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**RALPH L. GRAY**  
PETROLEUM ENGINEERING - PRODUCTION  
**CONSULTANT**  
302 CARPER BUILDING  
ARTESIA, NEW MEXICO

1031 MAY 11 AM 1964

May 11, 1964

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Dear Sirs:

William A. and Edward R. Hudson are now completing their Puckett "A" #24, located 25 feet from the north and 1295 feet from the east lines of Section 24, Township 17 South, Range 31 East, Eddy County, New Mexico. Preparations are being made to drill Puckett "A" well #25, located 25 feet from the south and 2615 feet from the east lines of Section 13, Township 17 South, Range 31 East. These two wells are being drilled as authorized by Order No. R-1693, dated June 10, 1960. However, instead of producing these wells, it is proposed to use them as water input wells as a part of the Puckett Waterflood Project #1, authorized by your Order No. R-2239, dated May 9, 1962. Waterflood response has been obtained within the project, and it is now desired to expand the flood program.

The following table shows wells that have shown response to flooding:

WELL	BEFORE INJECTION		TEST - APRIL 15, 1964	
	OIL	WATER	OIL	WATER
Puckett "A" #2	8	1	11	1
#4	6	1	12	0
#5	19	2	38	6
#6	11	1	14	48
#7	6	26	50	20

Attached is a map showing the Puckett "A" waterflood project. Present injection wells are shown with blue circles, while the two proposed injection wells are shown with red circles. Also attached is a sketch showing casing strings and other information on the Puckett "A" well #24. Although this well has been logged with Gamma Ray-Neutron, the finished log has not yet been received. We will furnish copies of the log to the Commission as soon as they are received.

The Puckett "A" well #24 was drilled to a depth of 3961, and 5½" casing was cemented at 3957' with 250 sacks of 4% gel regular cement plus 100 sacks of neat cement. Zone 7 of the San Andres was perforated at 3695-3718, and Zone 9 of the San Andres was perforated at 3927-51, both with 4 shots per foot. Zone 7 has been acidized with 2,000 gallons and we are now swabbing load fluid back. We plan to also acidize Zone 9 with 2,000 gallons.

Puckett "A" #24 and #25 will be equipped for injection in a similar manner to the present injection wells. 2-3/8" O.D. upset tubing coated internally

will be run to approximately 60 feet above the highest perforation. No packers are being used on tubing.

Injection water being used in the flood is the shallow Ogallala water piped from source wells located to the east. At the present time this water is being purchased from Caprock Water Company, but it is ultimately planned to utilize water rights held by the operator. It is estimated that approximately 500 barrels of water per day will be injected at first, and this volume will gradually decrease.

It is requested that authorization to use Puckett "A" #24 and #25 as water injection wells under Order #R-2239 be given as soon as possible.

Copies of this application are being furnished to the State Engineer, Continental Oil Company and Skelly Oil Company.

Respectfully submitted,

WILLIAM A. & EDWARD R. HUDSON

By:   
REGISTERED PETROLEUM ENGINEER.

RLG:lw

Encls.

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO REPORT

MAY 11 AM 1964

OPERATOR William A. & Edward R. Hudson POOL Maljamar

ADDRESS 302 Carper Bldg., Artesia, N.Mex. MONTH OF April, 1964

SCHEDULED TEST \_\_\_\_\_ COMPLETION TEST \_\_\_\_\_ SPECIAL TEST X (Check One)

(See Instructions on Reverse Side)

Lease	Well No.	Date of Test	Producing Method	Choke Size	Test Hours	Daily Allowable Bbls.	Production During Test			GOR Cu. Ft. Per Bbl.
							Water Bbls.	Oil Bbls.	Gas MCF	
Puckett "A"	2	15	Pump		24	9	1	11		
	4	15	"		24	11	0	12		
	5	15	"		24	26	6	38		
	6	15	"		24	10	48	14		
	7	15	"		24	45	20	50		

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 degrees F. Specific gravity base will be 0.60.

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 certify that the information given is true and complete to the best of my knowledge.)

Date May 11, 1964

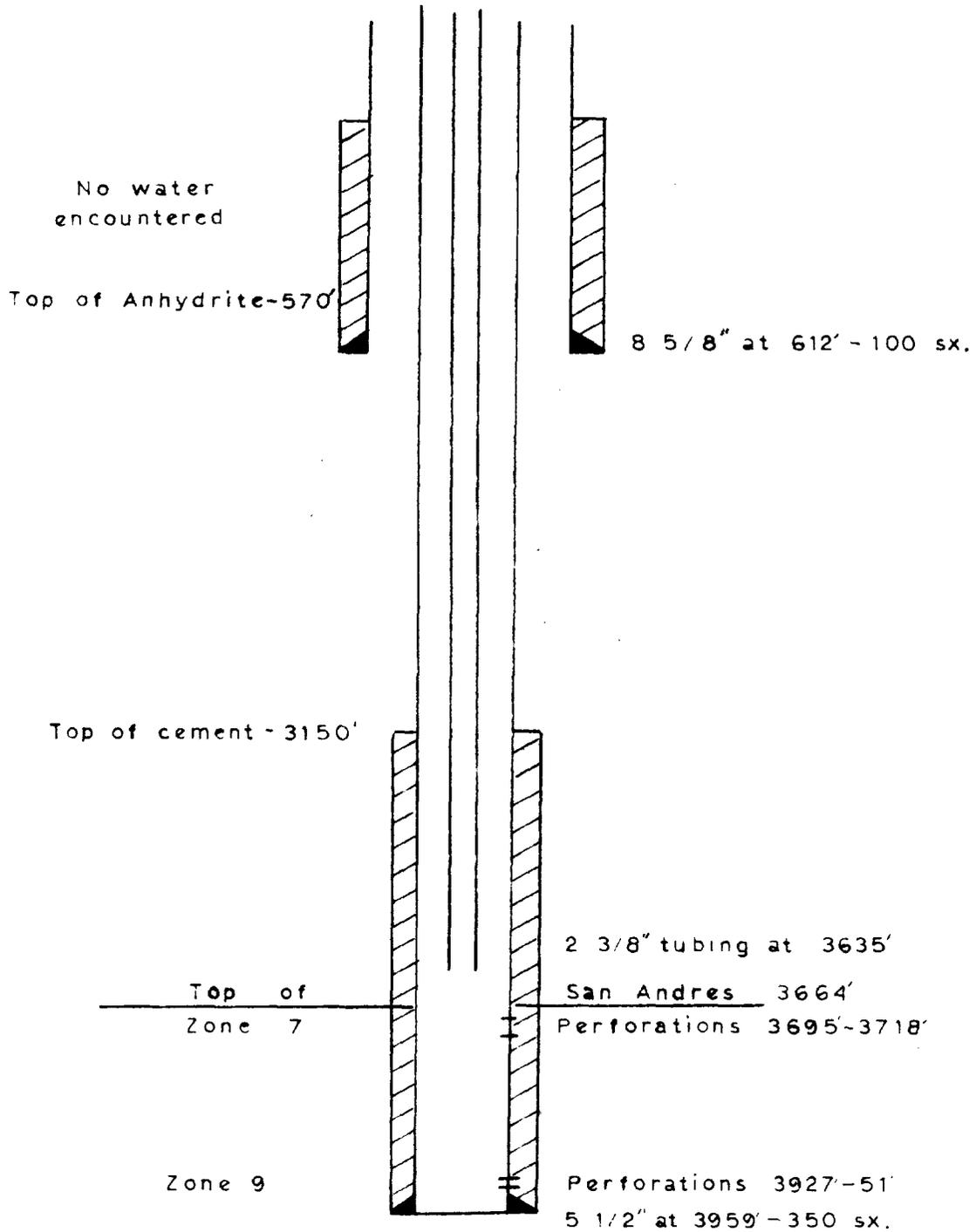
WILLIAM A. & EDWARD R. HUDSON

By *Raymond Gray*

Consulting Engineer.

Title

WILLIAM A. & EDWARD R. HUDSON  
PUCKETT "A" 24



**RALPH L. GRAY**

PETROLEUM ENGINEERING - PRODUCTION  
CONSULTANT  
302 CARPER BUILDING  
ARTESIA, NEW MEXICO

May 11, 1964

1964 MAY 12 AM 10

Continental Oil Company  
Box 427  
Hobbs, New Mexico

Skelly Oil Company  
Box 38  
Hobbs, New Mexico

State Engineer Office  
Capitol Building  
Santa Fe, New Mexico

Dear Sirs:

Attached is a copy of application by William A. and Edward R. Hudson for administrative approval to expand their Puckett "A" lease water-flood project in the Maljamar Field. This project was authorized under Order NR-2239, dated May 9, 1962, and the project has been in operation since September 30, 1962.

It is desired to obtain approval to use Puckett "A" #24 and #25 as water injection wells as soon as possible, so it would be appreciated if you would furnish the Oil Conservation Commission in Santa Fe with your waiver.

Yours very truly,

WILLIAM A. & EDWARD R. HUDSON

By: Ralph L. Gray  
REGISTERED PETROLEUM ENGINEER.

RIG:iw

cc: New Mexico Oil Conservation Commission ✓  
Box 2088  
Santa Fe, New Mexico



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

May 12, 1964

RECEIVED  
MAY 20 AM 1 21  
ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, N. M.

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, N. M.

Dear Mr. Porter:

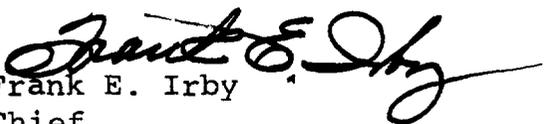
Reference is made to the application of Wm. A. and Edward R. Hudson submitted by Ralph L. Gray on May 11, 1964 which seeks Commission approval to use Puckett "A" No. 24 and 25 as water injection wells in their water flood project in the Maljamar Field. The project was authorized under Order R-2239 dated May 9, 1962.

Since injection is to be through tubing without packer, it is assumed that the formation will take the water without pressure. If this is the case, this office offers no objection to the granting of the application.

Very truly yours,

S. E. Reynolds  
State Engineer

FEI/ma  
cc-Ralph L. Gray  
F. H. Hennighausen

By:   
Frank E. Irby  
Chief  
Water Rights Div.



# CONTINENTAL OIL COMPANY

P. O. BOX 460  
HOBBS, NEW MEXICO

May 20, 1964

1001 NORTH TURNER  
TELEPHONE: EX 3-4141

PRODUCTION DEPARTMENT  
HOBBS DISTRICT  
A. B. SLAYBAUGH  
DISTRICT MANAGER  
G. C. JAMIESON  
ASSISTANT DISTRICT MANAGER

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

Attention: Mr. A. L. Porter, Jr., Secretary-Director

Re: Application of Hudson and Hudson  
to Expand their Puckett "A"  
Lease Waterflood Project,  
Maljamar Field

Gentlemen:

Continental Oil Company has been advised of the application of William A. and Edward R. Hudson for administrative approval to expand their Puckett "A" Lease Waterflood Project in the Maljamar Field. It is our understanding that applicant proposes to complete two injection wells for water injection purposes; Puckett "A" No. 24, located 25 feet from the North and 1,295 feet from the East lines of Section 24, and Puckett "A" No. 25, located 25 feet from the South and 2,615 feet from the East lines of Section 13, both in Township 17 South, Range 31 East, Eddy County, New Mexico. It is further our understanding that the pilot waterflood was approved by Order No. R-1693.

Continental Oil Company is an offset operator to the project described above and hereby waives notice and hearing in regard to the proposed expansion as herein described.

Yours very truly,

VTL-MLH

cc: Ralph Gray, 302 Carper Building, Artesia, New Mexico



STATE OF NEW MEXICO  
STATE ENGINEER OFFICE  
SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

May 19, 1964

ADDRESS CORRESPONDENCE TO:  
STATE CAPITOL  
SANTA FE, N. M.

87501

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

Dear Mr. Porter:

Reference is made to the application of Wm. A. and Edward R. Hudson submitted by Ralph L. Gray on May 11, 1964 which seeks commission approval to use Puckett "A" No. 24 and 25 as water injection in their water flood project in the Maljamar Field. The project was authorized under Order R-2239 dated May 9, 1962.

Reference is also made to my letter of May 12, 1964 and to Mr. Ralph Gray's letter to me dated May 13, 1964, a copy of which was forwarded to you. Both of these letters pertain to the above mentioned application. Mr. Gray has advised me of his reasons for not using a packer and he has stated that these are newly drilled wells with new 5½ inch, 15½ lbs. J-55 casing which will withstand more than twice the pressure to be exerted. He states that the casing will be pressure tested to 2000 psi; that the anticipated life of the flood is about 10 years and will not exceed 20 years, and that the annulus between the casing and the open end tubing will have a gage at the surface. In view of this statement, it is my opinion that if a leak should occur, it can readily be determined that any threat of contamination to fresh water which may exist in the area may be averted. Therefore, this office offers no objection to the granting of this application.

Yours truly,

FEI/ma  
cc-Ralph L. Gray  
F. H. Hennighausen

S. E. Reynolds  
State Engineer

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

**RALPH L. GRAY**  
PETROLEUM ENGINEERING - PRODUCTION  
CONSULTANT  
302 CARPER BUILDING  
ARTESIA, NEW MEXICO

May 13, 1964

1964 MAY 13 AM 10 08

State Engineer Office  
State Capitol Building  
Santa Fe, New Mexico

Attention: Mr. Frank E. Irby

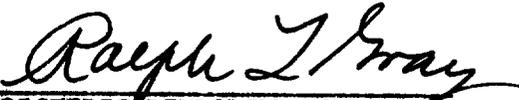
Dear Sir:

I have a copy of your letter dated May 12, 1964, addressed to the Oil Conservation Commission in regard to the application of William A. and Edward R. Hudson to use their Puckett "A" #24 and #25 wells as water injection wells.

Your letter states that you have no objection if injection is to be performed without pressure. This is to advise you that this flood is being conducted under pressure and at the present time, our plant pressure is approximately 1800 psi. I would like to call your attention to the fact that new pipe is being run in these injection wells and the 5½" casing is 15½# J-55, which is very adequate for the pressures that will be encountered. We choose not to run packers on the tubing since we believe that more satisfactory operation can be obtained in this manner. In our original hearing on this waterflood project, it was stated that injection would be made in this manner and no objections were voiced at that time.

We believe that our injection proposals are adequate but if you have any additional questions, please advise.

Yours very truly,

  
REGISTERED PETROLEUM ENGINEER.

RIG:lw

cc: Mr. A. L. Porter, Jr.  
Oil Conservation Commission  
Santa Fe, New Mexico

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