

CASE 4097: Application of WESTERN
STATES PROD. CO. FOR A DUAL COM-
PLETION & SALT WATER DISPOSAL.

Case Number.

4097

Application

Transcripts.

Small Exhibits

ETC.

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS-BUILDING, P. O. BOX 1092, ALBUQUERQUE, NEW MEXICO 87102 • PHONE 243-6691

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

April 9, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Western States
Producing Company for a dual
completion and salt water
disposal, Lea County, New
Mexico.

Case No. 4097

BEFORE: DANIEL S. NUTTER, Examiner

TRANSCRIPT OF HEARING

MR. HATCH: Case 4097, application of Western States Producing Company for a dual completion and salt water disposal, Lea County, New Mexico.

MR. EATON: Paul Eaton of the firm of Hinkle, Bondurant, and Christy, Roswell, on behalf of the Applicant. We have one witness.

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

WILLIAM E. HENDON, JR.

called as a witness by the Applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. EATON:

Q State your name, address, occupation, and employer?

A I am William E. Hendon, Jr., from Midland, Texas, and employed by Western States Producing Company as Production Engineer.

Q Are you familiar with the application of Western States Producing Company in this case?

A Yes, I am.

Q Have you previously testified before the

Commission?

A No, I have not.

Q Will you please give a resume of your education and experience in the oil business?

A I was graduated from Texas Technical College in 1963 with a B. S. degree in Geology; employed in 1963 by the Federal Power Commission as a Reservoir Geologist, with the primary duties of determination of gas reserves and deliverability.

In 1965, I was employed by Barr and Jackson as a stimulation and completion engineer, designing remedial work treatments. In 1966, I was employed by the Union Oil Company of California as a Drilling and Reservoir Engineer, primary responsibilities of designing and drilling oil and gas wells, as well as remedial work on oil and gas wells. In March of 1969, I was employed by Western States Producing Company as a Production Engineer.

Q Mr. Hendon, what does Western States seek by its application?

A We seek permission to dispose of produced formation water into the San Andres, Glorieta, Tubb, and

Abo formations.

Q I hand you what has been marked as Exhibit 1.

A This is a plat of the area, showing the proposed injection well in the northwest quarter section of Section 9, Township 12, South, Range 34 East, showing the location of the wells in the area, as well as lease ownerships.

Q Now, the map is colored green. What does that green color represent?

A That is Western States acreage.

Q What is the designation of the subject well?

A This is Western States Producing Company Smelting State No. 1.

Q Staying with Exhibit No. 1, are there any other producing wells within a radius of, say, 2 miles of the subject well?

A Yes, there are. Pan-American has one producing well in the southwest quarter of Section 5.

Q Do you know what formation that is from?

A That is producing from the Pennsylvanian.

Q Are there any other producing wells within

the 2 miles radius?

A Not within a 2 mile radius.

Q Would you please give the history of this proposed injection well?

A This well was drilled originally by Sunray-Midcontinent Oil Company as the East Bagley Unit No. 1, drilled and completed in 1955, and produced for an unknown length of time. It was plugged and abandoned and in July of 1968, Western States reentered the old hole, and ran 5 1/2 inch casing and recompleted in the Bough C zone, where it's currently producing.

Q I hand you what has been marked as Exhibit No. 2, and ask you to state what this represents.

Mr. Examiner, Exhibit No. 2 is the electric log. We only have one copy here. It is possible that copies were furnished the Commission with the application.

MR. NUTTER: No, I guess we have a reproduced portion of it. Maybe it is all of it cut into pieces. I think this is it.

THE WITNESS: I think it is.

MR. EATON: If the Commission desires more copies of this particular log, we will obtain them.

MR. NUTTER: I think this was attached to the application as a log of the Sunray-Midcontinent Oil Company East Bagley Unit No. 1 in 12-9-34. Evidently the entire log is here reproduced page by page. This will be sufficient.

Q (By Mr. Eaton) Will you state what Exhibit No. 2 represents?

A This is an electric log run at the time the well was drilled, showing the zones penetrated marked on the log, showing casing point, showing perforated interval, as well as top of the cement behind the 5 1/2 inch casing.

Q Now, referring you to what has been marked as Exhibit No. 3, would you state what that reflects?

A Exhibit No. 3 is a schematic diagram of our well, showing the size of the holes drilled, casing and cementing programs. Starting at the top, 17 1/2 inch hole was drilled, and 13 3/8 inch casing set at a depth of 338 feet, cemented with 325 sacks of cement, and cement did circulate to the surface.

9 5/8 inch casing run to 4,199 feet, and 12 1/4 inch hole. It was cemented with 1,450 sacks of cement, and it did circulate to the surface.

5 1/2 inch hole was drilled to 13,150. 5 1/2 inch casing was set at 10,366 feet, with 400 sacks of cement in 7 7/8 inch hole. Top of the cement estimated

to be 8,931 feet.

The well was perforated from 10,295 to 10,318. These perforations were plugged off with an unknown amount of cement.

In 1958, the well was perforated from 9,994 to 10,007 feet. These perforations were also plugged off with an unknown amount of cement. At that time, the former operator took the casing off and abandoned and plugged the well, and recovered the casing.

Western States Producing reentered this hole in July of 1968, drilled the plug out of the open hole, and dressed the top of the 5 1/2 inch casing stub and landed 5 1/2 inch casing with a Bowen lead seal casing bowl at 8,546. At that time, the casing was tested to 2,500 pounds pressure and it did hold okay.

We are proposing to inject water between the 9 5/8 and 9 1/2 inch into the formations between 4,199 feet which is the bottom of the 9 5/8 casing and the top of cement, 8,931.

Q Exhibits 3 reflects the perforated 5 1/2 inch casing between the depths of 9,998 feet and 10,010 feet, is that correct?

A This is correct. Those perforations are now open to the 5 1/2 inch casing, and the well will be produced from this zone.

Q Is that zone the Pennsylvanian?

A That is the Pennsylvanian and Bough C.

Q Now, it appears that from this Exhibit, that water will be injected down the annulus between the 5 1/2 inch casing and the 9 5/8 inch casing, is that correct?

A That is correct.

Q Will this water be injected by gravity or pressure?

A By pressure. It is assumed that initially the water will be on a vacuum; probably be pressure maintenance in the near future.

Q In your opinion, will the formations in the injection interval take the water?

A Yes, it will.

Q At what pressure do you propose to inject the water?

A We are proposing a pressure of less than 400 pounds.

MR. NUTTER: That is at the surface?

THE WITNESS: At the surface, yes.

Q Is this injection zone productive or capable of producing oil or gas in the vicinity of this well?

A Not in the vicinity of this well. There have been several wells drilled through this zone. None have been productive.

Q What kind of fluid will be injected, and what is the source of that fluid?

A It will be formation water from the Bough C. as produced from this well, and no other wells.

Q Referring your attention to what has been marked as Exhibit 4, will you please state what that Exhibit represents?

A This is a water analysis of the produced formation water from a depth of 10,000 feet, showing the chemical composition of the water. You can see by the Chloride count there the water is not suitable for livestock use or any other consumption.

Q What volume of salt water do you anticipate will be injected?

A Between 300 and 500 barrels per day.

Q What steps do you plan to take to inhibit corrosion and to determine the existence of leakage?

A Well, we will inject a corrosion inhibitor into the water at the surface. Pressure will be monitored at all times. There is currently a hydraulic pump in the well. Casing pressure will be monitored for abnormal pressures which might indicate a leak. Test coupons will be checked to determine corrosion, and a proper amount of treatment necessary.

Q Mr. Hendon, in your opinion, is this well cased and cemented in such a fashion that there is no danger to any fresh water reservoir that may be encountered near the surface?

A Yes, sir, it is sufficiently cased and protected with casing and cement.

Q Will the completion of this well for disposal purposes, and in this manner, interfere with production from the Bough C zone?

A We anticipate no interference from this injection.

Q Have Exhibits 1 and 3 been prepared by you or under your supervision?

A No, sir, they were not. They were prepared by Mr. Don Bennett, who is a graduate petroleum engineer. He is Operations Manager for Western States Producing, and is my superior.

Q Do you concur in the data represented by these exhibits?

A Yes, sir, I am familiar with the data, and I do concur that it is to the best of my knowledge true and correct,

Q In the event the application is approved, will Western States notify the Commission of the date of the commencement of injection operations, and otherwise comply with the information requirements of the Commission?

A Yes, we will.

Q In your opinion, will approval of this application prevent waste and protect correlative rights?

A Yes, sir, it will because currently the well is shut in, because of the high trucking cost to truck the water off lease.

MR. EATON: Mr. Examiner, we moved the admission of Exhibits 1 through 4.

MR. NUTTER: Applicant's Exhibits 1 through 4

will be admitted in evidence.

(Thereupon, Applicant's Exhibits 1 through 4 was admitted in evidence.)

MR. EATON: That's all the question I have on direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Hendon, apparently the top of the cement on the 5 1/2 is at 8,931?

A Yes, sir..

Q And the uppermost perforation in your producing zone is at 9,998?

A Yes, that is correct.

Q So you have better than 1,000 feet of cement between your disposal zone and the uppermost perforation. What I am concerned with is this lead casing bowl here. It was tested to 2,500 pounds and held up okay. But if we have 8,546 feet of hydrostatic head plus 400 pounds of pressure at the surface on that, I wonder if it would stand that pressure.

A You also have hydrostatic inside your 5 1/2.

Q Did you say you are using a casing pump?

A Yes, sir, we are.

Q So your casing would be full of fluid, also?

A Yes. So your differential is less than that.

Q You have a lesser differential, then, because you have inside as well as outside pressure?

A Right.

Q And you will continuously treat the water?

A Yes.

Q And also monitor the pressure at the surface, as well as run coupon tests?

A That's correct.

Q Now, has the Commission created a pool for this well? I guess it has. It is designated as the East Bagley Pennsylvanian.

A Yes.

Q Is it the only well in that pool, or is that Pan American well up to the Northwest in the same pool?

A I believe, sir, the Pan American well is in the same pool.

Q And it is producing from the equivalent zone you are producing from?

A Yes.

Q And your well and the Pan American well are

the only two wells in the immediate vicinity then?

A Yes.

Q There is no production from the San Andres, Glorieta, Tubb, or Abo, which are the zones the injection will be into, within a 2 mile radius?

A Not within a 2 mile radius.

MR. NUTTER: Are there any further questions?

Do you have anything further, Mr. Eaton?

MR. EATON: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer? We will take the case under advisement, and will Case 4098.

I N D E XWITNESSPAGE

WILLIAM E. HENDON, JR.

Direct Examination by Mr. Eaton

2

Cross Examination by Mr. Nutter

12

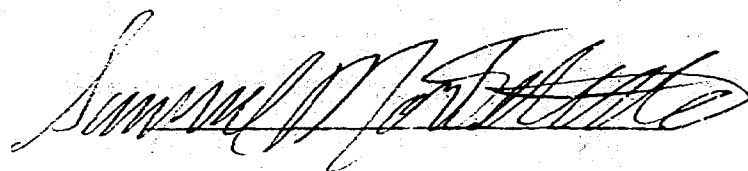
EXHIBITSMARKEDADMITTED INTO
EVIDENCEApplicant's Exhibits
1 through 4

2

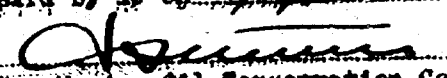
12

STATE OF NEW MEXICO)
) ss.
 COUNTY OF BERNALILLO)

I, SAMUEL MORTELETTE, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.



I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4017 heard by me on 4/9 1969.

 Examiner
 New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMijo
MEMBER

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

April 15, 1969

Mr. Paul Eaton
Hinkle, Bondurant & Christy
Attorneys at Law
Post Office Box 10
Roswell, New Mexico 88201

Re: Case No. 4097
Order No. R-3730
Applicant: WESTERN STATES PRODUCING CO.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other State Engineer Office

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. 4097
Order No. R-3730

APPLICATION OF WESTERN STATES PRODUCING
COMPANY FOR A DUAL COMPLETION AND SALT
WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 9, 1969,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 15th day of April, 1969, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, 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, Western States Producing Company,
seeks authority to complete its Smelting-State Well No. 1, located
in Unit F of Section 9, Township 12 South, Range 34 East, NMPM,
East Bagley-Pennsylvanian Pool, Lea County, New Mexico, as a dual
completion to produce oil from the East Bagley-Pennsylvanian Pool
through 5 1/2-inch casing and to dispose of produced salt water
down the annulus between the 5 1/2-inch production casing string
and the 9 5/8-inch intermediate casing string into the San Andres,
Glorieta, Tubb, and Abo formations in the open-hole interval from
approximately 4199 feet to 8931 feet.

(3) That the produced salt water should be continuously
treated prior to injection to prevent casing corrosion and coupon
corrosion tests should be conducted continuously on said well
and the results thereof filed quarterly with the Commission until
further notice from the Secretary-Director of the Commission.

-2-

CASE No. 4097
Order No. R-3730

(4) That approval of the dual completion and salt water disposal as set out above will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Western States Producing Company, is hereby authorized to complete its Smelting-State Well No. 1, located in Unit F of Section 9, Township 12 South, Range 34 East, NMPM, East Bagley-Pennsylvanian Pool, Lea County, New Mexico, as a dual completion to produce oil from the East Bagley-Pennsylvanian Pool through 5 1/2-inch casing and to dispose of produced salt water down the annulus between the 5 1/2-inch production casing string and the 9 5/8-inch intermediate casing string into the San Andres, Glorieta, Tubb, and Abo formations in the open-hole interval from approximately 4199 feet to 8931 feet;

PROVIDED HOWEVER, that the produced salt water shall be continuously treated prior to injection to prevent casing corrosion; that coupon corrosion tests shall be conducted continuously on said well and the results thereof filed quarterly with the Commission until further notice from the Secretary-Director of the Commission;

PROVIDED FURTHER, that the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(2) 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.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

W. J. Porter, Jr., Member

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

esr/

Examiner Hearing - April 9, 1969

-2-

Docket No. 10-69

(Case 4096 continued)

by the injection of water into the Seven Rivers formation through four wells located in Units C, D, and F of Section 25, Township 17 South, Range 28 East, Aid (Yates-Seven Rivers) Pool, Eddy County, New Mexico.

CASE 4097: Application of Western States Producing Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Smelting-State Well No. 1, located in Unit F of Section 9, Township 12 South, Range 34 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the East Bagley-Pennsylvanian Pool and the disposal of produced salt water through the intermediate casing-production casing annulus into the San Andres, Glorieta, Tubb, Abo, and possibly other formations in the interval from approximately 4199 feet to 8931 feet.

CASE 4098: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Walter J. Nelson and all other interested parties to appear and show cause why the Walter J. Nelson Lee Burns "A" Well No. 1 located in Unit P of Section 31, Township 6 North, Range 8 East, Torrance County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 4078: (Continued from the March 26, 1969 Examiner Hearing) Application of J. Gregory Merrion for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Devils Fork-Gallup Pool and an undesignated Mesaverde oil pool in the well-bore of his NCRA State Well No. 3 located in Unit L of Section 16, Township 24 North, Range 6 West, Rio Arriba County, New Mexico.

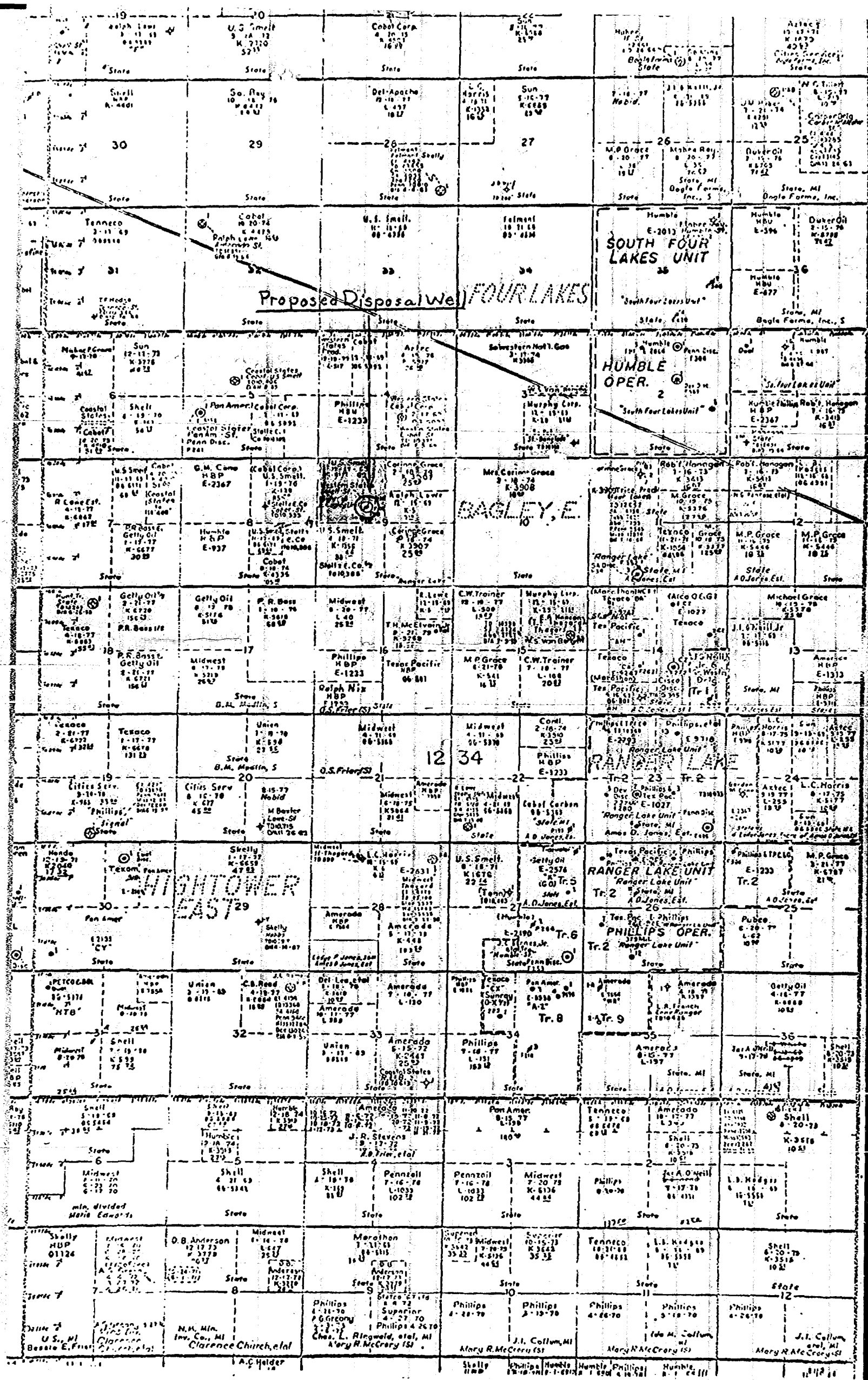
Docket No. 10-69

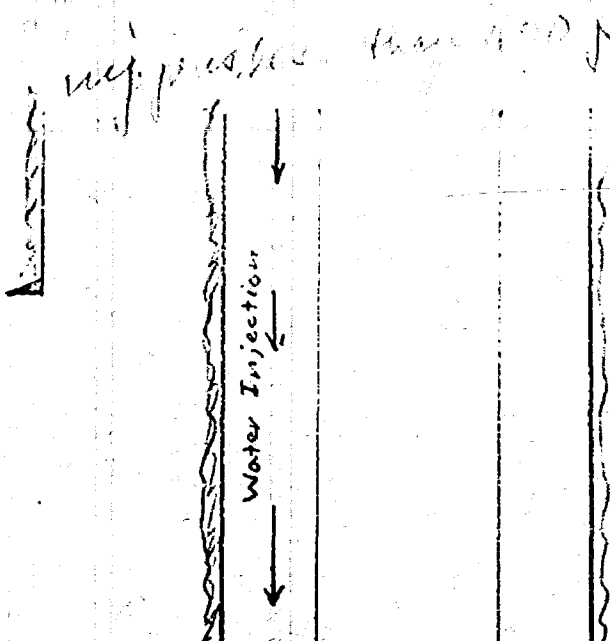
DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 9, 1969

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or
Elvis A. Utz, Alternate Examiner:

- CASE 4092:** Application of Phillips Petroleum Company for a capacity allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the assignment of a capacity allowable to its U. S. Minerals Well No. 4 located in the SW/4 SE/4 of Section 30, Township 17 South, Range 33 East, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico. Said well offsets a waterflood project operated by Cities Service Oil Company.
- CASE 4093:** Application of BTA Oil Producers for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the intervals from approximately 12,240 feet to 12,275 feet in its State "E" Well No. 1 and from approximately 12,088 feet to 12,164 feet in its State "E" Well No. 2 located, respectively, in Units F and C of Section 5, Township 10 South, Range 36 East, adjacent to the West Crossroads-Devonian Pool, Lea County, New Mexico.
- CASE 4094:** Application of Cayman Corporation for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from approximately 4184 feet to 4274 feet in its Hondo-State Well No. 1 located in Unit F of Section 31, Township 7 South, Range 33 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.
- CASE 4095:** Application of Tom Schneider for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Rustler formation in the perforated interval from approximately 1320 feet to 1340 feet in his SWD Well No. 1 located in Unit O of Section 16, Township 23 South, Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 4096:** Application of Kersey & Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project





13 3/8" Csg. @ 330'
325 SRS. Cmt. - Circ.
17 1/2" Hole

9 5/8" Csg. @ 4199'
1450 SRS. Cmt. - Circ.
12 1/4" Hole

Injection interval

Proposed Annular
Injection Zone
4195' - 8 5/8" Csg. Shoe
to 8931' Top of Cmt.
in 5 1/2" Csg. - 7 7/8"
Hole Annulus
Formations Open
San Andres - 4199'
Gloria - 5540'
Tubb - 6975'
Abo - 7750'

Bottom Head Seal Csg. Bowl - 8546'
Tested to 2,500 psi - OK
Repaired on Re-entry - 7-8-68
Top Cmt. 8931'

Re-opened on 8-8-68
Completed - 10,910
Now Producing

9,994'
1958 - Plugged off - Cmt. Amt. Unit.
10,007'

PBTD-10,058'

Western States Producing Co.
Smelting - State No. 1
Bagley, East (Pennsylvanian)
Field, Lea County, New Mexico
Former Operator - 1958
Sun Ray - Mid-Continent
Oil Corporation

10,295'
10,318' Plugged off - Cmt. Amt. Unit.

5 1/2" Csg. @ 10,366'
400 SRS. Cmt. - Cmt. Top - 8931'
7 7/8" Hole

T.D. 13,150'

7778
8931
1067

*with disposal of
300-500 bbl/day
we will be treated for pollution
problems be monitored
test run, etc.*

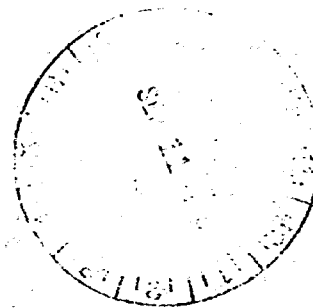
BEFORE EXAMINED NUTTER

NO. 3

CASE NO. 4097

SAMPLE NO. _____

THE WESTERN COMPANY
Service Laboratory



WATER ANALYSIS

Operator	Western States Producing Company	Date Sampled	9-9-68
Well	Smelting State #1	Date Received	9-10-68
Field	East Bagley	Submitted by	Don Bennett
Formation	Bough "C"	Worked by	Koehl
Depth	10,000'	Other Description	Acidized 7-8-68 with 1000 gallons 15%
County	Lea, New Mexico		

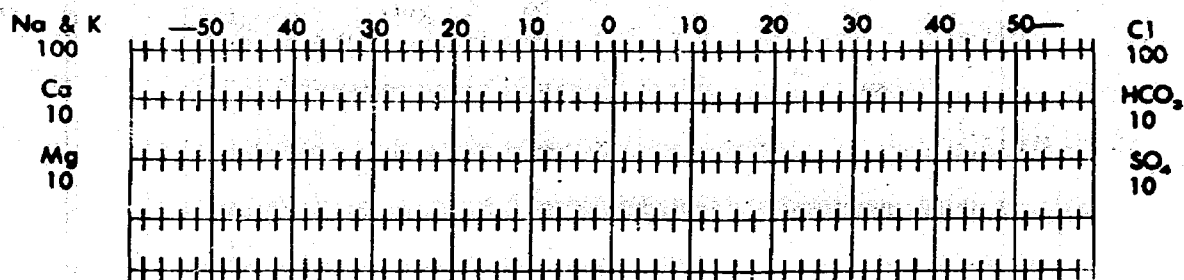
CHEMICAL DETERMINATIONS

Density	1.075 @ 67°F	pH	6.7
Iron	Fair Trace	Hydrogen Sulfide	None
Sodium and Potassium	33,200 ppm	Bicarbonate	378 ppm
Calcium	7,600 ppm	Sulfate	1,840 ppm
Magnesium	1,215 ppm	Phosphate	ppm
Chloride	66,500 ppm	as Sodium Chloride	ppm

Resistivity 0.086 ohm-meters @ 70°F

Remarks:

for Stiff type plot (in meq./l.)



Per _____

BEFORE EXAMINED WATER

NO. 4
CASE NO. 4097

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Western States Producing Co.		ADDRESS 900 Building of the Southwest	
LEASE NAME Smelting-State	WELL NO. 1	FIELD East Bagley (Pennsylvanian)	COUNTY Lea
LOCATION UNIT LETTER <u>F</u> ; WELL IS LOCATED <u>1980</u> FEET FROM THE <u>north</u> LINE AND <u>1980</u> FEET FROM THE <u>west</u> LINE, SECTION <u>9</u> TOWNSHIP <u>12-S</u> RANGE <u>34-E</u> NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	13-3/8"	330	325
INTERMEDIATE	9-5/8"	4199	1450
LONG STRING	5-1/2"	10,366	400
TUBING	2-3/8"	9990	NAME, MODEL AND DEPTH OF TUBING PACKER Baker Model R - 9990'
NAME OF PROPOSED INJECTION FORMATION Zones from 4199' thru 8931' (See attached sketch).		TOP OF FORMATION 4199	BOTTOM OF FORMATION 8931
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Annulus - 9-5/8"-5-1/2"		PERFORATIONS OR OPEN HOLES Open Hole	PROPOSED INTERVAL(S) OF INJECTION 4199 - 8931
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil Production		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 9994-10,007' plugged, cmt unknown; re-opened 9998-10,010 on re-entry. Zone still producing thru 5-1/2" esp via 2-3/8" lbg. Perfs 9998-10,010			
FRESH WATER ZONE IN THIS AREA 300		OIL OR GAS ZONE IN THIS AREA 9982'	
ANTICIPATED DAILY INJECTION VOLUME (BBL'S.) 300	MINIMUM 300	MAXIMUM 500	OPEN OR CLOSED TYPE SYSTEM Closed
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -		IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 400
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) B. Medlin, Rural Route, Tatum, New Mexico		WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL No wells within one-half (1/2) mile of proposed injection well.			
DOCKET MAILED Date 3/27/69			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL NA	THE NEW MEXICO STATE ENGINEER Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA Yes	ELECTRICAL LOG Yes	DIAGRAMMATIC SKETCH OF WELL Yes

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

Don C. Bennett Operations Manager March 13, 1969
(Signature) (Title) (Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

Case 4097

Proposed Annular
Injection Zone
4199' - 8 5/8" Csg. Shoe
to 8931' - Top of Cmt.
in 5 1/2" Csg. - 7 7/8"
Hole Annular
Formations Open
San Andres - 21199'
Glorieta - 5540'
Tubb - 6975'
Abo - 7750'

Re-opened on re-entry
Completed - 8-8-68 Now Producing
10,910

Western States Producing Co.
Smelting - State No. 1
Bagley, East (Pennsylvanian)
Field, Lea County, New Mexico
Former Operator - 1958
Sun Ray - Mid-Continent
Oil Corporation

Water Injection

8 5/8" Csg. @ 330'
325 Sks. Cmt. - Ciro.
17 1/2" Hole

9 5/8" Csg. @ 4199'
1450 Sks. Cmt. - Ciro.
12 1/4" Hole

Bowen Lead Seal Csg. Bowl - 8546'
Tested to 2,500 psi - OK
Repaired on Re-entry - 7-8-68
Top Cmt. 8931'

9,994
1958 - Plugged off - Cmt. Amt. Unit.
10,207

10,295
10,318 Plugged off - Cmt. Amt. Unit.

5 1/2" Csg. @ 10,366'
400 Sks. Cmt. - Cmt. Top - 8931'
7 7/8" Hole

T.D. 13,150'

Case 4097

[illegible]

DRAFT

GMH/esr

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. 4097

Order No. R- 5730

APPLICATION OF WESTERN STATES PRODUCING
COMPANY FOR A DUAL COMPLETION AND SALT
WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 9, 1969,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of April, 1969, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, 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, Western States Producing Company,
seeks authority to complete its Smelting-State Well No. 1, located
in Unit F of Section 9, Township 12 South, Range 34 East, NMPM,
East Bagley-Pennsylvanian Pool, Lea County, New Mexico, as a dual
completion to produce oil from the East Bagley-Pennsylvanian Pool
through 5 1/2-inch ^{Casing} tubing and to dispose of produced salt water
down the annulus between the 5 1/2-inch production casing string
and the 9 5/8-inch intermediate casing string into the San Andres,
Glorieta, Tubb ^{and} Abo ~~and possibly other~~ formations in the open hole
interval from approximately 4199 feet to 8931 feet.

(3) That the produced salt water should be continuously
treated prior to injection to prevent casing corrosion and coupon

corrosion tests should be conducted continuously on said well and the results thereof filed quarterly with the Commission until further notice from the Secretary-Director of the Commission.

(4) That approval of the dual completion and salt water disposal as set out above will prevent the drilling of unnecessary wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Western States Producing Company, is hereby authorized to complete its Smelting-State Well No. 1, located in Unit F of Section 9, Township 12 South, Range 34 East, NMPM, East Bagley-Pennsylvanian Pool, Lea County, New Mexico, as a dual completion to produce oil from the East Bagley-Pennsylvanian Pool through 5½ -inch ^{Casing} ~~tubing~~ and to dispose of produced salt water down the annulus between the 5½ -inch production casing string and the 9 5/8 -inch intermediate casing string into the San Andres, Glorieta, Tubb, ^{ad} Abo, ~~and~~ ~~possibly other~~ formations in the open-hole interval from approximately 4199 feet to 8931 feet;

PROVIDED HOWEVER, that the produced salt water shall be continuously treated prior to injection to prevent casing corrosion; that coupon corrosion tests shall be conducted continuously on said well and the results thereof filed quarterly with the Commission until further notice from the Secretary-Director of the Commission;

PROVIDED FURTHER, that the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(2) 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.