CASE 4547: Application of HANSON OIL CORP. FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO

Case Number

Application

Trascripts

Small Exhibits

dearnley-meier reporting service, inc.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 16, 1971

EXAMINER HEARING

IN THE MATTER OF:

Application of Hanson Oil Corporation for salt water disposal, Lea County, New Mexico.

Case No. 4547

BEFORE: DANIEL S. NUTTER, EXAMINER

TRANSCRIPT OF HEARING



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acceptable?

MR. NUTTER: The hearing will come to order, please. The first case this afternoon is Case No. 4547. MR. HATCH: Case 4547. Application of Hanson Oil Corporation for salt water disposal, Lea County, New Mexico. MR. KELLAHIN: If the examiner please, Jason Kellahin Kellahin & Fox, Santa Fe, appearing for the applicants. We have one witness that I would like to have sworn. (Witness sworn) GERALD E. HARRINGTON having been first duly sworn, testified upon his oath as follows: DIRECT EXAMINATION BY MR. KELLAHIN: Would you state your name, please? Gerald E. Harrington. Α By whom are you employed and in what position, Mr. Harrington? I am employed by Hanson Oil Corporation in Roswell, New Mexico, as a geologist. Have you testified before the Oil Conservation Commission and made your qualifications as a geologist a matter of record? I have. MR. KELLAHIN: Are the witness qualifications

1		MR. NUTTER: Yes, they are.
2	Q	(Mr. Kellahin continuing) Mr. Harrington, are you
3		familiar with the application of Hanson Oil Corporation
4		in Case 4547?
5	A	
6	Ö	Briefly, what is proposed by the applicants in this case?
7	A	We are proposing to convert a formal producing oil well
8		to a water disposal well.
9	Q	And what oil pool are you in?
10	Α	We are located in the Pearl-Seven Rivers Field and the
11		Pearl-Queen Field.
12	Q	Now, referring to what has been marked as the Applicant's
13		Exhibit Number 1, would you identify that exhibit?
14	A	Exhibit Number 1 is a plat showing the area surrounding
15		the area of the location of the proposed disposal well.
16	Q	Does that show the location of other wells within the
17		two-mile radius?
18	A	It does.
19	Q	What producing formations are those wells producing from?
20	Α	The Pearl-Queen Field produces from the Queen formation,
21		and the Pearl-Seven Rivers from the Seven Rivers formation
22	Q	Is there any Seven-Rivers production in the immediate
23		vicinity of your proposed disposal well?
24	A	There is one well located in the southeast quarter of
25		section thirty-five, our well Number 9.

1	Q	Is that a Hanson operated well?
2	A	It is.
3	Q	Operated by the applicants in this case?
4	A	
5	Q	Now, referring to what has been marked as Exhibit Number 2
6	7	would you identify that exhibit?
7	A	Exhibit Number 2 is a perforating formation color log
8		of the well proposed to convert to a disposal well.
9	Q	Have you marked any tops of formations or other information
10		on that exhibit?
11	A	The top of the Seven-Rivers formation has been identified,
12		and the perforations of the formally producing zone in
13		the Seven-Rivers have been marked on the log.
14	Q	Now, are you going to inject through those same perforations
15		or the same interval?
16	Α	It is our intention to do so.
17	Q	Now, referring to what has been marked as Exhibit Number
18		3, would you identify that exhibit?
19	A	Exhibit Number 3 is a diagramatic sketch of the existing
20		facilities and the proposed hook-up on the water disposal
21	14.	property.
22	Q	Now, is the top of the cement that calculated top?
23	A	The top of the cement is calculated inasmuch as there
24		was cement left inside the pipe when the well was
25		originally drilled, and calculating the volume comprising

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would be that amount of cement left inside it. I arrived at the conclusion that the top of the cement outside the casing would be at an estimated depth of 3550 feet. 5 Now, that would be well above your Packard perforated interval, would it not? Yes. Now, do you propose to inject under a Packard and through 8 9 tubing? We do. We intend to set the Packard at approximate depth 10 of 2970 feet, and run our internal coat of plastic-coated 11 tubing to the Packard and inject water through perforated 12 intervals from 4000 to 9 feet, 4024 feet. 13 Will you use an internal equipment tubing? 14 15 Yes. Will you fill the casing tubing annulus with inert fluid? 16 Yes, we will. 17 A And will you install a pressure gauge at the surface? Q 18 19 Is this the same type of installation you used in another 20 injection well in this area? 21 It was exactly the same type of installation as is 22 currently being used on our Number 11 well located in the 23 southwest quarter of section thirty-five. 24 Now, what will be the source of water that you will inject

	managem?
	in this well, Mr. Harrington?
A	The source of water is produced water from the Mescalero
	thirty-five Pearl-Queen Reservoir, as
	water from our single well in the Pearl-Seven Rivers.
	water from our single
Q	Do you have an analysis of the Queen water?
A	An analysis is included with this application.
Ç	that also marked as Exhibit Number 4 in the exhibit
	for the Commission?
1	A It is.
	MR. NUTTER: Mr. Kellahin, I am having a little
	hard time following these exhibit numbers. I think this set
	hand a little differently. This is man-
	may be numbered a 1200 MR. KELLAHIN: Yes, sir. Exhibit 2 is the log.
	MR. KELLARIN. MR. NUTTER: Well, that would be this?
	MR. KELLAHIN: Yes. Yes, sir.
	MR. KELLAHIN: 100. MR. NUTTER: Well it is three here, so I had better
	change that. That is 2, and
7	change that. Indt 2 is the diagramatic sketch. MR. KELLAHIN: Exhibit 3 is the diagramatic sketch.
B	till and the state of the same
9	MR. NUTTER: That was 4 here
0	MR. KELLAHIN: And the material would be MR. NUTTER: And the plat here is. That would be
	MR. NUTTER: And the plat here is.
21	this big thing here?
22	MR. KELLAHIN: Right.
23	MR. NUTTER: That's where it got off, because it i
24	Okav
25	marked 2. That's fine. Okay.

1	Q	(Mr. Kellahin continuing) Now, Exhibit Number 4 is the
2		Queen water analysis, is it not?
3	A	That's correct.
4	Q	Now, referring to what has been marked Exhibit Number 5,
5		would you discuss the information that is shown on that
6		exhibit?
7	A	Exhibit Number 5 is a map showing the existing water
8		disposal facilities, the existing water disposal well, and
9	en en fragesia. Esta fragesia	the location of the proposed water disposal well, as well
10		as all the producing wells in this six section block.
11	Q	Now, in that six section block, are those all Queen wells
12		with the exception of your Seven-River well?
13	A	Yes.
1/4	Q	And all of the water that you are disposing of will be
15		from Queen production with the exception of some water
16		from the Seven-Rivers?
17	A	That's correct.
18	Q	And what volume of water, roughly, will be disposed of?
19	A	We are anticipating a volume, initially, of approximately
20	a kai alah	950 barrels per day.
21	Q	And do you anticipate that you will encounter pressure
22		in there, or will it take it on a vacuum?
23	'A	We are anticipating that we will encounter pressure, and
24		that thing will be in the vicinity of approximately
25		2450 pounds.

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1	Q	And what has your experience in your other disposal wells
2		been?
3	A	At the present time we are approaching the maximum on
4		pressure as far as injecting salt water.
5	Q	Now, you are disposing in the Queen formation, are you
6		not?
7	A	That's correct.
8	Q	But your new application is for the Seven-Rivers?
9	A	That's correct.
10	Q	And what pressure do you have on the Queen formation?
11	A	Our Queen injection well is operating currently at a
12		pressure of approximately 2375 pounds. It ranges from
13		2375 to 2420.
14	Q	Now, in the event the Commission approves this application,
15	.0	will you transfer some of the water presently going to
16		that disposal well to the new one?
17	A	This is our intention, to relieve the pressure on the
18		existing water disposal well.
19	Q	Do you feel that it is your intent that this be done
20		right away?
21	A	Extremely urgent inasmuch as we are at a capacity or
22		approaching capacity of the existing disposal well.
23	Q	Are you handling water from any other operators in addition
24		to Hanson Oil Corporation?
25	A	o Welare.

. 1	Q What companies?
2	A The companies involved are J. P. Driscoll, an individual,
3	Minerals Incorporated. There is one other company which
4	I have listed on our application, Union Oil Company of
5	California.
6	Q And you will continue to dispose water for those companies
7	A That's correct.
8	Q In your opinion, will the injection of water into the
9	Seven-Rivers cause any damage to the producing formation
10	A NO.
11	Q And do you feel that it will take the water that you
12	propose to put in there without any difficulties?
13	A Based on a court analysis which we have available on the
14	proposed disposal well, there would be no difficulty in
15	injecting water in the Seven-River formation.
16	Q Were Exhibits 1 through 5 prepared by you or under your
17	supervision?
18	A They were.
19	MR, KELLAHIN: At this time, I would like to offer
20	in evidence Exhibits 1 through 5, inclusive.
21	MR. NUTTER: Applicant's Exhibits 1 through 5 will
22	be admitted in evidence.
23	MR. KELLAHIN: That's all I have, Mr. Nutter.
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CROSS EXAMINATION BY MR. NUTTER: Mr. Harrington, which is the one well that is producing Q from the Seven-Rivers at this time? The well is our Number 9, which is located in the northeast Α of the southeast of section thirty-five. б So that would be a diagonal offset to the proposed 7 injection well? That's correct. Α What about the structural position with the relation 10 Q between these two wells? 11 The structural position on the Seven-Rivers would indicate 12 A that the proposed disposal well would be at a structurally 13 lower position. 14 Do you have the structural positions there? Q 15 I do not have them with me. 16 How much lower is the Number 17? Q 17 It would be approximately twenty feet structurally lower. 18 A And what is Number 9 making at the present time? Q 19 Approximately ten barrels of oil per day, and the same A 20 amount of water. 21 And the Number 17 at the present time? Q 22 The Number 17 is not produced. It produced for a period Α 23 of approximately twenty-four hours, and since that time, 24 remedial operations have been attempted, and unsuccessfully,

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and there has been no additional production.

Q So it has really never been a producer?

A No, sir. However, it was completed as an oil well, based on that first twenty-four hour gauge, and since that time, it has not produced.

It was attempted, but no commercial production was -the attempt was not successful.

- Q How long has the Number 9 been completed?
- A I will have to look here.
- Well, rather than being specific, has it been completed as a Seven-Rivers for some little while?
- A Yes, sir, it has.
- 13 Q Has it made much oil?
 - A The cumulative figures are somewhere among my souvenirs.

 Through 1970 it produced a cumulative total of -- I beg

 your pardon. In 1970 it produced a total of 5556 barrels

 of oil, 13,500 MCF, and 2995 barrels of water.

The well was completed April 1, 1965.

- Q Now, do you have a cumulative production on that?
- 20 A Number 9 well has produced cumulative totals through 1970 of 42,541 barrels of oil.
 - Q I see. Well, you don't feel that the injection of water into the Number 17 will be detrimental to the Number 9 because of its structural position?
- 25 A That's correct.

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And, in fact, injection of water might enhance the
         production?
          It is possible. However, it is difficult to --
          Is the Seven-Rivers normally a water drive in this area?
         No. I think it is solution gas drive, primarily.
              MR. NUTTER: Are there any further questions of Mr.
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    Harrington? He may be excused.
                                          (Witness excused)
              MR. NUTTER: Do you have anything further, Mr.
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    Kellahin?
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              MR. KELLAHIN: That's all, Mr. Nutter, that I --
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              MR. NUTTER: Does anyone have anything to offer in
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    Case Number 4547? Take the case under advisement.
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dearnley-meier reporting service.

<u>I</u> <u>N</u> <u>D</u> <u>E</u> X	
2 WITNESS	PAGE
3 GERALD E. HARRINGTON	
4 Direct Examination by Mr. Kellahin	2
5 Cross Examination by Mr. Nutter	10
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이 보는 사람이 발표하였다. 요즘 보이 바다 보다는 것이 되었다. 기가 나는 사람들은 사람들이 있었다. 사람들은 보다 하나 보다 되었다.	
	보고 있는데 이번 전쟁 발표하다. 회사, 최근 회사 이번 경기 (2017년 기)

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STATE OF NEW MEXICO
  COUNTY OF BERNALILLO
        I, LINDA MALONE, Court Reporter, do hereby certify that
   the foregoing and attached Transcript of Hearing before the
3
   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.
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                                               Linda Mollone
Court Reporter
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OIL CONSERVATION COMMISSION

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

June 21, 1971

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

	Re: Case No. 4547
Mr. Jason Kellahin	Order No. R-4156
Kellahin & Fox Attorneys at Law	Applicant:
Post Office Box 1769	
Santa Fe, New Mexico	Hanson Oil Corporation

Dear Sir:

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

A. L. PORTER, Jr.
Secretary-Director

Very truly yours,

ALP/1r		in the state of th	= f =
Copy of orde	r also sent to:		
Hobbs OCC Artesia OCC			
Aztec OCC			
Other	State Enginee	r 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 FURPOSE OF CONSIDERING:

> CASE NO. 4547 Order No. R-4156

APPLICATION OF HANSON OIL CORPORATION FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 10:30 a.m. on June 16, 1971, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this <u>21st</u> day of June, 1971, the Commission, a guorum 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, Hanson Oil Corporation, seeks authority to utilize its Mescalero Ridge Unit "35" Well No. 17, located in Unit G of Section 35, Township 19 South, Range 34 East, MNPM, Pearl-Seven Rivers Pool, Lea County, New Mexico, to dispose of produced salt water into the Seven Rivers formation in the perforated interval from 4009 feet to 4024 feet.
- (3) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 3970 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

-2-**CASE NO. 4547** Order No. R-4156

(4) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Hanson Oil Corporation, is hereby authorized to utilize its Mescalero Ridge Unit "35" Well No. 17, located in Unit G of Section 35, Township 19 South, Range 34 Bast, NMPM, Pearl-Seven Rivers Pool, Len County, New Mexico, to dispose of produced salt water into the Seven Rivers formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3970 feet, with injection into the perforated interval from approximately 4009 feet to 4024 feet.

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

- (2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
- (3) 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.

> OIL CONSERVATION COMMISSION BRUCE KING.

STATE OF NEW MEXICO

ALEX J. ARMIJO, Member

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

SEAL

dr/

DOCKET: REGULAR HEARING - WEDNESDAY - JUNE 16, 1971

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STAME LAND OFFICE BUILDING, SANTA FE, NEW MEXICO "

- ALLOWABLE: (1) Consideration of the oil allowable for July and August, 1971;
 - (2) Consideration of the allowable production of gas for July, 1971, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico for July, 1971; also presentation of purchaser's nominations for the six-month period beginning August 1, 1971, for that area.

CASE 4487: (De Novo) This case will be continued to the August 18, 1971, Regular Hearing.

Application of Pennzoil United, Inc., for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Strawn formation underlying the W/2 of Section 6, Township 23 South, Range 27 East, South Carlsbad-Strawn Gas Pool, Eddy County, New Mexico, said acreage to be dedicated to the Morris R. Antweil Joell Well No. 1 located 660 feet from the North line and 1980 feet from the West line of said Section 6, Also to be considered will be the cost of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

Upon application of Pennzoil United, Inc., this case will be heard <u>De Novo</u> under the provisions of Rule 1220.

CASE 4503: (De Novo)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Penroc Oil Corporation and all other interested persons to appear and show cause why the intentional deviation of Penroc Oil Corporation State Well No. 2, having a surface location 360 feet from the South line and 330 feet from the East line of Section 28, Township 17 South, Range 28 East, Empire-Abo Pool, Eddy County, New Mexico, to a bottom hole-location 123 feet from the South line and 149 feet from the East line of said Section 28 should be approved and why the allowable assigned to said well should not be reduced to offset any advantage gained by said bottom hole location over other producers.

Upon application of Amoco Production Company, this case will be heard De Novo under the provisions of Rule 1220.

THE FOLLOWIR; CASES WILL BE HEARD BEFORE DANIEL S. NUTTER, EXAMINER, OR ELVIS A. UTZ. ALTERNATE EXAMINER, IN THE OIL CONSERVATION COMMISSION CONFERENCE ROOM ON THE SECOND FLOOR OF THE LAND OFFICE BUILDING AT 10:30 a.m.:

CASE 4547:

Application of Hanson Oil Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers formation in the perforated interval from 4009 feet to 4036 feet in its Mescalero Ridge Unit "35" Well No. 17 located in Unit G of Section 35, Township 19 South, Range 34 East, Pearl-Seven Rivers Pool, Lea County, New Mexico.

- CASE 4548: Application of Hanagan Petroleum Corporation for creation of a new gas pool and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Morrow gas pool for its Catclaw Draw Unit Well No. 1-Y located in Unit F of Section 26, Township 21 South, Range 25 East, Eddy County, New Mexico. Applicant further seeks the promulgation of special rules therefor, including a provision for 640-acre spacing units.
- CASE 4549: Application of Tom L. Ingram for unorthodox gas well location, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location for his Light Well No. 1 located 1980 feet from the South line and 660 feet from the East line of Section 15, Pool, Roosevelt County, New Mexico, the S/2 of said Section 15 to be dedicated to the well.
- CASE 4550: Application of Roger C. Hanks for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation at approximately 10,500 feet in a well located 660 feet from the North and West lines of Section 5, Township 20 South, Range 25 East, Eddy County, New Mexico.
- CASE 4551: Application of Roger C. Hanks for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 104 of the Commission Rules and Regulations to drill a well at an unorthodox gas well location 1900 feet from the South line

Docket No. 12-71

Regular Hearing
Wednesday - June 16, 1971

(Case 4551 continued)

and 850 feet from the West line of Section 35, Township 20 South, Range 24 East, undesignated Pennyslvanian gas pool, Eddy County, New Mexico, the S/2 of said Section 35 to be dedicated to the well.

- CASE 4552: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the amendment of Rule 506 of the Commission Rules and Regulations by deleting therefrom the provision that all gas produced with the current oil allowable determined in accordance with Rule 506 shall be deemed to have been lawfully produced.
- CASE 4554: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Henry S. Birdseye and all other interested persons to appear and show cause why the following-described wells in the Chaco Wash-Mesaverde Pool in Township 20 North, Range 9 West, McKinley County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

Santa Fe Railroad Wells Nos. 1, 2, 3, and 4 and in Unit P of Section 21; Well No. 6 in Unit M of Section 22; and Wells Nos. 5, 7, 8, 9, 11, and 12 in Units D, D, C, F, D, and F, respectively, of Section 27.

- CASE 4555: Application of BTA Oil Producers for expansion of a pressure maintenance project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its BTA Vada Bond Pressure Maintenance Project, Vada Pennsylvanian Pool, by the conversion to water injection of its Bond Wells Nos. 2 and 3 located, respectively, in Units L and A of Section 5 and its Bond Well No. 4 located in Unit J of Section 4, all in Township 9 South, Range 36 East, Lea County, New Mexico. Applicant proposes to complete the above-described wells in such a manner as to cause, by means of down-hole equipment, water from the Bough "D" zone to flood the Bough "C" zone in each of the wells.
- CASE 4553: Southeastern New Mexico nomenclature case calling for an order for the creation and extension of certain pools in Lea, Eddy and Chaves Counties, New Mexico.
 - (a) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Aid-Morrow Gas Pool. The discovery well is Pennzoil United,

(Case 4553 continued)

Inc., Aid State No. 1 located in Unit A of Section 24, Township 17 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM SECTION 24: N/2

(b) Create a new pool in Lea County, New Mexico, classified as an oil pool for Blinebry production and designated as the East Terry-Blinebry Pool. The discovery well is Mark Production Company, Conoco Federal No. 2 well is Mark Production 30, Township 20 South, Range located in Unit J of Section 30, Township 20 South, Range 39 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 39 EAST, NMPM SECTION 30: SE/4

(c) Extend the Arrowhead-Grayburg Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM SECTION 20: NW/4

(d) Extend the North Bagley-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM SECTION 5: SE/4

(e) Extend the Boyd-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM SECTION 10: S/2

(f) Extend the Dagger Draw-Upper Pennsylvanian Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM SECTION 30: W/2 W/2

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(g) Extend the Double 1-Queen Pool in Chaves County, New Mexico, to include therein:

POWNSETP 14 SOUTH, RANGE 29 EAST, NMPM SECTION 23: SE/4 SE/4

TOWNSHIP 15 COUTH, RANGE 29 EAST, MAPM SECTION 12: NW/4 NE/4

(h) Excend the Lea-Bone Springs Fool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM SECTION 25: SW/4

(i) Extend the South McCormack-Silurian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, MMPM SECTION 22: NW/4

(j) Extend the Power Grayburg-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM SECTION 32: SW/4 SW/4

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM SECTION 6: NW/4 NW/4

(k) Extend the West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSKIP 9 SOUTH, RANGE 37 FAST, NMPM SECTION 21: SE/4

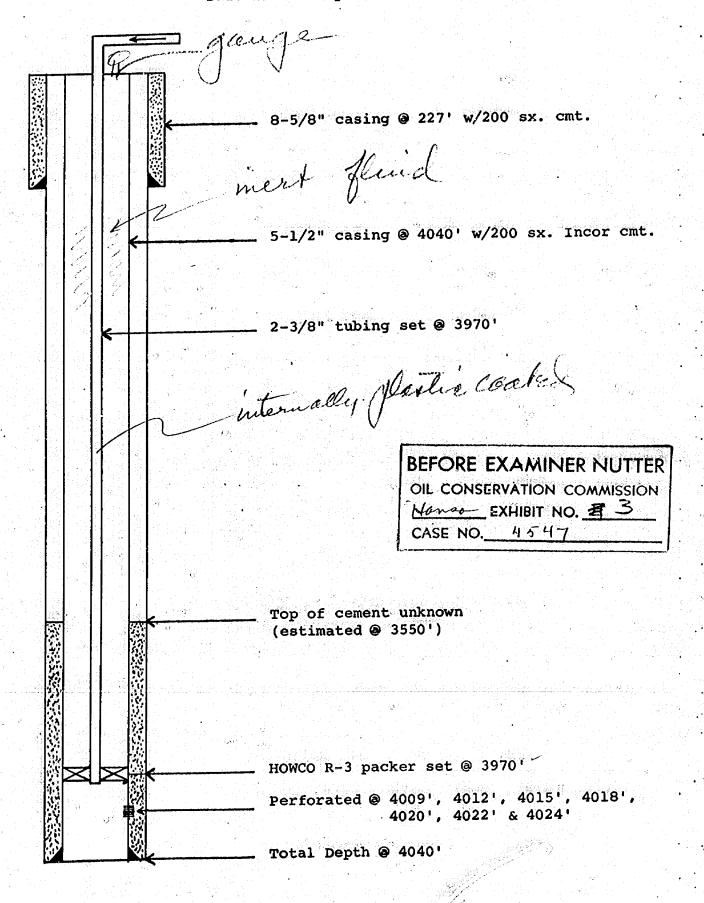
(1) Extend the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM SECTION 13: NE/4 SECTION 15: S/2 SW/4 SECTION 23: W/2

(m) Extend the Northwest Vacuum-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM SECTION 5: NE/4

DIAGRAMMATIC SKETCH Salt Water Disposal Well



JAN 27 1968

WATER ANALYSIS REPORT

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	Analysis	7.7			M	9/L ,		*Meq/L	NOTES
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4.	Dissolved Solids								
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<b>6.</b> _					180				
7.	M. O. Alkalinity (CoC	O ₃ )						4	ne e
8.	Bicarbonale (HCO ₂ )			HCO,			+610.	21	нсо,
9.	Chlorides (CI)			CI	747 954		+35.5.	20	CI
10.	Sulfates (SO ₄ )			. so,	80		+48 .	4	so,
11.	Calcium (Ca)			Co :	24		+20 .	2	Co
12.	Magnesium (Mg)			Mg	300	<del></del>	+12.2.		Mg
13.	Total Hardness (CaCC	<b>3,)</b>			1.3ppm				
14.	Total Iron (Fe)					4,			
15.	Barium (Qualitative)								
16.									
Mil									
	li equivalents per liter								
	ii equivalents per iner	PROBA	BLE MINER	AL COMI	AOITI2O	<u>.</u>			
		•				•	vı. X	Meg/L	■ Mg/L
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DIL CONSERVATION COMMISSION

NOTE EXHIBIT NO. FY

CASE NO. 4547

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## **Hanson Oil Corporation**

PETROLEUM BUILDING
P. O. BOX 1315
ROSWELL, NEW MEXICO 88201

May 17, 1971

New Mexico Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501 Coc 4547

Re: Application for Salt Water Disposal Fearl-Seven Rivers Field Lea County, New Mexico

Gentlemen:

Hanson Oil Corporation, owner and operator of the Mescalero Ridge Unit "35" Well No. 17, located in Unit G of Section 35, Township to South, Range to East, NMPM, Pearl - Seven Rivers Field, Lea County, New Mexico, does hereby make application to convert said well for use as a salt water disposal well. Reference is made to the New Mexico Oil Conservation Commission Order No. R-3449 which was issued July 3, 1968, to Ernest A. Hanson authorizing the utilization of another well on this lease for this purpose.

Hanson Oil Corporation proposes to inject produced salt water into the Seven Rivers Formation through 2-3/8" internally plastic coated tubing installed in a HOWCO R-3 packer set at approximately 3970 feet, with injection into the perforated interval from 4020 feet to 4036 feet. The casing-tubing annulus will be filled with a non-corrosive inhibited water, and a pressure gauge will be installed at the surface as a check on any leakage.

It is respectfully requested that this application be placed on the docket of the New Mexico Oil Conservation Commission hearing scheduled for June 16, 1971.

Genald & Harr

NUMA E. MUTTINGTON

Geologist

GEH: ef Enclosures:

Plat

Gamma Ray-Densilog Diagrammatic Sketch Water Analysis Form C-108

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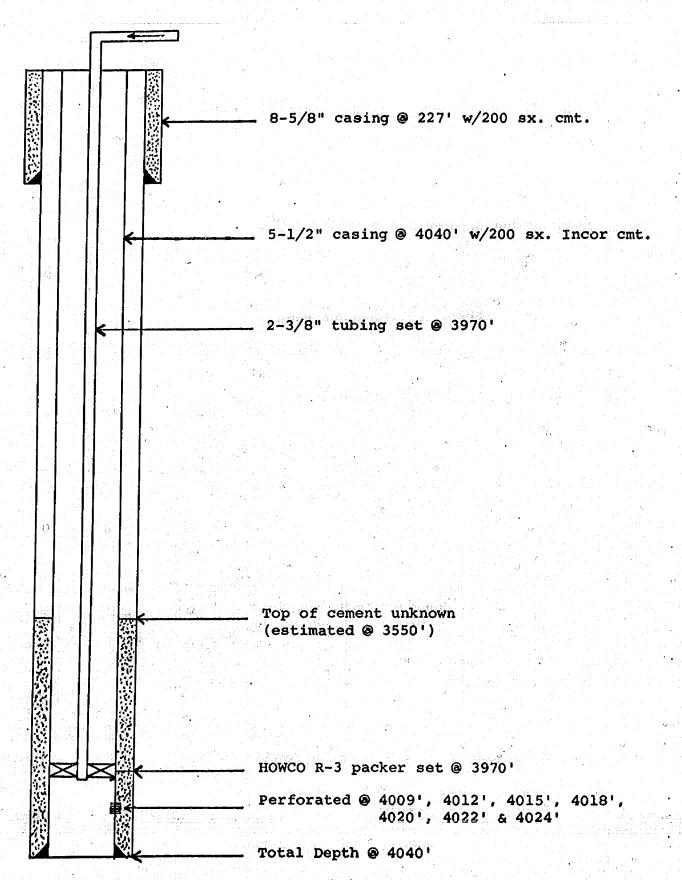
## Perforating Formation Collar CHART

A DIVISION OF DRESSER INDUSTRIES, INC.

COMPANY E.A. Han			
TO A CONTRACT OF THE PARTY OF T	1500		
VEIL Mescalaria R	ido 6 11	nit 35 Nº 17	. •
IELD Pear (Sevan	Rivers	nit 35 Nº 17 Se. 35 T-19-5, R-34-E New Mexico	an in
OCATION 1980 FNL 216.	50 F.E.L	Sec. 75 T-19-5, R-34-E	
OUNTY LES	STATE	New Mexico	
ERO POINT (Tronad Leva)	+12'	PERFORATED ZONES	
OTAL DEPTH (CUST.) 4040			. ** '
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## DIAGRAMMATIC SKETCH Salt Water Disposal Well



Case 4547

## WATER ANALYSIS REPORT

MPANY_		raya da Labarata da Santa		organizacija izborija	88 <u>2</u> - 1998	ANALYSIS	
URCE	Mescalaro R	idge Unit	DATE SAM	PLED	)~68	NO	2040
	Analysis			Mg/L		*Meq/L	e de la companya de l
٦.	PH	7.7					NOTED
2.	H ₂ S (Qualitative)	Neg.				· /·	JAN 2 8 :31
3.	Specific Gravity	1.000					
4.	Dissolved Solids			2,950			HANSON
5.	Suspended Solids				<del>=-</del> -		
6.	Phenol Alkalinity (CaC	0,1					
7.	M. O. Alkalinity (CoCO	<b>)</b>	NA SE E E E E E SE ME E E E E E E	180			
8.	Bicarbonate (HCOs)		HCO, _	220	+61	4	нсо,
9.	Chlorides (Cl)		CI .	747	+35.5	21	CI
10.	Sulfates (SO ₄ )		so, _	954	+48 .	20	\$0,
11.	Calcium (Ca)		Co _	80	+20 .	4	Co .
12.	Magnesium (Mg)		Mo -	24	+12.2.	2	Mg
13.	Total Hardness (CaCO			300			
. 14.	Total Iron (Fe)			1.3ppm			
16.				internormalist Magazet			
	i equivalents per liter	PROBABLE M	INERAL COMP	OSITION			
nim•					ıiv. We.	Meq/L =	<b>■</b> Mg/L
•Mill	i equivalents per liter	PROBABLE M	Compound	Equ	griffi in the state	Meq/i =	■ Mg/L 324
•Milli		uco. I	Compound Ca (HCO ₃ ),	<b>Eq</b>	81.04 _		5 1 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
•Mill	A0	- HCO ₈ 4. → SO ₄ 20	Compound Ca (HCO ₃ ), Ca SO ₄	Equ	81.04 _ 68.07 _		5 1 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
•Mill 4 2 39	.a	- HCO ₃ 4 → SO ₄ 20 → CI 21	Compound Ca (HCO ₃ ) ₃ Ca SO ₄ Ca Cl ₂	Equ	81.04 _ 68.07 _ 55.50 _		5 1 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
•Milli  2  A  39  Satura	No	- HCO ₄ 4 → SO ₄ 20 → Cl 21 Water 20°C	Ca (HCO ₃ ), Ca SO ₄ Ca Cl ₂ Mg (HCO ₃ ),	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _	4	324
• Milli 19 Sorura	Ag 4 Na Pistilled Ca CO ₃ 13	- HCO ₈ 4 → SO ₄ 20 → Cl 21 Water 20°C Mg/L	Compound Ca (HCO ₃ ), Ca SO ₄ Ca Cl ₂ Mg (HCO ₃ ), Mg SO ₄	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _ 60.19 _		5 1 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
•Milli  2  A  39  Satura	Ng Ha Distilled Ca CO ₃ 13 Ca SO ₄ • 2H ₂ O 2,05	- HCO ₂ 4 → SO ₄ 20 → Cl 21 Water 20°C Mg/L 90 Mg/L	Compound Ca (HCO ₃ ); Ca SO ₄ Ca Cl ₂ Mg (HCO ₃ ); Mg SO ₄	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _ 60.19 _ 47.62 _	4	324
•Mill  4 2 A 39 Solute	Ag A	- HCO ₈ 4 → SO ₄ 20 → Cl 21 Water 20°C Mg/L	Compound Ca (HCO ₃ ); Ca SO ₄ Ca Cl ₂ Mg (HCO ₃ ); Mg SO ₄ Mg Cl ₂ Na HCO ₃	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _ 60.19 _ 47.62 _ 84.00 _	2	120
•Mill  4 2 A 39 Solute	Ng Ha Distilled Ca CO ₃ 13 Ca SO ₄ • 2H ₂ O 2,05	- HCO ₂ 4 → SO ₄ 20 → Cl 21 Water 20°C Mg/L 90 Mg/L	Compound Ca (HCO ₃ ), Ca SO ₄ Ca Cl ₂ Mg (HCO ₃ ), Mg SO ₄ Mg Cl ₂ Na HCO ₃ Na ₂ SO ₄	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _ 60.19 _ 47.62 _ 84.00 _ 71.03 _	2	120
•Milli A 9 A	Ng Ha Distilled Ca CO ₃ 13 Ca SO ₄ • 2H ₂ O 2,05	- HCO ₂ 4 → SO ₄ 20 → Cl 21 Water 20°C Mg/L 90 Mg/L	Compound Ca (HCO ₃ ); Ca SO ₄ Ca Cl ₂ Mg (HCO ₃ ); Mg SO ₄ Mg Cl ₂ Na HCO ₃	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _ 60.19 _ 47.62 _ 84.00 _	2	120
•Milli 9 Soluri	Ng Ha Distilled Ca CO ₃ 13 Ca SO ₄ • 2H ₂ O 2,05	- HCO ₈ 4 + SO ₄ 20 - CI 21 Water 20°C Mg/L 90 Mg/L Mg/L	Compound Ca (HCOs); Ca SO4 Ca Cl; Mg (HCOs); Mg SO4 Mg Cl; Na HCOs Na; SO4	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _ 60.19 _ 47.62 _ 84.00 _ 71.03 _	2	120
•Milli 9 Soluti	Ag  Ala  Ala  Ala  Ala  Ala  Ala  Ala  A	HCOs  + SO4  20  21  Water 20°C  Mg/L  90 Mg/L  Mg/L  Hanson, Box 18	Compound Ca (HCO ₃ ); Ca SO ₄ Ca Cl ₂ Mg (HCO ₃ ); M9 SO ₄ Mg Cl ₂ Na HCO ₃ Na ₂ SO ₄ Na Cl S15 Roswell N	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _ 60.19 _ 47.62 _ 84.00 _ 71.03 _	2	120
•Mill  4 2 A 39 Solute	Ag A	HCOs  + SO4  20  21  Water 20°C  Mg/L  90 Mg/L  Mg/L  Hanson, Box 18	Compound Ca (HCO ₃ ); Ca SO ₄ Ca Cl ₂ Mg (HCO ₃ ); M9 SO ₄ Mg Cl ₂ Na HCO ₃ Na ₂ SO ₄ Na Cl S15 Roswell N	Equ	81.04 _ 68.07 _ 55.50 _ 73.17 _ 60.19 _ 47.62 _ 84.00 _ 71.03 _	2	120
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Form C-108 Revised 1-1-65

## NEW MEXICO OIL CONSERVATION COMMISSION

## APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

			ADDRESS		
Hanson Oil Corpo	ration	and the second s		k 1515 - Rosv	vell, New Mexico 8
Mescalero Ridge (	Unit "35"	WELL NO.	Pearl - S	Seven Rivers	Lea
OCATION UNIT LETTER	G .,	VELL IS LOCATED 1980	) FEET FROM T	HE North	AND 1650 FEET FROM
East LINE, SECTION		DWNSHIP 19-S	RANGE 34-E	NMPM.	
2			ND TUBING DATA	AMEM.	
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
NTERMEDIATE	8-5/8"	227'	200	circulated	
	10 July 10 Jul				
ONG STRING					
	5-1/2"	4040	200	3\$50!	calculation
UBING	re- Calabar (n.	La production of the last	ME, MODEL AND DEPTH	OF TUBING PACKER	1)
AME OF PROPOSED INJECTION FORMAT	2-3/8"	3970' H	IOWCO R-3 @	3970'	
Data Bulgaria (B. B. Languaga)	TION		1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	81	OTTOM OF FORMATION
Seven Rivers SINJECTION THROUGH TUBING, CASING		1000-00-00-00-00-00-00-00-00-00-00-00-00	3876	D INTERVAL(S) OF INJECTI	Unknown
	OFUR ANNULUS?	PERFORATIONS OF	les cardiended in resolu	A salada salas salas de de se	UN S
Tubing THIS A NEW WELL ORILLED FOR	JE Apples .	Perfora		09-4024	la Well goed been hearthfaire
SPOSAL?	IF ANSHER IS	NO, FOR WHAT PURPOSE	WAS WELL ORIGINALLY L	) Z	AS WELL EVER BEEN PERFORATED IN A ONE OTHER THAN THE PROPOSED INJEC ON ZONE?
NO		ing Oil Well	00 5005575 5169	فالقيدة بيفيدين	No
IST ACE SUCH PERFORATED INTERVACE	S AND SACKS OF C	EMENT USED TO SEAC OFF	OR SQUEEZE EACH		
				12222	
EPTH OF BETTOM OF DEEPEST RESH WATER ZONE IN THIS AREA		DEPTH OF BOTTOM OF NE	EXI HIGHER S AREA	DEPTH OF TOP OF	## <u>2</u> 7 7 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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750 t		E MIN- WATER TO	SAL	ZONE	E WATER ANALYSES ATTACHED?
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NSWER YES OR NO WHETHER THE FOLL RALIZED TO SUCH A DEGREE AS TO BE TOCK, IRRIGATION, OR OTHER GENERAL CAME AND ADDRESS OF SURFACE OWNER	LOWING WATERS ARE UNFIT FOR DOMES L USE —	TATE OR FEDERAL LAND)	es 'sat	Yes	Yes
ISLS.)  1 750  ISWER YES OR NO WHETHER THE FOLL  ISWER YES OR NO WHETHER AS TO BE  OCK, IRRIGATION, OR OTHER GENERAL  IME AND ADDRESS OF SURFACE OWNER	LOWING WATERS ARE UNFIT FOR DOMES L USE —	TATE OR FEDERAL LAND)	es 'sat	Yes	Yes
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ST NAMES AND ADDRESSES OF ALL OF	ate - Box	TATE OR FEORNAL LAND)  726 - Loving ONE-HALF (1) MILE OF TH  OX 1320 - Hol	es   sale	Yes	Yes
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W. M. Snyder Est.  St Names and Address of Surface owner  W. M. Snyder Est.  St Names and Address, Inc. —  Union Oil Co. of	ate - Boy PERATORS WITHIN C P. O. BC	TATE OR FEORRAL LAND)  726 - Lovi  DNE-HALF (I) MILE OF TH  DX 1320 - Hol  Dia - Union (	es   sale   sale	Yes  Mexico 88260  Aico 88240  Midland, Tex	Yes ) (as 79701
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WE COPIES OF THIS APPLICATION BEE  VE THE FOLLOWING ITEMS ATTACHED T  IS APPLICATION (SEE RULE 701-B)	COWING WATERS ARE LUSE - BOS R (OR LESSEE, IF S A THE - BOS PERATORS WITHIN O P. O. BO Califorr 3108 Sou	TATE OF FEORNAL LAND)  C 726 - LOVI  C 726 -	es   SAL   S	Yes  Mexico 88260  Aico 88240  Midland, Tex  Texas 7521	Yes  Cas 79701  O  NEW MERICO STATE ENGINEER  Yes  GRAMMATIC SKETCH OF WELL  Yes
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NOTE: Should waivers from the State Engineer, the surface owher, 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.

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## 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. 4547 Order No. R- 7/56 APPLICATION OF HANSON OIL CORPORATION FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

## ORDER OF THE COMMISSION

## BY THE COMMISSION:

10:30

This cause came on for hearing at 9 a.m. on June 16  $19^{1}$  , at Santa Fe, New Mexico, before Examiner

_, 191, the Commission, a ___day of __June NOW, on this 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.
- That the applicant, Hanson Oil Corporation, seeks authority to utilize its Mescalero Ridge Unit "35" Well No. 17, located in Unit G of Section 35, Township 19 South, Range 34 East, NMPM, Pearl-Seven Rivers Pool, Lea County, New Mexico, to dispose of produced salt water into the Seven Rivers formation in the perforated interval from 4009 feet to 4036 feet.

-2-CASE NO. 4547 Order No. R-

- (3) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 3970 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.
- (4) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

## IT IS THEREFORE ORDERED:

(1) That the applicant, Hanson Oil Corporation, is hereby authorized to utilize its Mescalero Ridge Unit "35" Well No. 17, located in Unit G of Section 35, Township 19 South, Range 34

East, NMPM, Pearl-Seven Rivers Pool, Lea County, New Mexico, to dispose of produced salt water into the Seven Rivers formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3/20 feet, with injection into the performated interval from approximately 4009 feet to 4/024/4036 feet.

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure guage shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

- (2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
  - (3) That jurisdiction of this cause is retained for the

Company of the state of Agrican and Supering and the state of the stat

-3-CASE NO. 4547 Order No. R-

entry of such further orders as the Commission may deem necessary.

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

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