



November 9, 1966

WTK - 244

R. C. TUCKER, PRES.

Oil Conservation Commission  
Box 871  
Santa Fe, New Mexico

PHONE MU 2-5241  
ADDRESS REPLY TO:  
BOX 1659  
MIDLAND, TEXAS

Re: Application to Convert Well  
No. 13-14 to Water Injection  
by Administrative Approval  
Malmar Unit

Gentlemen:

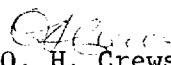
As provided by Commission Order No. R-2155 Great Western Drilling Company, as operator of the Malmar Unit, requests administrative approval for the conversion of the following unit well to water injection: Well No. 13-14, Section 13, T-17-S, R-32-E, Lea County, New Mexico.

Well No. 13-11, a direct north offset to No. 13-14, has received response to water injection. For the past four months Well No. 13-11 has averaged 10 barrels of oil per day. On November 1st and November 2nd, twenty four hour tests measured 14 barrels per day each day. The last expansion was in 1964 and we believe this will help recovery of oil in the unit.

Attached are: The C-116 of Well No. 13-11, before and after stimulation; a plat of the area showing the status of unit wells and offset operators; copies of waivers and a sketch of the proposed injection well.

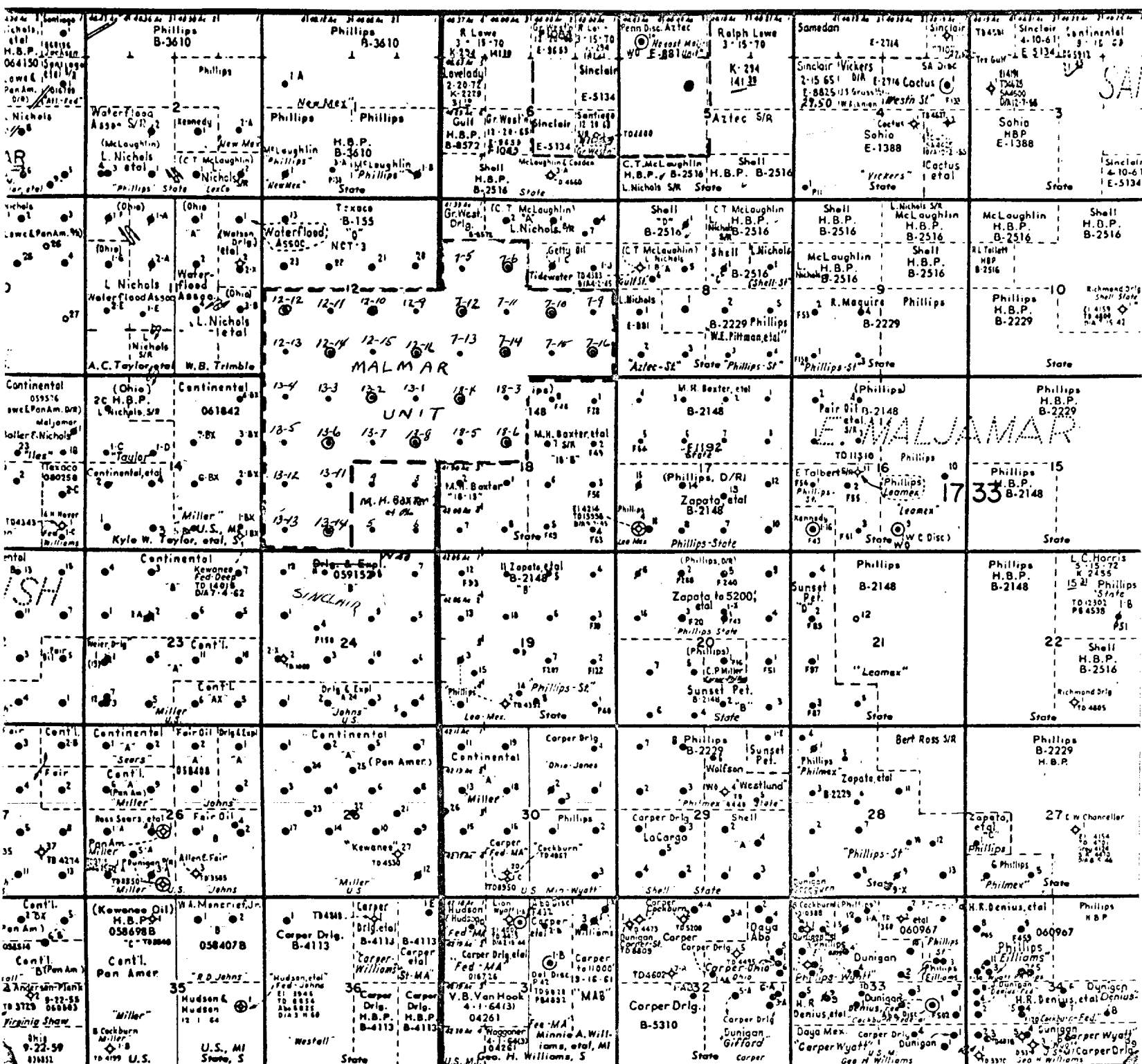
Yours very truly,

GREAT WESTERN DRILLING COMPANY

  
O. H. Crews  
Administrative Coordinator

OHC:SM  
Enclosures

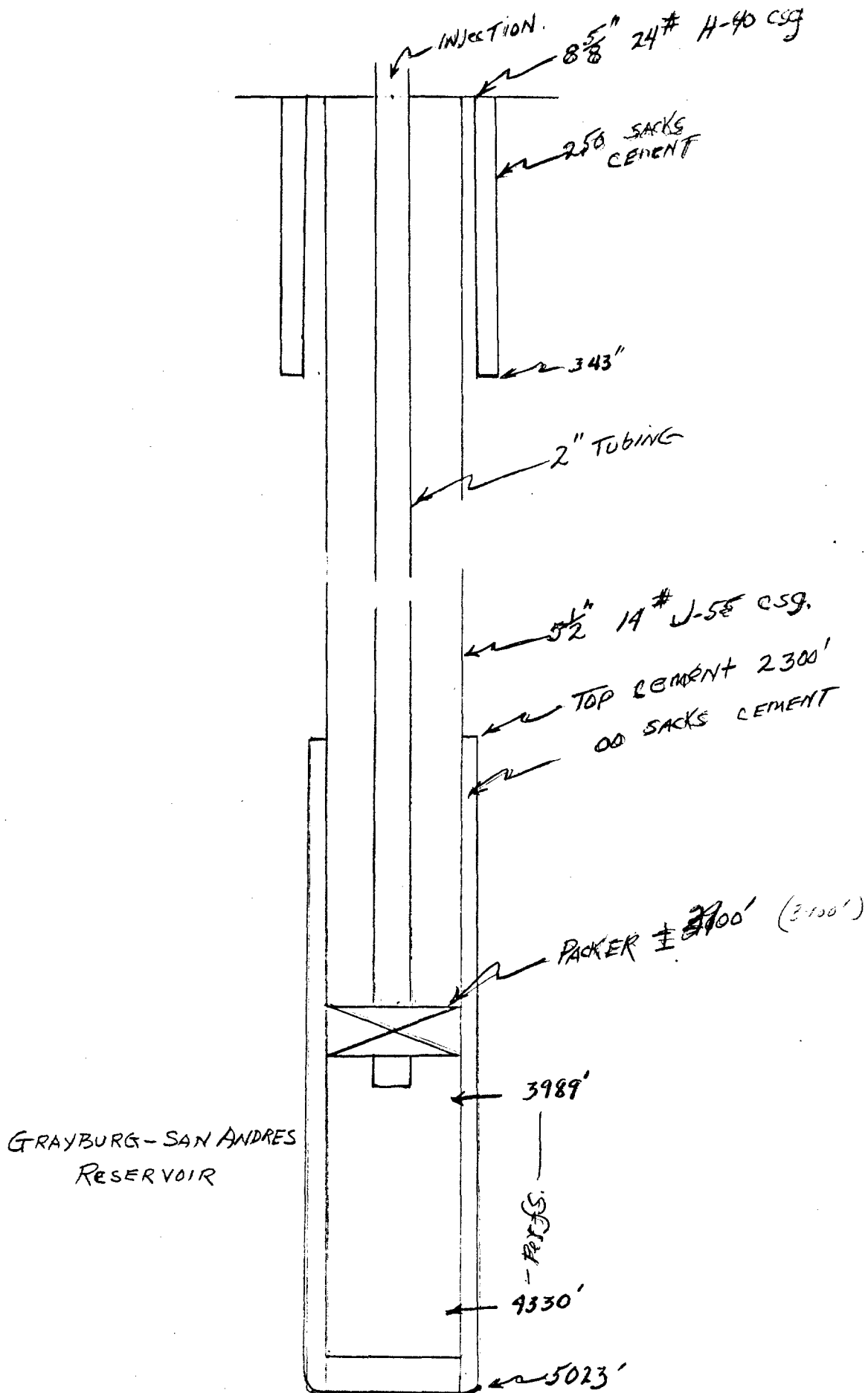




© J. W. WELLS  
© Pat. Ind.

GREAT WESTERN DRILLING CO.  
MALMAR UNIT  
Sec. 7, 12, 13 and 18 T-17-S R-33-E  
Lea Co., New Mexico

GREAT WESTERN DRILLING COMPANY - Well No. 13-14 - MALMAR UNIT





November 9, 1966

R. C. TUCKER, PRES.

PHONE MU 2-5241  
ADDRESS REPLY TO:  
BOX 1659  
MIDLAND, TEXAS

Sinclair Oil and Gas Company  
P. O. Box 1470  
Midland, Texas 79701

Attention: Mr. R. M. Kobdish

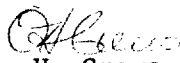
Gentlemen:

We have requested expansion of the Malmar Unit through administrative approval as set forth in Commission Order No. R-2155. A copy of our letter is enclosed.

If you have no objection to this application, please signify by signing and returning one copy of this letter to this office.

Yours very truly,

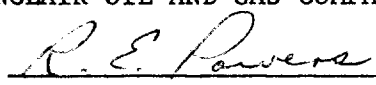
GREAT WESTERN DRILLING COMPANY

  
O. H. Crews  
Administrative Coordinator

OHC: SM

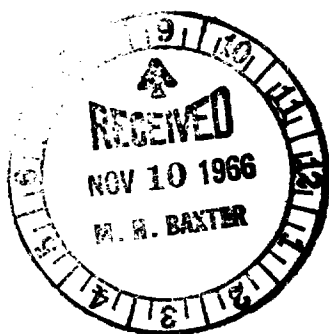
We have no objection to the expansion of the Malmar Unit operations by the conversion of Well No. 13-14 to water injection as requested in your application of November 7, 1966.

SINCLAIR OIL AND GAS COMPANY

By 

Date Nov 14, 1966





GREAT WESTERN DRILLING CO.  
MIDLAND, TEXAS

17 NOV 1966

November 9, 1966

Murphy H. Baxter  
1126 Vaughn Building  
Midland, Texas 79701

Gentlemen:

We have requested expansion of the Malmar Unit through administrative approval as set forth in Commission Order No. R-2155. A copy of our letter is enclosed.

If you have no objection to this application, please signify by signing and returning one copy of this letter to this office.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

O. H. Crews  
Administrative Coordinator

OHC: SM

We have no objection to the expansion of the Malmar Unit operations by the conversion of Well No. 13-14 to water injection as requested in your application of November 7, 1966.

MURPHY H. BAXTER

By

Date

November 10, 1966

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

...the ... ..  
... ..  
... ..

Scientific aims or objectives are stated in the following manner:

YOUNG VIEW 9-13

THANON DALLING BOSTON TACAC

100-443887-100

6. 30

The results of the expansion of the field are shown in Figure 10. The expansion of the field is shown in Figure 10. The expansion of the field is shown in Figure 10.

REMARKS IN THEOREM

RECEIVED  
JAN 11 1964  
U.S. AIR FORCE  
OFFICE OF THE  
JOINT CHIEFS OF STAFF  
WASHINGTON, D.C.

10/1/71

NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS

C-1116  
Revised 1-1-65

| Operator<br>GREAT WESTERN DRILLING COMPANY |          | Pool<br>Caprock Queen |    | County<br>Lea                                                                   |              |            |             |                 |                      |                   |             |           |                             |           |
|--------------------------------------------|----------|-----------------------|----|---------------------------------------------------------------------------------|--------------|------------|-------------|-----------------|----------------------|-------------------|-------------|-----------|-----------------------------|-----------|
| Address<br>Box 1659, Midland, Texas        |          | TYPE OF TEST - (X)    |    | Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/> |              |            |             |                 |                      |                   |             |           |                             |           |
| LEASE NAME                                 | WELL NO. | LOCATION              |    |                                                                                 | DATE OF TEST | CHOKE SIZE | TBG. PRESS. | DAILY ALLOWABLE | LENGTH OF TEST HOURS | PROD. DURING TEST |             |           | GAS - OIL RATIO CU.FT./BBL. |           |
|                                            |          | U                     | S  | T                                                                               |              |            |             |                 |                      | R                 | WATER BBLs. | GRAV. OIL |                             | OIL BBLs. |
| Malmar Unit Sec. 13                        | 14       | N                     | 13 | 17                                                                              | 32           | 10-15-66   |             |                 | 5                    | 24                | 1           | 36        | 10                          | TSTM      |
| Test before stimulation.                   |          |                       |    |                                                                                 |              |            |             |                 |                      |                   |             |           |                             |           |

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

No well will be assigned an allowable greater than the amount of oil produced on the official test.  
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.  
Gas volumes must be reported in MCF measured at a pressure base of 15,025 psia and a temperature of 60° F. Specific gravity base will be 0.60.  
Report casing pressure in lieu of tubing pressure for any well producing through casing.  
Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

*O. H. Crews*  
(Signature)  
O. H. Crews  
Administrative Coordinator  
(Title)  
November 9, 1966  
(Date)

**NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS**

C-116  
Revised 1-1-65

| Operator<br><b>GREAT WESTERN DRILLING COMPANY</b>                           |          | Pool<br><b>Caprock</b> |    | County<br><b>Lea</b>                                                                                               |              |         |            |             |                 |                      |                   |              |           |                             |
|-----------------------------------------------------------------------------|----------|------------------------|----|--------------------------------------------------------------------------------------------------------------------|--------------|---------|------------|-------------|-----------------|----------------------|-------------------|--------------|-----------|-----------------------------|
| Address<br><b>Box 1659, Midland, Texas</b>                                  |          | TYPE OF TEST - (X)     |    | Completion <input type="checkbox"/> Scheduled <input type="checkbox"/> Special <input checked="" type="checkbox"/> |              |         |            |             |                 |                      |                   |              |           |                             |
| LEASE NAME                                                                  | WELL NO. | LOCATION               |    |                                                                                                                    | DATE OF TEST | STAGE   | CHOKE SIZE | TBG. PRESS. | DAILY ALLOWABLE | LENGTH OF TEST HOURS | PROD. DURING TEST |              |           | GAS - OIL RATIO CU.FT./BBL. |
|                                                                             |          | U                      | S  | T                                                                                                                  |              |         |            |             |                 |                      | R                 | WATER BBL.S. | GRAV. OIL |                             |
| Malmar Unit<br>Sec. 13<br><br>Test after stimulation<br>by water injection. | 14       | N                      | 13 | 17                                                                                                                 | 32           | 11-2-66 |            |             | 5               | 24                   | 1                 | 36           | 14        | TSTM                        |
|                                                                             |          |                        |    |                                                                                                                    |              |         |            |             |                 |                      |                   |              |           |                             |

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

No well will be assigned an allowable greater than the amount of oil produced on the official test.  
 During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.  
 Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.  
 Report casing pressure in lieu of tubing pressure for any well producing through casing.  
 Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

 **O. H. Crews**  
 (Signature)  
**Administrative Coordinator**  
 (Title)  
**November 9, 1966**  
 (Date)



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

November 29, 1966

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, NEW MEXICO 87501

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

244

Dear Mr. Porter:

Reference is made to the application of Great Western Drilling Company which seeks administrative approval for the expansion of their Malmar Unit by the conversion of their well #13-14 to water injection services.

No cement top is given for the 250 sacks used on the surface string. However, this cement should circulate, provided they did not use an excessively large bit in drilling the hole. Therefore, I will assume that the cement surrounding the surface string is circulated. The diagrammatic sketch indicates that 00 sacks of cement were used in cementing the 5½" 14# J-55 casing, but shows the top of the cement to be at 2300'. After realizing how ridiculous this is, I asked one of your staff members to check the well record on this well and I am advised that the record shows that 400 sacks of cement were used on this string of casing, so I am overlooking this deficiency in the information submitted. The well record in the Oil Conservation Commission files also shows that the 5½" casing is set at 5023' and that 5023' is the total depth of the well.

In view of the information gathered from sources, other than the applicant, this office offers no objection to the granting of this application. However, it is suggested that Great Western furnish more complete information in the future.

FEI/ma  
cc-Great Western Drilling Co.  
F. H. Hennighausen

Yours truly,

S. E. Reynolds  
State Engineer

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



November 15, 1966

R. C. TUCKER, PRES.

PHONE MU 2-5241  
ADDRESS REPLY TO:  
BOX 1659  
MIDLAND, TEXAS

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.

Re: MALMAR UNIT  
EXPANSION OF PROJECT AREA

Gentlemen:

Enclosed please find the required waivers, properly executed,  
for the expansion of the Malmar Unit by converting a producing well  
in Section 13, Number 14 to water injection.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

O. H. Crews  
Administrative Coordinator

OHC:SM  
Encls.



DEC 5 AM C

December 1, 1966

Mr. Frank Irby  
Chief Water Rights Division  
State Engineer  
Santa Fe, New Mexico

Re: Malmar Expansion

Gentlemen:

We are indeed amazed and chagrined that so many errors were in the diagrammatic sketch of Well, Section 13 Number 14 in the Malmar Unit. In fact please destroy the sketch and accept the new one enclosed along with the information that I have obtained from the original owners.

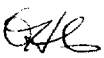
This information was sent the commission at the time the well was drilled and they pass on the rules and regulations regarding the well at that time.

The 2300' top of cement is the calculated 50% void from Halliburton Howco Cementing Tables, page 14 line 3 of Section 221. We realize that this is a poor figure due to washouts, but in absence of a temperature survey (accurate to within 100') we do accept these tables.

Should you require more information we shall try to oblige.

Yours very truly,

GREAT WESTERN DRILLING COMPANY

  
O. H. Crews  
Administrative Coordinator

OHC:SM

1964

1. Project 1-1  
2. Project 1-2  
3. Project 1-3  
4. Project 1-4  
5. Project 1-5

Project 1-1

Project 1-2

The first project was a study of the  
effect of the new law on the  
economy. It was found that the  
law had a significant effect on  
the economy, and that the effect  
was positive.

This study was the first of its  
kind, and it was very important  
in that it showed that the law  
had a significant effect on the  
economy.

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that it showed that the law had  
a significant effect on the  
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in that it showed that the law  
had a significant effect on the  
economy.

Should you have any questions, please  
contact me at the following address:

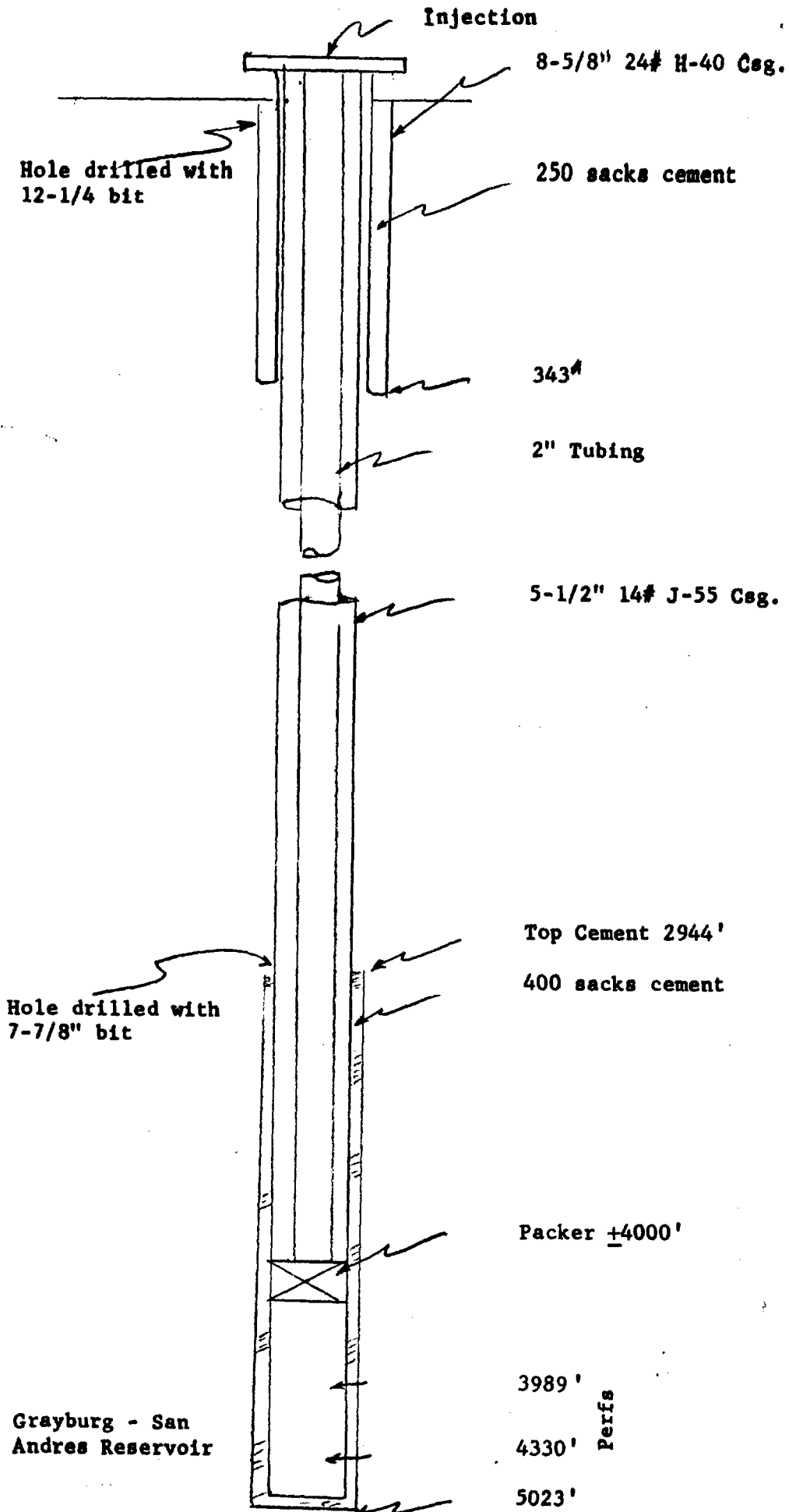
Your very truly,

WILLIAM W. WILSON

1964  
1. Project 1-1  
2. Project 1-2  
3. Project 1-3  
4. Project 1-4  
5. Project 1-5

1964

GREAT WESTERN DRILLING COMPANY - WELL NO. 13-14 - MALMAR UNIT



1966 Dec 5 AM 9 20

December 5, 1966

Great Western Drilling Company  
Box 1659  
Midland, Texas

Attn. Mr. O. H. Crews  
Administrative Coordinator

Gentlemen:

Your letter of December 1, 1966 pertaining to the expansion of your Malmar Waterflood Unit and the attached information are gratefully acknowledged.

FEI/ma  
cc-Oil Conservation Comm.  
F. H. Hennighausen

Yours truly,

S. E. Reynolds  
State Engineer

By:

Frank E. Irby  
Chief  
Water Rights Div.