GENERAL AMERICAN OIL COMPANY OF TEXAS

DISTRICT OFFICE
BOX 416
LOCO HILLS, NEW MEXICO

April 21, 1966

NSL-235

Mr. A. L. Porter
Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Dear Sir:

General American Oil Company of Texas hereby makes application for administrative approval to convert its Bosworth #1 and Brewer #5 and #18 wells to water injection wells in its East High Lonesome Penrose Sand Flood Unit. The High Lonesome Flood was approved under New Mexico Oil Conservation Commission Order No. R-2443.

Attached in accordance with Rule 701 are the following:

(1.) A Plat showing the proposed injection wells and all other wells within a radius of two miles and the formation from which they produce or have produced.

(2.) A portion of the available logs on the proposed injection wells.

(3.) A diagrammatic sketch of the proposed injection wells showing casing, cement, tubing, packer, open hole, etc.

(4.) A copy of the letter sent to the office of the State Engineer.

(5.) Form C-116 showing response to proposed wells from water injection.

By the conversion of these three wells it is felt that better control of the oil movement can be obtained. The west end is tighter and recovery is more erratic and has had more water breakthrough, therefore we wish to stop any migration of oil from the east portion to the west by converting these wells.

Brewer #18 and Bosworth #1 are making such high water cuts that it is felt that they would be of more advantage as water injection wells than as producers. Brewer #5 is needed also to complete the blocking action and will afford better control on both the east and west sides.

A copy of the application with all attachments is being sent to the office of the State Engineer. A copy of the application is also being sent to International Oil and Gas which is the only offsetting operator.

Respectfully submitted,

GENERAL AMERICAN OIL COMPANY OF TEXAS

By: R. J. Heard

R. J. Heard
District Superintendent

RJH/rlc
Encls.

April 21, 1966

International Oil and Gas Corporation
P. O. Box 427
Artesia, New Mexico

Gentlemen:

Attached is a copy of the application which General American has filed with the New Mexico Oil Conservation Commission requesting administrative approval for the conversion of its Bosworth #1 and Brewer #5 and #18 wells to water injection. These wells are about one half mile east of your High Lonesome flood.

If your company has no objection to our converting these wells, please so notify Mr. A. L. Porter, Jr., Secretary-Director of the Commission. A waiver of objection will assist in the immediate approval of this application and would be appreciated by the undersigned.

Very truly yours,

GENERAL AMERICAN OIL COMPANY OF TEXAS

By: R. J. Heard

R. J. Heard
District Superintendent

RJH/fpc
Encls.

Your truly yours,

By

April 21, 1966

Mr. Frank Irby
Office of State Engineer
Santa Fe, New Mexico

Dear Sir:

Attached is a copy of the application which General American Oil Company of Texas has filed with the New Mexico Oil Conservation Commission requesting administrative approval for the conversion of three wells to water injection in its East High Lonesome Penrose Sand Unit Waterflood.

We have also enclosed copies of all exhibits furnished the Commission in support of our request and hope this data will be sufficient for your purpose.

If your office has no objection to these additional conversions, please so notify the Commission.

Very truly yours,

GENERAL AMERICAN OIL COMPANY OF TEXAS

By: R. J. Heard
R. J. Heard
District Superintendent

RJH/fpc
Encls.

April 21, 1960

Mr. Frank Lloyd
Director of Guggenheim Museum
1071 Fifth Avenue
New York 28, New York

Dear Frank:

Enclosed is a copy of Gil's application which covered preliminary drawings for the Guggenheim Museum addition. Gil has not the New Mexico Oil Conservation Commission requesting additional information in the form of a topographic map showing the proposed location of the well. Gil anticipates that the drilling operation will be completed by May 15th.

Please let me know if you require any further information.

Very truly yours,

Gil Hodges

Enclosure: APP for Permit to Drill

cc: Mr. Oliver Smith
Attorney at Law

NEW MEXICO OIL CONSERVATION COMMISSION

GAS - OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
General American Oil Company of Texas	High Lonesome	Eddy

Address	TYPE OF TEST - (X)			
P. O. Box 416, Loco Hills, New Mexico	Scheduled ☐	Completion ☐	Special ☒

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT./BBL.
Brewer	5	G	14	16	29	6-22-64					24	0.0		5.0		
						8-24					"	0.0		8.0		
						9-14					"	0.0		18.0		
						9-30					"	30.0		12.0		
						10-19					"	48.0		5.5		
						11-15					"	75.4		6.9		
						12-13					"	110.0		8.5		
						1-11-65					"	69.0		6.0		
						2-16					"	66.0		26.0		
						2-24					"	84.0		48.0		
						3-3					"	72.0		42.0		
						3-9					"	90.0		48.0		
						3-27					"	69.0		27.0		
						4-22					"	36.0		21.0		
						6-25					"	54.0		21.0		
						8-18					"	45.0		18.0		
						11-11					"	57.0		12.0		
						12-23					"	54.0		9.0		
						2-10-66					"	45.0		7.0		
						3-30					"	54.0		6.0		

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.

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

R. J. Heard
(Signature)

District Superintendent
(Title)

April 21, 1966
(Date)

NEW MEXICO OIL CONSERVATION COMMISSION

GAS – OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
General American Oil Company of Texas	High Lonesome	Eddy

Address	TYPE OF TEST – (X)	Scheduled ☐	Completion ☐	Special ☒
P. O. Box 416, Loco Hills, New Mexico				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS – OIL RATIO CU.FT./BBL.
Brewer	18	K	14	16	29	10-25-63					24	0.0		7.0		
						11-30					"	0.0		7.0		
						1-25-64					"	27.0		67.0		
						1-30					"	102.0		330.0		
						2-27					"	124.0		46.0		
						3- 2					"	135.0		21.0		
						3- 7					"	92.0		10.0		
						3-12					"	53.0		16.0		
						3-20					"	38.0		12.0		
						4-17					"	59.0		7.0		
						5- 2					"	38.0		3.0		
						5- 7					"	81.0		2.0		
						6-22					"	126.0		5.0		
						7-10					"	123.0		5.0		
						7-18					"	75.0		5.0		
						8-13					"	143.0		3.0		
						8-19					"	100.0		5.0		
												Started flowing periodically 10-1-65				

APR 22 1966

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.

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

R. J. Heard
(Signature)

District Superintendent
(Title)

April 21, 1966
(Date)

NEW MEXICO OIL CONSERVATION COMMISSION
GAS – OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
General American Oil Company of Texas	High Lonesome	Eddy

Address	TYPE OF TEST – (X)	Scheduled ☐	Completion ☐	Special ☒
P. O. Box 416, Loco Hills, New Mexico				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS – OIL RATIO CU.FT./BBL.
Bosworth	1	I	14	16	29	10-25-63					24	0.0		4.9		
						5- 1-64					"	0.0		5.0		
						7- 1					"	1.0		6.0		
						9-20					"	4.0		7.5		
						9-25					"	1.0		17.0		
						10- 9					"	2.0		19.0		
						10-15					"	4.0		26.0		
						10-21					"	4.0		35.0		
						10-30					"	2.0		46.0		
						11- 5					"	2.0		42.0		
						12- 9					"	0.0		40.0		
						1-20-65					"	23.0		11.0		
						2- 4					"	31.0		8.0		
						3-29					"	33.0		1.0		
						4-17					"	33.0		3.0		
						5-13					"	37.0		2.0		
						6-25					"	55.0		2.0		
						7-30					"	71.0		2.0		
						8-28					"	60.0		2.0		
												Started flowing periodically 10-1-65				

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.

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

R. J. Heard
(Signature)

District Superintendent
(Title)

April 21, 1966
(Date)

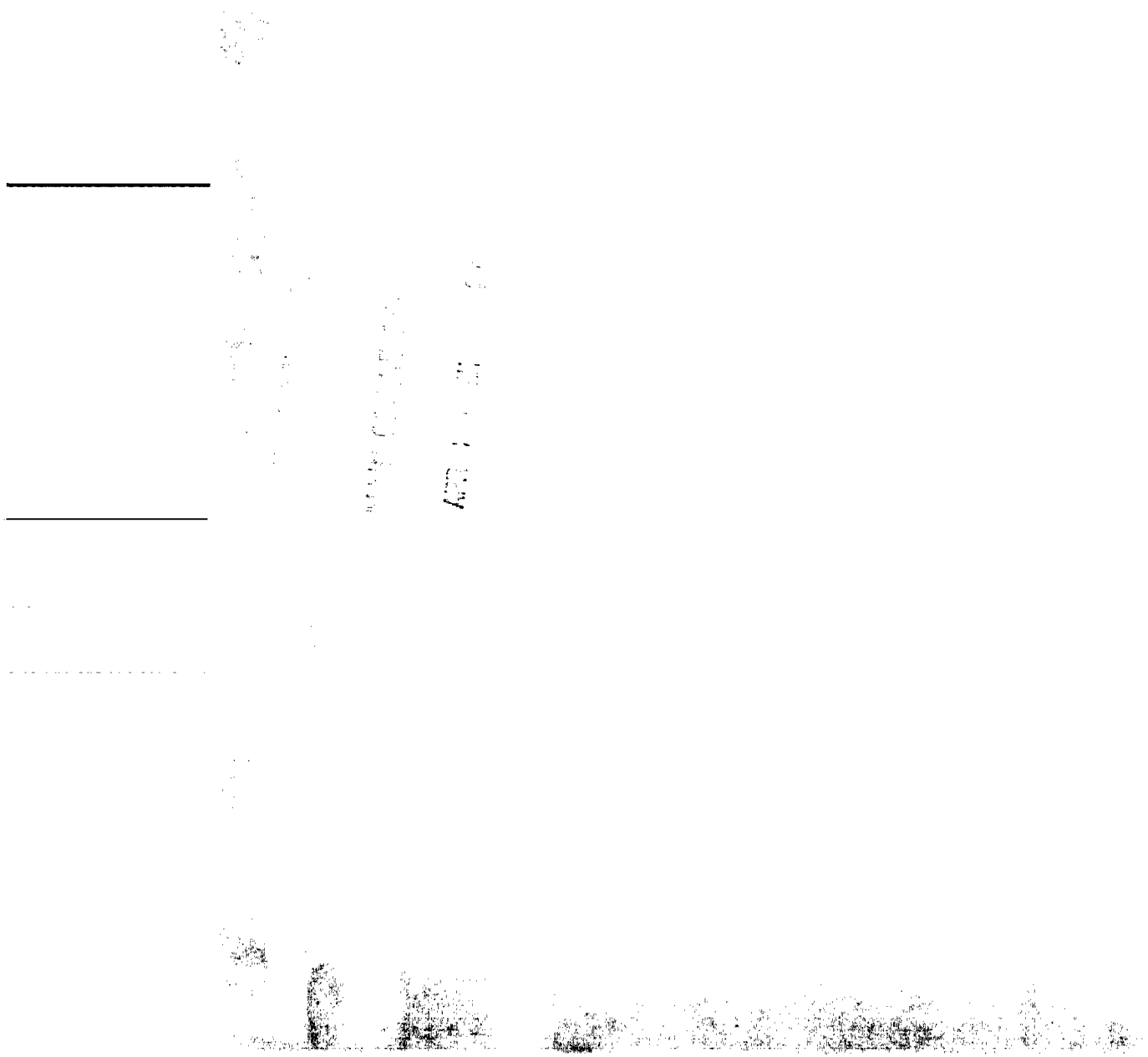
2000

casing

GFR 2070

NFR 2078
TD 2079

ILLEGIBLE



1900

2000

FLUID LEVEL

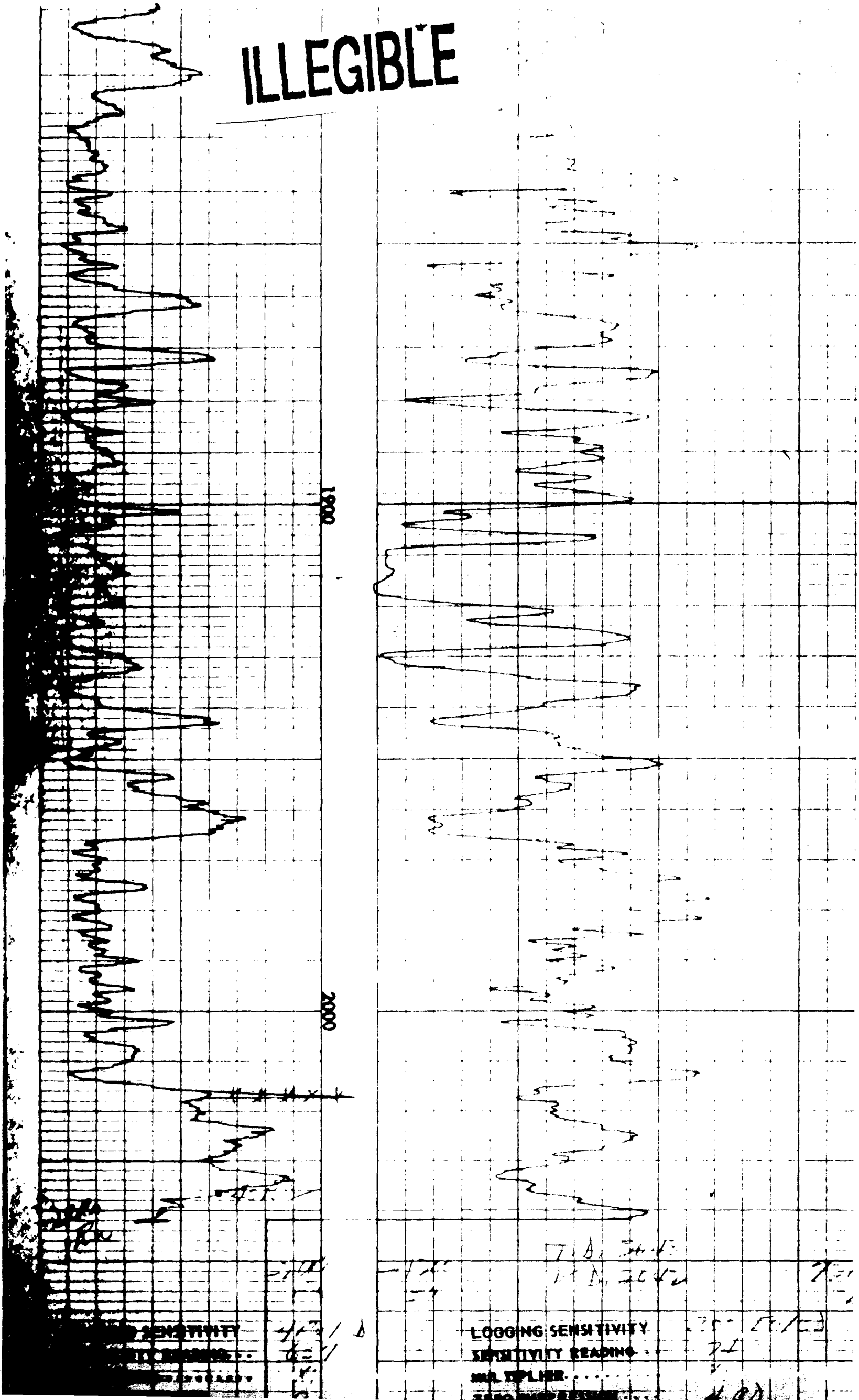
K. B. 2077'
T. D. 2098'

ILLEGIBLE

MAIN

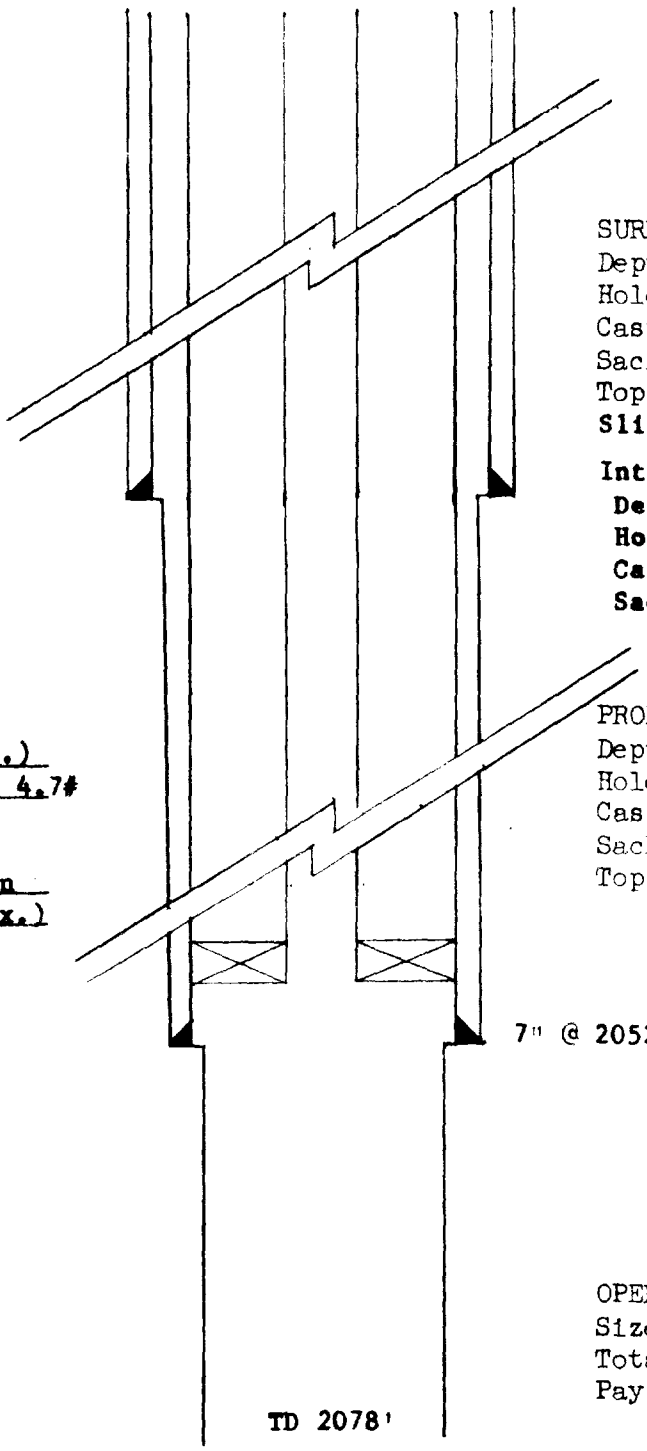
APR

ILLEGIBLE


1900
2000
LOGGING SENSITIVITY
SENSITIVITY READING
MULTIPLIER

GENERAL AMERICAN OIL COMPANY OF TEXAS
SCHEMATIC DIAGRAM OF
PROPOSED INJECTION WELL

Lease and Well No.: **Brewer #5**
Location: **1980** feet from **North** line and
1980 feet from **East** line of
Section **14** TWP **16-S** RGE **29-E**
N.M.P.M. **Eddy** County, New Mexico



SURFACE CASING
Depth Set: 385'
Hole Size: 12.5"
Casing Size & Wt.: 10 3/4" 32#
Sacks Cement: Mudded
Top of Cement:
Slight amount of Surface Water.

Intermediate Casing
Depth Set 1880'
Hole Size 10"
Casing Size & Wt 8 5/8" 28#
Sacks Cement Pulled

TUBING
Depth Set: 2000' (Approx.)
Size, Wt. & Type: 2" EUE 4.7#

PACKER
Make & Type: Totem Tension
Depth Set: 2000' (Approx.)

PRODUCTION CASING
Depth Set: 2052'
Hole Size: 8"
Casing Size & Wt.: 7" 23#
Sacks Cement: 150
Top of Cement: 1660 (Est.)

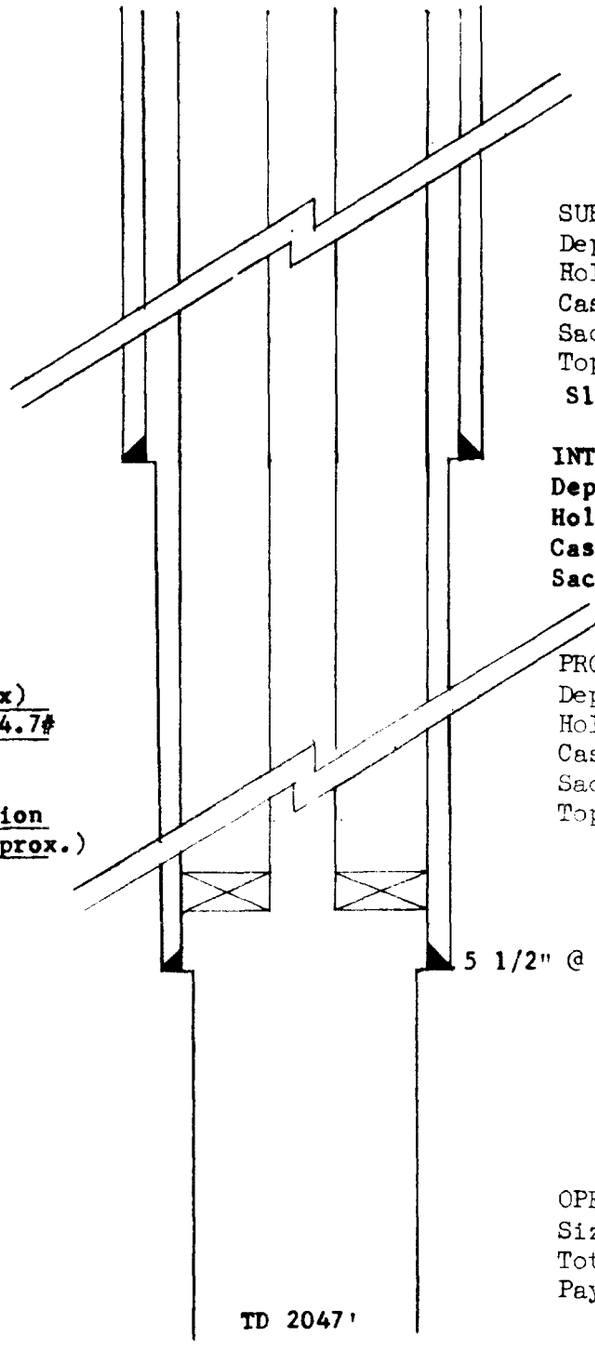
OPEN HOLE
Size: 6 1/4" (2052-78)
Total Depth: 2078'
Pay Zone: 2056-76'

CEMENT CALCULATIONS:

10" hole to 1880'
8" hole (1880'-2052') = 172'
172' of 8" hole with 7" casing fill up equals = 12.22 lin ft/cu ft. 172' ÷ 12.22 = 14.1 sacks @ 100% fill up @ 50% fill up equals 28.2 sacks. The remaining 122 sacks will fill up 438' of space between 7" casing and 10" hole @ 100% fill up @ 50% fill up equals 219'. 219' + 172' = 391' of fill up @ 50% efficiency 2052 - 391' = 1661' calculates top of cement.

GENERAL AMERICAN OIL COMPANY OF TEXAS
SCHEMATIC DIAGRAM OF
PROPOSED INJECTION WELL

Lease and Well No.: Brewer #18
Location: 1980 feet from South line and
1980 feet from West line of
Section 14 TWP 16-S RGE 29-E
N.M.P.M. Eddy County, New Mexico



SURFACE CASING
Depth Set: 374'
Hole Size: 12.5"
Casing Size & Wt.: 10 3/4" 32#
Sacks Cement: Mudded
Top of Cement:
Slight amount of Surface Water.

INTERMEDIATE CASING:
Depth Set 1798'
Hole Size 10"
Casing Size & Wt 7" 23#
Sacks of Cement Pulled

TUBING
Depth Set: 1975' (Approx)
Size, Wt. & Type: 2" EUE 4.7#

PACKER
Make & Type: Totem Tension
Depth Set: 1975' (Approx.)

PRODUCTION CASING
Depth Set: 2019'
Hole Size: 6 1/4"
Casing Size & Wt.: 5 1/2" 14#
Sacks Cement: 150
Top of Cement: 1600 (Est)

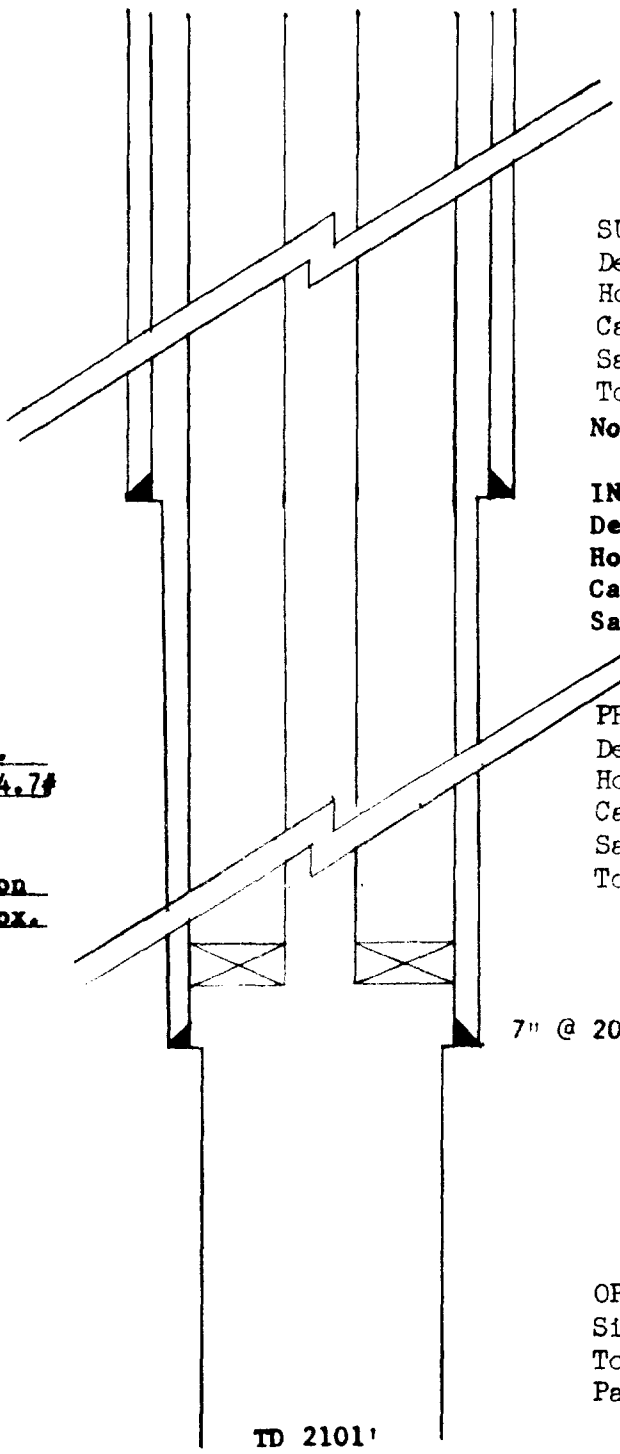
OPEN HOLE
Size: 5" (2019-47)
Total Depth: 2047'
Pay Zone: 2022-47'

CEMENT CALCULATIONS:

10" hole to 1840'
6 1/4" hole (1798-2019) = 221'
221' of 6 1/4" hole with 5 1/2" casing fill up equals 20.8 lin ft/cu ft. 221' ÷ 20.8 = 10.6 sacks @ 100% fill up @ 50% fill up equals 21.2 sacks. The Remaining 129 sacks will fill up 339' of space between 5 1/2"casing and 10" hole @ 100% fill up @ 50% fill up equals 170'. 221 + 170' = 391' of fill up @ 50% efficiency. 2019-391' = 1628' calculated top of cemnt. We rounded to 1600' for est. top of cement.

GENERAL AMERICAN OIL COMPANY OF TEXAS
SCHEMATIC DIAGRAM OF
PROPOSED INJECTION WELL

Lease and Well No.: **Bosworth #1**
Location: **1980** feet from **South** line and **660** feet from **East** line of Section **14** TWP **16-S** RGE **29-E**
N.M.P.M. **Eddy** County, New Mexico



SURFACE CASING
Depth Set: **390'**
Hole Size: **12.5**
Casing Size & Wt.: **10 3/4" 32#**
Sacks Cement: **Mudded**
Top of Cement:
No Surface Water

INTERMEDIATE CASING
Depth Set **1913'**
Hole Size **10"**
Casing Size & Wt. **8 5/8" 28#**
Sacks of Cement **Pulled**

TUBING
Depth Set: **2015' Approx.**
Size, Wt. & Type: **2" EUE 4.7#**

PACKER
Make & Type: **Totem Tension**
Depth Set: **2015' Approx.**

PRODUCTION CASING
Depth Set: **2067'**
Hole Size: **8"**
Casing Size & Wt.: **7" 24#**
Sacks Cement: **150**
Top of Cement: **1650' Est.**

OPEN HOLE
Size: **6 1/2" (2067-2101)**
Total Depth: **2101'**
Pay Zone: **2068-95**

CEMENT CALCULATIONS:
10" hole to 1913'
8" hole 1913-2067' = 154'
154' of 8" hole with 7" pipe fill up equals 12.22 lin ft/ cu ft. 154 ÷ 12.22 = 12.6 sacks @ 100% fill up 50% fill up = 25.2 sacks. Remaining 125 sacks of cement will fill up 450' of space between 7" casing and 10" hole @ 100% - 50% = 225. 225' + 154 = 379 fill up @ 50% efficiency. 2067-379' = 1688' calculated top of cement. Since these are approximate figures we rounded off to 1650'.

INTERNATIONAL OIL & GAS CORPORATION

P.O. BOX 427 • ARTESIA, NEW MEXICO 88210 • TELEPHONE 746-2725

April 25, 1966

Mr. A. L. Porter
Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Re: General American Oil Company
of Texas, East High Lonesome
Penrose Sand Flood Unit

Dear Sir:

International Oil & Gas Corporation has no objections to the New Mexico Oil Conservation Commission granting administrative approval to General American Oil Company of Texas to convert its Bosworth No. 1 and Brewer No. 5 and No. 18 wells to water injection.

Very truly yours,

INTERNATIONAL OIL & GAS CORPORATION

R. J. Davenport
Production Manager

RJD:cw

cc: General American Oil Company of Texas
P.O. Box 416
Loco Hills, New Mexico
Attn: Mr. R. J. Heard

State of New Mexico
Oil Conservation Commission

P. O. DRAWER DD
ARTESIA

April 28, 1966

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

Attention: Jim Kapteina

Re: WFX

Dear Jim:

Referring to General American Oil Company of Texas' application dated 4-21-66 to expand their East High Lonesome Waterflood, I can see no objection to the application.

Very truly yours,

OIL CONSERVATION COMMISSION

Dick

R. L. Stamets
Geologist

RLS/bh

May 12, 1966

General American Oil Company of Texas
Box 416
Loco Hills, New Mexico

Attn. Mr. R. J. Heard, District Supt.

Gentlemen:

I have reviewed your application to the Oil Conservation Commission which seeks to convert its Bosworth #1 and Brewer #5 and #18 wells to water injection in your East High Lonesome Penrose Sand Flood Unit. In studying the diagrammatic sketches of the 3 wells, I find it quite difficult to believe that 7" casing has been run in an 8" hole and that 5½" casing has been run in a 6¼" hole. The sacks of cement shown on these diagrams and the top of the cement indicated are even more difficult to believe. It appears that an error may have been inadvertently made in preparing these diagrammatic sketches. I would appreciate it if you can help me on this problem. I would also appreciate knowing the completion date of these wells and a statement as to whether inhibited fluid will be placed in the annulus between the tubing and casing in each well.

FEI/ma
cc-Mr.A. L. Porter,Jr.

Yours truly,

S. E. Reynolds
State Engineer

By:
Frank E. Irby
Chief
Water Rights Div.

May 12, 1960

Amoco Production Company
P. O. Box 1270
Midland, Texas

Attn: Mr. R. L. Hamlin, Area Engineer

Gentlemen:

I have reviewed your application to the Oil Conservation Commission dated May 6 to convert its Bowsprit #1 and #2 wells to water injection in your East High Lonesome Pressure Maintenance Project. In studying the diagrammatic sketches of the proposed installations, I find it quite difficult to believe that "the 7" casing has been run in an 8" hole and that "A" casing has been run in a 6" hole. The records of General Land Office indicate to the contrary. If this is the case, the casing and cementing programs will be inadequate. I would appreciate it if you can help me on this problem. I would also like to recommend certain deviations. I would suggest that the following additional requirements be made a part of the approval:

1. Cement to be circulated behind the 7" casing in the 8" hole.
2. Cement to be circulated behind the 4½" casing in the 6" hole.
3. Packers to be set immediately above the uppermost perforations.
4. Tubing to be run with packers and tested to 1000 psi.
5. Annulus between casing and tubing to be filled with inhibited fluid.
6. Annulus to be tested to 500 psi.

Your reply should indicate whether or not you intend to comply with the above requirements. If you cannot comply with these requirements, please advise us as to what deviations you propose.

Yours very truly,

R. L. Reynolds
State Engineer

By:
Frank E. Irby
Chief
Water Rights Div.

FEI:ms
cc-Artesia, N. Porter, Jr.

cc: Amerada Petr. Corporation
Drawer D
Monument, New Mexico

cc: Atlantic Refining Company
P. O. Box 1610
Midland, Texas

cc: Continental Oil Company of Texas
P. O. Box 1267
Eunice, New Mexico

May 16, 1966

Mr. Frank Irby
Office of State Engineer
Santa Fe, New Mexico

Dear Sir:

In your letter of May 12, 1966 you had several questions about the casing and cementing of the three wells General American requested for injection service. We hope the following information will satisfy your needs on our Bosworth #1, Brewer #5 and #18.

A common casing program for some 200 cable tool wells drilled on General American's New Mexico properties has been to run 10 3/4" surface casing, 8 5/8" intermediate casing and 7" production string. The 8 5/8" would be drilled out with an 8" bit and 7" would be run in an 8" hole. If 5 1/2" production casing was desired the intermediate casing would be 7" and drilled out with a 6 1/4" bit and run 5 1/2" casing.

Attached are diagrammatic sketches of the three wells showing the cement calculations and also showing the intermediate casing which was pulled. This larger hole is what makes the cement calculations look wrong and we are sorry this information was omitted from the original diagrams.

The completion dates of these wells are as follows: Bosworth #1 5-31-59, Brewer #5 2-13-59 and Brewer #18 9-1-59.

The fluid placed in the annulus will be either treated water or oil.

We hope this information will suffice for your needs.

Very truly yours,

GENERAL AMERICAN OIL COMPANY OF TEXAS

R. J. Heard
District Superintendent

RJH/rlc
Encls.

cc: Mr. A. L. Porter, Jr.
File (2)

Dear Mrs.

Thank you for your letter of [illegible] concerning [illegible]. I am pleased to inform you that [illegible] has been approved for [illegible].

Please find enclosed [illegible] as well as [illegible]. Should you have any questions, please do not hesitate to contact me at [illegible].

Sincerely,

[illegible]

Director, [illegible]