GEO ENGINEERING, INC.
P. O. Box 2966
Santa Fe, N.M. 87504-2966

FEB 29 1984

RECEIVED

Oil Conservation Division
Aztec, New MExico

Re: Chaco Wash Waterflood Project
McKinley County, N.M.

Dear Frank:

Enclosed please find Geo Engineering, Inc., application for extension of the Chaco Wash-Mese Verde Waterflood. As you know, our effort on this waterflood expansion is going to be concentrated on the upper pay zone of this pool. By this application, we propose to seal off the lower pay zone by means of using drillable cast iron bridge plugs set from 350' to 380' in all wells, open in South Menefee Zones. Geo Engineering, Inc. does not want to abandon this lower zone as we are having difficulty in obtaining the necessary data from previous operators so that an economical analysis of potential reserves can be made. Should this lower pay zone prove to be uneconomical for primary depletion or water flooding, this zone will be plugged according to state specifications upon completion of the waterflood of the upper pay zone.

Geo Engineering, Inc. has conducted research on why the previous waterfloods in this area have failed and have come to several conclusions. Previous waterfloods had water going into both the upper and lower zones and the operator had no control on zone entry. As stated above, this problem will be solved by sealing off the lower zone. Tests conducted by Core Laboratories and the Petroleum Recovery Research Center have also shown that the clays in this upper pay zone react dramatically with the water from our brakish water supply. To avoid clay swelling and decreasing the permeability of this upper zone, Kc^{1} must be added to the water injected. From the data provided by Core Lab, a 1% mixture-by weight will yield the best possible sweep efficiency of this zone and would keep formation clays from swelling.

Geo Engineering, Inc. feels that this upper pay zone is an isolated discontinuous sand enclosed by impermeable shale and that the connate water in this zone has no usage for domestic purposes. To insure the containment of this injected water and to achieve maximum sweep efficiency,

Geo Engineering will implement a continuous sampling procedure of this water. All analysis of this water will be for "salt content". Sampling procedures for produced water that is to be re-injected will occur every two weeks. Water samples will be obtained every month from producing wells, and a water sample will be analyzed every three months from the closest producing water well (located in SW/4 30 T20N R10W). In reality, the fresh water well will be tested daily by the "taste method" as we use this water for the camp that we have set up in the area.

I realize that you have been coming to Santa Fe quite frequently and I would like to discuss this matter with you and Dick Stamets. As usual with this industry, time is of the essence and we would like to obtain approval of this application before we install the costly surface equipment required to initiate this brine waterflood.

Geo Engineering feels that approval of this application will result in additional recoverable oil reserves and prevention of waste. Should you have any questions on this application, or if you are going to be in Santa Fe in the next couple of weeks, please contact me at this office.

Sincerely yours,

J. M. Law

JAMES LAW
Petroleum Engineer

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [X] yes [ ] no

II. Operator: Geo Engineering, Inc.

Address: P. O. Box 2966 Santa Fe, New Mexico 87504-2966

Contact party: J. W. Law Phone: 505-982-0472

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? [X] yes [ ] no
If yes, give the Division order number authorizing the project R-6538.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

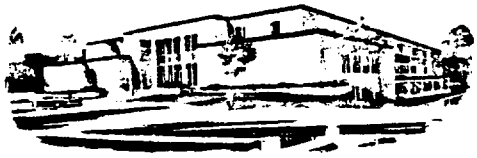
Name: James W. Law Title Petroleum Engineer

Signature: J. W. Law Date: February 14, 1984

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. Case No. 7039 application of Red Mountain Associates for Waterflood Project: Order No. R-6538 dated December 17,1980.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

State of New Mexico



Commissioner of Public Lands

JIM BACA
COMMISSIONER

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

Express Mail Delivery Use:
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

February 20, 1984

Geo Engineering, Inc.
P. O. Box 2966
Santa Fe, New Mexico 87504-2966

Re: Order No. R-6538
Expansion of Secondary Recovery Project
State of New Mexico Oil & Gas Lease LG-2779-2

Gentlemen:

Pursuant to your registered letter dated February 9, 1984, the New Mexico State Land Office has no objection to expansion of the above reference project.

Very truly yours,

Jim Baca
Commissioner of Public Lands

Ray D. Graham

By: Ray D. Graham, Director
Oil and Gas Division
A/C 505-827-5744

JB:RDG:cw

cc: Oil Conservation Division
Attn: Gilbert Quintana
P. O. Box 2088
Santa Fe, New Mexico 87504

CHACO WASH MESA VERDE WATERFLOOD EXPANSION APPLICATION

1. These injection wells are for the purpose of expanding the waterflood operation in the Menefee Formation at a depth of approximately 300 feet. Water will be injected through perforated intervals. The well in Section 21 will be drilled for injection. The wells in Section 28 were originally drilled as oil producers and will be converted to water injection.

PARAGRAPH VII

DATA ON PROPOSED OPERATION

1. Average and maximum daily water injection rate will be 1,000 BPD.

2. Open System.

3. Maximum and average indection pressure will be 50 PSI gauge.

4. Water source is Hospah Gallup Sand @ 2600-2900'. Source well is located 660' FSL & 660' FEL of Section 20, T20N, R9W. Water analysis is attached. Water will be compatible with the receiving formation after the addition of /BBL KCL.

CHACO WASH WATER SUPPLY

Alkalinity as HCO_3	347
Chlorides as Cl	233
Sulfates as SO_4	675
Hardness as $CcCO_3$	36
Calcium as Ca	10
Magnesium as Mg	3
Iron as Fe	0.34
H pH	8.2
Specific Gravity	1.001
Total Dissolved Solids	1440

With the exception of pH and specific gravity, all results are expressed at mg/L.

Hydrogen Sulfide: Not detectable (<0.5 mg/L)

SURFACE OWNERS

State of New Mexico
New Mexico State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504-1148

Attn: Mr. Ray Graham

Eastern Navajo Land Commission
P. O. Box 948
Crownpoint, New Mexico 87313

Attn: Mr. Jerry Elwood, Director

United States Government
Bureau of Land Management
Federal Building, U.S. Post Office
Santa Fe, New Mexico 87501

Attn: Oil and Gas Section

LEASE HOLD OPERATORS

Mr. Phillip McKee
P. O. Box 45
McIntosh, New Mexico 87032

PARAGRAPH X

Geo Engineering, Inc.
Santa Fe Pacific RR No. 19
To be drilled.

Red Mountain Associates
State No. 11
I.P. Not available.

Colorado Plateau Geological Society
State No. 7
I.P. Not available.

Red Mountain Associates
State No. 12
I.P. Not available.

NDEPENDENT
103 W Aztec, PO Box 1210
Gallup, New Mexico 87301
Phone (505) 863 6811

LEGAL NUMBER 10292

LINES 23 TIMES 2
START DATE 2-09-84

PAY THIS ==> $11.79

CLASS LEG 1

LEGAL NOTICE

KEEP THIS PORTION FOR YOUR RECORDS

LEGAL NOTICE

GEO Engineering Inc
P.O. Box 2966
Santa Fe, New Mexico 87504-2966
Contact Party J.W. Law, Telephone (505) 982-0472
This company intends to conduct a waterflood operation in sections 21 & 28 township 20 north, range 9 west, Mckinley County, New Mexico. Water injection will be into four wells completed in the menefee Formation at approximately 300 feet deep. Average injection rate per well is estimated to be 250 BBLS. Maximum surface injection pressure will be 50 PSI. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 Within 15 days

Legal #10292 Published in the Gallup Independent Thursday February 9, 10, 1984

Affidavit of Publication

STATE OF NEW MEXICO,
) ss
COUNTY OF McKINLEY

Donna Huber being duly sworn upon oath, deposes and says:

As Legal clerk of the Gallup Independent, a newspaper published in and having a general circulation in McKinley County, New Mexico, and in the City of Gallup, therein: that this affiant makes this affidavit based upon personal knowledge of the facts herein sworn to. That the publication, a copy of which is hereto attached was published in said newspaper during the period and time of publication and said notice was published in the newspaper proper, and not in a supplement thereof,

for two times, the first publication being on the 9 day of February, 19 84 the second publication being on the 10 day of February, 19 84 the third publication on the _____ day of _____, 19_____

and the last publication being on the _____ day of _____, 19_____

That such newspaper, in which such notice or advertisement was published, is now and has been at all times material hereto, duly qualified for such purpose, and to publish legal notices and advertisements within the meaning of Chapter 12, of the statutes of the State of New Mexico, 1941 compilation.

Donna Huber
Affiant.

Sworn and subscribed to before me this 10 day of February, A.D., 19 84

Margaret M. Palochak
Notary Public.

My commission expires
8-27-85

OUTLAW

All Entries MUST be in Ball Point Pen or Typed

REGISTERED NO.

POSTMARK OF

Post Office (Completion)

Reg. Fee $ | Special Delivery $

Handling Charge $ | Return Receipt $

Postage $ | Restricted Delivery $

Received by | ☐ Airmail

MAILING OFFICE

Customer Completion (Please Print)

Customer must declare Full value $

☐ With Postal Insurance ☐ Without Postal Insurance

$25,000 Domestic Limit

FROM

ZIP CODE

TO

ZIP CODE

PS FORM 3806 June 1982 RECEIPT FOR REGISTERED MAIL (PO COPY)

All Entries MUST be in Ball Point Pen or Typed

REGISTERED NO.

POSTMARK OF

Post Office (Completion)

Reg. Fee $ | Special Delivery $

Handling Charge $ | Return Receipt $

Postage $ | Restricted Delivery $

Received by | ☐ Airmail

MAILING OFFICE

Customer Completion (Please Print)

Customer must declare Full value $

☐ With Postal Insurance ☐ Without Postal Insurance

$25,000 Domestic Limit

FROM

Geo Engineering, Inc.

P. O. Box 2966

Santa Fe, N.M. 87504-2966

ZIP CODE

TO

Mr. Phillip McKee

P. O. Box 45

McIntosh, N.M.

ZIP CODE 87032

PS FORM 3806 June 1982 RECEIPT FOR REGISTERED MAIL (Customer Copy)

(See Information on Reverse)

All Entries MUST be in Ball Point Pen or Typed

REGISTERED NO.

POSTMARK OF

Post Office (Completion)

Reg. Fee $ | Special Delivery $

Handling Charge $ | Return Receipt $

Postage $ | Restricted Delivery $

Received by | ☐ Airmail

MAILING OFFICE

Customer Completion (Please Print)

Customer must declare Full value $

☐ With Postal Insurance ☐ Without Postal Insurance

$25,000 Domestic Limit

FROM

Geo Engineering, Inc.

P. O. Box 2966

Santa Fe, N.M. 87504-2966

ZIP CODE

TO

United States Government

Bureau of Land Mgt.

Federal Bldg., U.S. Post Office

Santa Fe, N.M. ZIP CODE 87501

Attn: Oil & Gas Sect.

PS FORM 3806 June 1982 RECEIPT FOR REGISTERED MAIL (Customer Copy)

(See Information on Reverse)

All Entries MUST be in Ball Point Pen or Typed

REGISTERED NO. P 120 293 317

POSTMARK OF

FEB 9 1984

Post Office (Completion)

Reg. Fee $ .35 | Special Delivery $

Handling Charge $ | Return Receipt $

Postage $ .50 | Restricted Delivery $

Received by | ☐ Airmail

MAILING OFFICE

Customer Completion (Please Print)

Customer must declare Full value $

☐ With Postal Insurance ☐ Without Postal Insurance

$25,000 Domestic Limit

FROM

Geo Engineering, Inc.

P. O. Box 2966

Santa Fe, N.M. 87504-2966

ZIP CODE

TO

Eastern Navajo Land Commission

P. O. Box 948

Crownpoint, N.M. 873 ZIP CODE

Attn: Mr. Elwood, Director

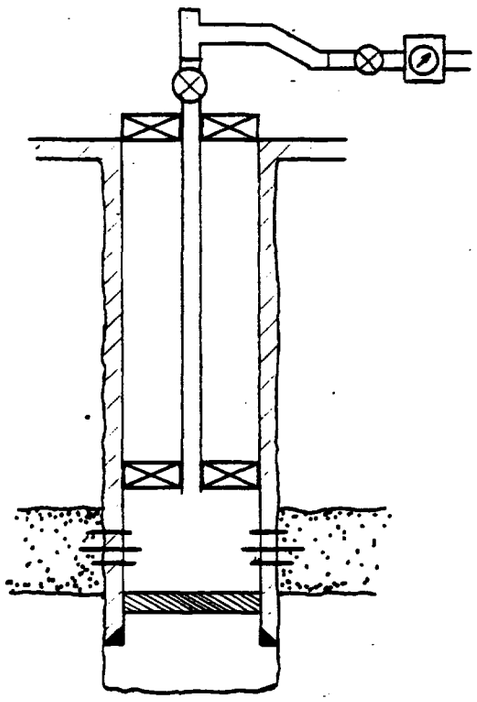
PS FORM 3806 June 1982 RECEIPT FOR REGISTERED MAIL (Customer Copy)

(See Information on Reverse)

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
GEO ENGINEERING INC	STATE OF NEW MEXICO LG 2779			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
7	660' FNL & 990' FEL	28	20 NORTH	9 WEST

Schematic



Tabular Data

Surface Casing

Size NONE " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size NONE " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4 1/2" " Cemented with 80 sx.

TOC SURFACE feet determined by RETURNS

Hole size 6 1/4"

Total depth 566

Injection interval 304 - 326'

330 - 338' feet to _____ feet

(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with PLASTIC (material) set in a

BAKER - LOCKSET (brand and model) packer at 290 feet.

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation MENEFEE

2. Name of Field or Pool (if applicable) CHACO WASH MESA VERDE

3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? OIL PRODUCTION

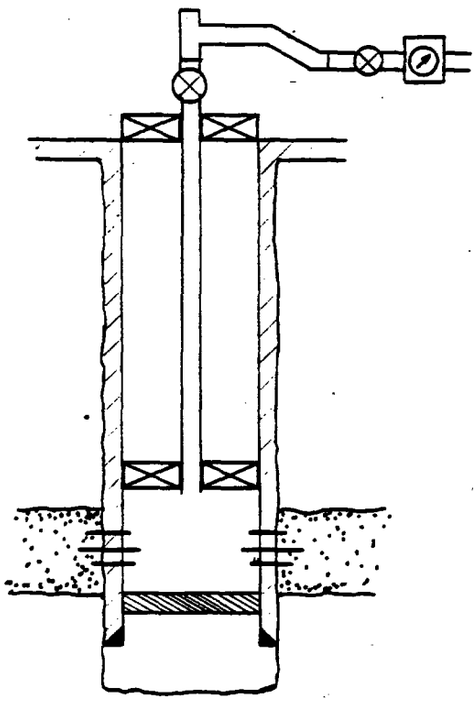
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) No

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. ~~None~~ 500' MENEFEE

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
GEO ENGINEERING INC	STATE OF NEW MEXICO LG 2779			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
11	330' FNL & 660' FEL	28	20 NORTH	9 WEST

Schematic



Tabular Data

Surface Casing

Size NONE " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size NONE " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4 1/2 " Cemented with 80 sx.

TOC SURFACE feet determined by RETURNS

Hole size 6 1/4 "

Total depth 564

Injection interval

304 feet to 326 feet

(perforated or open-hole, indicate which)

Tubing size 2 3/8 " lined with PLASTIC (material) set in a

BAKER - LOCKSET (brand and model) packer at 290 feet

(or describe any other casing-tubing seal).

Other Data

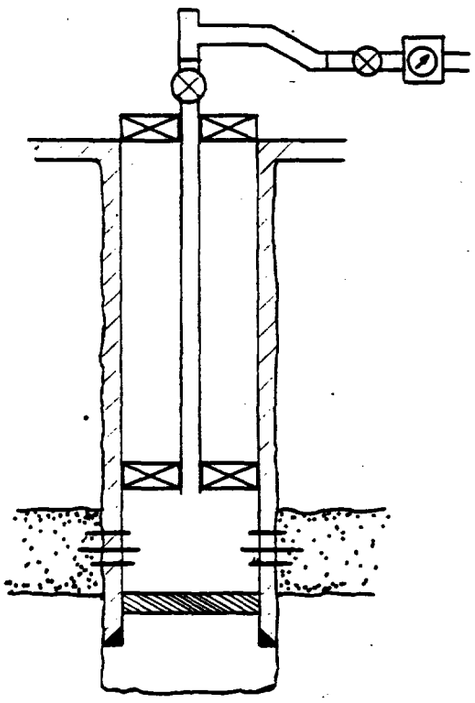
1. Name of the injection formation MENEFEE
2. Name of Field or Pool (if applicable) CHACO WASH MESA VERDE
3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? OIL PRODUCTION
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) ADDITIONAL PERFORATIONS 330 - 338 : BRIDGE PLUG WILL BE SET AT 328'
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. ~~NONE~~ 500' MENEFEE

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
GEO ENGINEERING INC.	STATE OF NEW MEXICO LG 2779			
WELL NO.	**FOOTAGE LOCATION**	**SECTION**	**TOWNSHIP**	**RANGE**
12	990' FNL & 660' FEL	28	20 NORTH	9 WEST

Schematic



Tabular Data

Surface Casing

Size NONE " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size NONE " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4 1/2 " Cemented with 80 sx.

TOC SURFACE feet determined by RETURNS

Hole size 6 1/4"

Total depth 342

Injection interval

325 feet to 346 feet

(perforated or open-hole, indicate which)

Tubing size 2 3/8" lined with PLASTIC (material) set in a

BAKER LOCKSET (brand and model) packer at 290 feet.

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation MENEFEE
2. Name of Field or Pool (if applicable) CHACO WASH MESA VERDE
3. Is this a new well drilled for injection? ☐ Yes ☒ No

   If no, for what purpose was the well originally drilled? OIL PRODUCTION
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

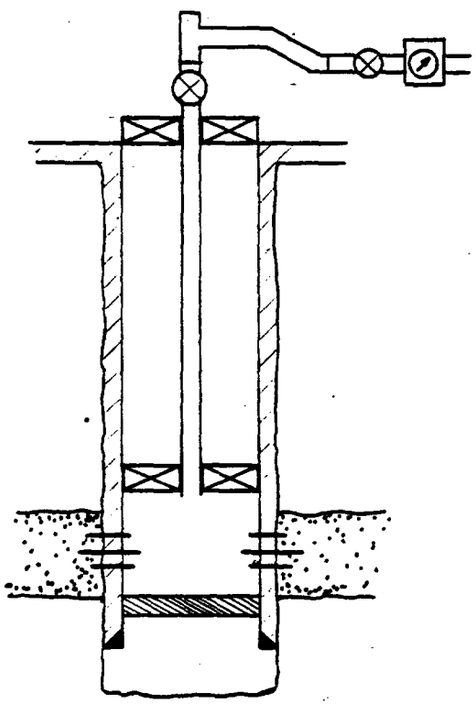
   352-64 BRIDGE PLUG WILL BE SET @ 350'
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

   500' MENEFEE

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
GEO ENGINEERING INC	STATE OF NEW MEXICO LG 2779			
WELL NO.	**FOOTAGE LOCATION**	**SECTION**	**TOWNSHIP**	**RANGE**
19	500' FSL & 660' FEL	21	10 NORTH	9 WEST

Schematic



Tabular Data

Surface Casing

Size NONE " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Intermediate Casing

Size NONE " Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4 1/2 " Cemented with 80 sx.

TOC SURFACE feet determined by RETURNS

Hole size 6 1/4"

Total depth 360'

Injection interval ESTIMATE

305 feet to 320 feet

(perforated or open-hole, indicate which)

Tubing size 2 3/8 lined with PLASTIC (material) set in a

BAKER LOCKSET (brand and model) packer at 290 feet.

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation MENEFEE

2. Name of Field or Pool (if applicable) _____

3. Is this a new well drilled for injection? ☒ Yes ☐ No

   If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) NONE

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. MENEFEE 500'

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS
OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing String & Setting Depth	Well Type	Sta
103	#3 Santa Fe	SW-SE-SE 21-20N-9W	6-25-44	354	8 @ 315 12 @ 60	Oil	T/A
104	#1 Santa Fe	SW-SW-W 21-20N-9W	11- 7-35	540	2 @ 315 5-1/2 @ 900	"	T/A
105	#4 Santa Fe	E-SE-SE 21-20N-9W (660N/S 330W/E)	11- 6-61	330	4 @ 320W/10	"	P&A 4-7
106	#8 Santa Fe	SE-SE 21-20N-9W (495N/S 660W/E)	1-11-62	325	6-5/8 @ 320W/10 4 @ 315W/10	"	P&A 196
107	#1 Santa Fe	SE-SE 21-20N-9W (165FSL 965FEL)	4- 3-75	502 PB:316	4-1/2 @ 306W/25 2-3/8 @ 307	"	T/A
108	#18 Santa Fe Pacific	SW-SE-SW 21-20N-9W (175FSL 1365FEL)	10-19-75	1,583	Not Reported	"	P&A 10-
109	#3 Santa Fe Pacific RR	SW-SE-SW 21-20N-9W (165FSL 1815 FWL)	10- 1-69	539	None	"	P&A 5-2
110	#4 Santa Fe RR or SFP #104	SE-SE-SE 21-20N-9W (165FSL 565 FEL)	10- 1-68	340	5-1/2 @ 308W/25 2-3/8 @ 330	"	T/E
111	#5 Santa Fe RR	NE-SE-SE 21-20N-9W (990N/S 330W/E)	10-31-61	360	5-1/2 @ 360W/10	"	P&A 4-7
112	#1 Santa Fe RR	SE-SE-SW 21-20N-9W (330FSL 2310FWL)	10- 9-69	565	None	"	P&A 5-1
113	#2 Santa Fe RR or SFP #102	SE-SE-SE 21-20N-9W (565FSL 165FEL)	10- 1-69	340	5-1/2 @ 310W/25	"	T/A
114	#2 Santa Fe RR	SE-SW 21-20N-9W (165FNL 2145FWL)	6- 5-69	563	None	"	P&A 4-3
115	#3 Santa Fe RR or SFP #103	SE-SE-SE 21-20N-9W (165N/S 165W/E)	11- 8-68	340	5-1/2 @ 323W/15 2 @ 330	"	T/A

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing String & Setting Depth	Well Type	Status
116	#10 Santa Fe RR	SW-SE-NE 21-20N-9W (2310S/N 990W/E	8-16-62	350	5-1/2 @ 310W/10	Oil	P&A 4-7-67
117	#1-1 Santa Fe RR	SE-SE 21-20N-9W (360FSL 360FEL)	7-19-68	340	5-1/2 @ 316W/25 2 @ 322	"	T/A
118	#17 Scannion	SE-SE 21-20N-9W (990N/S 660W/E)	3-31-68	350(a)		"	P&A 3-31-66
119	SFP #1	SE-SE-SE 21-20N-9W (565S 565E)	10-26-68	340	5-1/2 @ 326W/20 2-3/8 @ 330	"	T/A
120	SFP #1	SW-SE-SE 21-20N-9W (990E 330S)	5-25-60	450		"	P&A 4-7-67
121	SFP #3	SE-SE-SE 21-20N-9W (330E 330S)	9- 1-61	320	5-1/2 @ 295W/10 4 @ 314W/10	"	P&A 4-17-67
122	SFP #7	S-SE-SE 21-20N-9W (165S 660E)	1-16-62	333	4-1/2 @ 318W/10 2 @ 312	"	P&A 4-7-67
123	SFP #101	SE-SE-SE 21-20N-9W (565S 565E)	10-26-68	340	5-1/2 @ 326W/20 2-3/8 @ 330	"	T/A
124	SFP #113	SE-SE-SE 21-20N-9W (165S 965E)	4- 1-75	500(316)	4-1/2 @ 306W/10 2-3/8 @ 306	"	T/A
125	SFPRR #2	SW-NW-SW 21-20N-9W (1650S 330W)	11- 1-60	405		"	P&A 4-7-67
126	#1 Santa Fe	SW-SW-SW 22-20N-9W	7-17-36	550	8-1/4 @ 65	"	T/A
127	#6 Santa Fe or SFP #106	SW-SW 22-20N-9W (160N/S 165E/W)	11-18-68	349	4-1/2 @ 338W/25 2 @ 335	" "	T/A T/A
128	#9 Santa FE	SW-SW-SW 22-20N-9W (165N/S 165E/W)	7-20-62	343	5-1/2 @ 308W/10 2 @ 330	"	P&A 4-7-67
129	#12 Santa Fe	SW-SW-SW 22-20N-9W (495N/S 165E/W)	3-15-63	360	4 @ 326W/10	"	P&A 4-7-67
130	#14 Scanlon	SW-SW-SW 22-20N-9W (165N/S 495E/W)	7-29-63	342	2-7/8 @ 342W/10	"	P&A 9-24-6

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing String & Setting Depth	Well Type	Status
131	#18 Scanlon	NW-SW-SW 22-20N-9W (825N/S 165E/W)	7-28-63	360	2-7/8 @ 360W/10	Oil	P&A 9-23-66
132	#1-SFP Mesa	SE-NE-NW 22-20N-9W (895FSL 2505FEL)	5-19-75	532	4-1/2 @ 810W/25	Oil	P&A 9-15-75
133	#2 Santa Fe Pacific or SFP #104	NW-SE-SW 22-20N-9W (990FSL 1980FWL)	4- 3-75	485	4-1/2 @ 495W/25 2-3/8 @ 463	Oil	T/A
134	#4 Santa Fe Pacific or SFP #116	NW-SE-SW 22-20N-9W (990FSL 1650 FWL)	4-25-75	480		Oil	T/A
135	SFP #6	SE-NW-SW 22-20N-9W (1650S 990W)		260		Oil	P&A 4-7-67
136	SFP #117	SW-SE-SW 22-20N-9W (330S 1650W)	9-30-75	458	4-1/2 @ 448W/12	Oil	T/A
137	#5 Santa Fe Pacific RR	NW-NW-NW 27-20N-9W (160FNL 170FWL)	12- 3-68	352	2-3/8 @ 352W/8	Oil	P&A 9-28-73
138	#7 Santa Fe Pacific RR	NW-NW-NW 27-20N-9W (495FNL 495FWL)	10- 1-69	370	2-3/8 @ 375W/8	Oil	P&A 9-28-73
139	#9 Santa Fe Pacific RR	NW-SE-NW 27-20N-9W (1815FNL 1650FWL)	12- 1-68	520		Oil	P&A 6-10-73
140	#1 OH Well	NE-NE-NW 27-20N-9W (165S/N 2145E/W)	11-20-67	523	2-3/8 @ 505W/15	Oil	P&A 11-7-74
141	#2 OH Well	NE-NW 27-20N-9W (495S/N 2145E/W)	11-20-67	520	2-3/8 @ 500W/15	Oil	P&A 11-7-74
142	#3 OH Well	NE-NW 27-20N-9W (495S/N 2475E/W)	11-20-67	520	2-3/8 @ 500W/15	Oil	P&A 11-7-74
143	SFP #12	SW-SE-NW 27-20N-9W (2310N 1650W)		620		Oil	P&A 12-19-7
144	#11 Santa Fe Pacific RR	NW-NW-NW 27-20N-9W (165S/N 165E/W)	8-17-62	343	5-1/2 @ 350W/10	Oil	P&A 1966
145	#13 Santa Fe Pacific RR	NW-NW 27-20N-9W (165S/N 495E/W)	9-10-62	375	5-1/2 @ 317W/10	Oil	P&A 4-7-67
146	#54 Jaco State	NW-NW 27-20N-9W (660FNL 660FWL)	4-18-72	3,910	7 @ 90W/10	Oil	P&A 8-15-7

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing & String	Setting Depth	Well Type	Status
147	#8 Santa Fe RR	NE-NW 27-20N-9W (330S/N 1650E/W)	11- 1-68	520	None		Oil	P&A 6-10-71
148	#17 Santa Fe Pacific	SW-SW 27-20N-9W (495N/S 165E/W)	3-15-63	340	4-1/2	@ 326W/10	"	P&A 9-28-73
149	#6 State	NW-NE-NE 28-20N-9W (330FNL 990FEL)	12-22-77	565 PB:503	3-1/2	@ 503W/30	"	T/A
150	#2 State B	SE-NW-NE 28-20N-9W (990FNL 1650FEL)	5-15-76	520	4-1/2	@ 496W/25	"	T/A
151	#2 State of New Mexico	NE-NE-NE 28-20N-9W (165S/N 165W/E)	9-22-62	350	5-1/2	@ 324W/10	"	P&A 4-7-67
152	#3 State	SW-NW-NE 28-20N-9W (990FNL 2310FEL)	12-25-76	773 PB:450	4-1/2 2-3/8	@ 320W/10 @ 300	"	T/A
153	#4 State	NE-SW-NE 28-20N-9W (1650FNL 1650FEL)	5-19-76	598	None		"	P&A 5-19-76
154	#5 State	NE-NE-NE 28-20N-9W (660FNL 660FEL)	3-21-76	563	None		"	P&A 12-1-77
155	#2 Santa Fe	NW-SE-NE 28-20N-9W	10-22-36	340			"	T/A
156	#3 Santa Fe	NE-SW-NE 28-20N-9W	8- 9-44	354			"	T/A
157	#1 State	SW-NE-NE 28-20N-9W (970FNL 970FEL)	4-10-76	520	4-1/2 2-3/8	@ 490W/20 @ 495	"	T/A
158	#1 State	NW-NW-NW 28-20N-9W (495S/N 495E/W)	10-19-62	1,208	4-1/2	@ 330W/3	"	P&A 1966
159	#1 Ray	NE-NE-NW 28-20N-9W (330S/N 2310E/W)	11-24-59	900 PB:533	5-1/2	# 542W/80	"	P&A 4-7-67
160	#6 Ray	NE-NW 28-20N-9W (303S/N 2240E/W)	10-12-68	505			"	P&A 10-12-66
161	#1 Santa Fe	NW-SE-NW 28-20N-9W	7-19-37	453			"	T/A
162	#11 OH Well	NE-NE-NE 28-20N-9W (495FNL 495FEL)	10- 6-68	355	None			P&A 10-26-74
163	#12 OH Well	NE-NE-NE 28-20N-9W (165FNL 495FEL)	7-20-73	370 PB:363	4-1/2 2	@ 370W/25 @ 363	"	P&A 10-26-74
164	#13 OH Well	NE-NE-NE 28-20N-9W (330FNL 330FEL)	8-10-73	360 PB:357	4-1/2 2	@ 360W/25 @ 357	"	P&A 10-26-74
165	#39 OH Well	NE-NE-NW 28-20N-9 (350FNL 2310FWL)	1-15-72	556 PB:538	4-1/2	@ 500W/35	"	P&A 10-26-74
166	#6 OH Well	SE-NE-NW 28-20N-9W (825FNL 2145FWL)	10-13-67	545	None Reported		"	P&A 4-3-73

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing String & Setting Depth	Well Type	Status
167	#7 OH Well	NW-NE-NW 28-20N-9W (495FNL 1815 FWL)	10-21-67	540	None Reported	Oil	P&A 4-3-72
168	#9 OH Well	NE-NE-NE 28-20N-9W (165FNL 165FEL)	10- 3-68	358	None	"	T/A
169	#10 OH Well	NE-NE-NE 28-20N-9W (495FNL 165FEL)	10- 5-68	365	4-1/2 @ 330W/20	"	10-26-74
170	#5 OH Well	NW-NW-NE 28-20N-9W (330N 2310W)	10- 7-67	525	2-3/8 @ 505W/50	"	P&A 10-26-74
171	#8 OH Well	N-NE-NW 28-20N-9W (330N 1980W)	3- 2-68	515	2-3/8 @ 492W/50	"	T/A
172	Jaco State #104	NE-SW-NE 28-20N-9W (1815/N 1485/E)		491		"	10-30-74
173	New Mexico #1	NW-NW-NE 28-20N-9W (165/N 2475/E)	9-1564	550		"	P&A 1966
174	#18 Birdseye	165FSL 1365FEL 28-20N-9W		1,583		"	P&A 10-75
175	#5 Scan.Shep.	330FEL 990FSL 28-20N-9W		360		"	P&A 4-67
176	#3 Scan.Shep.	330FEL 330FSL 28-20N-9W		316	4-1/2 @ 314	"	P&A 4-67
177	#1 Scan.Shep.	990FEL 330FSL 28-20N-9W		545		"	P&A 4-67
178	#2 Scan.Shep	1650FSL 330FWL 28-20N-9W				"	P&A 4-67
179	#3 BS&H	165FSL 1815FWL 28-20N-9W		540		"	P&A 4-72
180	#2 BS&H	165FSL 2145FWL 28-20N-9W		550		"	P&A 4-72
181	#10 Scan.Shep.	2310FNL 990FEL 28-20N-9W		350		"	P&A 4-67
182	#8 Scan. Shep	465FSL 660FEL 28-20N-9W		325	4-1/2 @ 315	"	P&A 4-67

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing String & Setting Depth	Well Type	Stat
183	#7 Scan.Shep	165FSL 660FEL 28-20N-9W		333	4-1/2/2@ 318/312	Oil	P&A 4-67
184	#4 Scan.Shep	330FEL 660FSL 28-20N-9W		330	4 @ 323	"	P&A 4-67
185	#1 BS&H	330FSL 2310FWL 28-20N-9W		500		"	P&A 4-72
186	#1 CPGS	165FSL 965FEL 28-20N-9W		500	4-1/2 @ 306	"	P&A 4-75
187	#110 Birdseye	360FSL 360FEL 28-20N-9W				"	T/A
188	#17 Osborn	990FSL 660FWL 28-20N-9W				"	P&A 3-66
189	#3 Birdseye	165FSL 165FEL 28-20N-9W		340		"	T/A
190	#1 Birdseye	565FSL 565FEL 28-20N-9W		340		"	T/A
191	#102 CPGS	28-20N-9W		340		"	T/A
192	#9 Scan.Shep.	165FWL 165FSL 28-20N-9W	10-68	360		"	P&A 4-67
193	#14 Osb.& Weir	445FWL 165FSL 28-20N-9W	7-63			"	P&A 9-66
194	#18 Osb.& Weir	825FSL 1650FWL 28-20N-9W	7-63	360	2" @ 325	"	P&A 9-66
195	#6 Birdseye	160FSL 165FWL 28-20N-9W	11-68	349	4-1/2 @ 338	"	T/A
196	#6 Scan.Shep	1650FSL 990FWL 28-20N-9W				"	P&A 4-67
197	#12 Scan.Shep	165FWL 495FSL 28-20N-9W		360		"	P&A 4-67

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing & string	Setting Depth	Well Type	Statu
198	#1 CPGS	895FSL 2505FEL 28-20N-9W		532	4-1/2	@ 507	Oil	T/A
199	#2 CPGS	990FSL 1980FWL 28-20N-9W	4-75	484	4-1/2	@ 495	"	T/A
200	#13 Scan.Shep	165FNL 495FWL 28-20N-9W		370			"	P&A 4-67
201	#11 Scan.Shep	165FNL 165FWL 28-20N-9W		348			"	P&A 4-67
202	#11 Birdseye	495FNL 165FWL 28-20N-9W					"	P&A 10-73
203	#5 Birdseye	160FNL 170FWL 28-20N-9W		352			"	P&A 10-73
204	#8 Birdseye	330 FLN 1650FWL 28-20N-9W		535			"	P&A 6-71
205	#9 Birdseye	1815FNL 1650FWL 28-20N-9W		438			"	P&A 6-71
206	#7 Birdseye	495FNL 495FWL 28-20N-9W	10-69	370			"	P&A 9-73
207	#26 Red Mtn.	620FNL 1965FEL 28-20N-9W	2-82	537			"	T/A
208	#3 CPGS	990FNL 2310FEL 28-20N-9W		773	4-1/2	@ 320	"	T/A
209	#28 Red Mtn.	620FNL 1965FEL 28-20N-9W	2-82	537			"	T/A
210	#6 CPGS	330FNL 990 FEL 28-20N-9W	3-80	565	3-1/2	@ 503	"	T/A
211	B-1 CPGS	28-20N-9W					"	T/A
212	#25 Red Mtn.	350FNL 2260FEL 28-20N-9W	3-82	540			"	T/A

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS
OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing String	Setting Depth	Well Type	Sta
213	#23 Red Mtn.	660FNL 2635FEL 28-20N-9W	8-81	547			Oil	T/A
214	#24 Red Mtn.	660FNL 2310FEL 28-20N-9W	8-81	545	4-1/2	@ 506	"	T/A
215	#9 CPGS	330FNL 1650FEL 28-20N-9W	10-81	525	4-1/2	@ 520	"	T/A
216	#8 CPGS	707FNL 1273FEL 28-20N-9W	10-81	543	4-1/2	@ 540	"	T/A
217	#7 Red Mtn.	660FNL 990FEL 28-20N-9W	10-81	555	4-1/2	@ 555	"	T/A
218	#5 Red Mtn.	660FNL 660FEL 28-20N-9W	11-80	545			"	T/A
219	#1 BURSCAN	165FNL 2145FWL 28-20N-9W	11-67	550	2-3/8	@ 505	"	T/A
220	#27 Red Mtn.	940FNL 1965FEL 28-20N-9W	3-82	540			"	T/A
221	#2 BURSCAN	495FNL 2145FWL 28-20N-9W	11-67	520	2-3/8	@ 500	"	P&A 11-
222	#32 BURSCAN	350FNL 2310FWL 28-20N-9W	1-72	556	4-1/2	@ 500	"	T/A
223	#13 Red Mtn.	660FNL 1650FEL 28-20N-9W	3-82	565	4-1/2	@ 560	"	T/A
224	#11 Red Mtn.	330FNL 660FEL 28-20N-9W	10/81	564	4-1/2	@ 540	"	T/A
225	#12 Red Mtn.	990FNL 660FEL 28-20N-9W	10/81	545	4-1/2	@ 542	"	T/A
226	#10 Red Mtn.	47FNL 1367FEL 28-20N-9W	10/81	545	4-1/2	@ 538	"	T/A

TABULAR SUMMARY OF WELLS LOCATED WITHIN A HALF MILE RADIUS
OF INJECTION WELLS

Identification Number	Well Name	Location	Completion Date	Total Depth	Casing String	Setting Depth	Well Type	St
227	#20 Red Mtn.	990FNL 1315FEL 28-20N-9W	10-81	597	4-1/2	@ 543	Oil	T/
228	#22 Red Mtn.	990FNL 2635FEL 28-20N-9W	10-81	542	4-1/2	@ 503	"	T/
229	#102 Santa Fe	565/S 165E 21-20N-9W	6-21-71	340	5-1/2	@ 310	"	"
230	#103 Santa Fe	165/S 165E " "	11- 8-68	340	5-1/2	@ 323	"	"
231	#104 Santa Fe	165/S 565/E " "	11- 1-68	340	5-1/2	@ 308	"	"
232	#106 Santa Fe	160/S 165W 21-22N-9W	11-18-68	349	4-1/2	@ 338	"	"
233	#110 Santa Fe	360/S 360/E 21-21N-9W	7-19-68	340	5-1/2	@ 316	"	"
234	#114 Santa Fe	990/S 1980/W 21-22N-9W	4- 3-75	484	4-1/2	@ 459	Dry Hole	P
235	#116 Santa Fe	889.S 1650/W 21-22-9 W	6- 3-75	475	None			

CHA CHA-GALLUP POOL
TOTAH-GALLUP POOL
(Flaring of Gas Prohibited)
San Juan County, New Mexico

Order No. R-2103, Prohibiting the Flaring of Casinghead Gas from Wells in the Cha Cha-Gallup and the Totah-Gallup Pools, San Juan County, New Mexico, December 1, 1961.

In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the promulgation of an order prohibiting the flaring of casinghead gas from oil wells in the Cha Cha-Gallup and Totah-Gallup Oil Pools, San Juan County, New Mexico.

CASE NO. 2215
Order No. R-2103

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on March 15, 1961, May 17, 1961, July 13, 1961, August 16, 1961, and September 13, 1961, at Santa Fe, New Mexico, and on October 18, 1961, at Roswell, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 24th day of October, 1961, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

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

(2) That a very substantial quantity of casinghead gas produced from oil wells in the Cha Cha-Gallup and Totah-Gallup Oil Pools, San Juan County, New Mexico, is presently being flared or vented.

(3) That a facility to gather said gas is presently under construction and should be completed by December 1, 1961.

(4) That there is a definite need for the promulgation of an order prohibiting the flaring or venting of said casinghead gas.

(5) That said no-flare order should be made effective December 1, 1961.

(6) That a ninety-day exception to said no-flare order should be allowed for each well following its date of completion.

(7) That further exception to said no-flare order should be allowed only upon a showing that waste or undue hardship would otherwise be caused.

IT IS THEREFORE ORDERED:

That no casinghead gas shall be flared or vented from any well in the Cha Cha-Gallup Oil Pool or in the Totah-Gallup Oil Pool, San Juan County, New Mexico, after November 30, 1961.

PROVIDED HOWEVER, That each well completed in said pools is hereby granted a ninety-day exception to this order, dating from the well's date of completion.

PROVIDED FURTHER, That any operator who desires to obtain an exception to this order shall submit to the Secretary-Director an application for such exception showing justification therefor. The Secretary-Director is hereby authorized to grant such an exception if he determines that it is reasonably necessary to prevent waste or to prevent undue hardship on the applicant.

IT IS FURTHER ORDERED:

That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

CHACO WASH-MESAVERDE POOL
McKinley County, New Mexico

Order No. R-2112, Creating and Adopting Rules for the Chaco Wash-Mesaverde Pool, McKinley County, New Mexico, November 1, 1961.

Application of Scanlon & Shepard for the creation of a new oil pool for Mesaverde production in Section 21, Township 20 North, Range 9 West, McKinley County, New Mexico.

CASE NO. 2417
Order No. R-2112

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on October 25, 1961, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 1st day of November, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Scanlon & Shepard, seeks an order creating a new pool for Mesaverde production comprising the SE/4 of Section 21, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico, on the basis of a discovery well, the Scanlon and Shepard Santa Fe Railroad Well No. 3, drilled 330 feet from the South line and 330 feet from the East line of said Section 21, completed at a depth of 316 feet on September 4, 1961.

(3) That the applicant proposes that each well drilled in the new pool should be located no nearer than 165 feet to the outer boundary of the quarter-quarter section on which it is located and should be located no nearer than 330 feet to the nearest well capable of producing from the same common source of supply.

(4) That the pool should be named the Chaco Wash-Mesaverde Oil Pool.

(5) That the subject application should be approved.

IT IS THEREFORE ORDERED:

(1) That a new pool in McKinley County, New Mexico, classified as an oil pool for Mesaverde production is hereby created and designated as the Chaco Wash-Mesaverde Oil Pool comprising the SE/4 of Section 21, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico.

(2) That for allowable purposes, the 40-acre proportional factor for pools from 0 to 5000 feet shall apply to said Chaco Wash-Mesaverde Oil Pool, and no 40-acre proration unit shall produce in excess of the 40-acre top unit allowable for wells in the 0 to 5000 feet depth range in Northwest New Mexico.

(3) That each well drilled in the Chaco Wash-Mesaverde Oil Pool shall be located no nearer than 165 feet to the outer boundary of the quarter-quarter section on which it is located and shall be located no nearer than 330 feet to the nearest well capable of producing from the same common source of supply.

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

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

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

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