FLEET No. 1 660' FEL & 1980' FSL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 366', 400 SX, Circ.	8 5/8" 24 & 32# @ 4600', 2300 SX Circ.	5 1/2" 17, 20, 23# @ 12,839', 500 SX Top @ 10,115', Surv.	12,839' DEVONIAN	Currently San[d] [illegible]
CABOT FLEET No. 2 330' FEL & 990' FSL 35-13-37, LEA Co., N.M.	13 3/8" 48# @ 363', 400 SX, Circ.	8 5/8" 24 & 32# @ 4525', 2400 SX Circ.	5 1/2" 17, 20, 23# @ 12,526', 700 SX Top @ 9480', Surv.	12,624' DEVONIAN	Producing Deve[onian] (1930 & 805 B[illegible]
CABOT STATE "C" No. 1 2310' FNL & 330' FWL 36-13-37, LEA Co., N.M.	13 3/8" 48# @ 326', 300 SX, Circ.	8 5/8" 24 & 32# @ 4588', 2100 SX, Circ.	5 1/2" 17, 20, 23# @ 12,065', 600 SX Top @ 9495', Surv.	12,124' DEVONIAN	Producing Devon[ian] (1430 & 890 B[illegible]

13 3/8" 48# @ 353', 400 SX, CIRC	8 5/8" 24 & 32# @ 4586', 2400 SX, CIRC	5 1/2" 17, 20, 23# @ 12,300', 700 SX, TOP @ 8035', SURV.	12,430' DEVONIAN	P&A 1-70
13 3/8" 48# @ 366', 400 SX, CIRC	8 5/8" 24 & 32# @ 4610', 2200 SX, TOP @ 133', SURV.	5 1/2" 17, 20, 23# @ 12,530', 700 SX, TOP @ 9155', SURV	12,588' DEVONIAN	P&A 12-69
13 3/8" 48# @ 35?', 500 SX, CIRC	8 5/8" 24 & 32# @ 4591', 2100 SX, CIRC	5 1/2" 17, 20, 23# @ 12,440', 350 SX, TOP @ 10000' EST	12,590' DEVONIAN	PRODUCING DEVONIAN 8-79 (79 BO & 900 BWPD)
[illegible] 48# @ [illegible], 400 SX, [illegible]	[illegible] @ 4600', 2100 SX, [illegible]	5 1/2" 17, 20, 23# @ 12,839', 500 SX, TOP @ 10,015', SURV	12,839' DEVONIAN	CURRENT SAN ANDRES SWD WELL - TO BE ABANDONED
[illegible] 48# @ [illegible], 400 SX, CIRC	8 5/8" [illegible] @ 4524', 2400 SX, [illegible]	5 1/2" 17, 20, 23# @ 12,526', 700 SX, TOP @ 9480', SURV	12,6[illegible]' DEVONIAN	PRODUCING DEVONIAN 8-79 (19 BO & 805 BWPD)
13 3/8" 48# @ 32?', 300 SX, CIRC	8 5/8" 24 & 32# @ 4588', 2100 SX, CIRC	5 1/2" 17, 20, 23# @ 12,065', 600 SX, TOP @ 9493', SURV	12,24?' DEVONIAN	PRODUCING DEVONIAN 8-79 (4 BO & 890 BWPD)

CABOT STATE "C" No. 2 990' FNL & 440 FWL 36-13-37, LEA CO., N.M.	13 3/8" 48# @ 353', 350 SX, CIRC.	8 5/8" 24 & 32# @ 4586', 1720 SX TOP @ 1350', SURV.	5 1/2" 17, 20, 23# @ 12,545', 700 SX TOP ± 9070', SURV.	12,615' DEVONIAN	PRODUCING (WOR (7 BO & 9 BWP
KERR-McGEE STATE "E" No. 1 1650' FSL & 330' FWL 36-13-37, LEA CO., N.M.	13 3/8" @ 255', 380 SX CIRC.	NONE	5 1/2" @ 12,678', 850 SX, TOP @ 9000', EST.	12,680' DEVONIAN	PRODUCING DEVONI (10 BO & 26 BWP

CABOT STATE "C" No. 2 990' FNL & 440 FWL 36-13-37, LEA CO., N.M.	13⅜" 48# @ 353', 350 SX, CIRC.	8⅝" 24 & 32# @ 4586', 1720 SX TOP @ 1350', SURV.	5½" 17, 20, 23# @ 12,545', 700 SX TOP @ 9670', SURV.	12,615' DEVONIAN	PRODUCING WOLF (7 BO & 9 BWP		
KERR-McGEE STATE "E" No. 1 1650' FSL & 330' FWL 36-13-37, LEA CO., N.M.	13⅜" @ 255', 380 SX, CIRC.	NONE	5½" @ 12,678', 850 SX, TOP @ 9000', EST.	12,680' DEVONIAN	PRODUCING DEVONI (10 BO & 26 BWP		

13⅜" 48# @ 353', 350 SX, CIRC.	8⅝" 24 & 32# @ 4586', 1720 SX TOP @ 1350', SURV.	5½" 17, 20, 23# @ 12,545', 700 SX TOP @ 9670', SURV.	12,615' DEVONIAN	PRODUCING WOLFCAMP 8-79 (7 BO & 9 BWPD)	
13⅜" @ 255', 380 SX CIRC.	NONE	5½" @ 12,678', 850 SX, TOP @ 9000', EST.	12,680' DEVONIAN	PRODUCING DEVONIAN 3-79 (10 BO & 26 BWPD)	

EXHIBIT 6 - Water analysis reports for Wolfcamp and Devonian Formations.

1342-A

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W79-749

To Cabot Corporation
Box 1101
Pampa, Texas 79065
ATTN: Mr. Bob Kelley

Date 7-31-79

Submitted by _____ Date Rec. 7-31-79

Well No. As Marked Depth _____ Formation As Marked

County _____ Field _____ Source _____

	State "C" #2 Wolfcamp	J.L. Reed #2 Devonian		
Resistivity	0.055 @ 74°F.	0.112 @ 74°F.		
Specific Gravity	1.118	1.063		
pH	6.6	7.3		
Calcium (Ca)	11,000	3,350		*MPL
Magnesium (Mg)	300	300		
Chlorides (Cl)	106,000	52,000		
Sulfates (SO_4)	530	360		
Bicarbonates (HCO_3)	120	195		
Soluble Iron (Fe)	Nil	Nil		

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc: Encl: G-Scale Analysis

HALLIBURTON COMPANY

By W. L. Brewer
CHEMIST

GENERAL SCALE PROGRAM
MIXING TWO WATERS

CABOT CORP.
WATER #1=STATE"C"#2, WATER #2-=J.L.REED #2 "

TEMPERATURE(F)= 60.

TYPE OF IONS	CONCENTRATION(MG/L) WATER #1	WATER #2
SODIUM	55886.	29573.
CALCIUM	11000.	3350.
MAGNESIUM	300.	300.
IRON(FERROUS)	0.	0.
IRON(FERRIC)	0.	0.
CHLORIDE	106000.	52000.
BICARBONATE	120.	195.
CARBONATE	0.	0.
SULFATE	530.	360.
TOTAL DISSOLVED SOLIDS	173836.	85778.
PH	6.6	7.3
SPECIFIC GRAVITY	1.118	1.063

TYPE OF SCALE	AMT FORMED (GMS/L)	AMT SOLUBLE (GMS/L)	SCALE INDEX	SCALING TENDENCY
100.0 % WATER #1 0. % WATER #2				
CALCIUM SULFATE	0.950	1.888	-0.938	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.268	POSITIVE
90.0 % WATER #1 10.0 % WATER #2				
CALCIUM SULFATE	0.919	2.026	-1.107	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.236	POSITIVE
80.0 % WATER #1 20.0 % WATER #2				
CALCIUM SULFATE	0.889	2.171	-1.282	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.205	POSITIVE
70.0 % WATER #1 30.0 % WATER #2				
CALCIUM SULFATE	0.859	2.311	-1.452	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.180	POSITIVE
60.0 % WATER #1 40.0 % WATER #2				
CALCIUM SULFATE	0.828	2.495	-1.667	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.155	POSITIVE
50.0 % WATER #1 50.0 % WATER #2				
CALCIUM SULFATE	0.798	2.699	-1.901	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.136	POSITIVE
40.0 % WATER #1 60.0 % WATER #2				
CALCIUM SULFATE	0.767	2.910	-2.143	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.126	POSITIVE
30.0 % WATER #1 70.0 % WATER #2				
CALCIUM SULFATE	0.737	3.139	-2.402	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.119	POSITIVE
20.0 % WATER #1 80.0 % WATER #2				
CALCIUM SULFATE	0.706	3.403	-2.697	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.126	POSITIVE
10.0 % WATER #1 90.0 % WATER #2				
CALCIUM SULFATE	0.676	3.713	-3.037	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.153	POSITIVE
0. % WATER #1 100.0 % WATER #2				
CALCIUM SULFATE	0.645	4.066	-3.421	NEGATIVE
CALCIUM CARBONATE	-----	-----	0.201	POSITIVE

GENERAL SCALE PROGRAM
MIXING TWO WATERS

CABOT CORPORATION
#1=STATE "C" #2,#2=J.L.REED#2

TEMPERATURE(F)= 160°

TYPE OF IONS	CONCENTRATION(MG/L) WATER #1	WATER #2
SODIUM	55886.	29573.
CALCIUM	11000.	3350.
MAGNESIUM	300.	300.
IRON(FERROUS)	0.	0.
IRON(FERRIC)	0.	0.
CHLORIDE	106000.	52000.
BICARBONATE	120.	195.
CARBONATE	0.	0.
SULFATE	530.	360.
TOTAL DISSOLVED SOLIDS	173836.	85278.
PH	6.6	7.3
SPECIFIC GRAVITY	1.118	1.063

TYPE OF SCALE	AMT FORMED (GMS/L)	AMT SOLUBLE (GMS/L)	SCALE INDEX	SCALING TENDENCY
100.0 % WATER #1 0.0 % WATER #2				
CALCIUM SULFATE	0.950	1.883	-0.933	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.836	POSITIVE
90.0 % WATER #1 10.0 % WATER #2				
CALCIUM SULFATE	0.919	2.007	-1.088	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.737	POSITIVE
80.0 % WATER #1 20.0 % WATER #2				
CALCIUM SULFATE	0.889	2.141	-1.252	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.654	POSITIVE
70.0 % WATER #1 30.0 % WATER #2				
CALCIUM SULFATE	0.859	2.286	-1.428	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.618	POSITIVE
60.0 % WATER #1 40.0 % WATER #2				
CALCIUM SULFATE	0.828	2.441	-1.613	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.583	POSITIVE
50.0 % WATER #1 50.0 % WATER #2				
CALCIUM SULFATE	0.798	2.614	-1.817	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.556	POSITIVE
40.0 % WATER #1 60.0 % WATER #2				
CALCIUM SULFATE	0.767	2.808	-2.041	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.544	POSITIVE
30.0 % WATER #1 70.0 % WATER #2				
CALCIUM SULFATE	0.737	3.021	-2.285	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.535	POSITIVE
20.0 % WATER #1 80.0 % WATER #2				
CALCIUM SULFATE	0.706	3.269	-2.563	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.541	POSITIVE
10.0 % WATER #1 90.0 % WATER #2				
CALCIUM SULFATE	0.676	3.564	-2.888	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.571	POSITIVE
0. % WATER #1 100.0 % WATER #2				
CALCIUM SULFATE	0.645	3.905	-3.260	NEGATIVE
CALCIUM CARBONATE	-----	-----	1.621	POSITIVE

HALLIBURTON SERVICES

"NOTICE, THIS REPORT IS BASED ON SOUND ENGINEERING PRACTICES, BUT BECAUSE OF VARIBLE WELL CONDITIONS AND OTHER INFORMATION WHICH MUST BE RELIED UPON HALLIBURTON MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY OF THE DATA OR OF ANY CALCULATIONS OR OPINIONS EXPRESSED HEREIN. YOU AGREE THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DUE TO NEGLIGENCE OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH SUCH DATA, CALCULATIONS OR OPINIONS."

HALLIBURTON

EXHIBIT 7 - Consents by offset operator and Reed Lease surface owner.

Kerr McGee has no objection to the disposal of water in the Devonian formation in the J. L. Reed No. 1 well located 1980' FNL and 660' FEL of Section 35, Township 13S, Range 37E, Lea County, New Mexico, operated by Cabot Corporation.

C. Alan Roberts
for Kerr McGee

Amarillo or
OK City

JAMES R. McCRORY
ATTORNEY AT LAW
SUITE 444
200 LOMAS NW
ALBUQUERQUE, NEW MEXICO

TELEPHONE:
505 / 247-5883

MAILING ADDRESS:
P. O. BOX 25764
ZIP 87125

August 3, 1979

Bob Johnson
Cabot Corporation
Box 1101
Pampa, Texas 79065

Dear Mr. Johnson:

I represent Mary Ruth McCrory in regard to her interest described below.

On behalf of Mary Ruth McCrory, I consent to the use of the J. L. Reed oil well located 1980' from the north and 660' from the east lines of Section 35, T 13 S, R 37 E, N.M.P.M., Lea County, New Mexico for the injections of salt water into the Devonian formation from the State C and Lowe wells located nearby.

Yours truly,

James R. McCrory

JRM/ls

Docket No. 29-79

Dockets Nos. 32-79 and 33-79 are tentatively set for hearing on August 22 and September 5, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - AUGUST 7, 1979

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6590: (Continued from July 25, 1979, Examiner Hearing)

Application of Grace Petroleum Corporation for compulsory pooling and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Lots 9, 10, 15, and 16 and the SE/4 of Section 6, Township 21 South, Range 32 East, to be dedicated to a well to be drilled at an unorthodox location 4650 feet from the South line and 660 feet from the East line of said Section 6. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6612: Application of Gulf Oil Corporation for compulsory pooling and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Lots 9 thru 16 of Section 6, Township 21 South, Range 32 East, to be dedicated to a well to be drilled at an unorthodox location 4650 feet from the South line and 660 feet from the East line of said Section 6. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6555: (DE NOVO)

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, all of said Section 30 to be dedicated to the well.

Upon application of Texas Oil & Gas Corp. this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6596: (Continued from July 24, 1979, Commission Hearing)

Application of Harvey E. Yates Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Upper Pennsylvanian gas pool to be designated as the Southeast Indian Basin-Upper Pennsylvanian Gas Pool for its Southeast Indian Basin Well No. 1 located in Unit A of Section 23, Township 22 South, Range 23 East, and special pool rules therefor including 320-acre gas well spacing.

CASE 6597: (Continued from July 24, 1979, Commission Hearing)

Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Southeast Indian Basin Well No. 2, an Upper Pennsylvanian well to be drilled 660 feet from the North and West lines of Section 24, Township 22 South, Range 23 East, with the N/2 or all of said Section 24 to be dedicated to the well, depending on the outcome of Case No. 6596.

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 8, 1979

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 6613: Application of Grace Petroleum Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Smith Ranch Unit Area, comprising 1,600 acres, more or less, of State and federal lands in Township 20 South, Range 33 East.

CASE 6602: (Continued from July 25, 1979, Examiner Hearing)

Application of Tenneco Oil Company for an unorthdox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal 33 C No. 2 Well 1010 feet from the North line and 1710 feet from the West line of Section 33, Township 17 South, Range 29 East, South Empire-Wolfcamp Pool, the E/2 NW/4 of said Section 33 to be dedicated to the well.

CASE 6611: (Continued from July 25, 1979, Examiner Hearing)

Application of Cabot Corp. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the disposal of produced salt water in the Devonian formation through the perforated interval from 12,156 feet to 12,574 feet in its Reed Well No. 1 located in Unit H of Section 35, Township 13 South, Range 37 East, King Field.

CASE 6614: Application of Texaco Inc. for the amendment of Order No. R-4442, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-4442 to remove the top unit allowable restriction from producing wells in the Vacuum Grayburg San Andres Unit which are offset by "lease line" injection wells.

CASE 6615: Application of Southland Royalty Company for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Kutz-Gallup and Basin-Dakota production in the wellbore of its Frontier "E" Well No. 1 located in Unit O of Section 4, Township 27 North, Range 11 West.

CASE 6616: Application of Watson Treating Plant for an oil treating plant permit, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority for the construction and operation of an oil treating plant for the purpose of treating and reclaiming sediment oil at a site in the SE/4 NW/4 of Section 34, Township 8 South, Range 35 East.

CASE 6617: Application of El Paso Natural Gas Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Basin-Dakota and Otero-Gallup production in the wellbore of its Jicarilla 67 Well No. 10 located in Unit M of Section 30, Township 25 North, Range 5 West.

CASE 6618: Application of Harvey E. Yates Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Yates gas pool for its DEPCO Federal Well No. 1 located in Unit D of Section 19, Township 18 South, Range 29 East, and special rules therefor, including 80-acre gas well spacing.

CASE 6619: Application of Harvey E. Yates Company for an unorthodox well location and a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 62.75-acre non-standard Yates gas proration unit comprising Lots 1 and 2 of Section 19, Township 18 South, Range 29 East, to be dedicated to its DEPCO Federal Well No. 1 drilled 330 feet from the North line and 660 feet from the West line of said Section 19.

CASE 6620: Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination for its Austin Monteith Well No. 1 located in Unit K of Section 8, Township 14 South, Range 36 East.

CASE 6621: Application of Harvey E. Yates Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Penn formations underlying the S/2 of Section 4, Township 18 South, Range 29 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well. (This case will be dismissed.)

CASE 6601: (Continued from July 25, 1979, Examiner Hearing)

Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp through Mississippian formations underlying the E/2 of Section 8, Township 14 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6622: Application of Adams Exploration Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Penn formations underlying the N/2 of Section 15, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6623: Application of Penroc Oil Corporation for approval of infill drilling and simultaneous dedication, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the recompletion in the Morrow formation of its Dero "A" Federal Well No. 1 located in Unit N of Section 35, Township 19 South, Range 28 East, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6624: Application of Belco Petroleum Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of a well to be located in Unit K of Section 31, Township 9 South, Range 33 East, Flying "M"-San Andres Pool, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6625: Application of Mewbourne Oil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be located 660 feet from the North line and 1315 feet from the East line of Section 30, Township 20 South, Range 27 East, the E/2 of said Section 30 to be dedicated to the well.

CASE 6603: (Continued from July 25, 1979, Examiner Hearing)

Application of Conoco Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Penrose Skelly and Eumont production in the wellbore of its Hawk B-1 Well No. 12 located in Unit O of Section 8, Township 21 South, Range 37 East.

CASE 6587: (Continued and Readvertised)

Application of Caribou Four Corners, Inc., for an unorthodox well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Kirtland Well No. 4 located 1450 feet from the North line and 595 feet from the West line of Section 18, Township 29 North, Range 14 West.

****

Docket No. 31-79

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 15, 1979

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for September, 1979, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for September, 1979, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

LAW OFFICES

HINKLE, COX, EATON, COFFIELD & HENSLEY

1000 FIRST NATIONAL BANK TOWER

POST OFFICE BOX 3580

MIDLAND, TEXAS 79702

(915) 683-4691

LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
STUART D. SHANOR
C. D. MARTIN
PAUL J. KELLY, JR.
JAMES H. BOZARTH

DOUGLAS L. LUNSFORD
PAUL M. BOHANNON
J. DOUGLAS FOSTER
K. DOUGLAS [illegible]
O. RAY ALLEN
JACQUELINE [illegible]
T. CALDER EZZELL, JR.
WILLIAM B. [illegible]
JOHN S. NELSON
RICHARD E. [illegible]

OF COUNSEL
CLARENCE E. HINKLE

W. E. BONDURANT, JR. (1914-1973)

ROSWELL, NEW MEXICO OFFICE
600 HINKLE BUILDING
(505) 622-6510

ONLY ATTYS. COFFIELD, MARTIN, BOZARTH, BOHANNON, FOSTER, ALLEN, ALLEN & BURFORD LICENSED IN TEXAS

July 24, 1979

Mr. Dan Nutter
Chief Engineer
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Case No. 6611 --
Docket No. 28-79

Dear Dan:

This will confirm my request today by telephone for a continuance on the above referenced case so that it may be heard with Docket No. 29-79 on August 8, 1979.

If any problem develops such that it is not possible to have this case heard on August 8, please let me know.

Thank you.

Very truly yours,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

Conrad E. Coffield

Conrad E. Coffield

CEC:rf

xc: Mr. Bob Johnson
Cabot Corporation
Post Office Box 1101
Pampa, Texas 79065

xc: Mr. Ed Nail
Cabot Corporation
One Houston Center
Suite 1000
Houston, Texas 77002

Docket No. 27-79

Dockets Nos. 29-79 and 31-79 are tentatively set for hearing on August 8 and 22, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - JULY 24, 1979

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6596: Application of Harvey E. Yates Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Upper Pennsylvanian gas pool to be designated as the Southeast Indian Basin-Upper Pennsylvanian Gas Pool for its Southeast Indian Basin Well No. 1 located in Unit A of Section 23, Township 22 South, Range 23 East, and special pool rules therefor including 320-acre gas well spacing.

CASE 6597: Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Southeast Indian Basin Well No. 2, an Upper Pennsylvanian well to be drilled 660 feet from the North and West lines of Section 24, Township 22 South, Range 23 East, with the N/2 or all of said Section 24 to be dedicated to the well, depending on the outcome of Case No. 6596.

****

Docket No. 28-79

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 25, 1979

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 6545: (Continued from June 27, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Corinne Grace, Travelers Indemnity Company, and all other interested parties to appear and show cause why the Kuklah Baby Well No. 1 located in Unit G of Section 24, Township 22 South, Range 26 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6598: Application of Gulf Oil Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Otero-Gallup and Basin-Dakota production in the wellbores of its Apache Federal Wells No. 8 located in Unit C of Section 8 and No. 9 located in Unit D of Section 17, both in Township 24 North, Range 5 West.

CASE 6599: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Fusselman and Montoya production, North Justis Field, in the wellbore of its W. A. Ramsay Well No. 4 located in Unit M of Section 36, Township 24 South, Range 37 East.

CASE 6600: Application of Mesa Petroleum Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the E/2 of Section 10, Township 16 South, Range 27 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6601: Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp through Mississippian formations underlying the E/2 of Section 8, Township 14 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6602: Application of Tenneco Oil Company for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal 33 C No. 2 Well 1010 feet from the North line and 1710 feet from the West line of Section 33, Township 17 South, Range 29 East, South Empire-Wolfcamp Pool, the E/2 NW/4 of said Section 33 to be dedicated to the well.

CASE 6603: (This case will be continued to the August 8 hearing.)

Application of Conoco Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Penrose Skelly and Eumont production in the wellbore of its Hawk B-1 Well No. 12 located in Unit O of Section 8, Township 21 South, Range 37 East.

CASE 6604: Application of Cities Service Company for rescission of Division Order No. R-5921, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the rescission of Order No. R-5921 which order provided for the compulsory pooling of all of the mineral interests in the Pennsylvanian formation underlying the S/2 of Section 8, Township 23 South, Range 28 East.

CASE 6605: Application of Estoril Producing Corporation for compulsory pooling and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the W/2 of Section 15, Township 20 South, Range 34 East, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North and West lines of said Section 15. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6564: (Continued and Readvertised)

Application of Herndon Oil & Gas Co. for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its O. A. Woody Well No. 1 to be drilled 2310 feet from the North line and 330 feet from the West line of Section 35, Township 16 South, Range 38 East, Knowles-Devonian Pool.

CASE 6606: Application of Getty Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Yates formation in the open-hole interval from 3810 feet to 4169 feet in its State "AA" Well No. 1 located in Unit I of Section 35, Township 21 South, Range 34 East.

CASE 6607: Application of Getty Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Getty 36 State Well No. 1 located in Unit F of Section 36, Township 21 South, Range 34 East, to produce oil from the Wolfcamp formation and gas from the Morrow formation through parallel strings of tubing.

CASE 6608: Application of Getty Oil Company for pool creation and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Wolfcamp oil pool for its Getty 36 State Well No. 1 located in Unit F of Section 36, Township 21 South, Range 34 East, and special rules therefor, including 160-acre oil well spacing.

CASE 6609: Application of Napeco Inc. for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Strawn oil pool for its Benson Deep Unit Well No. 1 located in Unit O of Section 33, Township 18 South, Range 30 East, and special rules therefor, including 160-acre spacing and standard well locations.

CASE 6610: Application of Koch Industries, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Rustler formation through the perforated interval from 1190 feet to 1210 feet in its Wills "A" Well No. 7 located in Unit E of Section 35, Township 26 South, Range 37 East, Rhodes Field.

CASE 6611: Application of Cabot Corp. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the disposal of produced salt water in the Devonian formation through the perforated interval from 12,156 feet to 12,574 feet in its Reed Well No. 1 located in Unit H of Section 35, Township 13 South, Range 37 East, King Field.

CASE 6487: (Continued from May 23, 1979, Examiner Hearing)

Application of El Paso Natural Gas Company for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Shell E State Com Well No. 2 located in Unit N of Section 6, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6471: (Continued from May 23, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Freeman Well No. 1-A to be located in Unit C of Section 11, Township 31 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6472: (Continued from May 23, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Jenny Well No. 1-A to be located in Unit P of Section 13, Township 26 North, Range 4 West, Basin-Dakota Pool, Rio Arriba County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6473: (Continued from May 23, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its McIntyre Well No. 1-A to be located in Unit K of Section 11, Township 26 North, Range 4 West, Basin-Dakota Pool, Rio Arriba County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6474: (Continued from May 23, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Williams Well No. 1-A to be located in Unit C of Section 24, Township 31 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6475: (Continued from May 23, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Montoya Well No. 1-A to be located in Unit I of Section 35, Township 32 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6535: (Continued from June 13, 1979, Examiner Hearing)

Application of Torreon Oil Company for a waterflood project, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the San Luis-Mesaverde Pool by the injection of water into the Menefee formation through two wells located in Section 21, Township 18 North, Range 3 West, Sandoval County, New Mexico.

CASE 6579: (Continued from June 27, 1979, Examiner Hearing)

Application of R. N. Hillin for an unorthodox well location and approval of infill drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of a Morrow gas well at an unorthodox location 800 feet from the South line and 2000 feet from the East line of Section 34, Township 19 South, Range 28 East, is necessary to effectively and efficiently drain that portion of the E/2 of said Section 34 which cannot be so drained by the existing well.

CASE 6580: (Continued from June 27, 1979, Examiner Hearing) (This case will be continued to the August 22 hearing.)

Application of Continental Oil Company for a carbon dioxide injection project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to initiate a pilot carbon dioxide injection project in the Grayburg-San Andres formation in Units H and I of Section 20, Township 17 South, Range 32 East, Maljamar Pool, for tertiary recovery purposes.

CASE 6270: (Continued from July 11, 1979, Examiner Hearing)

In the matter of Case 6270 being reopened pursuant to the provisions of Order No. R-5771 which order created the South Peterson-Fusselman Pool, Roosevelt County, New Mexico, and provided for 80-acre spacing. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

CASE 6590: (Continued from July 11, 1979, Examiner Hearing)

Application of Grace Petroleum Corporation for compulsory pooling and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Lots 9, 10, 15, and 16 and the SE/4 of Section 6, Township 21 South, Range 32 East, to be dedicated to a well to be drilled at an unorthodox location 4650 feet from the South line and 660 feet from the East line of said Section 6. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

Application of Cabot Corp. for salt water disposal, Lea County, New Mexico

Applicant, in the above-styled cause, seeks approval for the disposal of produced salt water in the Devonian formation through the perforated interval from 12156 feet to 12574 feet in its Reed Well No. 1 located in Unit H of Section 36, Township 13 South, Range 37 East, King Field.

Form C-108
Revised 1-1-65

Case 6611

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR	ADDRESS
Cabot Corporation	Box 1101, Pampa, Texas 79065

LEASE NAME	WELL NO.	FIELD	COUNTY
J. L. Reed	1	King (Mississippian)	Lea

LOCATION

UNIT LETTER H ; WELL IS LOCATED 1980 FEET FROM THE N LINE AND 660 FEET FROM THE E LINE, SECTION 35 TOWNSHIP 13S RANGE 37E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8	331	400	Circ	
INTERMEDIATE	8-5/8	4577	2200	Circ	
LONG STRING	5-1/2	12590	700	8770	Survey
TUBING	2	11600	NAME, MODEL AND DEPTH OF TUBING PACKER: Baker Model D-11600		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Devonian	12150	12669

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Tubing	Perfs	12156-574

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Oil	Yes

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

Penn 10755-764 100sx Will squeeze off Mississippi perfs 11,421 to 11,471

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
200'	Penn 10730 Miss 11400	None

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
3500	2500	4500	Closed	Pressure	2500

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 —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Yes	Yes	No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Garland Brown, Star Route 1, Lovington, New Mexico

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

Kerr McGee, Amarillo

No others

RECEIVED
JUL 05 1979
OIL CONSERVATION DIVISION
SANTA FE

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	Yes	Yes	Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	Yes	Yes

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

R. A. Kedgy — (Signature)

Manager, Drilling & Production, Western Region — (Title)

June 20, 1979 — (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.

CABOT

CABOT CORPORATION P. O. BOX 1101, PAMPA, TEXAS 79065

R. A. KEAGY
WESTERN REGION
DRILLING & PRODUCTION
MANAGER

CABLE ADDRESS "CABLAK" PAMPA
PHONE 669 - 2581 (AREA CODE 806)

June 26, 1979

New Mexico Conservation Commission
P. O. Box 1980
Hobbs, New Mexico 88240

Attention: Jerry Sexton
District Supervisor

RE: Reed No. 1 SWD Well
Section 35 - T13S - R37E
King Field, Lea County,
New Mexico

Gentlemen;

Cabot Corporation would like to make application to dispose of salt water by injection into a porous formation.

Our King Field production continues to () shut in awaiting approval from the New Mexico Conservation Commission and joint owners approval to proceed with the work upon Commission approval.

Waiver from Kerr McGee and the land owner will be forwarded upon receipt. Kerr McGee has been advised by phone and verbally has voiced no objection.

Very truly yours,

R. A. Keagy

RECEIVED
JUL 05 1979
OIL CONSERVATION DIVISION
SANTA FE

RAK:cc
Enclosures: Copy of letter of June 12, 1979
Original and 2 copies Form C 108
Sketch w/2 copies present well condition
Sketch w/2 copies proposed completion
Plat w/2 copies general area plat
Plat w/2 copies well location
Copy of Cabot to Kerr McGee letter of June 20, 1979
Electric log

June 12, 1979

New Mexico Conservation Commission
P. O. Box 1980
Hobbs, New Mexico 88240

Attention: Jerry Sexton
District Supervisor

RE: Howard Fleet No. 1 SWD Well
Section 35 - T13S - R37E
King Field, Lea County,
New Mexico

Gentlemen:

On June 7, 1979, our field superintendent checked the above well and found pressure on the intermediate string of 8-5/8" casing.

We immediately shut in the injection system and called Otis to check for a tubing leak. On this same day Otis set a plug at 650' and the casing was bled down. The Otis plug traveled a very short distance up the tubing and hung after the casing had bled to zero.

With a second plug set a tubing leak was found at 16'. This plug was left in the tubing set at 42'.

The tubing and casing have both been at zero when checked on June 9, 10, and 11.

The wells in our King Field have been shut-in and will continue shut in until disposal facilities are in operation.

We will continue to keep you advised. It is our present intention to apply for a permit to dispose of water in the Devonian on our Read No. 1 well. This well was a producing well in the Devonian prior to water. It was recently recompleted in the Mississippi as a 8[illegible] well but has decreased in production in recent months.

RECEIVED
JUL 05 1979
OIL CONSERVATION DIVISION
SANTA FE

Our plans will be forthcoming.

Very truly yours,

R. A. Keagy

RAK:cc

CABOT CORPORATION P. O. BOX 1101, PAMPA, TEXAS 79065

R. A. KEAGY
WESTERN REGION
DRILLING & PRODUCTION
MANAGER

CABLE ADDRESS "CABLAX" PAMPA
PHONE 669 - 2541 (AREA CODE 806)

June 20, 1979

Kerr McGee
Box 250
Amarillo, Texas 79189

Attention: Mr. Jim Hacksma

Gentlemen:

Cabot has recently experienced trouble on the salt water disposal well on its Fleet No. 1 disposing of water in the San Andres formation.

Attached is the proposal to convert our J. L. Reed No. 1 well to a disposal well in the Devonian pay that has previously been abandoned when it went to 100 percent water.

If you have no objection, would you please sign two copies of the enclosed waiver and return to Cabot Corporation, Box 1101, Pampa, Texas 79065, Attention: R. A. Keagy.

Very truly yours,

R. A. Keagy

R. A. Keagy
Manager, Drilling & Production,
Western Region

RAK:tw

Attachments: Waiver
Acreage plat
Form C-108
Proposed well sketch

Cabot

Forest

Cabot

Lowe "C" #1 SWD

Lowe

Lowe "B"

Lowe et al

35

36

Cabot

Cabot

Dev Prod

C-2

proposed SWD Devonian

1/2 mi.

Dev Prod

Reed

State

Cabot

Kerr McGee

SWD 11-7-75 Order # SWD-173

Cabot SWD Inject in S.A.

Dev Prod

Dev prod

Fleet

State

T P Oil Co.

Atlantic

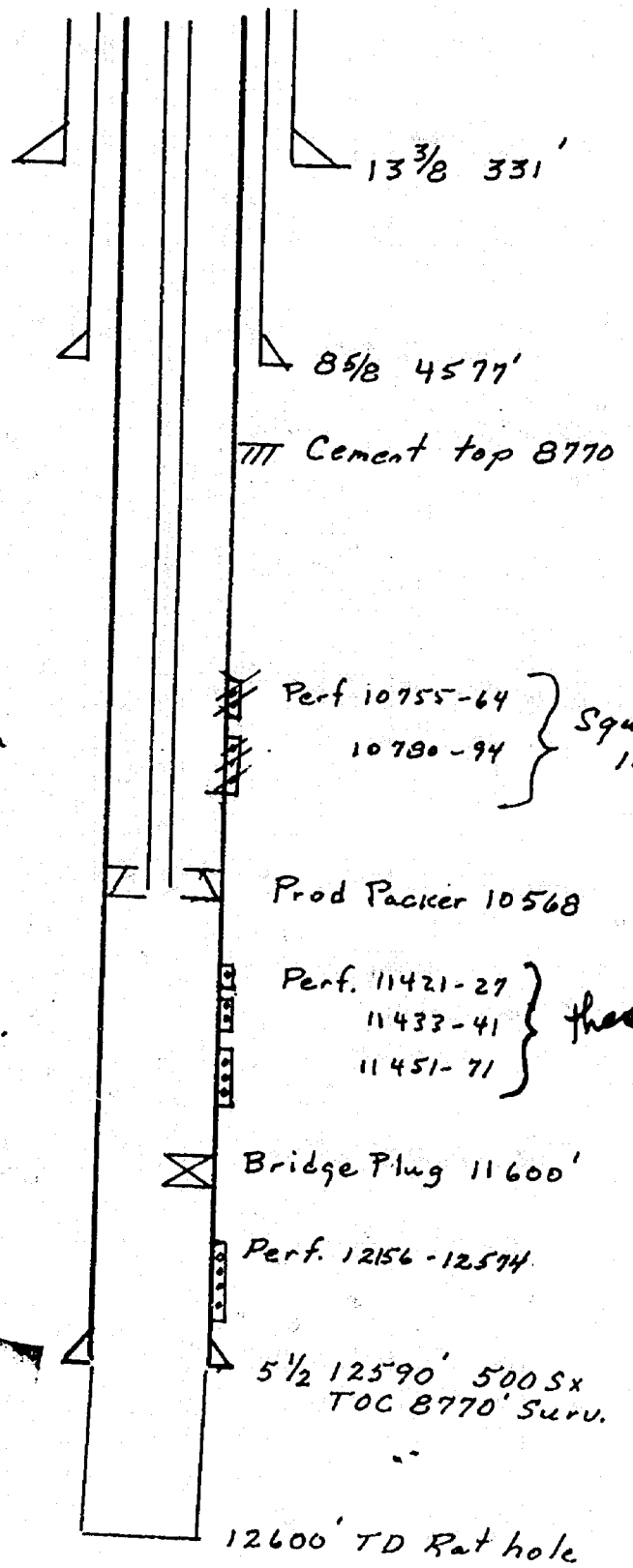
RECEIVED
JUL 05 1979
OIL CONSERVATION DIVISION
SANTA FE

CABOT CORPORATION
MIDLAND, TEXAS

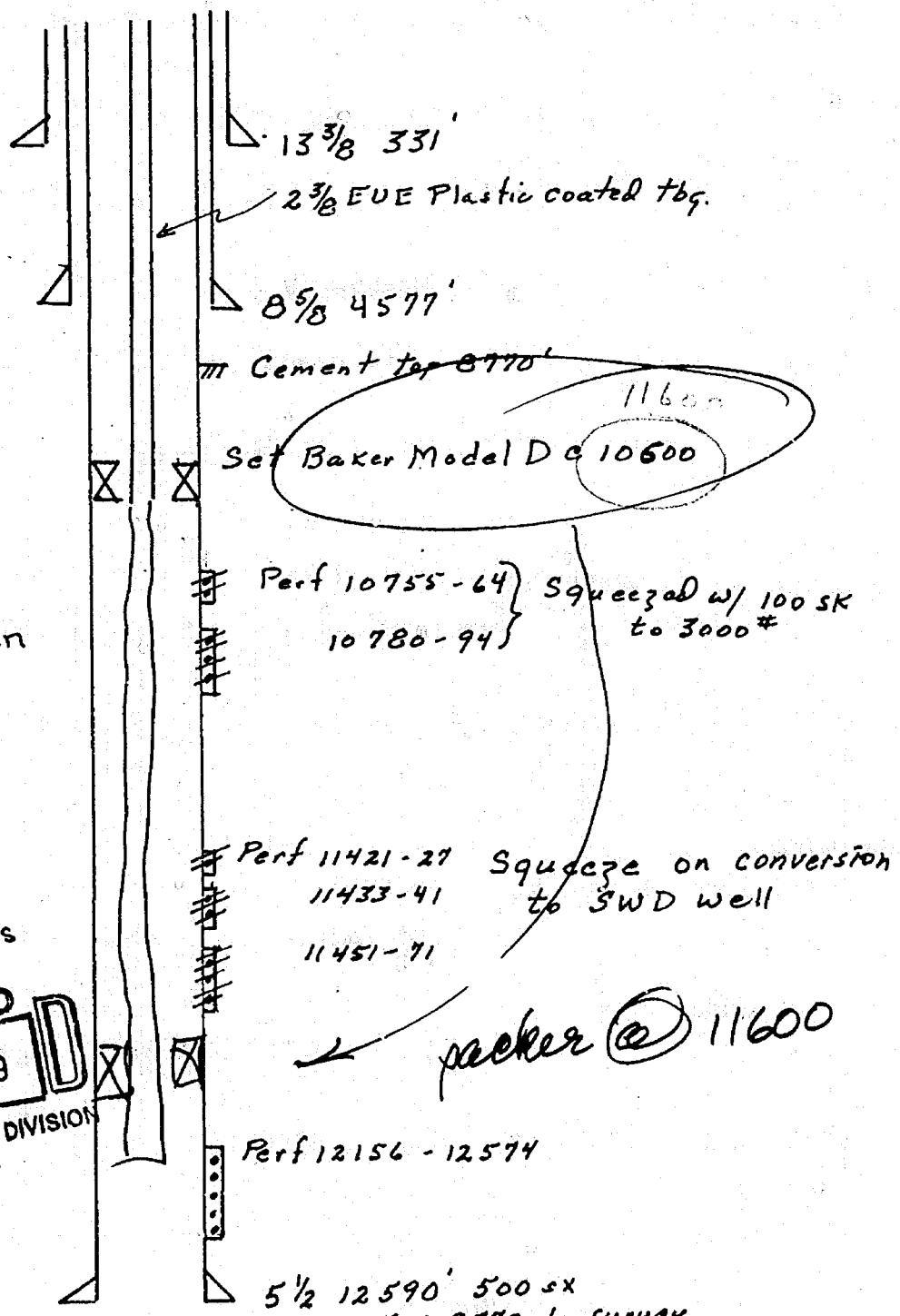
KING FIELD
Lea County, New Mex.
Datum:
C.I. = 100'
Scale 1" = 1000'

PRAIRIEVIEW

Reed #1
Present



Reed #1
Proposed 6-18-79



Dev

OIL CONSERVATION COMMISSION
HOBBS DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE July 2, 1979

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD X
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated _____

for the Cabot Corporation (Operator) J. L. Reed (Lease and Well No.) No. 1-H (Unit, S-T-R) 35-13-37

and my recommendations are as follows:

O.K.---J.S.

(See Application Attached)

Yours very truly,

Jerry Sexton

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JUL 05 1979
OIL CONSERVATION DIVISION
SANTA FE

Form C-108
Revised 1-1-65

Case 6601

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR		ADDRESS	
Cabot Corporation		Box 1101, Pampa, Texas 79065	
LEASE NAME	**WELL NO.**	**FIELD**	**COUNTY**
J. L. Reed	1	King (Mississippian)	Lea

LOCATION

UNIT LETTER H ; WELL IS LOCATED 1980 FEET FROM THE N LINE AND 660 FEET FROM THE E LINE, SECTION 35 TOWNSHIP 13S RANGE 37E NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8	331	400	Circ	
INTERMEDIATE	8-5/8	4577	2200	Circ	
LONG STRING	5-1/2	12590	700	8770	Survey
TUBING	2	11600	NAME, MODEL AND DEPTH OF TUBING PACKER: Baker Model D-11600		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Devonian	12150	12669

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Tubing	Perfs	12156-574

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Oil	Yes

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

Penn 10755-764 100sx Will squeeze off Mississippi perfs 11,421 to 11,471

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
200'	Penn 10730 Miss 11400	None

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
3500	2500	4500	Closed	Pressure	2500

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 –	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Yes	Yes	No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Garland Brown, Star Route 1, Lovington, New Mexico

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

Kerr McGee, Amarillo

No others

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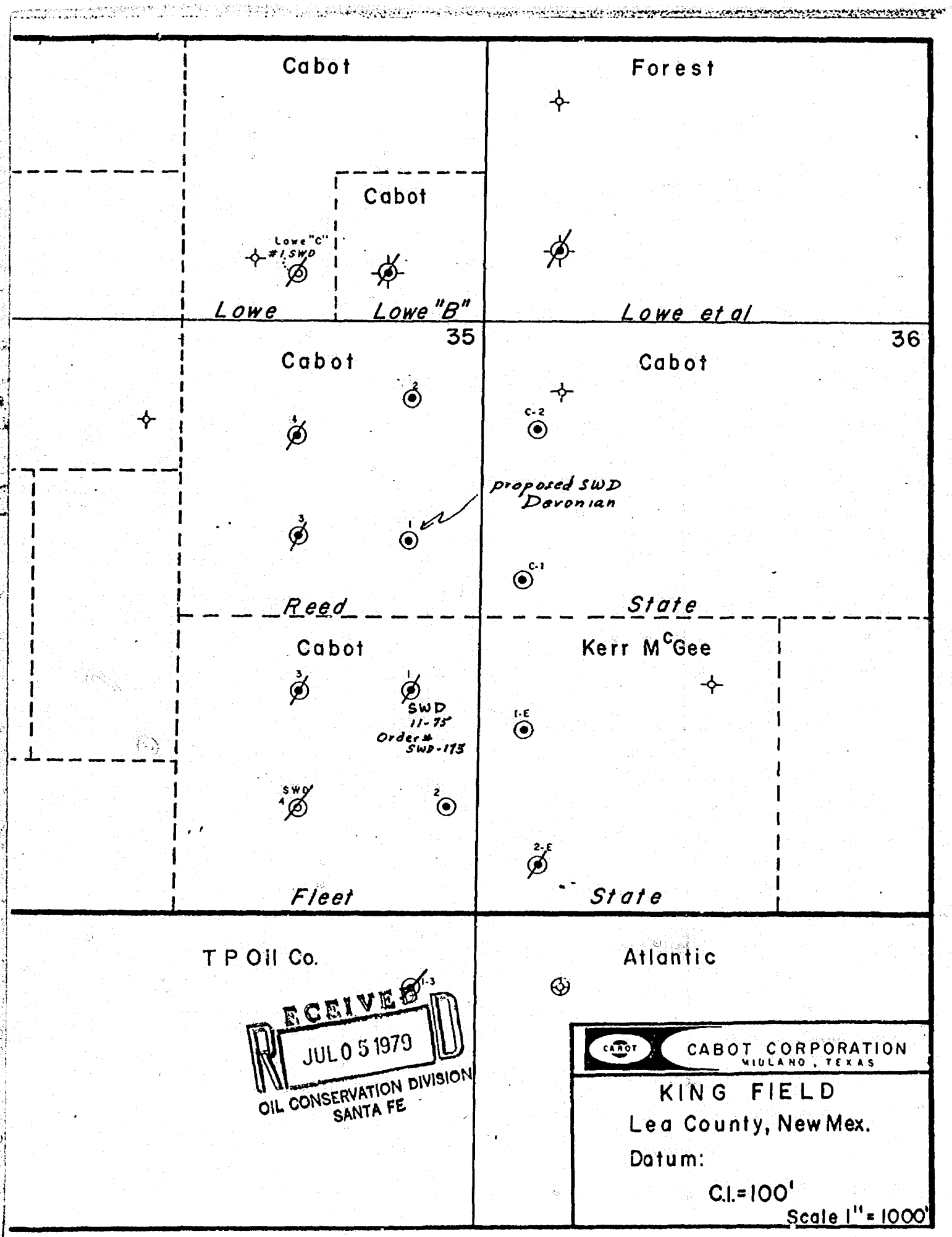
OIL CONSERVATION DIVISION
SANTA FE

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	Yes	Yes	Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	**PLAT OF AREA**	**ELECTRICAL LOG**	**DIAGRAMMATIC SKETCH OF WELL**
	Yes	Yes	Yes

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

(Signature) [signature] — Manager, Drilling & Production, Western Region (Title) — June 20, 1979 (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.


Cabot
Forest
Cabot
Lowe "C" #1 SWD
Lowe
Lowe "B"
Lowe et al
35
36
Cabot
Cabot
2
4
C-2
proposed SWD Devonian
3
1
C-1
Reed
State
Cabot
Kerr McGee
3
1
SWD 11-75 Order # SWD-173
1-E
SWD
4
2
2-E
Fleet
State
T P Oil Co.
1-3
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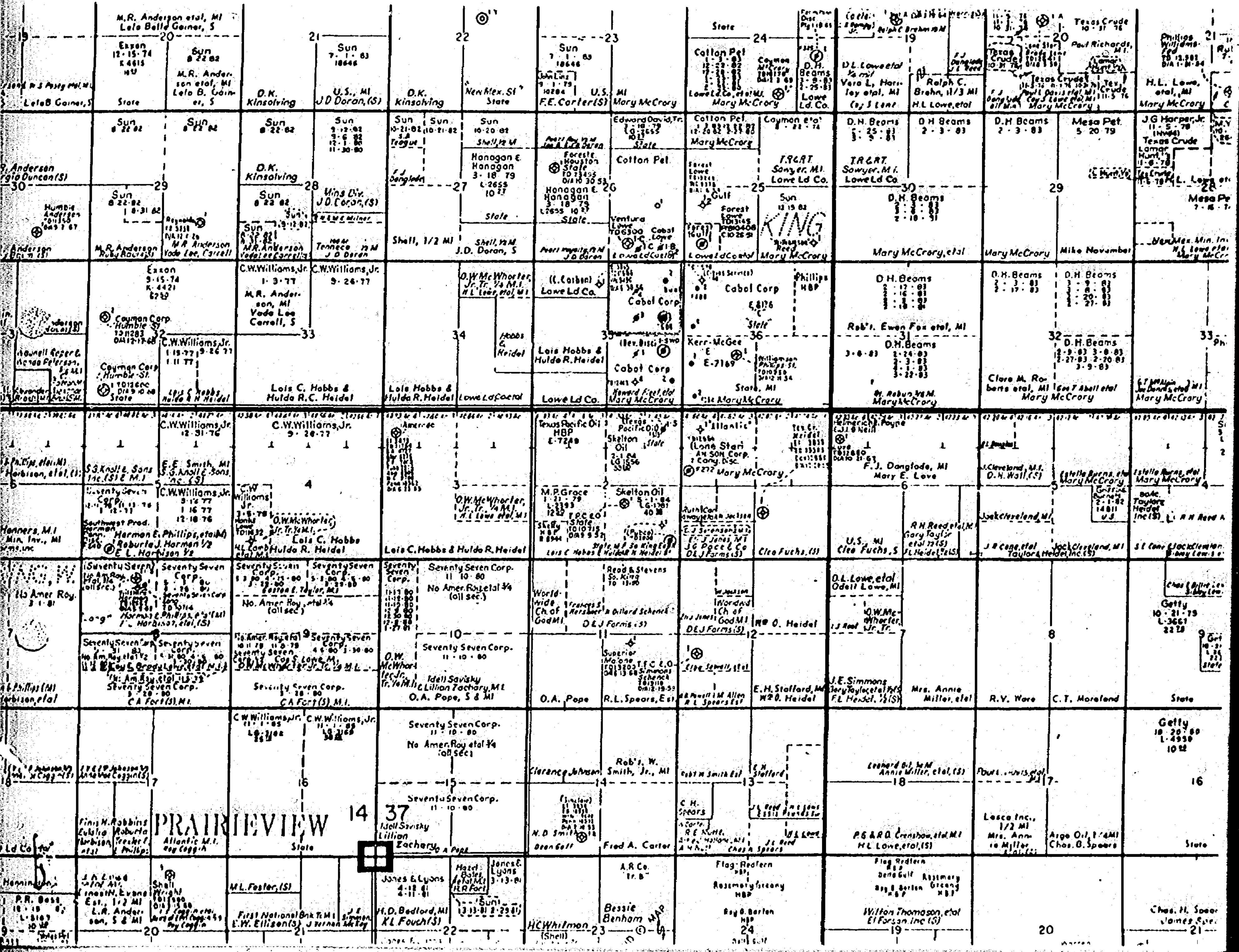
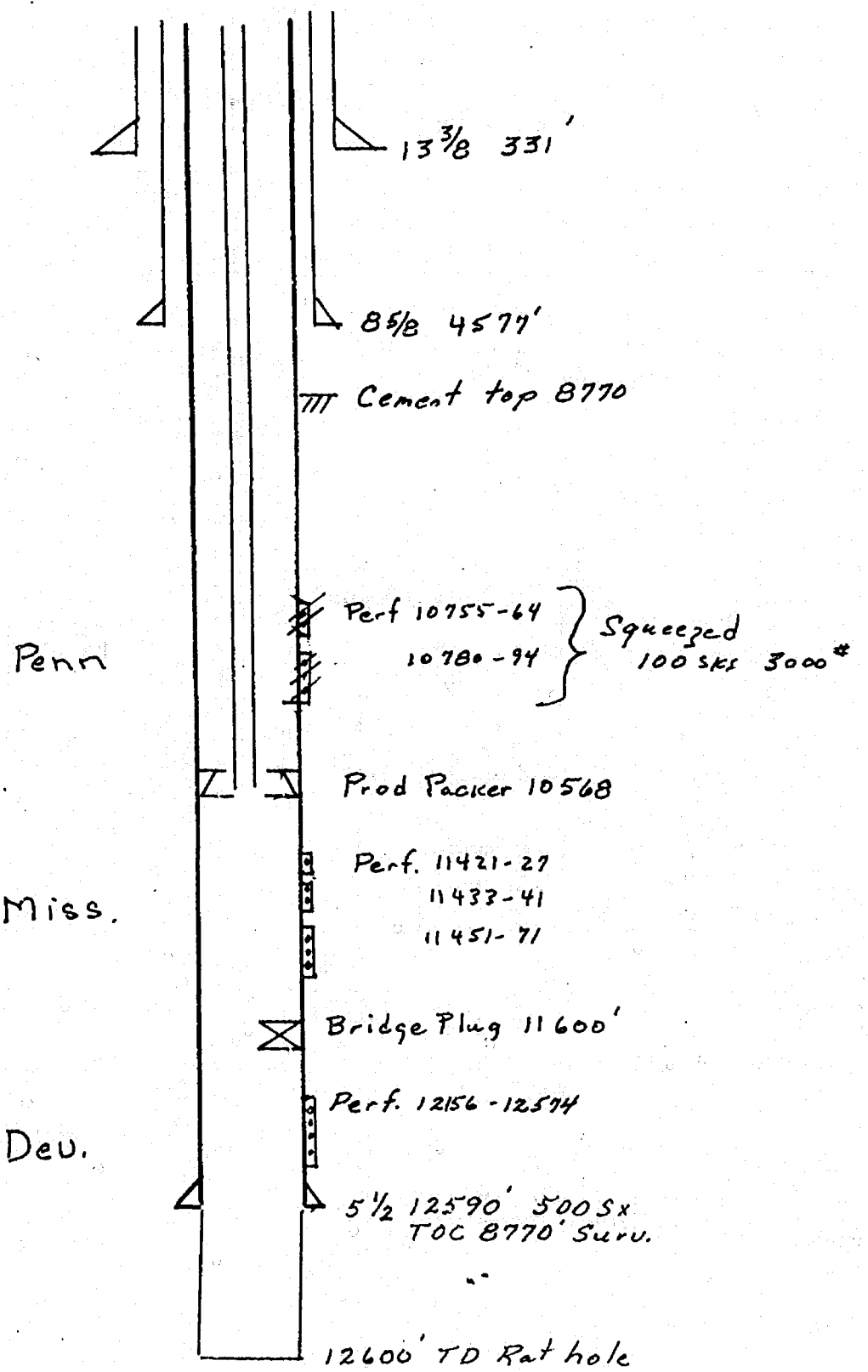
JUL 05 1979
OIL CONSERVATION DIVISION
SANTA FE
Atlantic
CABOT
CABOT CORPORATION
MIDLAND, TEXAS
KING FIELD
Lea County, New Mex.
Datum:
C.I. = 100'
Scale 1" = 1000'



M.R. Anderson etal, MI
Lela Belle Gainer, S
Exxon
12-15-74
Sun
8-22-82
M.R. Anderson etal, MI
Lela B. Gainer, S
State
LelaB Gainer, S
D.K. Kinsolving
Sun
7-1-83
18646
U.S., MI
J.D Doran, (S)
New Mex. St
State
F.E. Carter (S)
U.S. MI
Mary McCrory
State
Cotton Pet
Caymon
D.H. Beams
Lowe Ld. Co.
Mary McCrory
D.L. Loweetal
Vera L. Harley etal, MI
Ralph C. Brehn, 1/3 MI
H.L. Lowe, etal
Texas Crude
Paul Richards, MI
Phillips
H.L. Lowe, etal, MI
Mary McCrory
Edward David, Tr.
Cotton Pet.
Caymon etal
D.H. Beams
2-3-83
Mesa Pet.
5-20-79
J.G Harper, Jr.
Texas Crude
Lamar Hunt
R. Anderson
Humble
Hanagan & Hanagan
3-18-79
Forest
Houston
Gulf
Sun
12-15-82
KING
T.R.&R.T. Sawyer, M.I.
Lowe Ld Co.
Mesa Pet
Ventura
Cabot
Shell, 1/2 MI
Shell, 1/2 M
J.D. Doran, S
M.R. Anderson
Vodo Lee Carrell
Tenneco
Mary McCrory, etal
Mary McCrory
Mike November
New Mex. Min. Inv
Exxon
9-15-74
C.W. Williams, Jr.
1-3-77
M.R. Anderson, MI
Vada Lee Carrell, S
C.W. Williams, Jr.
9-26-77
O.W. McWhorter, Jr. Tr. 1/4 M.I.
Lowe Ld Co.
Cabot Corp.
Phillips
HBP
D.H. Beams
Caymon Corp
Humble St.
Hobbs & Heidel
Lois Hobbs & Hulda R. Heidel
Kerr-McGee
E-7169
State, MI
Rob't. Ewen Fox etal, MI
Clara M. Roberts etal, MI
Mary McCrory
Lois C. Hobbs & Hulda R.C. Heidel
Lois Hobbs & Hulda R. Heidel
Lowe Ld Co.
Texas Pacific Oil
HBP
Skelton Oil
Atlantic
Lone Star
Mary McCrory
F.J. Danglade, MI
Mary E. Love
S.S. Knoll & Sons Inc. (S) & M.I.
E.E. Smith, MI
C.W. Williams, Jr.
12-31-76
Seventy Seven Corp.
Harbison, etal
Southwest Prod.
Harmon E. Phillips, etal (M)
Roburta J. Harmon 1/2
E.L. Harbison 1/2
Lois C. Hobbs
Hulda R. Heidel
Lois C. Hobbs & Hulda R. Heidel
M.P. Grace
Skelton Oil
U.S., MI
Cleo Fuchs, S
Cleo Fuchs, (S)
R.H. Reed etal, M
Jack Cleveland, MI
Estelle Burns, etal
Mary McCrory
Seventy Seven Corp.
11-10-80
No Amer. Roy. etal 3/4 (all sec.)
World-wide Ch. of God MI
Reed & Stevens
D.L. Lowe, etal
Odell Lowe, MI
Getty
10-21-79
L-3661
Seventy Seven Corp.
11-10-80
Idell Savisky
Lillian Zachary, MI
O.A. Pope, S & MI
O.A. Pope
R.L. Spears, Est
E.H. Stafford, MI
W.O. Heidel
J.E. Simmons
Mrs. Annie Miller, etal
R.V. Ware
C.T. Moreland
State
CA Fort (S), M.I.
C.W. Williams, Jr.
Seventy Seven Corp.
No Amer. Roy etal 3/4 (all sec)
Clarence Johnson
Rob't. W. Smith, Jr., MI
Annie Miller, etal, (S)
Getty
10-20-80
L-4950
PRAIRIEVIEW
14
37
Idell Savisky
Lillian
Zachary
Finis N. Robbins
Atlantic M.I.
Ray Coggin
State
N.D. Smith
Fred A. Carter
C.H. Spears
P.G. & R.D. Crenshaw, etal MI
H.L. Lowe, etal, (S)
Lesco Inc., 1/2 MI
Mrs. Annie Miller
Argo Oil, 1/4 MI
Chas. O. Spears
State
Shell
M.L. Foster, (S)
First National Bnk Tr. M.I.
E.W. Ellison (S)
Jones & Lyons
4-12-81
Hazel Bates
H.D. Bedford, MI
K.L. Fouch (S)
Sun
H.C. Whitmon
(Shell)
A.R. Co.
Bessie Benham
Flag-Redfern
Rosemary Greeny
HBP
Wilton Thomason, etal
El Farson Inc (S)
Chas. H. Spear
L.R. Anderson, S & MI
P.R. Best

Reed #1
Present

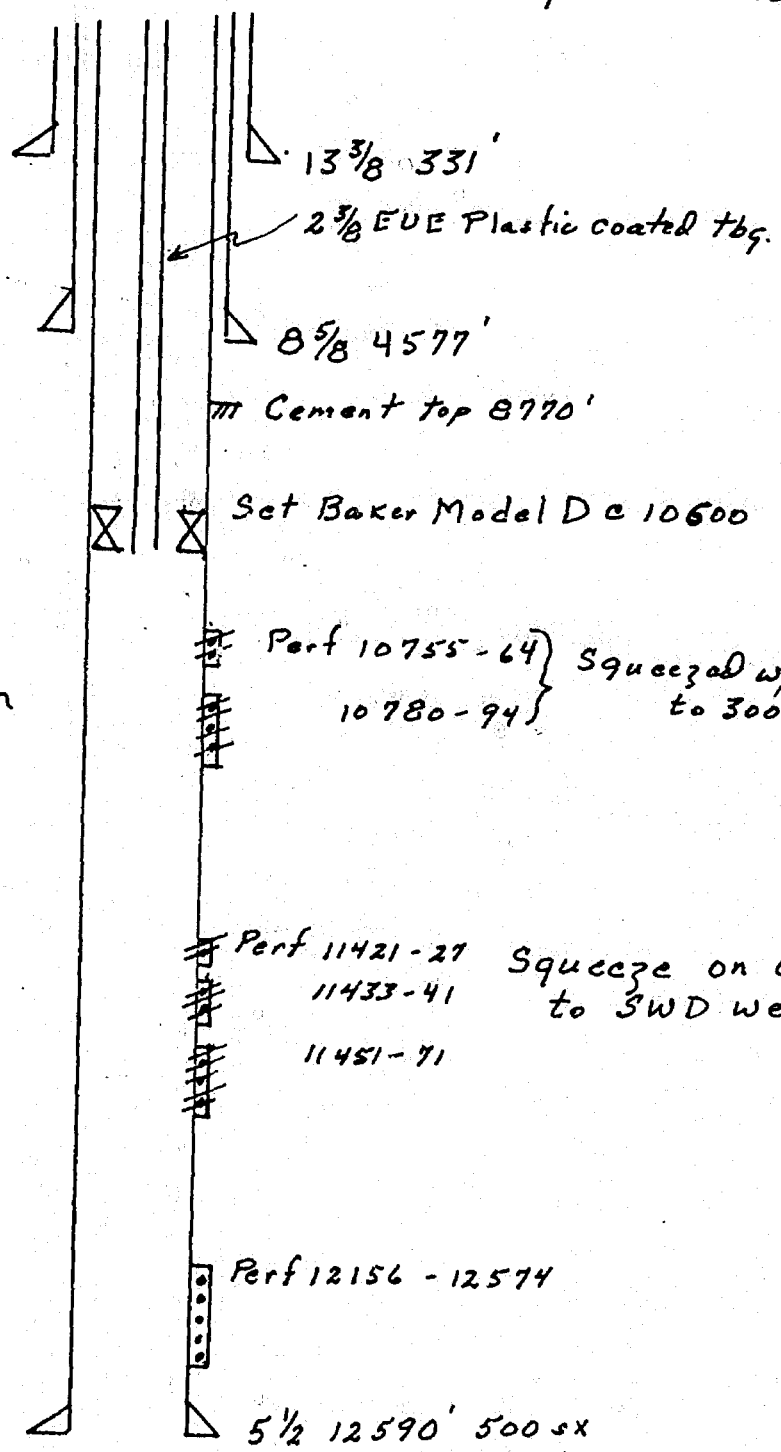


Penn

Miss.

Dev.

Reed #1
Proposed 6-18-79



ROUGH

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6611

Order No. R- 6101

APPLICATION OF CABOT CORP. FOR
SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on ~~July 25~~ August 8, 19 79, at Santa Fe, New Mexico, before Examiner ~~Daniel S. Nutter~~ R.L.S.

NOW, on this _____ day of _____, 19 79, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Cabot Corp., is the owner and operator of the Reed Well No. 1, located in Unit H of Section 35, Township 13 South, Range 37 East, NMPM, King Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Devonian formation, with injection into the perforated interval from approximately 12,156 feet to 12,574 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 10,600 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order

(6) that the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the ~~[illegible]~~ operator that such higher pressure will not result in migration of the injected waters from the Devonian formation.

to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a ~~pop-off valve or acceptable substitute~~ pressure limiting device which will limit the wellhead pressure on the injection well to no more than 1200 psi.

(6) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(9) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Cabot Corp., is hereby authorized to utilize its Reed Well No. 1, located in Unit H of Section 35, Township 13 South, Range 37 East, NMPM, King Field, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 10600 feet, with injection into the perforated interval from approximately 12,156 feet to 12,574 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus

or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a ~~pop-off valve or acceptable substitute~~ pressure limiting device which will limit the wellhead pressure on the injection well to no more than 1200 psi.

(3)

(~~4~~) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Devonian Formation.