CASE 4059: Application of HIRAM
W. KEITH AND DALTON HAINES FOR
SALT WATER DISPOSAL, EDDY COUNTY.

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Application
Transcripts.

Small Exhibits

BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

February 26, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Hiram W.)
Keith and Dalton Haines)
for salt water disposal,)
Eddy County, New Mexico.)

Case No. 4059

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING



MR. UTZ: Case 4059.

MR. HATCH: Case 4059, application of Hiram W. Keith and Dalton Haines for salt water disposal, Eddy County, New Mexico.

MR. UTZ: Any other appearances? You may proceed.

(Whereupon, Applicant's Exhibits Numbers 1, 2, and 3, inclusive, were marked for identification.)

HIRAM W. KEITH

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

DIRECT EXAMINATION

MR. KEITH: My name is Hiram Keith, and I have been previously sworn in Case 4058. The purpose of this application is to obtain permission under Rule 701 to use our Eddy State AGA for subsurface disposal. As shown in the attached schematic diagram, we propose to inject the salt water into the produced formation, Delaware Sand, from 3,140 to 3,158. By equipping the subject Well No. 2, we believe the upper fresh water zones in the area and also the producing zones will be protected from pollution by the disposal water.

In addition to the above, we believe that the requested subsurface disposal would not adversely affect production from producing Delaware wells in the immediate area. In fact, an

engineering committee has been formed to study the subject pool with the possibility of instigating waterflood in the Delaware zone.

With the total production of only some eight barrels of oil a day and 12 of water from the two wells, it can be seen this is a marginal lease, and approval of this application is essential for continuous operation.

If this application is approved, it is estimated that the subject lease has remaining primary reserves of 17,000 barrels of oil. In addition to this, it is estimated by the engineering committee that the subject lease has a secondary reserve of some 168,000 barrels of oil. We believe that it will take from two to three years before secondary recovery operations are instigated, if at all, and we are trying to operate the AGA Lease until this improvement takes place.

Actually, our injection setup for the well, we propose to use tubing, a packer, inject to the tubing, plastic-coated as requested by the Commission, and an inert subject in the annulus between the tubing and casing. There are some six other operators in this field with 37 active producing wells, and I believe there is one other injection disposal well in the field at the present time. Whether it has been approved officially or not, I don't know. And it is also in the Delaware

Sand.

MR. UTZ: What is the name of this pool?

MR. KEITH: The North Mason Pool.

MR. UTZ: Do you anticipate some of these other people will want to join your injection system?

MR. KEITH: No, sir, I don't think so, because
Hanson is the largest operator, and I think Hanson and
Continental went together on a system. Actually, this is in
the long run kind of temporary until secondary recovery programs
can be put in, and then it will go into unitization in all
probability. But when, I couldn't say.

MR. UTZ: You anticipate, though, it will be several years?

MR. KEITH: Yes. Flooding operations in the Delaware in that particular area have not been too encouraging.

MR. UTZ: Does that finish your testimony?

MR. KEITH: Yes, sir.

MR. UTZ: Do you wish to enter Exhibits 1, 2, and 3?

MR. KEITH: Yes. I don't have an analysis on the water in this particular area, but it is pretty salty, running from 15,000 to 19,000 parts per million of chlorides.

MR. UTZ: Exhibits 1, 2, and 3, will be entered into the record of this case. Are there any statements in this case?

(Whereupon, Applicant's Exhibits Numbers 1 through 3, inclusive, were admitted in evidence.)

MR. UTZ: The case will be taken under advisement.

INDEX

WITNESS
HIRAM W. KEITH
Direct Examination 2

EXHIBITS

MARKED

OFFERED AND
ADMITTED

Applicant's Exhibits

Numbers 1 through 3

STATE	OF	NEW	WEXICO)	
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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.

Somuel Markellelles
COURT REPORTER

do hereby correspy that the foregoing is

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Harrison Oil Concervation Complexion



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 SEOLOGIST A. L. PORTER, JR. SECRETARY - DIRECTOR

March 4, 1969

Mr. Hiram W. Reith Petroleum Engineer Post Office Box 844 Kermit, Texas 79745 Re: Case No. 4058 4 4059
Order No. 2-3692 - 2-3693
Applicant:
Hiram W. Keith

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

Copy of order also sent to:

Hobbs OCC X

Artesia OCC X R-3693

Aztec OCC

Other State Engineer Office

BEFORE THE OIL CONSERVATION CONDISSION OF THE STATE OF NEW MEXICO

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

> CASE No. 4059 Order No. R-3693

APPLICATION OF HIRAM W. KEITH AND DALTON HAINES FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICG.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 26, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

MOW, on this 4th day of March, 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.

PIMDS .

- (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 applicants, Hiram W. Keith and Dalton Haines, are the owners and operators of the Eddy "AGA" State Well No. 2, located 660 feet from the North line and 1650 feet from the West line of Section 36, Township 26 South, Range 31 East, NMPM, North Mason-Delaware Pool, Eddy County, New Mexico.
- (3) That the applicants propose to utilize said well to dispose of produced salt water into the Delaware formation, with injection into the open-hole interval from approximately 4130 feet to 4158 feet.
- (4) That the injection should be accomplished through 2-inch plastic-lined tubing installed in a packer set at approximately 4100 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should

-2-CASE No. 4059 Order No. R-3693

be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(5) 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 applicants, Hiram W. Keith and Dalton Haines, are hereby authorised to utilize their Eddy "AGA" State Well No. 2, located 660 feet from the North line and 1650 feet from the West line of Section 36, Township 26 South, Range 31 East, MNPM, North Mason-Delaware Pool, Eddy County, New Mexico, to dispose of produced salt water into the Delaware formation, injection to be accomplished through 2-inch tubing installed in a packer set at approximately 4100 feet, with injection into the open-hole interval from approximately 4130 feet to 4158 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 applicants shall submit monthly reports of the 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.

STATE OF HEW MEXICO OID COMPERVATION COMMISSION

DAVID . CARGO, Chairman

J. ARMI TO Nember

L. PORTER, Jr., Member & Secretary

Care 4059 Lead 2- 2669 Scant Kiram Keith Pelmession to Lec. 2-28-69 To courset his Eddy At. AGA tz. 660/N-1650/W-36-26 5-31E. toan 5WD well. Injection Shall be the Tatubing plastice coated lender a packer set at opprof 4100 + into the open hole zono in the delaware formation from 4130-41,5 st. Annulus shall be filled with ment fluid. Could will will a differ them for 1200 (position 1 2-2869-

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 26, 1969

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

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

- CASE 4052: Application of Mobil Oil Corporation for a pool creation and discovery allowable, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the creation of the Lightcap-Pennsylvanian Pool in Chaves County, New Mexico, comprising the NE/4 NE/4 of Section 7, Township 8 South, Range 30 East, and for the assignment of approximately 35,650 barrels of oil discovery allowable to the discovery well, its C. L. O'Brien Well No. 1 located in Unit A of said Section 7.
- CASE 4036: (Continued from the February 5, 1969, Examiner Hearing)
 Application of Mobil Oil Corporation for a dual completion,
 Chaves County, New Mexico. Applicant, in the above-styled
 cause, seeks approval for the dual completion (conventional)
 of its C. L. O'Brien Well No. 1 located in Unit A of Section
 7, Township 8 South, Range 30 East, Chaves County, New Mexico,
 to produce oil from an undesignated Pennsylvanian oil pool and
 the Lightcap (Devonian) Pool through parallel strings of tubing.
- CASE 4053: Application of El Paso Products Company for special pool rules, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special rules for the Gallegos-Gallup Pool, San Juan County, New Mexico, including provisions for the classification of oil and gas wells, 80-acre spacing for oil wells, and 320-acre spacing for gas wells.
- CASE 4054: Application of Amerada Petroleum Corporation for an unorthodox oil well location and amendment to Order No. R-2197, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 1250 feet from the West line and 2220 feet from the South line of Section 28, Township 24 South, Range 37 East, in its Langlie Mattix Woolwooth Unit Waterflood Project, Langlie-Mattix Pool, Lea County, New Mexico. Applicant also seeks the amendment of Order No. R-2197, which order authorized said waterflood project, to establish an administrative procedure whereby said project could be expanded to include additional lands and injection wells and producing wells at orthodox and unorthodox locations as may be necessary to complete an efficient injection and producing pattern without the necessity of showing well response.

February 26, 1969

- CASE 4055: Application of Albert Gackle 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 open-hole interval from approximately 3290 feet to 3620 feet in his George Etz Well No. 3 located in Unit N of Section 27, Township 23 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.
- CASE 4056: Application of Albert Gackle for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Lower Queen formation in the perforated interval from approximately 3642 feet to 3699 feet in his Sinclair "A" State Well No. 5 located in Unit I of Section 23, Township 23 South, Range 36 East, Langlie-Mattix Pool, Lea County, New Mexico.
- CASE 4057: Application of Charles B. Read for special pool rules, Lea County, New Mexico, Applicant, in the above-styled cause, seeks the promulgation of special rules for the Quail-Queen Pool, Lea County, New Mexico, including a provision for 80-acre spacing and proration units.
- CASE 4058: Application of Hiram W. Keith and Dalton Haines for salt water disposal, Lea County, New Mexico. Applicants, in the abovestyled cause, seek authority to dispose of produced salt water into the Seven Rivers formation in the open-hole interval from approximately 3874 feet to 3951 feet in their State Well No. 2 located in Unit K of Section 16, Townhahip 21 South, Range 34 East, West Wilson Pool, Lea County, New Mexico.

Application of Hiram W. Keith and Dalton Haines for salt water disposal, Eddy County, New Mexico. Applicants, in the above—styled cause, seek authority to dispose of produced salt water into the Delaware formation in the open-hole interval from approximately 4030 feet to 4158 feet in their Eddy "AGA" State Well No. 2 located 660 feet from the North line and 1650 feet from the West line of Section 36, Township 26 South, Rance 31 East, North Mason-Delaware Pool, Eddy County, New Mexico.

CASE 4060: Application of Sidney Lanier for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates-Seven Rivers formations in the open-hole interval from approximately 3402 feet to 3650 feet in his I. B. Ogg "A" Well No. 5 located in Unit J of Section 35, Township 24 South,

CASE 4059:

(Case 4060 continued)

Range 36 East, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico.

- CASE 4061: Application of Millard Deck Oil Company 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 and Queen formations in the open-hole interval from approximately 3752 feet to 3872 feet in its Atha Well No. 1 located in Unit M of Section 31, Township 21 South, Range 36 East, South Eurice Pool, Lea County, New Mexico.
- CASE 4062: Application of Kersey & Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Queen formation in the perforated interval from approximately 1835 feet to 1870 feet in the Bass Well No. 3 located in Unit F of Section 12, Township 19 South, Range 28 East, East Millman Queen-Grayburg Pool, Eddy County, New Mexico.
- CASE 4063: Application of Kerr-McGee Corporation for the 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 pool for the production of gas from the Morrow formation by its Nix Well No. 1 located in Unit L of Section 11, Township 19 South, Range 26 East, Eddy County, New Mexico, and for the promulgation of special pool rules therefor, including a provision for o40-acre spacing.
- CASE 4064: Application of Atlantic Richfield Company 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 approximaely 4207 feet to 4286 feet in its Tucker Well No. 4 located in Unit O of Section 23, Township 7 South, Range 32 East, Chaveroo-San Andres Pool, Roosevelt County, New Mexico.
- CASE 4065: Application of Humble Oil & Refining Company for an unorthodox oil well location and reclassification of a water well to an oil well, Lea County, New Mexico. Applicant, in the above-styled cause, seeks to have its New Mexico State "S" Water Source Well No. 4 (CP-427), located at an unorthodox oil well location 650 feet from the West line and 175 feet from the

South line of Section 2, Township 22 South, Range 37 East, Lea County, New Mexico, reclassified as an oil well for the production of oil an undesignated San Andres Oil Pool and authority to produce same as an oil well.

- CASE 4066: Application of Humble Oil & Refining Company for the consolidation of two non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the consolidation of two existing non-standard 320-acre gas proration units into one standard 640-acre unit comprising all of Section 26, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its New Mexico State "G" Wells Nos. 2 and 4 located in Units P and G, respectively, of said Section 26. Applicant further seeks authority to produce the allowable assigned to said unit from either of said wells in any proportion.
- CASE 4067: Application of Benson-Montin-Greer Drilling Corporation for special pool rules, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the La Plata-Gallup Pool, San Juan County, New Mexico, including a provision for 160-acre spacing and proration units. Applicant further requests that said special rules provide that the unit allowable for a 160-acre unit in said pool be allocated on the basis of four times the normal unit allowable for Northwest New Mexico, and that no credit be given for depth factors. Applicant further requests that said special rules be limited in their application to the exterior boundaries of the La Plata-Mancos Unit Area.
- CASE 4068: Application of Martin Yates III for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in its Yates & Hanson McCord Well No. 1 located in Unit E of Section 22, Township 23 South, Range 26 East, Dark Canyon Field, Eddy County, New Mexico. Applicant further seeks a procedure whereby its Cordie King Well No. 2 located in Unit K of said Section 22 may be approved for the disposal of salt water without the requirement of notice and hearing.

Docket No. 6-69

CASE 4045:

(Continued from the February 5, 1969 Examiner Hearing)
Application of H & S Oil Company for an amendment to Order
No. R-3357, as amended by Order No. R-3357-A, Eddy County,
New Mexico. Applicant, in the above-styled cause, seeks
the amendment of Order No. R-3357, as amended by Order No.
R-3357-A, which order authorized the H & S West Artesia Unit
Unit Waterflood Project. Applicant proposes to substitute
the Roach Drilling Company-Leonard Well No. 18 located in
Unit D of Section 17 as a water injection well in said project
in lieu of the Cities Service-Mell Well No. 17 located in Unit
M of Section 8, both in Township 18 South, Range 28 East,
Artesia Pool, Eddy County, New Mexico.

CASE 4069:

Application of Union Oil Company of California for the creation of a new pool, assignment of discovery allowable, and the promulgation of special pool rules, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks the creation of a new Devonian oil pool for its Midway State Well No. 1 located in Unit F of Section 12, Township 17 South, Range 36 East, Lea County, New Mexico, and for the assignment of an oil discovery allowable in the amount of approximately 57,380 barrells to said well. Applicant further see is the promulgation of special pool rules for said pool, including a provision for 80-acre proration units.

CASE 4070:

Application of C. E. LaRue and B. N. Muncy, Jr., for salt water disposal, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to dispose of produced salt water into the salt and Yates formations in the open-hole interval from approximately 1254 feet to 3000feet in the La Rue-Muncy John "B" Well No. 2 located in Unit A of Section 35, Township 17, South, Range 32, East, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico.

Before the Oil Conservation Commission of the State of Non Maxico

In the matter of the application of Hiram W. Keith and Dalton Haines for sait water disposal under rule 701. 3 Can 4049

<u>APPLICATION</u>

comes Hiram W. Keith and Daiton Raines, a co-ownership, and states: 1. Applicants are the operators of two producing wells in the North Mason Delaware Field, Eddy County, New Mexico. The wells are all situated upon eil and gas leases issued by the State of New Mexico and covers the following lands.

TOWNSHIP 26 SOUTH, RANGE 31 EAST, N. M. P. M.

Eddy AGA State, N/2 NW/4 and Lot 4 of Section 36

- 2. The operator is currently disposing of approximately 360 barrels of water per menth in conjunction with the production of approximately 8 barrels of oil per day from said 2 wells, in one unlined pit located on the subject lease.
- There is attached hereto, a plot showing the said 2 producing wells, proposed salt water disposal well, Eddy AGA State No. 2, and all other oil operators withings 2 mile radius.
- 4. There is also attached heroto, a diagrammatic sketch of the proposed injection well, showing all casing strings, with the proposed tuping and location of packer.
- 5. All wells in the North Mason Delaware Field are producing from the delaware Formation at a depth of approximately 4,100 feet and are in an advanced stage of depletion.

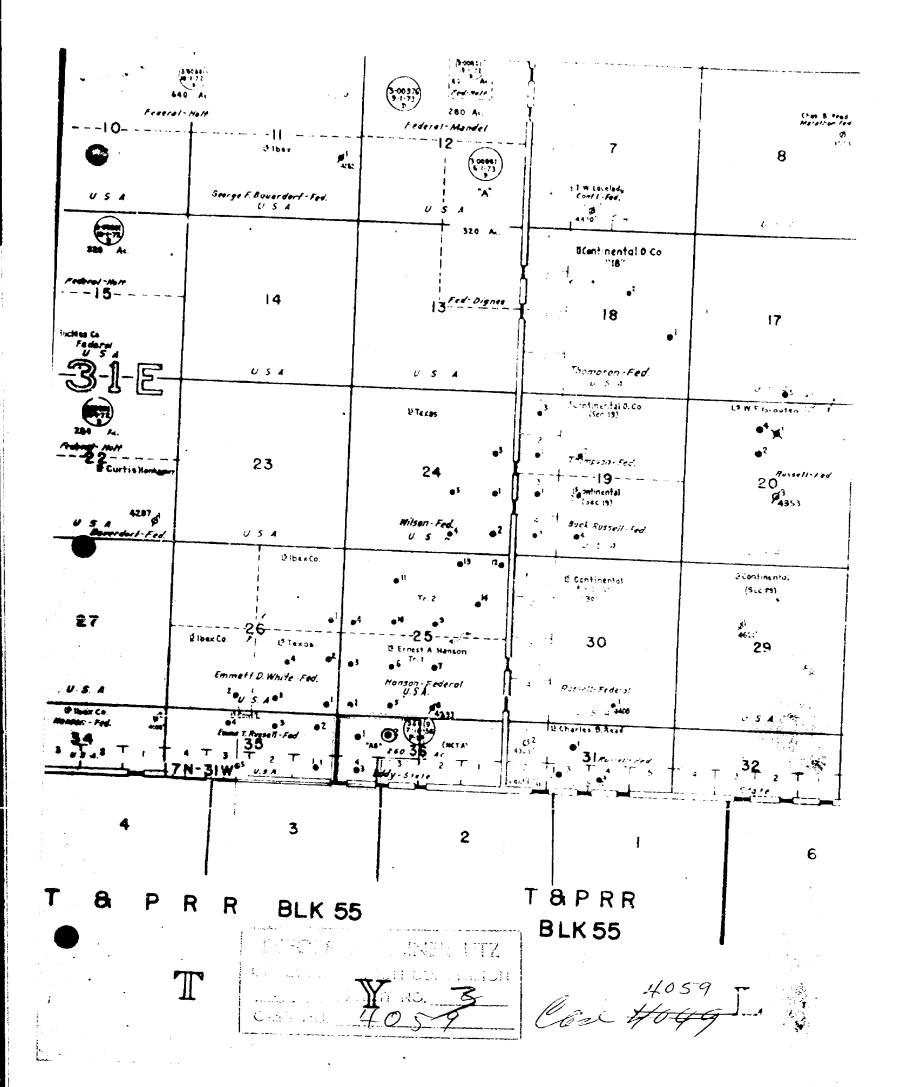
Wherefore, Applicant praye:

(a) That permission be granted to the applicants under rule 701, for the sait water disposal of produced water from the Eddy AGA State Lease into their Eddy AGA State Well No. 2, located 660 feet from the North Line and 1650 feet from the West Line of Section 36, Township 26 South, Range 31 East, Eddy County, New Mexico. It is proposed to inject the said produced sait water into the subject well in the Delaware formation, open hole from 4930 to 4158 feet.

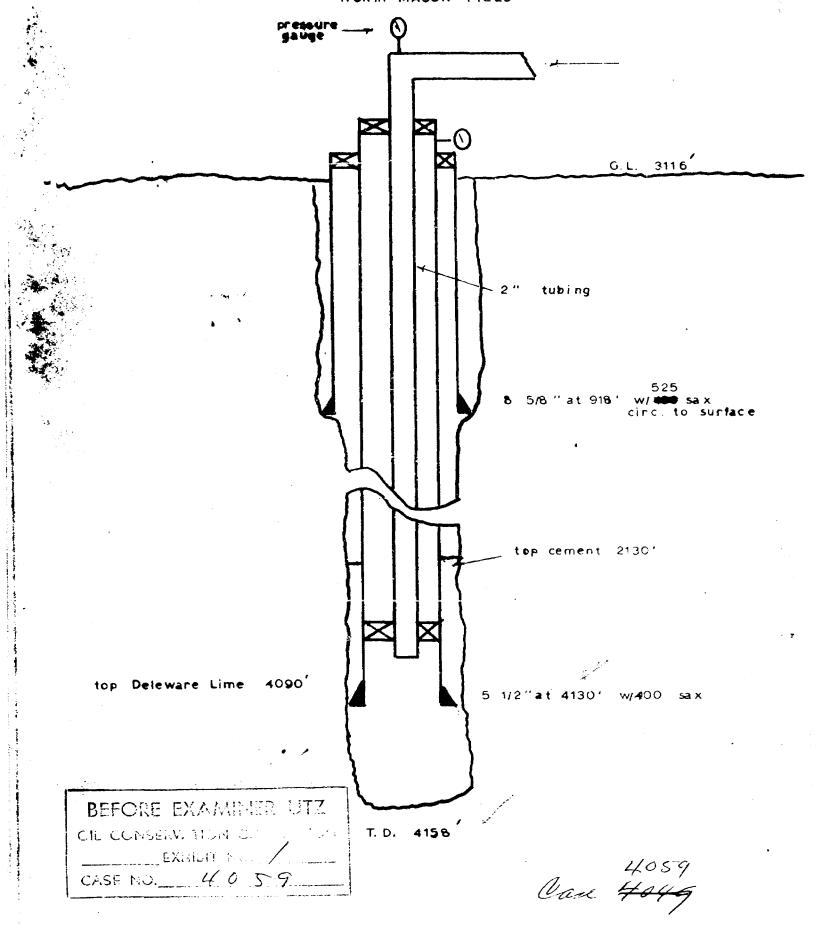
Hiram W. Keith & Dalton Haines

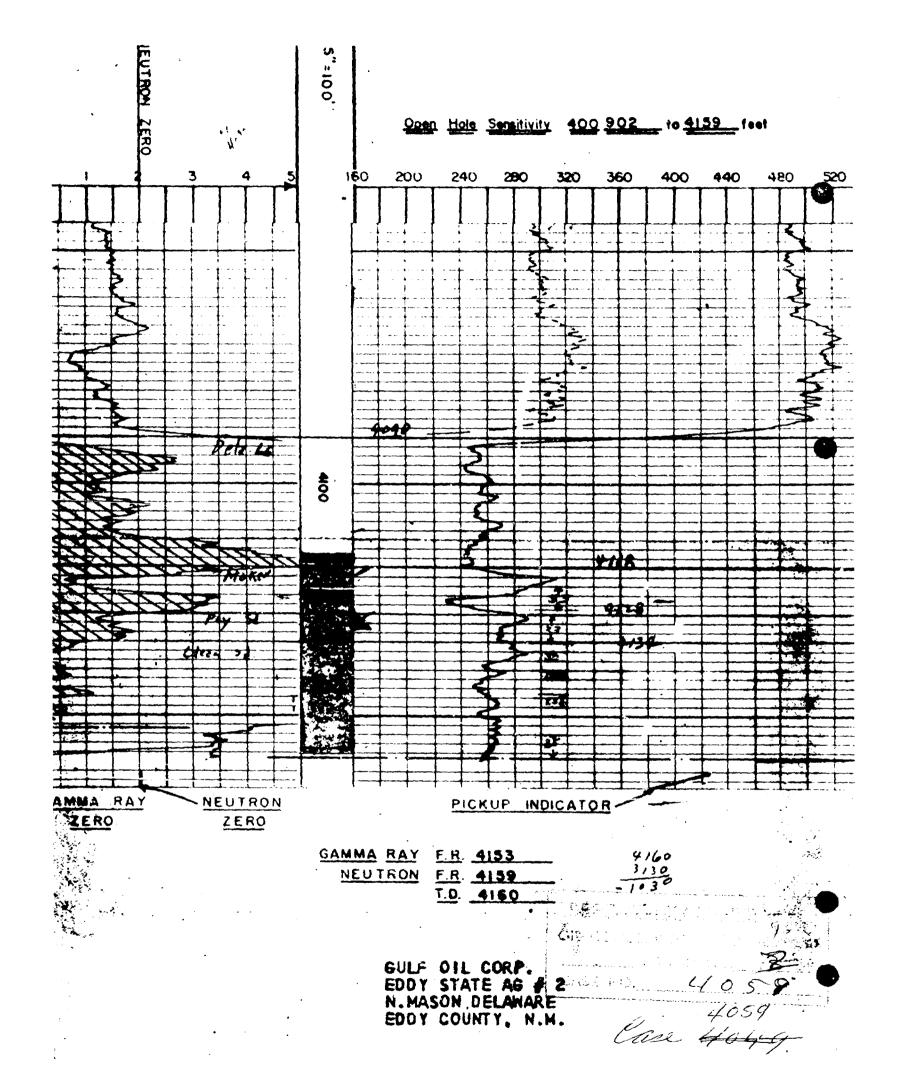
Hiram W. Keith P. O. Box 814 Kermit, Texas 79745

Date 2-13-69



HIRAM W, KEITH & DALTON HAINES EDDY STATE AGA WELL NO. 2 NORTH MASON FIELD





NORTH MASON FIELD

Names and addresses of all operators within a two mile radius of the proposed sait water disposal well, Eddy State AGA Well No. 2.

Texaco, Inc. P.O. Box 728 Hobbs, New Mexico 88240

Ernest A. Hanson P.O. Box 1515 Roswell, New Mexico 88201

Continental Oil Company
P.O. Bex 460
Hobbs, New Mexico 88240

C. B. Read Box 2126 Roswell, New Mexico 88201

Case Hayly

GMH/esr

OF THE STATE OF NEW MEXICO

XW	IN THE MATTER OF THE HEARING CALLED BY THE DIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:
W.	APPLICATION OF HIRAM W. KEITH AND DALTON HAINES FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO.
	ORDER OF THE COMMISSION
	BY THE COMMISSION:
·	This cause came on for hearing at 9 a.m. on February 26 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz
	NOW, on this day of
	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 applicants, Hiram W. Keith and Dalton Haines,
	are in the ownersand operators of the Eddy "AGA" State Well No. 2, 660 feet from the North line and 1650 feet from the West line located ////////////// of Section 36, Township 26 South, Range
	31 East, NMPM, North Mason-Delaware Pool Eddy
	County, New Mexico.
	(3) That the applicant proposes to utilize said well to
	dispose of produced salt water into the
	formation, with injection into the open-hole interval
	from approximately 4036 feet to 4158 feet.
	(4) That the injection should be accomplished through

approximately 4100 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus or the annulus left open at the surface in order to determine leakage in the casing, tubing, or packer.

(5) 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:

- (2) That the applicants shall submit monthly reports of ixes the 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.