te institute a pilet water fleed project in Brewn Pool - Chaves County 169

Application, Transcript,
Smill Exhibits, Etc.

OIL CONSERVATION COMMISSION P. O. BOX 871 SANTA FE, NEW MEXICO

January 22, 1964

Mr. J. W. Brown Mickson Hotel Roswell, New Mexico

Re: State B-92 Well No. 9

Dear Mr. Browns

Mercin you request authority to convert your State B-92 Well Mo. 9, located 1310 feet from the Morth line and 1980 feet from the West line of Section 26, Township 10 South, Range 26 East, Brown Pool, Chaves County, New Mexico, to a water injection well. It is our understanding that this well was originally drilled as a producer, but that it is now needed to fill out the desired water injection pattern for the waterflood project which you are operating in the aforesaid pool. It is our understanding further that the well was drilled to a total depth of 800 feet, that 800 feet of 4 1/2-inch onsing was set at total depth and communed with 100 sacks of sement. Water injection will be into the Penrose member of the Queen formation through 144 perforations from approximately 750 to 785 feet.

Inasmuch as the aforesaid casing and cementing program appear to be adequate for water injection purposes in this waterflood, the conversion of the subject Well No. 9 to water injection at the aforesaid unorthodox location is hereby approved.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/DSE/esr

OIL CONSERVATION COMMISSION P. O. BOX 871 SANTA FE, NEW MEXICO

July 2, 1959

Mr. Jack Campbell Box 721 Roswell, New Mexico

Dear Mr. Campbell:

On behalf of your client, J. W. Brown, we enclose two copies of Order No. R-1433 issued July 2, 1959 by the Oil Conservation Commission in Case No. 1699.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

ALP/ir

Enclosures

Copy sond & Holles occ

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE No. 1699 Order No. R-1433

APPLICATION OF J. W. BROWN FOR AN ORDER AUTHORIZING A PILOT WATER FLOOD PROJECT IN THE BROWN POOL IN CHAVES COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 8:00 o'clock a.m. on June 24, 1959, at Santa Fe, New Mexico, before Elvis A. Utz, 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 And day of July, 1959, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, J. W. Brown, proposes to institute a pilot water flood project in the Brown Pool in Chaves County, New Mexico, by the injection of water into the Queen formation through the following-described wells:

State E-92 Well No. 2, located 2310 feet from the North line and 2310 feet from the East line of Section 26.

State E-92 Well No. 3, located 1650 feet from the North line and 1650 feet from the West line of Section 26,

State E-92 Well No. 6, located 1650 feet from the North line and 2310 feet from the West line of Section 26,

State E-92 Well No. 8, located 2310 feet from the North line and 1650 feet from the West line of Section 26.

ail in Township 10 South, Range 26 East, NMPM, Chaves County, New Mexico.

- (3) That the proposed pilot water flood project will not adversely affect the interests of any other operators in said Brown Pool.
- (4) That the proposed pilot water flood project will promote conservation and will tend to prevent waste through the production of oil which might not otherwise be recovered.

IT IS THEREFORE ORDERED:

- (1) That the application of J. W. Brown for permission to institute a pilot water flood project in the Brown Pool in Chaves County, New Mexico, be and the same is hereby approved.
- (2) That the following-described wells be and the same are hereby authorized as water injection wells:

State E-92 Well No. 2, located 2310 feet from the North line and 2310 feet from the East line of Section 26.

State E-92 Well No. 3, located 1650 feet from the North line and 1650 feet from the West line of Section 26.

State E-92 Well No. 6, located 1650 feet from the North line and 2310 feet from the West line of Section 26,

State E-92 Well No. 8, located 2310 feet from the North line and 1650 feet from the West line of Section 26,

all in Township 10 South, Range 26 East, NMPM, Chaves County, New Mexico.

(3) That monthly progress reports on the pilot water flood project herein authorized shall be submitted to the Commission in accordance with Rule 704 and Rule 1119 of the Commission Rules and Regulations.

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

STATE OF NEW MEXICO
OIL_CONSERVATION COMMISSION

JOHN BURROUGHS, Chairman

MURRAY E. MORGAN, Member

A. L. PORTER, Jr., Member & Secretary

140 C

CORE ANALYSIS REPORT
FOR
J. W. BROWN

BROWN STATE NO. 6 WELL
BROWN FIELD
CHAVES COUNTY, NEW MEXICO

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO
CASE NO.





CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

WELI FIELI COUI	PANY J. V. BROWN D BROWN NTY CHAVES	STATE NO. 6	STATE	NEW ME	DATE FORI XICODRLO REM	E OFF 5-15-58 MATION QUEEN G. FLD. WATER BA ARKS SAMPLED MALYSIS	ENG ELE SE MUD COF	V. 3738 GL RES DIAMOND 2 1/8"					
	CORE REPORT												
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T-TA	n			based on obser	vations and material s	opplied by the client to whom, and for videomet of Core laboratories for Coll	hose exclusive and confidential						
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CORE LABORATORIES, INC. Petroleum Reservoir Engineering DALLAS, TEXAS May 19, 1958

P. O. BOX 4337 MIDLAND, TEXAS

J. W. Brown Nickson Hotel Roswell, New Mexico

Subject: Core Analysis

Brown State No. 6 Well

Brown Field

Chaves County, New Mexico

Gentlemen:

Diamond coring equipment and water base mud were used to core the interval, 728 to 792 feet, in the Brown State No. 6. An engineer of Core Laboratories, Inc. selected samples of recovered formation for analysis as directed by a representative of J. W. Brown. These samples were quick-frozen to preserve fluid content and were transported to the Hobbs laboratory. Complete analysis results are presented in this report.

Queen sand analyzed between the depths of 754 and 792 feet is characterized at most points by favorable residual fluid saturations and is interpreted to be capable of oil production. Those samples in this zone which exhibit zero residual oil saturation are considered of no productive significance and have been excluded from further consideration. The average permeability of the 28 productive feet considered in this interval is 13 millidarcys and the total observed natural productive capacity is 358 millidarcy-feet, indicating that formation treatment probably will be necessary in order to establish sustained satisfactory rates of flow. The average measured porosity is 13.5 per cent and the average empirically calculated connate water saturation is 35 per cent of pore space.

Recoverable oil estimates have been calculated for the Queen formation interval, 754 to 792 feet, using the observed core analysis data from the 28 productive feet in conjunction with estimated reservoir fluid characteristics considered applicable. These estimates are presented on page one

J. W. Brown
Brown State No. 6 Well

Page Two

of this report and are subject in all respects to the conditions set forth in the body of and in the footnotes to the summary page.

We sincerely appreciate this opportunity to be of service and trust that this report will assist the preliminary evaluation of the Queen formation analyzed from the Brown State No. 6.

Very truly yours,

Core Laboratories, Inc.

R. S. Bynum, Jr., District Manager

RSB:JDJ:dw 6 cc. - Addressee

7

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering
DALLAS, TEXAS

Page 1 of 1 File WP-3-1076 FC Well Brown State No. 6 Well

CORE SUMMARY AND CALCULATED RECOVERABLE OIL

FORMATION NAME AND DEPTH INTERVAL: Queen 754.0-792.0											
FEET OF CORE RECOVERED FROM ABOVE INTERVAL	38.0	AVERAGE TOTAL WATER BATURATION: PER GENT OF PORE SPACE		36.4							
FEET OF CORE	28.0	AVERAGE CONNATE WATER SATURATIONS PER CENT OF PORE SPACE	(c)	35							
AVERAGE PERMEABILITYI MILLIDARDYS	13	DIL GRAVITY: PAPI	(e)	36							
PRODUCTIVE CAPACITY! MILLIDARDY-FEET	358	ORIGINAL SOLUTION DAS-OIL RATIO: CUBIC FEET PER SARREL	(e)	50							
AVERAGE PORUBITY: PER CENT	13.5	ORIGINAL FORMATION VOLUME FACTOR: BAI BATURATED OIL PER BARREL BTOCK-TANK	RRELE DIL (e)	1.07							
AVERAGE RESIDUAL DIL SATURATION: PER CENT OF PORE SPACE	26.3	CALCULATED ORIGINAL STOCK-TANK OIL IN BARRELS PER ACRE-FOOT	PLACE	636							

Calculated maximum solution gas drive recovery is 105 barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is 361 barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. (Please refer to footnotes for further discussion of recovery estimates.)

FORMATION NAME AND DEPTH INTERVAL:

FEET OF CORE RECOVERED FROM	AVERAGE TOTAL WATER SATURATION:
ABOVE INTERVAL	PER CENT OF PORE SPACE
FEET OF CORE	AVERAGE CONNATE WATER BATURATION:
INCLUDED IN AVERAGES	PER CENT OF PORE SPACE
AVERAGE PERMEABILITY: MILLIDARCYB	OIL GRAVITY: *API
PRODUCTIVE CAPACITY:	GRIGINAL BOLUTION GAB-DIL RATIO:
MILLIDARCY-FEET	CUBIC FEET PER BARREL
AVERAGE POROBITY: PER CENT	ORIGINAL FORMATION VOLUME FACTOR: BARRELS BATURATED DIL PER BARREL STOCK-TANK DIL
AVERAGE RESIDUAL OIL SATURATION:	CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE;
PER CENT OF PORE SPACE	BARRELS PER ACRE-FOOT

Calculated maximum solution gas drive recovery is barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. (Please refer to footnotes for further discussion of recovery estimates.)

These recovery estimates represent theoretical maximum values for solution gas and water drive. They assume that production is started at original reservoir pressure; i.e., no account is taken of production to date or of prior drainage to other areas. The effects of factors tending to reduce actual ultimate recovery, such as economic limits on oil production rates, gas-oil ratios, or water-oil ratios, have not been taken into account. Neither have factors been considered which may result in actual recovery intermediate between solution gas and complete water drive recoveries, such as gas cap expansion, gravity drainage, or partial water drive. Detailed predictions of ultimate oil recovery to specific abandonment conditions may be made in an engineering study in which consideration is given to overall reservoir characteristics and economic factors.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc., and its officers and employees assume no responsibility and make no warranty or representation as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

⁽c) Calculated (e) Estimated (m) Measured (*) Refer to attached letter.

CORE ANALYSIS REPORT

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

EXHIBIT NO



CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

COMPANY	J. W. J	BROWN			FILE NO.	WP-3-1267
WELL	STATE I	-92 NO. 8	DATE	5-18-59	_ ENGRS	BOONE
FIELD	BROWN		FORMATION	PENROSE	ELEV	
		STATE NE				
		SEC 26-TIOS-R26E				

COMPLETION COREGRAPH

LIMESTONE

CONGLOMERATE



ANHYDRITE ++++++

F=Fractured L=Laminated FG; MG; CG = Type Grain Size S : Stylolitic V = Yuggy							, 3 /		PROBABLE PRODUCTION 0:0il W::Water G::Gas T::Transitional			TOTAL WATER O—O PERCENT PORE SPACE 75 50 25				
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CORE LABORATORIES. INC Petroleum Reservoir Engineering DALLAS. TEXAB May 21, 1959

REPLY 10
P. O. BOX 4337
MIDLAND, TEXAS

J. W. Brown Nickson Hotel Roswell, New Mexico

Subject: Core Analysis

State E-92 No. 8 Well

Brown Field

Chaves County, New Mexico Location: Sec. 26-T10S-R26E

Gentlemen:

Penrose formation analyzed from 720 to 759 feet is interpreted to be oil productive. The natural productive capacity is 245 millidarcy-feet and an economic completion will be entirely dependent upon a successful formation treatment,

The theoretical maximum solution gas drive recovery is calculated to be 66 barrels per acre-foot, assuming production is started at original reservoir pressure and is continued until such pressure declines to zero psig. The theoretical maximum water drive recovery is calculated to be 228 barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100 per cent areal and vertical coverage and continuation of production to 100 per cent water cut. The actual recovery will be less than these theoretical maximums due to the various economic limiting factors affecting ultimate recovery.

We sincerely appreciate this opportunity to be of service.

Very truly yours,

Core Laboratories, Inc.

R. S. Bynum, Jr., District Manager

RSB:MH:jw 10 cc. - Addressee

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering
DALLAS, TEXAS

Page 1 of 1 File WP-3-1267 Well State E-92 No. 8

CORE SUMMARY AND CALCULATED RECOVERABLE OIL

FORMATION NAME AND DEPTH INTER	val: Penro	se 720.0-759.0	
FEET OF CORE RECOVERED FROM ABOVE INTERVAL	39.0	AVERAGE TOTAL WATER SATURATION: PER CENT OF PORE SPACE	41.2
FEET OF CORE INGLUDED IN AVERAGES	35.0	AVERAGE CONNATE WATER SATURATION: (C)	41
AVERAGE PERMEABILITY: MILLIDARCYS	7.0	OIL GRAVITY: *API (e)	36
PRODUCTIVE CAPACITY: MILLIDARCY-FEET	245	ORIGINAL BOLUTION GAS-DIL RATIO: (e)	40
AVERAGE POROSITY: PER CENT	9.2	ORIGINAL FORMATION VOLUME FACTOR: BARRELS (e)	1.06
AVERAGE RESIDUAL OIL SATURATION: PER CENT OF PORE SPACE	23.8	CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE: BARRELS PER ACRE-FOOT	397

Calculated maximum solution gas drive recovery is 66 barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is 228 barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. (Please refer to footnotes for further discussion of recovery estimates.)

FORMATION NAME AND DEPTH INTERVAL:

FEET OF CORE RECOVERED FROM ABOVE INTERVAL	AVERAGE TOTAL WATER SATURATION: PER CENT OF PORE SPACE
FEET OF CORE INCLUDED IN AVERAGES	AVERAGE CONNATE WATER SATURATION: PER CENT OF PORE SPACE
AVERAGE PERMEABILITY: MILLIDARGYS	OIL GRAVITY: PAPI
PRODUCTIVE CAPACITY: MILLIDARGY-FEET	ORIGINAL SOLUTION GAS-OIL RATIO: CUBIC FEET PER BARREL
AVERAGE PORUSITY: PER CENT	ORIGINAL FORMATION VOLUME FACTOR: BARRELS SATURATED DIL PER BARREL BTOCK-TANK DIL
AVERAGE RESIDUAL OIL SATURATION: PER CENT OF PORE SPACE	CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE: BARRELS PER ACRE-FOOT

Calculated maximum solution gas drive recovery is barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. (Please refer to footnotes for further discussion of recovery estimates.)

These recovery estimates represent theoretical maximum values for solution gas and water drive. They assume that production is started at original reservoir pressure; i.e., no account is taken of production to date or of prior drainage to other areas. The effects of factors tending to reduce actual ultimate recovery, such as economic limits on oil production rates, gas-oil ratios, or water-oil ratios, have not been taken into account. Neither have factors been considered which may result in actual recovery intermediate between solution gas and complete water drive recoveries, such as gas cap expansion, gravity drainage, or partial water drive. Detailed predictions of ultimate oil recovery to specific abandonment conditions may be made in an engineering study in which consideration is given to overall reservoir characteristics and economic factors.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc., and its officers and employees assume no responsibility and make no warranty or representation as the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

⁽c) Calculated (e) Estimated (m) Measured (*) Refer to attached letter.

TREAT-RITE WATER LABORATORIES BOX 548 - MONAHANS, TEXAS

RESULT OF WATER ANALYSES

•	LABORATORY NO. M75885
TO: Mr. J. W. Brown	SAMPLE RECEIVED 7-30-58
Nickson Hotel, Roswell, New Mexico	2

OMPANY Brown & Coll	Brown Pool	25	<u>u−7~</u>	
IELD OR POOL	PLOMII LOOT		Chann-) The
ECTIONBLOCK	SURVEY	COUNTY	Unavez	STATE _NML
OURCE OF SAMPLE, AND DATE TAKEN:				
NO. Raw water - bailed fr	om well at appro	ximately 4	001.	
NO. 2				
NO. 3	·			· · · · · · · · · · · · · · · · · · ·
NO. 3				
NO. 4		·		
REMARKS:				
	CHEMICAL AND PHYSIC	AL OPODEDTIES		
				· · · · · · · · · · · · · · · · · · ·
	NO. I	NO. 2	NO. 3	NO. 4
PECIFIC GRAVITY AT 60°F.	1.1962			
H WHEN SAMPLED				
H WHEN RECEIVED	7.5		·	
OTAL ALKALINITY AS CACOS	98			
SUPERSATURATION AS CACOS	20	<u>:</u>		
UNDERSATURATION AS CACOS	——————————————————————————————————————		, -	
TOTAL HARDNESS AS CACOS	5,977			
CALCIUM AS CACOS	3,632			_
MAGNESIUM AS CACOS	2,345			
EDDIUM AND/OR POTABSIUM EULFATE AS SO4	98,753			
	4,401 153,176			
SILICA AS SIO2	2.4		+	
IRON ÁS FE	0.24		+	
MANGANESE AS MN	0.24			
BARIUM AS BA	none			
TURBIDITY ELECTRIC	7.7		 	
COLOR AS PT	0.75			
DISSOLVED SOLIDS AT 103 °C.	257,307			
TOTAL SOLIDS AT 103 °C.	257.315			
TEMPERATURE "F.	1 3 4 1			
CARBON DIOXIDE CALCULATED	6.0			
DISSOLVED OXYGEN WINKLER				
HYDROGEN SULPHIDE	none			
RESIDUAL CHLORINE	none			
RESISTIVITY OHM3 / CC	10.8			
Chlorides, as NaCl	252,349			
Total Solids, Calculated	258,473	·	. 1	
NOTE: All Results Reported as Parts Per M		Convert to Grains	Per Gallon	
	Letter of recom			
Additional Determinations and Remarks		SECTION CTOIL (TO NECTION 6	
The state of the s				· · · · · · · · · · · · · · · · · · ·
TAX IN THE STATE OF THE STATE O	7-1			
A A A A A A A A A A A A A A A A A A A	12.51			
AND TOTAL COMMISSION	1113	·		
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TREAT-RITE WATER LABORATORIES, INC.

WATER CONSULTANTS SINCE 1938
BACTERIAL AND CHEMICAL ANALYSIS
P. U. 80X 548 PHONE WI 3-4781

MONAHANS, TEXAS

August 2, 1958

Mr. J. W. Brown Brown & Coll Nickson Hotel Roswell, New Mexico

Subject: Recommendations relative to analysis #M75885 (7-30-58), State E-92 lease.

Dear Mr. Brown:

This laboratory is very familiar with waters of the type exemplified by this analysis. This water is very similar in characteristics to the Rustler water in the central basin platform area where we have several plants in operation using this water. This experience gives us a reasonably clear cut picture of what conditions are to be anticipated in the handling of this water.

The chemical characteristics of this water distinctly suggest that it comes from a limestone strata and will probably be a reasonably clear water as produced. These physical conditions of the natural water should be confirmed, but it is also doubtful that this well will produce any sand.

The following are the items recommended to take into consideration in planning a system to prepare this water for injection:

- 1. The water should be carried in a closed system. This includes a gas blanket on the water well and any tanks that may be found necessary to include.
- 2, It is strongly recommended that all lines, water well tubing, injection well casing (or tubing), and containers be effectively lined. The most difficulty with corrosion will probably occur at collars, nipples, and els in the form of disintegration of threads. These conditions result from electrolytic activity which is anticipated to be the major corrosion problem. This laboratory is not thoroughly familiar with how baked-on plastic linings resist this electrolysis at collars, but an effective connection with cement lining has proven to be reasonably good. I don't have the full figures on the costs of cement lined pipe, but they are comparable in proportion to that of plastic lined pipe. Some figures to go by in this relation are as follows:

TREAT-RITE WATER LABORATORIES, INC.

WATER CONSULTANTS SINCE 1938
BACTERIAL AND CHEMICAL ANALYSIS
P. D. BÖX 548
PHONE WI 3-4781

MONAHANS, TEXAS

Brown & Coll - Page 2

Plastic lined	•	Cement lined					
5½ ^m casing l ^m . line: pipe	1.00/ft. .30/ft.	51 casing	•45/ft				
land line pipe	.34/ft.	•					
2 ^m line pipe	.40/ft.	~					
3 th line pipe	.63/ft.						

These are estimated figures from the price lists I have available and not necessarily exact. I believe the cost for cleaning second hand pipe for applications is about .05/ft. It is suggested that plastic tubing be used in the water well, cement lining in the injection lines, and I am somewhat uncertain what will be the best application for the casing. You could probably confer with representatives of these two types of applications and come up with the best decision.

- 3. It is strongly recommended that confirmation of conditions of this water be made when the well is placed on pump before final plans are laid out for the treating system. It is possible that we may be able to handle this water through a very simple water system and even avoid the use of a plant filter. However, in the event this is deemed feasible, it would be recommended that wellhead filters be placed at the wellhead of the injection well for protection. The turbidity of the attached analysis would not indicate that we could avoid the use of a plant filter, but it is considered very likely that the natural water does not carry anything like this much turbidity.
- 4. In respect to chemical treatment, it is very doubtful that any whatsoever will be needed if the above recommendations are followed. In the event lined pipe is not used throughout the system, it will be necessary to use corrosion inhibition of a type to be decided when the plant is put into operation. It is possible that occasional slug for the control of bacteria may be necessary, but this will be a relatively insignificant application in respect to the economics of the project.

The above is a general run-down on the suggested general scheme of handling this water. The necessity of a sand trap filter and clear water storage tank at the treating plant will depend entirely on the results we obtain on a pumped water sample. In respect to the possibility of using this water, this laboratory can conceive of no characteristics that would prevent its use as a satisfactory injection water.

Please feel free to contact me for any further details, supplementary reports, or discussion concerning this project.

Yours very truly,

WCM/sb

OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

CASE NO. /699 HEARING DATE 6-24-59
My recommendations for an order in the above numbered case(s) are as follows:
1. approve J. W. Browns application for a pillot water flood in the Brown June Port.
2. The pilot and should consist of to 105-26E
See. 26, 5 W/4 NE/4, 5 E/4 NW/4.
3. The pilot will kane one producing well the Brown-Itale # 1, 1880/w, 1980/N Ser. 26-105-265.
4. Dhe injection wells are 1
Brown - State # 2, 23/0/N, 23/0/E " " "
" # 8, 1650/N, 2310/N " " " " " " " " " " " " " " " " " " "
5. Usual 120 flood order othering.

Staff Member

22				23		24
M. G. Peters (Kelly)	M. G. Peters (Gulf)		M. G. Peters (Kelly)			
• ¹⁻⁸		♦ ′ √+a	 te			
27	J. W. 8	erown •⁴	M.G.Peters	M.G. Peters ²⁶ (Gulf)	Gulf	25
		⊚³ ••°	.lo	• 2	De Kalb •'	
	Gulf	State		Steinberger \$ (Brown)		
				W Brown		

Proposed Pilot Flood

- O Proposed Injection Well
- · Producing Well

J. W. Brown BROWN POOL

Section 26 T-10-S R-26-E Chaves Co. New Mexico

Scale 1"-1000'

BEFORE	EXAM	NER	UTZ
OIL CONSE	RVATION	COMM	USSION
´	EXHIBIT N	0	
CASE NO	_/6	44	

BEFORE THE OIL CONSERVATION COMMISSION EXAMINER HEARING Santa Fe, New Mexico June 24, 1959

IN THE MATTER OF: Case 1699

TRANSCRIPT OF HEARING

DEARNLEY - MEIER & ASSOCIATES INCORPORATED GENERAL LAW REPORTERS ALBUQUERQUE, NEW MEXICO 3-6691 5-9546

ALBUQUERQUE, NEW

BEFORE THE OIL CONSERVATION COMMISSION EXAMINER HEARING Santa Fe, New Mexico June 24, 1959

IN THE MATTER OF:

Application of J. W. Brown for an order authorizing a pilot water flood project. Applicant, in the above-styled cause seeks an order authorizing it to institute a pilot : Case 1699 water flood project in the Brown Pool, Chaves: County, New Mexico, by the injection of water: into the Queen formation through four wells located in the SE/4 NW/4 of Section 26, Township 10 South, Range 26 East, Chaves County, New Mexico.

BEFORE:

Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The next case on the docket will be 1699.

MR. PAYNE: Case 1699: Application of J. W. Brown for an order authorizing a pilot water flood project.

MR. CAMPBELL: Jack M. Campbell, Campbell and Russell, Roswell, New Mexico, appearing on behalf of the Applicant. We will have one witness. Mr. Nichols, will you come up, please? (Witness sworn.)

MR. UTZ: Are there other appearances to be made in this case? If not, you may proceed.

N. B. NICHOLS

called as a witness, having been first duly sworn on oath, testified as follows:



DIRECT EXAMINATION

BY MR. CAMPBELL:

- Q Will you state your name, please?
- N. B. Nichols.
- Where do you live, Mr. Nichols? Q
- Roswell, New Mexico.
- Q What is your profession?
- Consulting petroleum geologist.
- Have you ever testified before the New Mexico Oil Conservation Commission or any of its Examiners?
 - No, sir, I haven't.
- Will you please give the Examiner a brief resume of your education and professional background?
- I was graduated from Texas Technological College in Lubbock, 1950, with a B. S. degree in Petroleum Geology; was employed by Standard Oil Company of Texas in 1951 and was in their employment until 1957 in the capacity of development geologist and district development geologist in the Production Department. From 1957 to 1959 I was employed by Wartex Exploration Company interested primarily in primary production.
- Have you had any experience in connection with secondary recovery?
- Yes, sir, during my employment with Standard Oil Company of Texas, I worked directly with the water flood projects in Ward, Winkler, and Loving County, Texas, as district geologist;



and we made the first evaluation of an area which we anticipated or thought might possibly respond to repressuring by water. It was up to our department to instigate these, and very much of the primary work done on those wells was done by my department.

MR. CAMPBELL: Are the witness's qualifications acceptable?

MR. UTZ: Yes, they are.

Q (By Mr. Campbell) Mr. Nichols, have you been employed by J. W. Brown as a consultant in connection with a possible pilot water flood project in Section 26, Township 10 South, Range 26 East, Chaves County, New Mexico?

A Yes, sir, I have.

Q In connection with that, have you made a study of the presently existing wells, the cumulative production, and so on, in connection with the area?

A Yes, sir, I have.

(Applicant's Exhibits 1 through 4 marked for identification.)

Q I will refer you, Mr. Nichols, to what has been identified as Applicant's No. 1 and ask you to state what that is, please.

A This is a plat of the J. W. Brown State Lease located Section 26, Township 10 South, Range 26 East, Chaves County. It shows the development to date to the Brown Queen Pool pay. There are now five producing wells on the lease, and there have been two



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additional wells. This plat also shows the proposed pilot flood, which the proposed injection wells are circled with larger circles and are connected by dashed line. You will note that Well No. 6 and Well No. 8 are two plain circles. It was meant to be that way, although No. 6 is almost filled in. This is to show that these wells have never been completed as a producer or injection well. These wells were drilled primarily for reservoir data and we drilled and cored those wells, cemented the pipe through the pay section, and they are standing. They have never produced and were drilled primarily for reservoir data and to fulfill the low five-spot pattern we have.

You will note that Wells No. 2 and 3 are now producing wells which are proposed to be converted to injection wells. Our Well No. 1 will be the central producer in this proposed pilot flood.

What is the depth of the oil producing formation?

From 720 to 790 feet, depending upon the structure location of the well.

Will you give the Examiner a brief history of the drilling of the wells in this area and a little bit about the cumulative oil production to date from those wells?

The first indication of Queen production here was in 1941 in the J. W. Brown No. 1 State. Although this well was not completed, several attempts were made by shooting, and was left temporarily abandoned until 1956. However, the discovery well for



the Pool will be No. 2, which was drilled in 1949 but again was temporarily abandoned and re-worked in 1955. After re-working Well No. 2 and completing it from the Queen pay, Well No. 1 was re-entered and Wells 3, 4, and 5 were drilled and completed from the pay. These wells 3, 4, and 5 were drilled in 1957.

What has been the production history?

The production has been nil on all these wells except immediately after treatment; all these wells responded not at all to nitroglycerin shots, but to a sand fracture treatment the wells responded rapidly and satisfactorily; but had a very fast decline from 20 and 30 barrels down to 1 and 2 barrels inside of eight months.

All the wells on the J. W. Brown State Lease and in the proposed pilot area, what is their present production?

Well No. 1 is presently producing about two barrels a day, Well No. 3 about 3 barrels per day, Well No. 2 about 1 barrel per day.

Then it is your opinion, I assume, that this is definitely a marginal situation?

Certainly is, primarily.

What has been the cumulative production of oil from all of these wells?

Cumulative production to January the 1st, 1959, from five wells was 6,650 barrels.

I refer you to what has been identified as Applicant's



Exhibit No. 2 and ask you to state what that is, please.

A This is the Brown No. 6 State, which was drilled in the summer of 1958 almost solely for reservoir data. The wells drilled up to this time, we had no cores or no core analysis and some of these were drilled with cable tools and very little reservoir data. In June of 1958, we went in and drilled this well solely for this reservoir data, and run pipe on the well and it has been standing since that time. Of course, the reserves which are shown on this core graph and on the tabulation which accompanies this report indicate that we aren't getting the oil that is in this reservoir.

Q I refer you to what has been identified as Applicant's Exhibit 3 and ask you to state what that is, please.

A This is a core graph on the J. W. Brown State No. 8, drilled in May of 1959. Again this was a well drilled for additional reservoir data and to complete the five-spot pattern which we have circled here on the plat Exhibit 1. Again the core graph shows there are reserves here which we haven't been able to get out. These wells were drilled near two producing wells, which should have drained and should be comparable to these wells, and they haven't produced primarily any appreciable oil, and we have drilled and cored on each side of these wells, and we feel very confident the oil is in the well that we have produced for drilled years but not been able to get any primary reserves out of.

Q Do the studies of the Core Laboratories indicate that



there is a possibility that by water injection you may be able to recover a substantial amount of oil reserves that would not otherwise be recoverable?

- A They do.
- Q Have you made, in connection with those core reports, any independent studies to indicate what potentially may ultimately be recoverable from this area?

A I have. I have made a thorough study of this area and it is my opinion that we can recover approximately a hundred fifty barrels per acre foot under the acreage which we have developed to date by secondary recovery. This is considerably less than is given by core analysis, but there are some assumptions and limitations in this. We do have a fairly low permeable zone, our porosities are low, but in each case they are sufficient to inject water into, so we have in all probability been very conservative on this recovery per acre foot by water flood. We have brought it down considerably from the Core Laboratories report, but we do think there is sufficiently more than we have recovered by primary. We have to date, according to my best calculations, recovered two barrels per acre foot of primary.

- Q Is this an operation that is sound in the economic sense?
 - A Two barrels per acre foot, I don't think so.
- Q Do you believe that unless some attempt is made by secondary recovery methods to obtain this oil that it would be



necessary to abandon the area insofar as oil production is concerned?

- A It almost surely would be.
- Q Mr. Nichols, where do you intend to get the water for this program in the event it is approved?
- A We are now testing a zone at 400 feet on a well located in Section 23, designated the M. G. Peters No. 1 Gulf State, which is shown as a dry hole on Exhibit 1.
 - Q Have you obtained some water from that?
 - A We have.
 - Q Have you had it tested?
 - A We have.
- Q I refer you to what has been identified as Applicant's Exhibit No. 4 and ask you to state what that is, please.
- A This is water analysis made of the water which we recovered from the M. G. Peters No. 1 Gulf State during the time it was being drilled in 1958, recovered by baling at a depth of 400 feet. This was sent to the Treat-Right Laboratory in Monahans Texas, for complete analyses which are attached, which shows this to be a salt water. We have attached to this report recommendations from the Treat-Right Company of the nature of the water and what would be necessary to use this water as injection into the Queen Reservoir.
- Q You would pipe that water from that M. G. Peters

 Gulf State No. 1 Well down to the injection wells in J. W. Brown



3

State Lease, is that correct?

- A Right.
- Q Do you have any indication on that as to the quantity of water you may have available?
- A Our latest tests indicate 240 barrels per day, which needless to say is insufficient, which would be enough to start our pilot while we search for additional water.
- Q Would you contemplate drilling water wells to that same depth to the one you are going to initially?
- A Yes, we do contemplate additional drilling to that same formation.
- Q You believe you have adequate water source to commence the project?
 - A Yes, sir.
- Q Do you believe that if this project is undertaken it will promote conservation in that you will possibly obtain a greater ultimate recovery of oil than would otherwise be obtained?
 - A Yes, sir.
- Q Was Exhibit 1 prepared by you or under your supervision?
 - A Yes, sir.
- Q Do you have anything further you would like to add in connection with this matter?
- A The only thing, it's all been brought out here, but I would say that we do have some more testing on the water. We



are pumping the well now to get a good clean sample, and in all probability we will have that water ready for injection in the near future. As outlined in the recommendations on the water, we are planning to inject this water through cement-lined tubing on our casing below the packer. The condition of the wells, all have good pipe in them but they are not protected for the salt water which we are anticipating using, so our injection wells will carry cement-lined tubing set on a production packer and we'll be injecting that below the reservoir.

MR. CAMPBELL: I would like to offer Applicant's Exhibits 1, 2, 3, and 4 in evidence.

MR. UTZ: Without objection Exhibits 1 through 4 will be accepted in evidence.

MR.-CAMPBELL: That's all the questions I have at this time.

MR. UTZ: Are there questions of the witness?

MR. PAYNE: Yes, sir.

MR. UTZ: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Could you give me the locations of the No. 1, 2, 3, 6 and 8 Wells?

Well No. 1 is 1980 feet from the west line, 1980 feet from the north line, Section 26, Township 10 South, Range 26 East. What was the next well?



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Q The No. 2.

A The No. 2 Well is 2310 feet from the north line, 2310 feet from the east line of Section 26.

Q And the No. 3?

A The No. 3 is 1650 feet from the north and 1650 feet from the west of Section 26.

Q And the No. 6 Well?

A 2310 feet from the west, 1650 feet from the north, Section 26.

Q And the No. 8?

A 1650 feet from the west and 2310 feet from the north, Section 26.

Q Now, Mr. Nichols, do you propose to expand this pilot flood, or is this it, so to speak?

A The plan will most surely be expanded, if successful.

Q Do you propose to follow the recommendations made by the Treat-Right Water Laboratories?

A We are to the extent that, as stated in this letter, they would like another sample after we have produced the wellsome. We do plan on following their recommendations, and particularly after we get them the next sample which we think will be less contaminated than this. As stated, this was a sample taken with a baler while we were drilling the well.

Q Do you think it might be a good idea -- you say you are going to use tubing in the injection wells to run sweet oil



in the annular space. Do you think that would be a good protective measure?

It might possibly be.

MR. PAYNE: That's all, thank you.

BY MR. UTZ:

- What is your total injection zone that you propose Q to inject water?
 - Approximately thirty feet. Α
- Could you spot that on the core analysis on the No. 6 and 8 Wells?
 - That would be from 720 to 758 on No. 8 Well.
 - 720 to 758? Q
 - And from 754 to 791 in the No. 6 Well.
 - To 790?
 - Right -- 91, beg your pardon.
 - The first one was 723 to 58?
 - To 59.
- How about the No. 2 and 3, would that be about the same?

Right. We, of course, anticipate logging these wells and getting a little better information on them; the older wells which we have no information to speak of at present. We do know where the casing is and where the total depth of those wells, and that's about the size of it, and how much oil was produced from them.



BY MR. PAYNE:

You don't feel that the injection interval would be in excess of 700 to 800 feet, do you?

No -- beg your pardon?

The total injection interval, not looking at the individual wells but any of them, would the injection interval exceed the distance from 700 to 800 feet?

No, sir, it wouldn't. On the north edge, if the plan, the flood is expanded, the pay section ranges from around 700 to 750; on the south we will never get below 800 feet, I don't think, on our total depth of our pay there. I think the water will be restricted to the interval of 700 to 800 feet over the entire lease.

MR. PAYNE: Thank you.

BY MR. UTZ:

Mr. Nichols, referring to your core analysis on the Q No. 6 Well, it looks as though you had very good permeability in the lower section. Why aren't you going to flood that?

> Α Well No. 6?

Q Yes, sir.

What interval are you speaking of?

In the vicinity of 786 to 789.

I believe I stated that we would flood that from 750 to 791 -- 754, which would include that whole interval, would it not?



I understood that to be the No. 8.

You will note where the permeability is the greatest there, our porosity drops tremendously, which is quite a phenomena in itself.

Is the interval perforated in the No. 1 in the same interval as No. 6 and No. 8?

The interval opened in No. 1 is from 758 to 785, based on the information we have gotten from these two cores we anticipate having to perforate a little of the section to open it all up. We think we have ten feet of our pay section cased off there.

MR. UTZ: Any other questions of the witness? If there are none, the witness may be excused.

(Witness excused.)

MR. UTZ: Any other statements to be made in this case? The case will be taken under advisement.



DEARNLEY-MEIER REPORTING SERVICE, Inc.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill, and ability.

DATED this 2nd day of July, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

NOTARY PUBLIC

My Commission Expires:

New Mexico Oil Conservation Commission

JQUERQUE, NEW MEXICO

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO

I, Academy Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

of Bernalillo, State of New Mexico.

Asa) Dearly PUBLIC

My Commission Expires:

June 19, 1963.

DOCKET: EXAMINER HEARING JUNE 24, 1959

OIL CONSERVATION COMMISSION - 1120 CERRILLOS ROAD, HIGHWAY DEPARTMENT AUDITORIUM, 8 a.m., SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner, or A. L. Porter, Jr., Secretary-Director.

CONTINUED CASE

CASE 1666: Application of Sunray Mid-Continent Oil Company for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its Central Bisti-Lower Gallup Sand Unit embracing approximately 7389 acres of federal, state, and allotted Indian lands in the Bisti-Lower Gallup Oil Pool, San Juan County, New Mexico.

NEW CASES

- CASE 1692: Application of Continental Oil Company for the establishment of a non-standard gas proration unit in the Tubb Gas Pool. Applicant, in the above-styled cause, seeks the establishment of a 160-acre non-standard gas proration unit in the Tubb Gas Pool consisting of lot 15, the N/2 SE/4 and the SE/4 SE/4 of Section 3, Township 21 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to applicant's Hawk B-3 Well No. 2-T, located 1650 feet from the South and East lines of said Section 3.
- CASE 1693: Application of Amerada Petroleum Corporation for three non-standard oil proration units. Applicant, in the above-styled cause, seeks an order establishing three 43.7 acre non-standard oil proration units for Mississippian production in the SE/4 of Section 11, Township 13 South, Range 38 East, Lea County, New Mexico. Applicant further seeks approval of one unorthodox oil well location.
- CASE 1694: Application of Texas Crude Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Big Eddy Unit 1-30 Well, located in the SE/4 SE/4 of Section 30, Township 20 South, Range 31 East, Eddy County, New Mexico, in such a manner as to produce oil from an undesignated Tansil pool and to produce oil from an undesignated Delaware pool through parallel strings of tubing.
- CASE 1695: Application of Texaco, Inc. for a triple completion, for permission to commingle the production from three separate pools, and for the establishment of two non-standard gas proration units, Applicant, in the above-styled cause, seeks an order authorizing it to triple complete its A. H. Blinebry NCT-4 Well No. 1, located in the SE/4 SE/4 of Section 31, Township 22 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit production from the Blinebry formation, production of gas from the Tubb Gas Pool, and production of oil from the Drinkard Pool through tubing, the annulus via cross-over, and tubing respectively. Applicant further seeks the establishment of a 160-acre non-standard gas proration unit in both the Tubb Gas Pool and Blinebry Gas Pool each consisting of the S/2 S/2 of said Section 31. Applicant further seeks permission to commingle the liquid production from the Blinebry, Tubb, and Drinkard formations underlying said acreage.

- CASE 1696: Application of Caulkins Oil Company for a triple completion. Applicant, in the above-styled cause, seeks an order authorizing it to triple complete its Breech "F" Well No. PMD-8, located in the NE/4 NE/4 of Section 34, Township 27 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to produce gas form the South Blanco-Pictured Cliffs Pool, gas from the Mesaverde formation, and gas from the Dakota formation through parallel strings of tubing.
- CASE 1697: Application of Universal Oil Corporation for the creation of a new oil pool for Gallup production, and for an exception to Rules 104 and 107 for wells in said pool. Applicant, in the above-styled cause, seeks an order creating a new pool for Gallup production to be designated the Shiprock-Gallup Oil Pool and located in Sections 16 and 17, Township 29 North, Range 18 West, San Juan County, New Mexico. Applicant further seeks the promulgation of pool rules to permit wells in said pool to be located closer than 660 feet to the nearest producing well in exception to Rule 104, and to permit certain exceptions to the casing requirements of Rule 107 of the Commission Rules and Regulations.
- CASE 1698: Application of Shell Oil Company for an exception to Rule 502 I (a). Applicant, in the above-styled cause, seeks an order which would exempt all wells in the Carson Unit Area and all other Shell wells in Township 25 North, Ranges 11 and 12 West, Bisti-lower Gallup Oil Pool, San Juan County, New Mexico, from the daily tolerance provisions of Rule 502 I (a) of the Commission Rules and Regulations.
- CASE 1195: Application of Graridge Corporation for capacity allowables for certain wells in a water flood project. Applicant, in the above-styled cause, seeks an order authorizing capacity allowables for three wells in the project area of its water flood in the Caprock-Queen Pool in Lea and Chaves Counties, New Mexico.
- CASE 1196: Application of Graridge Corporation for an order amending Order No. R-966. Applicant, in the above-styled cause, seeks an order amending Order No. R-966 to establish administrative procedures for development of its Artesia Water Flood Projects No. 2 and 3, Artesia Pool, Eddy County, New Mexico, and for approval of unorthodox locations for 27 wells in said projects, for authority to convert six wells in said projects to water injection, and for capacity allowables for five wells in said projects.
- CASE 1185: Application of Graridge Corporation for an order amending Order No. R-952. Applicant, in the above-styled cause, seeks an order amending Order No. R-952 to establish administrative procedures for development of its Artesia Water Flood Project No. 1, Artesia Pool, Eddy County, New Mexico, and for approval of unorthodox locations for fifteen wells in said project, and for capacity allowables for five wells in said project.
- CASE 1699: Application of J. W. Brown for an order authorizing a pilot water flood project. Applicant, in the above-styled cause seeks an order authorizing it to institute a pilot water flood project in the Brown Pool, Chaves County New Mexico, by the injection of water into the Queen formation through four wells located in the SE/4 NW/4 of Section 26, Township 10 South, Range 26 East, Chaves County, New Mexico.

No. 23-59

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- CASE 1337: Application of Gulf Oil Corporation for an order amending Order No. R-1093-A. Applicant, in the above-styled cause, seeks an order amending Order No. R-1093-A to permit the commingling of Paddock production with the commingled Blinebry, Drinkard, and Langlie-Mattix production from its Learcy McBuffington lease consisting of the S/2 of Section 13, Township 25 South, Range 37 East, Justis Field, Lea County, New Mexico.
- CASE 1700: Application of Gulf Oil Corporation for permission to commingle the production from two separate leases: Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the East Millman Queen-Grayburg Pool from two separate non-contiguous leases in Township 19 South, Range 28 East, Eddy County, New Mexico.
- Application of Tidewater Oil Company to commingle the production from several separate oil pools from two separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the intermediate grade crudes produced from its Coates "D" Lease comprising the SE/4 SW/4 of Section 24, Township 25 South, Range 37 East, Justis Field, Lea County, New Mexico, with the commingled production of all intermediate grade crudes produced from its Coates "C" Lease comprising the E/2, SE/4 NW/4, and the NE/4 SW/4 of said Section 24 and to pass such commingled production through its automatic custody transfer system.
- CASE 1704: Application of Cities Service Oil Company for capacity allowables for nine wells in a water flood project and for establishment of administrative procedure for expansion of said project. Applicant, in the above-styled cause, seeks an order authorizing capacity allowable for nine wells in the project area of its water flood project in the Caprock-Queen Pool, Chaves County, New Mexico. Said capacity allowables would be in exception to Order R-1128-A. Applicant further seeks establishment of an administrative procedure to expand said water flood project.
- CASE 1705: Application of Neville G. Penrose, Inc., for a capacity allowable for one well. Applicant, in the above-styled cause, seeks an order authorizing a capacity allowable for its Alston Well No. 2, located in the NW/4 NW/4 of Section 11, Township 14 South, Range 31 East, Caprock Queen Pool, Chaves County, New Mexico, due to a response from the adjoining Cities Service Oil Company water flood project. Said capacity allowable would be in exception to Order R-1128-A.

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NEW MEXICO OIL CONSERVATION COMMISSION

Docket No. 23-59-a

In addition to the cases listed on Docket No. 23-59, the following cases will also be heard June 24, 1959, before Elvis A. Utz, Examiner, or A. L. Porter, Jr., Secretary-Director:

CASE 1701:

Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Learcy McBuffington Well No. 5, located in the NW/4 SE/4, Section 13, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from an undesignated Paddock Pool and oil from the Justis-Ellenburger Pool through parallel strings of tubing.

CASE 1702:

Application of Humble Oil & Refining Company for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its South Four Lakes Unit Well No. 6, located in the SW/4 SE/4, Section 2, Township 12 South, Range 34 East, Lea County, New Mexico, in such a manner as to produce oil from a Four Lakes-Pennsylvanian Pool extension and gas from a Four Lakes-Devonian Gas Pool extension through parallel strings of tubing.

CASE 1706:

Application of Sunray Mid-Continent Oil Company for an order amending Order No. R-1414. Applicant, in the above-styled cause, seeks an order amending Order No. R-1414 to include the following additional acreage: NW/4 NW/4 of Section 6, Township 25 North, Range 12 West, and the SW/4 SW/4 of Section 31, Township 26 North, Range 12 West, San Juan County, New Mexico.

Place of hearing will be Highway Department Auditorium, 1120 Cerrillos Road, Santa Fe, New Mexico.

Time of hearing will be 8:00 o'clock a.m.

LAW OFFICES OF

CAMPBELL & RUSSELL J. P. WHITE BUILDING

ROSWELL, NEW MEXICO
1 June 1959

JACK M. CAMPBELL JOHN F. RUSSELL

TELEPHONES MAIN 2-4641 MAIN 2-4642

Re: In the Matter of the Application of J. W. Brown

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

Dear Mr. Porter;

Enclosed please find application which we request to have set down for examiner's hearing on June 24th.

Very truly yours,

CAMPBELL & RUSSELL

Jack M. Campbell

JMC:bb Enclosures

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BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF J. W. BROWN FOR A PILOT WATER FLOOD PROJECT ON HIS STATE LEASE E-92 IN SECTION 26, TOWN-SHIP 10 SOUTH, RANGE 26 EAST, IN THE BROWN FIELD, CHAVES COUNTY, NEW MEXICO.

APPLICATION

Comes now applicant, J. W. Brown, by his attorneys, Campbell & Russell, and states:

- 1. He is the owner of State Lease No. E-92 situated in Section 26, Township 10 South, Range 26 East, N.M.P.M., Chaves County, New Mexico
- 2. He has drilled and is the operator of four wells situated on said lease, including his State E-92 Well No. 1 situated in the SEZNWZ of said Section 26.
- 3. All of the wells drilled by applicant are marginal wells and unless production is stimulated, said wells will be abandoned for economic reasons and waste will result.
- 4. Applicant has drilled four proposed in-put wells in the SELNW of Section 26, into which applicant desires to inject water for the purpose of stimulating recovery of oil.

WHEREFORE, applicant requests the Commission to set this application down for hearing, after notice, before an examiner for the Commission.

Respectfully submitted,

CAMPBELL & RUSSELL

Jack M. Campbell

P. O. Box 766 Roswell, New Mexico

Attorneys for Applicant