


# CABOT CARBON COMPANY

MAIN OFFICE OCC

P.O. BOX 1101 PAMPA, TEXAS

 Cabot Carbon Black, Oil and Gas Field Pumping Equipment

TELEPHONE MO-4-2581

20  
July 21, 1959

June 30, 1959

Re: Salt Water Disposal Application  
King Field, Lea County, New Mexico

Mr. A. L. Porter, Jr.  
Secretary & Director  
New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Dear Sir:

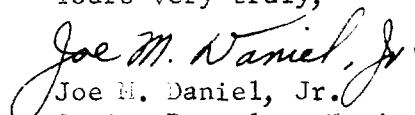
Cabot Carbon Company wishes to obtain administrative approval on its application to dispose salt water into its Howard Fleet Well No. 4 (Unit C, Section 35, T-13-S, R-37-E) King Field, Lea County, New Mexico. We are enclosing a field plat, electric log on subject well, and a diagrammatic sketch of the well along with the application.

We propose to perforate opposite the Lower San Andres formation between the interval 5640' and 6000' and attempt to circulate the drilling mud out of the annulus between the 5-1/2" casing and the 8-5/8" casing above the perforations. If this is successful, the bradenhead valve for this annulus will be closed. We will then attempt to inject water into the perforations. If partial success is obtained, we will acidize and/or frac to attempt to increase injectivity as well as to lower required injection pressure. If the perforations will take a volume of water greater than present requirements at a reasonable pressure, we propose to run tubing set on a packer and install gathering system and surface equipment. The annuli between tubing and 5-1/2" casing and between the 5-1/2" casing and 8-5/8" casing will be filled with oil.

We assume the injection interval will be the San Andres; however, as can be noted on the diagrammatic sketch the water could be entering any zone from 8775' to 4612'. We have not encountered any productive oil or gas zones in this 4163' interval in any King Field wells. We believe that our casing and cementing program originally employed protects all fresh water zones as well as any prospective oil and/or gas zones; therefore, we are fulfilling your State requirement to protect such formations.

Drilling samples have never warranted testing the San Andres in the King Field and the electrical logs have always shown the interval to have a high water saturation. In light of these facts, we have no assurance the San Andres will take water. The outlined procedure will greatly increase the possible disposal interval and save considerable expense; therefore, we ask for administrative approval.

Yours very truly,

  
Joe M. Daniel, Jr.  
Senior Petroleum Engineer

JMD:mn

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

APPLICATION  
TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION  
NOT PRODUCTIVE OF OIL OR GAS

Operator CABOT CARBON COMPANY Address P. O. Box 1101, Pampa, Texas  
Lease HOWARD FLEET Well No. 4 County Lea  
Unit 0 Section 35 Township 13 South Range 37 East

This is an application to dispose of salt water produced from the following pool(s):  
King Field Devonian and Wolfcamp Reservoirs  
Name of Injection Formation(s) San Andres (see letter)  
Top of injection zone: 4580' Bottom of injection zone: 6064'  
Give operator, lease, well no., and location of any other well in this area using this same  
zone for disposal purposes: None in near vicinity

CASING PROGRAM

	Diameter	Setting Depth	Sacks Cement	Top of Cement
Surface	13-3/8"	351'	400	Surface
Intermediate	8-5/8"	4612'	2400	1010'
Long String	5-1/2"	12385'	700	8775'

Will injection be through tubing, casing, or annulus? Tubing  
Size tubing: 2-7/8" Setting depth: @ approx. 5825' Packer set at: 5800' approx.  
Name and Model No. of packer: Baker Model "D"  
Will injection be through perforations or open hole? Perforations  
Proposed interval(s) of injection: 5840-5860'; 5900-5915'; 5955-6000'  
Well was originally drilled for what purpose? To test Devonian  
Has well ever been perforated in any zone other than the proposed injection zone? Yes

List all such perforated intervals and sacks of cement used to seal off or squeeze each:  
Plug back T.D. 12,400'. Open hole 12,400' to 12,385'. Sqzd 440 sacks. Perf 12345-12366', set  
bridging plug @ 9600' to seal off Devonian. Tested Wolfcamp. Perf 9553-63', set bridging plug  
@ 9530'; Perf 9497-9501', 9482-92', 9439-42', 9432-36' & 9402-12' with a bridging plug @ 9510'.  
Set bridging plug @ 9460' and tested perfs from 9402 to 9442'.  
Give depth of bottom of next higher zone which produces oil or gas: None  
None in this well; however, in  
Give depth of top of next lower zone which produces oil or gas: the field the Wolfcamp  
at 9200'  
Give depth of bottom of deepest fresh water zone in area: Approximately 2200'  
Expected volume of salt water to be injected daily (barrels) 300-500 BPD now,  
ultimately 5000 BPD  
Will injection be by gravity or pump pressure? Unknown Estimated pressure: Unknown  
Is system open or close type? Close Is filtration or chemical treatment necessary? No

Is the water to be disposed of mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes

Is any water occurring naturally within the proposed disposal formation mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes

List all offset operators to the lease on which this well is located and their mailing address

Kerr-McGee Oil Industries, Inc., P. O. Box 1347, Odessa, Texas, Attn. Mr. J. W. Fletcher

T. & P. Coal & Oil Co., P. O. Box 1688, Hobbs, New Mexico

Gulf Oil Corporation, P. O. Box 669, Roswell, New Mexico, Attn. Mr. M. T. Taylor

The Atlantic Refining Co., P. O. Box 871, Midland, Texas, Attn. Mr. N. B. Winter

Forrest Oil Corporation, P. O. Box 2066, Midland, Texas, Attn. Mr. John C. Dorn

Name and address of surface owner J. L. Reed, P. O. Box 697, Lovington, New Mexico

Have copies of this application been sent by registered mail or given to all offset operators, surface owners, and to the New Mexico State Engineer? Yes

Is a complete electrical log of this well attached? Yes

Operator: CABOT CARBON COMPANY

By: Joe M. Daniel, Jr.  
Joe M. Daniel, Jr.

Title: Senior Petroleum Engineer

STATE OF TEXAS )  
 ) ss.  
County of GRAY )

BEFORE ME, The undersigned authority, on this day personally appeared Joe M. Daniel, Jr. known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein and that said report is true and correct.

SUBSCRIBED AND SWORN TO before me this the 30 day of June, 19 59.

(MARCELENE NACHLINGER)  
Notary Public in and for the County of Gray

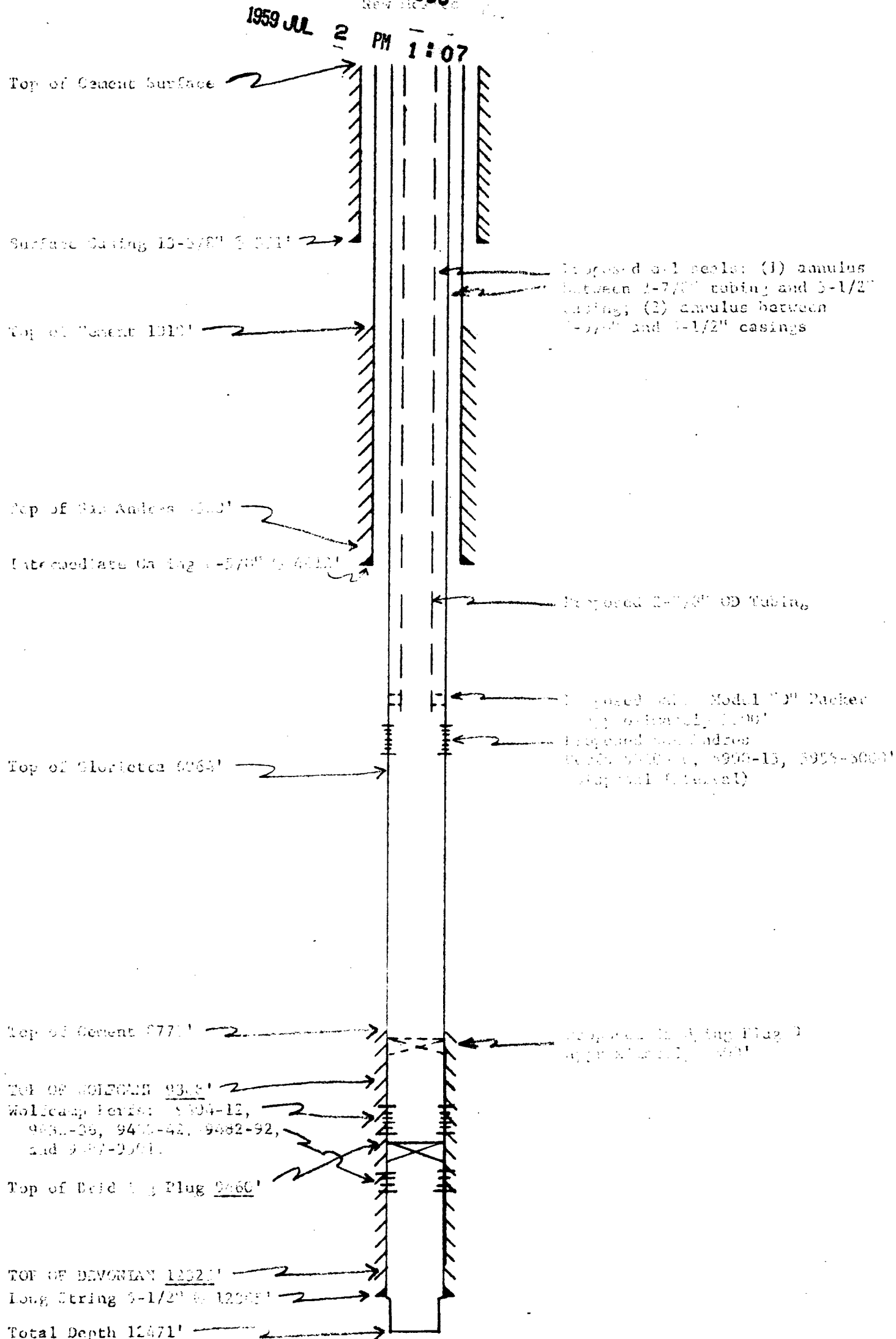
June 1, 1961  
My Commission Expires

NOTE: Should waivers from all offset operators, the surface owner, and the State Engineer not accompany an application, the New Mexico Oil Conservation Commission will hold the application for a period of fifteen (15) days from date of receipt by the Commission's Santa Fe office. If at the end of said fifteen-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

**ILLEGIBLE**

CABOT CARBON COMPANY  
Howard Fleet Well No. 1  
25, E-15-S, T-17-N  
Main Office OCC  
New York, N.Y.

EXHIBIT NO. 2  
Cabot's Salt Water  
Disposal Application



NOTE: This well did not encounter oil or gas in commercial quantities from the Devonian or Wolfcamp formations. There are no other known productive zones. This well was temporarily abandoned on November 1, 1959.



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

July 2, 1959

ADDRESS CORRESPONDENCE TO  
P. O. BOX 1079  
SANTA FE, N. M.

Re: Salt Water Disposal Application  
King Field, Lea Co., N. M.

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Cabot Carbon Company seeking to convert a dry hole into a salt water disposal well and to the explanatory letter attached to the application and to the diagrammatic drawing of the well construction. The well is identified as follows:

Lease- Howard Fleet; Well-No. 4; County - Lea; Unit 0,  
Section 35, Township 13 South, Range 37 East.

It is my opinion that if the plans as set forth in the application, the accompanying letter and the diagrammatic drawing are followed, there will be no threat to usable waters in the area. Therefore, this office offers no objection to the granting of this application.

Yours truly,

S. E. Reynolds  
State Engineer

By: *Frank E. Irby*  
Frank E. Irby  
Chief  
Water Rights Division

FEI/ma  
cc-F. H. Hennighausen  
Cabot Carbon Co.  
Attn. Joe M. McDaniel, Jr.  
Senior Petroleum Engineer

MAIL OFFICE (OO)

OIL CONSERVATION COMMISSION

BOX 2045

HOBBS, NEW MEXICO

DATE July 16, 1959

OIL CONSERVATION COMMISSION  
BOX 871  
SANTA FE, NEW MEXICO

Re: Proposed NSP \_\_\_\_\_

Proposed NSL \_\_\_\_\_

Proposed NPL \_\_\_\_\_

Proposed DC \_\_\_\_\_

Gentlemen:

SWD 20

I have examined the application dated \_\_\_\_\_  
for the Cabot Carbon Co. Howard Fleet #4-0 35-13-37  
Operator Lease and Well No. S-T-R

and my recommendations are as follows:

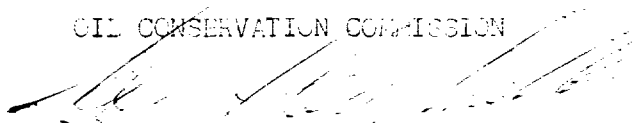
O.K.---E.F.E.

O.K.---J.W.R.

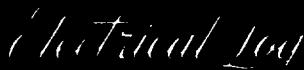
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\_\_\_\_\_  
\_\_\_\_\_

Yours very truly,

OIL CONSERVATION COMMISSION



ROSTOV, RUSS

[illegible]

Reproduced By  
**West Texas Electrical Log Service**

**Dallas 2, Texas**

Exhibit No. 3

**REFERENCE** W7914E

14 COMPLETION RECORD

SPUD DATE \_\_\_\_\_

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

ACID. FRAC SHOT

LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE