CASE 4022: Application of ERNEST A. HANSON FOR AN EXCEPTION TO ORDER NO. R-3221, AS AMENDED.

Case Number

4022

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

January 15, 1969

REGULAR HEARING

IN THE MATTER OF:

Application of Charles B. Read for an exception to Order No. R-3221, as amended, Lea County, New Mexico, and, Application of Ernest A. Hanson for an exception to Order No. R-3221, as amended, Lea County, New Mexico.

Case Nos. 4021, 4022
Consolidated

BEFORE: A. L. Porter, Jr., Secretary-Director
Alex J. Armijo, Land Commissioner
Governor David F. Cargo, Chairman
George Hatch, Counsel

TRANSCRIPT OF HEARING

MR. PORTER: Case 4021.

MR. HATCH: Case 4021, application of Charles B. Read for an exception to Order No. R-3221, as amended, Lea County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, Santa Fe, appearing for the applicant.

In connection with the presentation of this case, we would like to consolidate it with Case 4022, in that the two properties are adjacent. We will use the same witness and the same set of exhibits for both cases, and I would like to have it consolidated for the purposes of the hearing, with separate orders to be entered by the Commission.

MR. PORTER: Are the properties located in the same pool, Mr. Kellahin?

MR. KELLAHIN: Yes, sir.

MR. PORTER: Are there any objections to Counsel's motion for a consolidation of the cases? Cases 4021 and 4022 will be consolidated for the purposes of hearing the testimony. Separate orders, of course, will be entered.

MR. KELLAHIN: We will have one witness to present, and I would like to have him sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibit Number 1, a multi-page exhibit, was marked for identification.)

HARRY F. SCHRAM

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q State your name, please.

A Harry F. Schram.

Q By whom are you employed, and in what position?

A I am Exploration Manager for Hanson Oil Company in Roswell, New Mexico.

Q Have you testified before the Oil Conservation Commission and made your qualifications a matter of record?

A Yes, sir.

Q Are you a geologist?

A Yes, sir.

Q Mr. Schram, in connection with your work for Hanson Oil Company, did you also do any work for Charles B. Read in connection with Case 4021?

A Yes, sir, I made the exhibits for the case.

Q Are the two cases related?

A Yes, sir, they are, they pertain to the same field.

Q Referring to a multiple-page exhibit which has been marked as Exhibit Number 1, I direct your attention to the map

marked Exhibit Number 1 in the book. Will you identify that, please?

A This Exhibit 1 is a location map of the West Teas Pool, showing the Hanson Lease and the Read Lease, the location of the disposal pits on each of those leases, and with relation to Laguna Gatuna, the salt lake immediately to the west and the Salt Lake Field.

Q Now, what oil pool are those two leases located in?

A They are located in the West Teas Pool.

Q And the pits as shown on the exhibit are presently in use for disposal of produced water, are they not?

A Yes, they are.

Q Referring to what has been marked as Exhibit Number 2, would you identify that exhibit?

A Exhibit Number 2 is merely a structure contour map of the West Teas Pool, which is mapped on the top of the Yates Formation.

Q The boundaries of the pool have been well delineated, have they?

A Yes.

Q Would you anticipate any further development in this area?

A No, sir, it is rather unlikely, I think.

Q Now, referring to Exhibit Number 3, would you identify that exhibit?

A Exhibit Number 3 is a gamma ray sonic log of the Hanson No. 1 Atlantic State, located 990 from the north and 1,980 from the west line of Section 18, in the West Teas Pool.

Q And Exhibit 3-A, would you identify that?

A Exhibit 3-A is a gamma ray sonic log of the Read No.1 Snyder, located 2,310 from the south and east in Section 16 of the West Teas Pool.

Q Referring to Exhibit No. 4 in the exhibit, would you identify that?

A Exhibit Number 4 is a well data sheet of every well that has been drilled in the West Teas Pool or in the immediate vicinity, and those dry holes surrounding the pool, also. And it shows the technical information of the different depths, and the treatment and initial production, and accumulated production.

Q Does that show the present status of these wells?

A Yes, it can be determined.

Q That is all of the wells in the pool, is that correct?

A Yes, sir.

Q Now, referring to what appears to be a water analysis, a series of water analyses, would you identify those, please?

A Yes, sir. Exhibit 5-A is a water analysis of the

Hanson No. 1 Atlantic State Well, showing the chemical content of that water that is being produced.

Q Is that water which will continue to be disposed of in the surface pit, if this application is granted?

A Yes, that's correct.

Q Exhibit 5-B, would you identify that?

A Exhibit 5-B is a water analysis of the water from the Read No. 1 Snyder. Apparently they had several analyses made at one time, and the Snyder is so designated on the right-hand side of the page.

Q And again, the Snyder No. 1 is one of the wells which would continue to use a surface pit?

A Yes, sir.

Q Exhibit 5-C, would you identify that exhibit?

A Exhibit 5-C is a water analysis of the Minerals, Incorporated No. 1 Bass Well, which is located in the Salt Lake Field in Section 18, 20 South, 33 East.

Q And Exhibit 5-D?

A Exhibit 5-D is Minerals, Incorporated No. 2 Bass, water analysis in the same field.

Q That is also in the Salt Lake Pool?

A Yes, sir.

Q And Exhibit 5-E?

A Exhibit 5-E is the No. 3 Bass.

Q In the Salt Lake Pool?

A In the Salt Lake Pool.

Q And Exhibit 5-F?

A 5-F is the Rand Montgomery No. 3 Brooks "7", water analysis in Section 7 of the Salt Lake Pool.

Q And Exhibit 5-G?

A Exhibit 5-G is the water analysis of the No. 4 Brooks "7", in Section 7 of the Salt Lake Pool.

Q And Exhibit 5-H?

A Exhibit 5-H is the water analysis of the Montgomery No. 6 Brooks "7", of the Salt Lake Pool.

Q In connection with the examination of these water analyses, do you find the water comparable in the Salt Lake and West Teas Pool?

A Yes, sir. roughly they are comparable. Well, it depends on where the water is coming from. The water salts are very, very high in parts of the Salt Lake Pool, basically higher than they are in the West Teas Field. However, it depends on whether the water is being produced from the Seven Rivers Formation or the Yates Formation.

Q As a general proposition, the water from one pool would be no more damaging than water from another, would it?

A No. In the Salt Lake Pool, the chlorides were run in some cases as high as 25,000 parts and as low as 5,000 or 6,000 parts.

Q Directing your attention to Exhibit 6-A, and in connection with that you may wish to refer to Exhibit Number 7, would you discuss the situation as to production of fresh water in the area in which these surface pits are located?

A The fresh water that is being produced in the immediate area is primarily from two formations, either the Quaternary or Triassic. Both of these formations are very, very small in the amount of fresh water that is produced, and in many cases the water is not potable, and many of them have already been abandoning the area. Of these wells that have been abandoned, that there is no record on, one was within, oh, 300 or 400 feet of our No. 1 Atlantic State, and was never used, was abandoned almost as soon as it had been drilled, I understand. The marker is all that is left, and there are no records on it.

Wells that are shown on Exhibit 6-A are a list of wells that have been drilled that we do have some record on, and we might refer to Exhibit Number 7 which shows a map of those wells.

In Section 4 of 20-33, the rancher stated here that

the water was gyppy, and the cattle would rather go someplace else to go get their water.

Q In connection with that well, and referring to Exhibit Number 7, what would the topographical situation of that well be in relation to your surface pits?

A It would be down dip toward our surface pits.

Q Your surface pits would be --

A Down dip from the water well, yes, and would be drained toward our water well.

Q Now, the well in Section 21, what is the situation as to it?

A It has been abandoned. We couldn't find out anything about that particular well except that it had been abandoned some time in the past. It was a quaternary well, and apparently had been used at one time, but it is either contaminated or there wasn't enough water to use, I suppose.

Q Then the closest fresh water that is being produced, Mr. Schram, where would that be?

A It would be up in Section 5 of 20-33, and it was a commercial well, and was used for drilling oil wells.

Q Do you know anything about the quality of the water in that well?

A No, sir, I don't.

Q There was no water analysis available on that?

A No, sir, there was not a water analysis available on that. There was one in Section 4 of 20-33.

MR. PORTER: Let me ask a question at this point. How far is that well to which you just referred from your disposal pit?

THE WITNESS: It is approximately a mile and a half northwest.

Q Again, that well would be at a higher location than your surface pit, would it not?

A Yes, sir. The surface elevation is approximately 3,550, and our surface pit would be approximately 3,540, or about ten feet higher, surfacewise.

Q Referring to Exhibit 6-B through 6-F, would you discuss those exhibits, please?

A Exhibit 6-B is a water analysis of Laguna Gatuna Playa, which is immediately to the west. The water was taken as a sample right after it had rained, and gives an indication of being supersaturated in salt, sulfate and chlorides.

Q It contains considerably more salt than any other wells --

A Yes, sir, approximately 275,000 parts per million.

Q There are some springs in Laguna Gatuna, aren't there?

A Yes, sir, on the southwest corner of Laguna Gatuna in the southwest of the northeast of Section 19, 20 South, 33 East, there are springs that flow during a rainy season. However, at the time that this particular analysis was taken, they were not flowing natural.

Q You are referring to the analysis, Exhibit 6-C?

A Yes, sir. And, this particular analysis, they dug down about three or four inches, and took the water sample right from the hole that they dug, and it was about 150,000 parts solids, or salts, sulfates, and chlorides.

Q Referring to Exhibit 6-D, would you discuss that exhibit?

A 6-D is a water analysis from the water well in Section 21, 20-33, which we call the Bingham Water Wells, which is at the ranch. Two of these wells have been plugged, and the one well at the Bingham Ranch is the only one being used. It has a chloride content of 3,518 -

Q Is that well shown on Exhibit Number 7?

A Yes, sir. I beg your pardon, that Bingham Water Well is the one that has been abandoned. That is directly south, and this is a water analysis of that water, and has a chloride content of 3,518 parts per million.

Q Would that classify as potable water?

A No, sir.

Q Now, referring to Exhibit 6-E, would you discuss that exhibit?

A 6-E is a water analysis of what they call the Three Wells in Section 4, 20-33, and that particular well has been abandoned. However, this particular sample was taken out of the well, and the chloride content of that particular well was right at 13,000 parts per million, and this particular well was approximately one mile north of the disposal pits that we propose to use.

Q Now, that also ran rather high in sulfates?

A Yes, sir, it did, it ran 16,000 parts sulfate.

Q Could that be used for domestic or stock use?

A No, sir, I don't believe so.

Q Referring to Exhibit 6-F, would you identify that?

A Exhibit 6-F is an analysis of the Bass Water Wells in Section 18, 20-33. This is a well that was drilled for water use, like apparently while they were drilling the Salt Lake Field. The chloride content of that particular well is 21,000 parts, the sulfate content was 3,895 parts.

Q Mr. Schram, have you made a study of the available literature concerning the hydrology of that area?

A Yes, sir.

MR. PORTER: BEfore you get into this, did you testify, Mr. Schram, as to the analysis of your produced water as far as parts per million of chlorides?

THE WITNESS: Yes, sir. We have the analysis in here on that.

MR. PORTER: What was that figure on chlorides?

THE WITNESS: In the No. 1 Atlantic State, the Hanson No. 1 Atlantic State --

MR. PORTER: This is your --

THE WITNESS: The Hanson No. 1 Atlantic State in Section 16, the chloride content was 6,800 parts per million. The sodium potassium content was 4,540 parts per million, with 800 parts calcium, 16 parts magnesium, 2,840 parts sulfate, and 1,086 parts bicarbonate, with a very strong trace of hydrogen sulfate.

Q (By Mr. Kellahin) That is shown on Exhibit 5-A?

A Yes, sir. On Exhibit 5-B, which is the water analysis of the Read No. 1 Snyder, the chlorides were 5,500 parts.

MR. PORTER: Just give me the chlorides, Mr. Schram.

THE WITNESS: Yes, sir.

MR. PORTER: We will examine the exhibits later.

THE WITNESS: The chloride content was 5,500 parts.

Q (By Mr. Kellahin) It is the water from only these

two wells that will be disposed of in your surface pits, is that correct?

A Yes, sir.

Q That is the only wells involved in this application?

A Yes, it is.

Q That water is considerably fresher than any being produced in the area, is it not?

A Yes, sir.

Q Will you refer to Exhibit Number 7, and the study you have made of the hydrology of the area, and in general terms what is the situation of the area involved in this application as to drainage and water availability?

A This is known as the playa area, with several major drainage lakes or playas within the immediate area, Laguna Gatuna being one of the lirgest. The Mescalero Ridge, which is approximately 20 miles to the east, everything from that point over drains toward this playa area, and is all down dip toward this Laguna Gatuna playa. The Laguna Gatuna playa is also a dry lake which National Potash, I believe, is dumping approximately 3,000 barrels of brine a day into, which is a mile and a half further west of Laguna Gatuna. But basically, everything in this part of Lea County drains to this point west of Mescalero Ridge.

Q Is there any fresh water in any of these lakes?

A No, sir.

Q Other than the wells you mentioned, is there any fresh surface water available?

A No, sir, not that we could find any trace of.

Q In the event the Commission sees fit to approve this application and permits continued use of surface pits for disposal of produced water, will that cause any damage to any surface water or any underground water in this area, in your opinion?

A No, sir, not in my opinion.

Q Insofar as you can determine, is there any fresh water there to be damaged?

A No, sir, not that we could find any trace of.

Q In your opinion, would it be in the interest of conservation to permit continued use of the surface pits for salt water disposal?

A Yes, it would be.

Q Was Exhibit Number 1, containing seven numbered exhibits, prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibit Number 1, consisting of numbered exhibits 1, 2,

3, 3-A, 4, 5-A, through 5-H, 6-A through 6-F, and Exhibit 7.

MR. PORTER: If there are no objections, the exhibit will be admitted.

(Whereupon, Applicant's Exhibit 1, a multi-page document, was admitted in evidence.)

MR. KELLAHIN: That completes the direct examination, Mr. Porter.

MR. PORTER: Does anyone have any questions of Mr. Schram?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Schram, the well in the northwest northwest of Section 21 is shown as abandoned, and you so stated. You mentioned that there was no information available as to why the well had been abandoned. Do you know when it was abandoned?

A No, sir.

Q Do you know what the condition of the well is at the present time?

MR. PORTER: Mr. Nutter, is that in Section 21 of 20-33?

MR. NUTTER: Yes, that is the Read well on Exhibit 7.

A No, sir, this particular analysis was taken by Mr. Don Gerry, with Minerals, Incorporated at Hobbs.

And, I talked to him about this particular well, and what they did. He told me, he said the well was just sitting there today, and had been abandoned, and that they had taken a tin can on a string and gone down into the well to get the water sample.

Q The well is open at the surface?

A Apparently it is.

Q And they were able to dip a sample out of it?

A Yes, sir.

Q But the analysis is only 3,518 parts per million chlorides, which is acceptable as far as stock usage is concerned, is that right?

A Well, I'm not sure whether it is for stock usage or not.

Q Now, the well up in Section 4 was formerly a stock well?

A Yes, sir.

Q That would be the first well on your Exhibit Number 6-A, in which you stated that the rancher states the water was gyppy, and cattle would walk a greater distance to another water source. I think we heard about that well in previous hearings. That is the one that they walk four miles to get a drink, rather than get a drink out of it.

You don't have any further information on this well in Section 21?

A No, sir. There is a well which is on the same 40-acre tract, I assume, it looks within 200 or 300 feet, it had been abandoned in the field and was drilled some years ago. I found a reference to that well in this Geology and Groundwater Conditions in Southern Lea County, which doesn't give any technical information at all, except that the well had been drilled and abandoned, and they couldn't even say who the well had been drilled by.

Q That is the one that is immediately east of the West Teas Pool?

A No, sir, it is in the West Teas Pool. I have no reference to it in here, because there was no -- well, there is no information that is of any value on that particular well. It is on page 75 of the book, and it does not even state who the owner is.

Pardon me, you are right, it is to the east of the pool, and then there is another well.

Q That would be the well in Section 15 of 20-33?

A Yes, sir.

Q Shown as being 336 feet to the water level?

A Right. And we can't find any indication of that at all.

There is another one in Section 16 that has been plugged that we can find nothing except that it had been plugged.

Q However, the well that is shown on the Lea County Water Study Map in Section 15 is a triassic well, isn't it?

A It would be, yes, it would have to be at that depth.

Q Now, structurally, where is the well in Section 21 as related to the pits?

A Structurally, it would be just -- well, it would be possibly down dip. One would be down dip, and the other would be up dip. They are almost on strike.

Q You have no information as to the depth of the well, except that it's considered to be a quaternary well?

A No, sir, we have a depth of 52 feet on that.

Q Then there are some fresh water wells in the quaternary over at Halfway, and one down at the Bingham Ranch in Section 36?

A Yes, sir.

Q What is the status of the two wells shown in the northwest quarter of Section 25, in between the Bingham Ranch and Halfway?

A I understand those are presently being produced today, they were both being used for stock wells, now.

Q You don't have an analysis of the water on those?

A No, sir, I don't.

MR. NUTTER: I believe that is all.

MR. PORTER: Does anyone else have a question of Mr. Schram?

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Schram, do you know what the ranches are doing for stock water in this area?

A What little water they are producing is shown on the maps. Outside of that, they have to haul it or --

Q Are some of them getting it from a pipeline?

A Yes, sir, there are pipelines. Now, I'm not familiar with that part of it, except that I do know that some of the ranches are getting that water from those pipelines that go to the potash mines, I believe.

MR. PORTER: Mr. Schram, one of your exhibits here indicated that you had talked to at least one of the ranchers in the area, and I was going to ask you what his comments were in regard to your efforts to find fresh water in the area, and so forth.

THE WITNESS: I have not talked, personally talked to any of the ranchers, myself. However, the people that went out and actually obtained the water samples did talk to them. I have, in fact, to the west, oh, approximately ten miles,

drilled, I guess, a half a dozen wells looking for water with cable tools, and there is no water.

MR. PORTER: This was in connection with your attempts to develop some oil acreage?

THE WITNESS: This was in the development of an oil field approximately ten miles to the west.

MR. PORTER: Any further questions of the witness? You may be excused.

MR. KELLAHIN: That's all we have, Mr. Porter.

MR. PORTER: Does anyone have any further testimony to offer in the case, or any statements you would like to make? The Commission will take the case under advisement.

I N D E X

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EXHIBITS	MARKED	OFFERED AND ADMITTED
Applicant's Exhibit Number 1, a multi-page document	2	16

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.

COURT REPORTER

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

March 3, 1969

Re: Case No. 4022
Order No. R-3683
Applicant:
Ernest A. Hanson

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

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 x
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. 4022
Order No. R-3683

APPLICATION OF ERNEST A. HANSON
FOR AN EXCEPTION TO ORDER NO.
R-3221, AS AMENDED, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 15, 1969, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 28th day of February, 1969, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Ernest A. Hanson, is the owner and operator of the Atlantic State Well No. 1, located in Unit C of Section 16, Township 20 South, Range 33 East, NMPM West Teas Yates-Seven Rivers Pool, Lea County, New Mexico.

(3) That effective January 1, 1969, Order (3) of Commission Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any

other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks an exception to the provisions of the aforesaid Order (3) to permit the continued disposal of salt water produced by the aforesaid Atlantic State Well No. 1 in an unlined surface pit located in Unit C of said Section 16.

(7) That there are 5 producing shallow water wells located approximately 3 3/4 to 4 1/4 miles to the southwest of the subject pit.

(8) That there is an abandoned shallow water well, the water from which was reported as too salty for cattle to drink, approximately 3 1/2 miles to the northwest of the subject pit.

(9) That there is an abandoned shallow water well, the water from which was reported as too gypseous for cattle to drink, approximately 1 1/2 miles to the north of the subject pit.

(10) That there is an abandoned shallow water well, the water from which was reported as of poor quality, approximately one mile south-southwest of the subject pit.

(11) That the surface and subsurface drainage appears to be in a westerly direction from the subject pit toward a salt lake, known as Laguna Gatuna, located approximately 1 1/8 miles west of the subject pit.

(12) That there appears to be no water in the vicinity of the subject pit for which a present or reasonably foreseeable beneficial use is or will be made that would be impaired by contamination from said pit.

(13) That the applicant should be permitted to continue to dispose of salt water, produced by applicant's said Atlantic State Well No. 1, in the above-described unlined surface pit.

IT IS THEREFORE ORDERED:

(1) That the applicant, Ernest A. Hanson, is hereby granted an exception to Order (3) of Commission Order No. R-3221, as amended, to continue to dispose of water produced in conjunction with the production of oil or gas, or both, by his Atlantic State Well No. 1, located in Unit C of Section 16, Township 20 South, Range 33 East, NMPM, West Teas Yates-Seven Rivers Pool, Lea County, New Mexico, in the unlined surface pit located in said Unit C until further order of the Commission.

(2) That the Commission may by administrative order rescind such authority whenever it reasonably appears to the Commission that such rescission would serve to protect fresh water supplies from contamination.

(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 NEW MEXICO
OIL CONSERVATION COMMISSION

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Member

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

esr/

Docket No. 2-69

DOCKET: REGULAR HEARING - WEDNESDAY - JANUARY 15, 1969

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

ALLOWABLE: (1) Consideration of the oil allowable for February, 1969;

(2) Consideration of the allowable production of gas for February, 1969, from thirteen prorated pools in Lea, Eddy and Roosevelt 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 February, 1969.

CASE 3996: (Continued from the December 18, 1968, Regular Hearing) Application of Martin Yates, III, for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's Cordie King Well No. 1 located in Unit L of Section 22, Township 23 South, Range 26 East, Dark Canyon (Delaware) Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located in the aforesaid quarter-quarter section.

CASE 4021: Application of Charles B. Read for an exception to Order No. R-3221, as amended, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's well located in Unit J of Section 16, Township 20 South, Range 35 East, West Teas Tates-Seven Rivers Pool, Lea County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located in the aforesaid Unit J.

CASE 4022: Application of Ernest A. Hanson for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's Atlantic State Well No. 1 located in Unit I of Section 16, Township 20 South, Range 33 East, West Teas Yates-Seven Rivers Pool, Lea County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located in the aforesaid Unit I.

CASE 4023: Application of Ernest A. Hanson 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 1994 feet to 2178 feet in his Welch Federal Well No. 2 located 1650 feet from the North line and 2310 feet from the West line of Section 22, Township 19 South, Range 28 East, East Millman Queen-Grayburg Pool, Eddy County, New Mexico.

CASE 4024: Application of J. S. Welch for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's wells located in Section 27, Township 18 South, Range 31 East, Shugart Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in unlined surface pits located in said Section 27. In the alternative, applicant seeks a temporary extension of at least six months in which to comply with the provisions of said order.

CASE 4025: Application of Ralph Lowe for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's leases in Sections 8, 17, and 18, Township 25 South, Range 36 East, Turkey Track Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in three unlined surface pits located in Sections 8, 17 and 18.

CASE 4026: Application of Fred Pool Drilling Company for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's leases located in Sections 8 and 9, Township 25 South, Range 30 East, Corral Canyon-Delaware Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in three unlined surface pits located in the SW/4 NW/4 and the SE/4 SE/4 of said Section 8, and the SW/4 SW/4 of said Section 9.

CASE 4027: Application of MacDonald Oil Corporation for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for the applicant's Sinclair Parke Well No. 1 located in Unit F of Section 22, Township 17 South, Range 30 East, Jackson Abo Pool, Eddy County, New Mexico. Applicant seeks authority to continue to dispose of produced salt water in an unlined surface pit located in the aforesaid Unit F.

CASE 4028: Southeastern nomenclature case calling for an order for the creation, extension and abolishment of certain pools in Lea, Chaves, Roosevelt and Eddy Counties, New Mexico.

(a) Create a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the Siete-San Andres Pool. The discovery well is the H. L. Brown, Jr. Federal "M" Well No. 1 located in Unit F of Section 17, Township 8 South, Range 31 East, NMPM. Said pool should comprise the following-described area:

TOWNSHIP 8 SOUTH, RANGE 31 EAST, NMPM
Section 17: SE/4

(Case 4028 continued)

(b) Create a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Vacuum Morrow Gas Pool. The discovery well is Phillips Petroleum Company, Lea No. 23 located in Unit P of Section 30, Township 17 South, Range 34 East, NMPM. Said pool should comprise the following-described area:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 30: E/2

(c) Create a new pool in Lea County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Wilson-Wolfcamp Gas Pool. The discovery well is Phillips Petroleum Company, Wilson "J" No. 1 located in Unit O of Section 5, Township 21 South, Range 35 East, NMPM. Said pool should comprise the following-described area:

TOWNSHIP 21 SOUTH, RANGE 35 EAST, NMPM
Section 5: Lots 9, 10, 15 and 16

(d) Extend the Middle Allison-Pennsylvanian Pool in Lea and Roosevelt Counties, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 36 EAST, NMPM
Section 33: SW/4

TOWNSHIP 9 SOUTH, RANGE 35 EAST, NMPM
Section 1: SE/4

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM
Section 4: SE/4
Section 6: All

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

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
Section 7: SE/4
Section 30: NW/4
Section 32: SE/4

(f) Extend the Cerca-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 34 EAST, NMPM
Section 33: SE/4

(g) Extend the Flying "M" Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
Section 10: SW/4

(h) Extend the Teague-Blinebry Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 37 EAST, NMPM
Section 20: NE/4

(i) Abolish the East Inbe-Pennsylvanian Pool in Lea County, New Mexico, described as:

TOWNSHIP 10 SOUTH, RANGE 34 EAST, NMPM
Section 30: SW/4

(j) Extend the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 34 EAST, NMPM
Section 22: NW/4

TOWNSHIP 10 SOUTH, RANGE 33 EAST, NMPM
Section 25: E/2
Section 36: N/2

TOWNSHIP 10 SOUTH, RANGE 34 EAST, NMPM
Section 9: W/2
Section 16: NW/4
Section 19: S/2
Section 30: S/2

(k) Extend the Tobe-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 33 EAST, NMPM
Section 25: W/2
Section 36: SE/4

TOWNSHIP 11 SOUTH, RANGE 34 EAST, NMPM
Section 4: Lots 1, 2, and 3, E/2 SW/4, and SE/4

(l) Extend the vertical limits of South Hope Strawn gas pool to include all of the Pennsylvanian formation and redesignate said pool as the South Hope-Pennsylvanian Pool; extend the horizontal limits of said South Hope-Pennsylvanian gas pool to include therein:

TOWNSHIP 18 SOUTH, RANGE 23 EAST, NMPM
Section 19: All

CASE NO. 4021

and

CASE NO. 4022

APPLICATIONS OF ERNEST A. HANSON AND CHARLES B. READ FOR AN EXCEPTION TO ORDER NO. R-3221, AS AMENDED, LEA COUNTY, NEW MEXICO

Applicants, in the above-styled cause, seek an exception to the provisions of Oil Conservation Commission Order No. R-3221, as amended, to permit the continued use of unlined surface pits for disposal of produced water in the West Teas-Yates-Seven Rivers Pool, Lea County, New Mexico.

THE FOLLOWING EXHIBITS ARE IN SUPPORT OF THIS APPLICATION.

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Exhibit No. 4	Well Data - West Teas Pool
Exhibit No. 5-A	Water Analysis - Hanson #1 Atlantic State
Exhibit No. 5-B	Water Analysis - Read #1 Snyder
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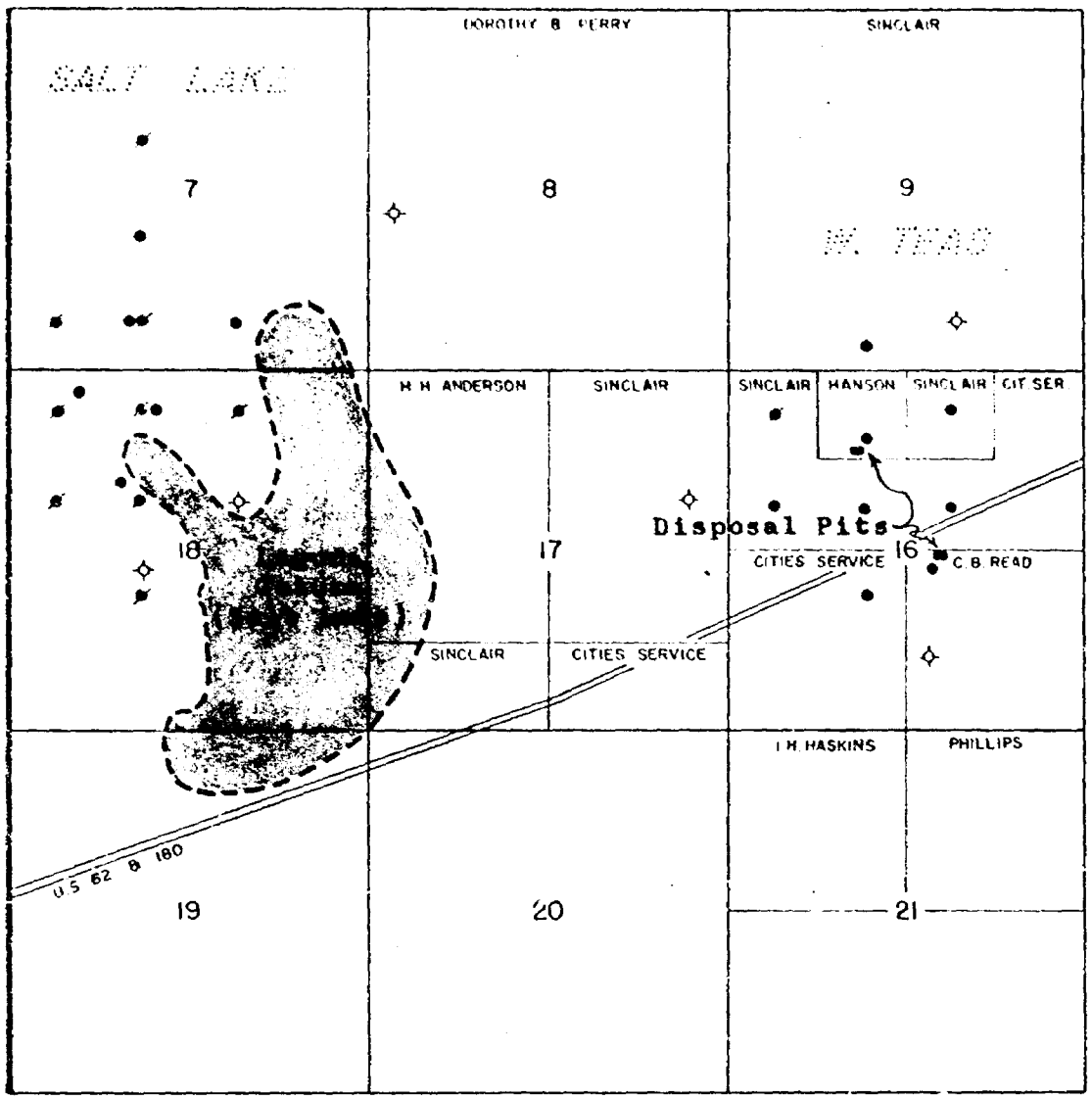
Exhibit No. 6-D	Water Analysis - Bingham Well (21-20-33)
Exhibit No. 6-E	Water Analysis - Three Wells (4-20-33)
Exhibit No. 6-F	Water Analysis - Bass Water Well (18-20-33)
Exhibit No. 7	Water Well Location Map

R - 33 - E



T
20
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EXHIBIT NO. 1

West Teas Pool
T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

LOCATION MAP

Scale: 2 Inches = 1 Mile
Date: January, 1969

R - 33 - E

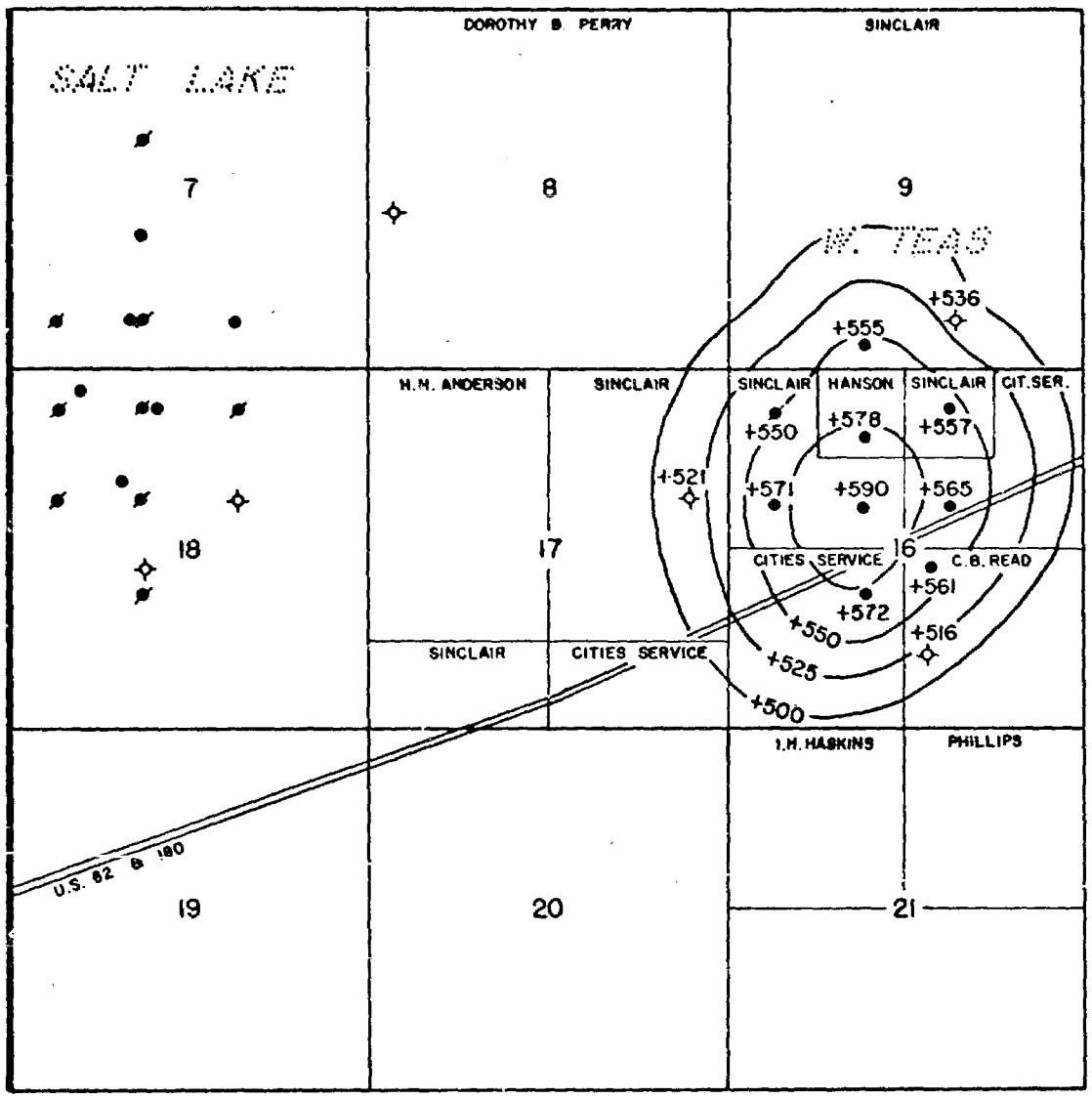

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EXHIBIT NO. 2

STRUCTURE CONTOUR MAP

West Teas Pool
T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

Contour Datum: Top of Yates Fm.
Contour Interval: 25 Feet
Scale: 2 Inches = 1 Mile
Date: January, 1969

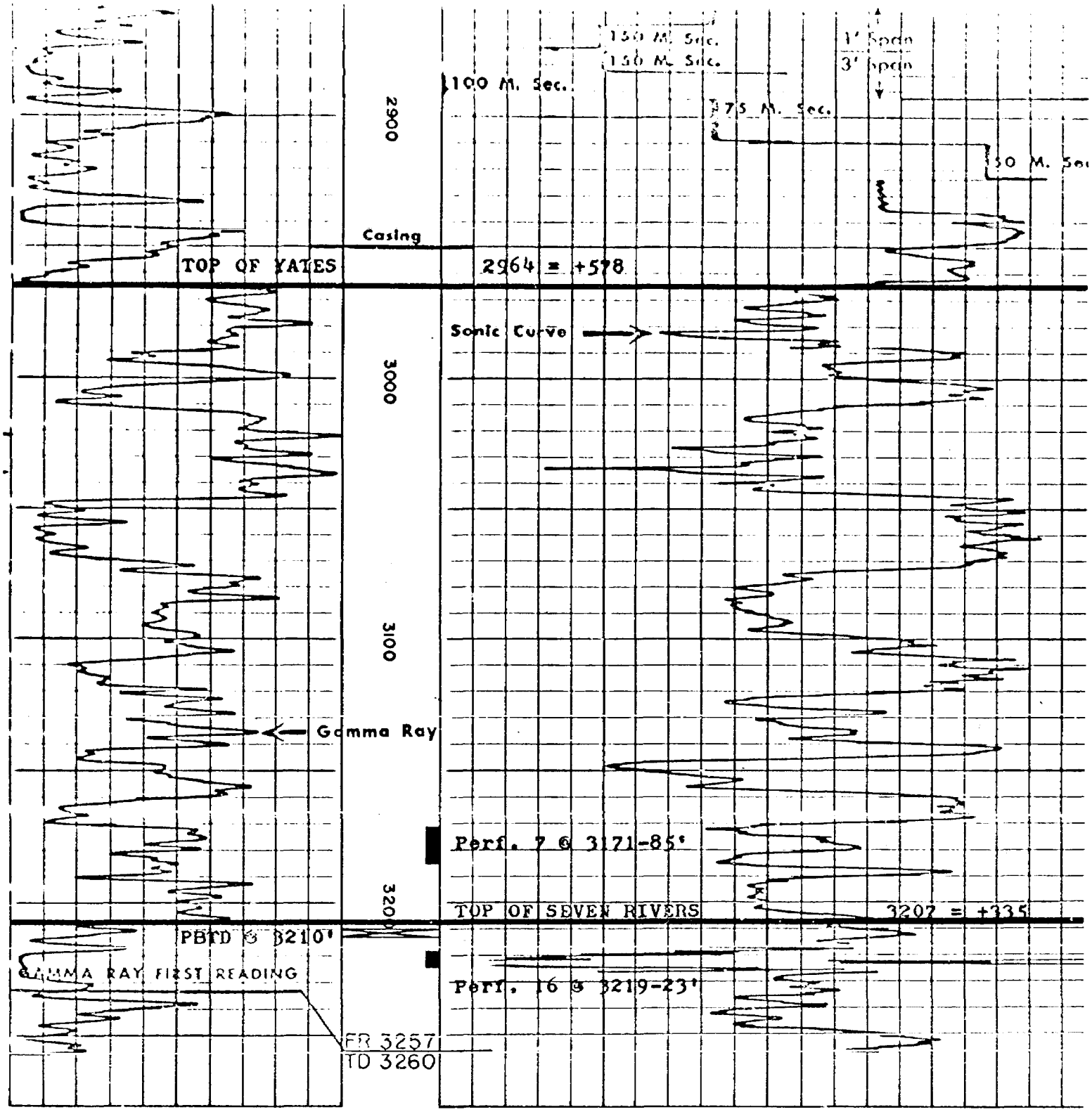


EXHIBIT NO. 3

Gamma Ray - Sonic Log
Ernest A. Hanson - #1 Atlantic State
990' FNL & 1980' FWL
Sec. 16, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

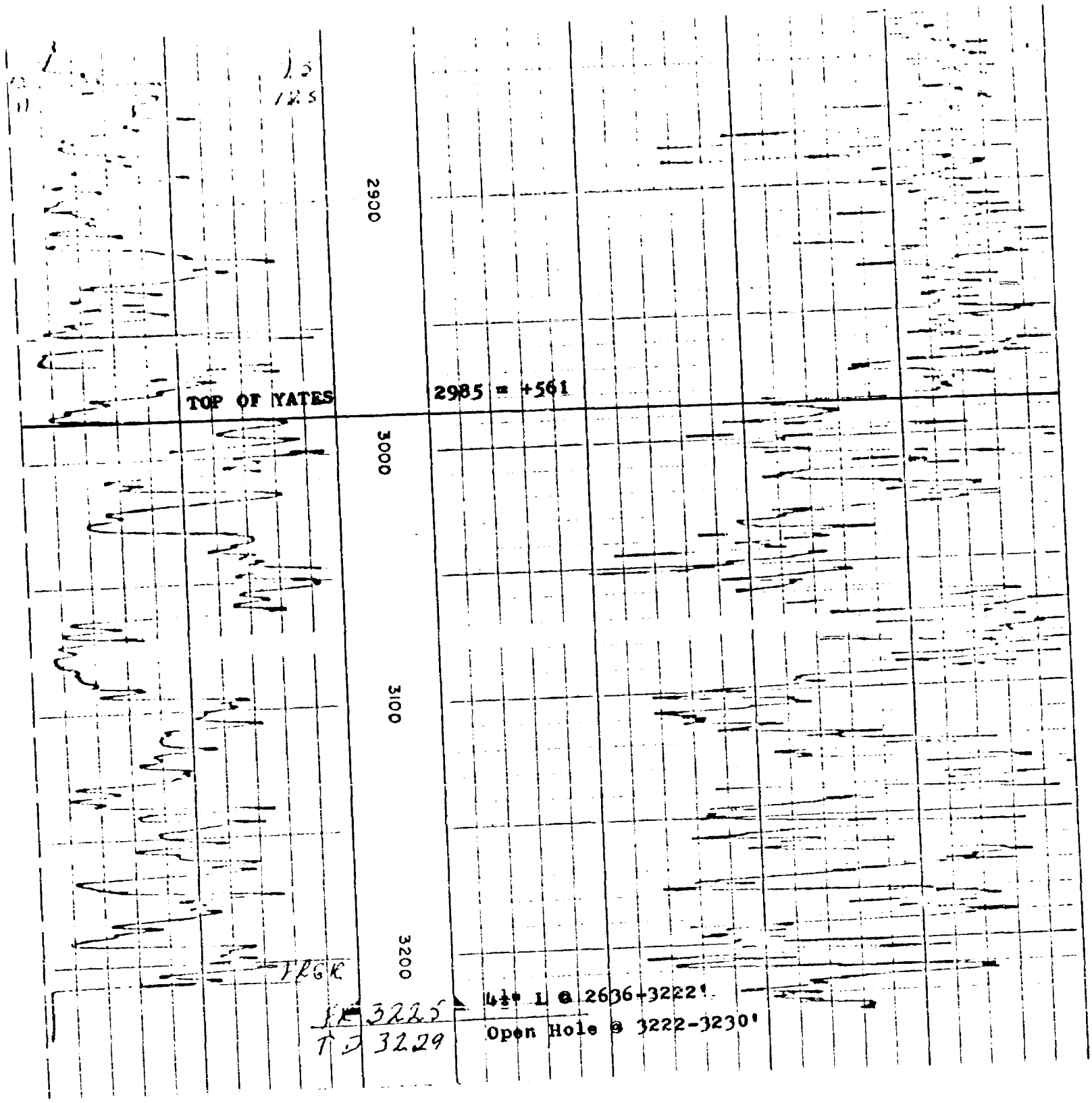


EXHIBIT NO. 3-A

Gamma Ray - Sonic Log
Charles B. Read - #1 Snyder
2310' FSL & FEL
Sec. 16, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

SAMPLE NO._____

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

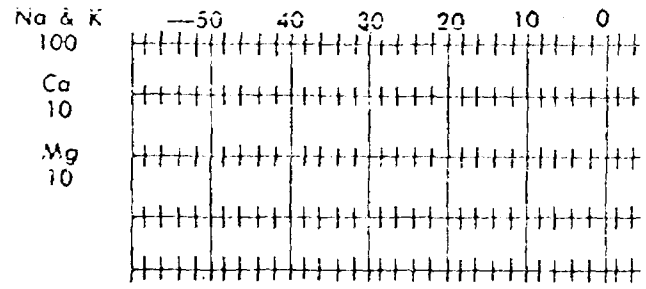
Operator	Hanson Oil Company	Date Sampled	5-10-68
Well	Atlantic State #1	Date Received	5-14-68
Field	Salt Lake	Submitted by	Hobbs District
Formation	Yates	Worked by	Jones
Depth	3171 - 3185'	Other Description	
County	Lea, New Mexico		

CHEMICAL DETERMINATIONS

Density	1.010 @ 76°F	pH	7.0
Iron	Very Faint Trace	Hydrogen Sulfide	Very Strong Trace
Sodium and Potassium	4,540 ppm	Bicarbonate	1,086 ppm
Calcium	800 ppm	Sulfate	2,840 ppm
Magnesium	316 ppm	Phosphate	ppm
Chloride	6,800 ppm	as Sodium Chloride	ppm

Remarks:

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



Per

EXHIBIT NO. 5-A

WATER ANALYSIS

Hanson - #1 Atlantic State
Sec. 16, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

1342-A

HALLIBURTON DIVISION LABORATORY
HALLIBURTON COMPANY
MIDLAND DIVISION

LABORATORY WATER ANALYSIS

No. WI-554-68

To Charles B. Read

Fox 2120

Roswell, New Mexico 88201

Date September 5, 1968

Submitted by _____ Date Rec. 8-30-68

Well No. _____ Depth _____ Formation _____

County _____ Field Lynch Source _____

	Humble St. #1	Sinclair St. #1	Snyder #1
Resistivity	.642 @ 71 F	.510 @ 71 F	.644 @ 76 F
Specific Gravity	1.005	1.006	1.004
pH	6.0	6.7	6.2
Calcium (Ca)			*MPL
Magnesium (Mg)			
Chlorides (Cl)	5,500	7,000	5,500
Sulfates (SO_4)	1,750	1,400	1,340
Bicarbonates (HCO_3)			
Soluble Iron (Fe)			

cc: Mr. Gene Snow
606 South 13.
Lovington, N M

Remarks:

*Milligrams per liter

Respectfull

Analyst: Frank Whitfield
cc:

NO

EXHIBIT NO. 5-B

WATER ANALYSIS

Read - #1 Snyder
Sec. 16, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

KE-TONE

UNITED CHEMICAL CORPORATION
OF NEW MEXICO
601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company R. F. Montgomery, et al

Field

Lease Brooks I-7-3 Sampling Date 9/19/68

Type of Sample Wellhead

WATER ANALYSIS Unit O 7-20-33

IONIC FORM	me/l *	mg/l *
Calcium (Ca++)	45.91	920
Magnesium (Mg++)	32.24	392
Sodium (Na+) (cal.)	184.81	4249
Bicarbonate (HCO_3^-)	7.40	451
Carbonate (CO_3^-)	NOT	FOUND
Hydroxide (OH^-)	NOT	FOUND
Sulphate (SO_4^-)	66.62	3200
Chloride (Cl^-)	188.94	6700
7.8 ph c @ 68 °F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as Ca CO_3	78.15	3908
Carbonate Hardness as $CaCO_3$ (temporary)	7.40	370
Non-Carbonate Hardness as $CaCO_3$ (permanent)	70.75	3538
Alkalinity as $CaCO_3$	7.40	370
Specific Gravity c 68° F	1.010	

* mg/l = milligrams per Liter
* me/l = milliequivalents per Liter

EXHIBIT NO. 5-C

WATER ANALYSIS

Minerals, Inc. - #1 Bass
Sec. 18, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

KE-TONE®

UNITED CHEMICAL CORPORATION
OF NEW MEXICO
601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Minerals, Incorporated

Field

Lease Bass #2 Sampling Date 9/19/68

Type of Sample Wellhead

WATER ANALYSIS F 18-20-33

IONIC FORM	me/l *	mg/l *
Calcium (Ca++)	51.90	1040
Magnesium (Mg++)	32.24	392
Sodium (Na+) (cal.)	177.10	4072
Bicarbonate (HCO_3^-)	13.40	817
Carbonate (CO_3^{--})	NOT	FOUND
Hydroxide (OH^-)	NOT	FOUND
Sulphate (SO_4^{--})	64.54	3100
Chloride (Cl-)	183.30	6500
6.9 ph c @ 68 °F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as $CaCO_3$	84.14	4207
Carbonate Hardness as $CaCO_3$ (temporary)	13.40	670
Non-Carbonate Hardness as $CaCO_3$ (permanent)	70.74	3537
Alkalinity as $CaCO_3$	13.40	670
Specific Gravity c 68° F	1.010	

* mg/l = milligrams per Liter
* me/l = milliequivalents per Liter

EXHIBIT NO. 5-D

WATER ANALYSIS

Minerals, Inc. - #2 Bass
Sec. 18, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

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P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Minerals, Incorporated

Field

Lease Bass #1 Sampling Date 9/19/68

Type of Sample Wellhead

WATER ANALYSIS C 18-20-33

IONIC FORM	me/l *	mg/l **
Calcium (Ca++)	43.91	880
Magnesium (Mg++)	32.24	392
Sodium (Na+) (cal.)	180.70	4154
Bicarbonate (HCO_3^-)	16.60	1012
Carbonate (CO_3^{--})	NOT	FOUND
Hydroxide (OH^-)	NOT	FOUND
Sulphate (SO_4^{--})	54.13	2600
Chloride (Cl^-)	186.12	6600
6.9 pH @ 68 °F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as $CaCO_3$	76.15	3808
Carbonate Hardness as $CaCO_3$ (temporary)	16.60	830
Non-Carbonate Hardness as $CaCO_3$ (permanent)	59.55	2978
Alkalinity as $CaCO_3$	16.60	830
Specific Gravity @ 68° F	1.010	

* me/l = milli-grams per liter
** mg/l = milli-equivalents per liter

EXHIBIT NO. 5-E

WATER ANALYSIS

Minerals, Inc. - #3 Bass
Sec. 18, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

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UNITED CHEMICAL CORPORATION
OF NEW MEXICO

601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Minerals, Incorporated

Field Salt Lake Field

Lease Bass #3 Sampling Date 10/24/68

Type of Sample

WATER ANALYSIS

IONIC FORM	me/l *	mg/l *
Calcium (Ca++)	65.77	1318
Magnesium (Mg++)	53.13	646
Sodium (Na+) (cal.)	728.10	16,739
Bicarbonate (HCO_3^-)	19.57	1194
Carbonate (CO_3^{--})	NOT	FOUND
Hydroxide (OH^-)	NOT	FOUND
Sulphate (SO_4^{--})	115.80	5562
Chloride (Cl^-)	711.63	25,235
6.7 ph c @ 68 °F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as $CaCO_3$	118.90	5945
Carbonate Hardness as $CaCO_3$ (temporary)	19.57	979
Non-Carbonate Hardness as $CaCO_3$ (permanent)	99.33	4967
Alkalinity as $CaCO_3$	19.57	979
Specific Gravity c 68° F	1.030	

* mg/l = milligrams per Liter
* me/l = milli-equivalents per Liter

EXHIBIT NO. 5-F

WATER ANALYSIS

R. F. Montgomery - #3 Brooks "7"
Sec. 7, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

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OF NEW MEXICO
601 NORTH LEECH
P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company R. F. Montgomery, et al

Field

Lease Brooks T-7-4 Sampling Date 9/19/68

Type of Sample Wellhead

WATER ANALYSIS K. 7-20-33

IONIC FORM	me/l *	mg/l *
Calcium (Ca++)	36.93	740
Magnesium (Mg++)	27.63	336
Sodium (Na+) (cal.)	169.67	3901
Bicarbonate (HCO_3^-)	21.00	1281
Carbonate ($CO_3^=$)	NOT	FOUND
Hydroxide (OH^-)	NOT	FOUND
Sulphate ($SO_4^=$)	46.85	2250
Chloride (Cl^-)	166.38	5900
6.6 pH @ 68 F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as $CaCO_3$	64.56	3228
Carbonate Hardness as $CaCO_3$ (temporary)	21.00	1050
Non-Carbonate Hardness as $CaCO_3$ (permanent)	43.56	2178
Alkalinity as $CaCO_3$	21.00	1050
Specific Gravity @ 68° F	1.005	

* mg/l = milligrams per liter
* me/l = milliequivalents per Liter

EXHIBIT NO. 5-G

WATER ANALYSIS

R. F. Montgomery - #4 Brooks "7"
Sec. 7, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

RE-TONE

UNITED CHEMICAL CORPORATION
OF NEW MEXICO

601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company R. F. Montgomery, et al

Field

Lease Brooks T-7-6 Sampling Date 9/19/68

Type of Sample Wellhead

WATER ANALYSIS Unit N 7-20-33

IONIC FORM	mg/l *	me/l *
Calcium (Ca++)	34.93	700
Magnesium (Mg++)	27.63	336
Sodium (Na+) (cal.)	163.29	3754
Bicarbonate (HCO_3)	26.59	1622
Carbonate (CO_3 --)	NOT	FOUND
Hydroxide (OH-)	NOT	FOUND
Sulphate (SO_4 --)	38.52	1850
Chloride (Cl-)	160.74	5700
6.7 ph @ 68 °F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as $CaCO_3$	62.56	3128
Carbonate Hardness as $CaCO_3$ (temporary)	26.56	1330
Non-Carbonate Hardness as $CaCO_3$ (permanent)	36.00	1800
Alkalinity as $CaCO_3$	26.56	1330
Specific Gravity @ 68° F	1.005	

* mg/l = milligrams per Liter
* me/l = milliequivalents per Liter

EXHIBIT NO. 5-H

WATER ANALYSIS

R. F. Montgomery - #6 Brooks "7"
Sec. 7, T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

EXHIBIT NO. 6-A

WATER WELL INFORMATION

T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

Township-20-South, Range-33-East

Sec. 4 $SW\frac{1}{4}NW\frac{1}{4}SE\frac{1}{4}$ Quaternary
T. D. 58'. ABANDONED STOCK. Rancher states water was gypy and cattle would walk greater distance to another water source.

Sec. 5 $SW\frac{1}{4}SE\frac{1}{4}SW\frac{1}{4}$ Triassic
T. D. 680'. COMMERCIAL - was used for oil well drilling.

Sec. 18 $NE\frac{1}{4}NW\frac{1}{4}$ Triassic
T. D. 450' (approx). ABANDONED. Well was reportedly drilled in 1942 and water was not potable. Used only for washing in old oil field camp.

Sec. 21 $NW\frac{1}{4}NW\frac{1}{4}NW\frac{1}{4}$ Quaternary
T. D. 52'. ABANDONED STOCK.

Sec. 24 $SE\frac{1}{4}NE\frac{1}{4}NW\frac{1}{4}$ Triassic
T. D. 676'. STOCK.

Township-20-South, Range-32-East

Sec. 1 $SW\frac{1}{4}NW\frac{1}{4}SW\frac{1}{4}$ Quaternary
No T. D. recorded. NON-PRODUCING. Rancher states well was too salty for cattle to drink.

Sec. 23 $SW\frac{1}{4}SW\frac{1}{4}SE\frac{1}{4}$ Quaternary (2 wells)
T. D. DOMESTIC AND STOCK. These wells are approx. 2 miles from salt lake being used for surface disposal.

Sec. 25 $NW\frac{1}{4}NW\frac{1}{4}NW\frac{1}{4}$ Quaternary (2 wells)
T. D. 65' (2 wells) Both STOCK.

Sec. 36 $SW\frac{1}{4}NE\frac{1}{4}NE\frac{1}{4}$ Quaternary (3 wells)
T. D. 50'. STOCK AND DOMESTIC.
T. D. 65'. ABANDONED.
T. D. 80'. NON-PRODUCING.

TELEPHONE: HOBBS 393-6215

KE-TONE

UNITED CHEMICAL CORPORATION
OF NEW MEXICO

601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Minerals, Incorporated

Field

Lease Salt Lake Sampling Date 9/19/68

Type of Sample

WATER ANALYSIS Sec. 7,18 T20S R33E

IONIC FORM	mg/l *	mval/l *
Calcium (Ca^{++})	9.98	200
Magnesium (Mg^{++})	1667.17	20,272
Sodium (Na^{+}) (cal.)	5395.75	124,048
Bicarbonate (HCO_3^-)	14.80	902
Carbonate (CO_3^{--})	NOT	FOUND
Hydroxide (OH^-)	NOT	FOUND
Sulphate (SO_4^{--})	2602.50	125,000
Chloride (Cl^-)	4455.60	156,000
7.7 ph c @ 68 °F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as $CaCO_3$	1677.15	83,858
Carbonate Hardness as $CaCO_3$ (temporary)	14.80	740
Non-Carbonate Hardness as $CaCO_3$ (permanent)	1662.35	83,118
Alkalinity as $CaCO_3$	14.80	740
Specific Gravity c 68° F	1.250+	

* mg/l = milligrams per liter
* mval/l = milliequivalents per Liter

EXHIBIT NO. 6-B

LAGUNA GATUNA WATER ANALYSIS

Sec. 7 & 18, T-20-S, R-33-E
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

UNITED CHEMICAL CORPORATION
OF NEW MEXICO
601 NORTH LEECH
P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Minerals, Incorporated

Field Salt Lake Field

Lease Salt Springs Sampling Date 10/24/68

Type of Sample

WATER ANALYSIS

IONIC FORM		me/l*	mg/l*
Calcium (Ca++)		27.59	553
Magnesium (Mg++)		586.62	7133
Sodium (Na+)	(cal.)	2389.29	54,930
Bicarbonate (HCO3-)		4.80	292
Carbonate (CO3--)		7.60	228
Hydroxide (OH-)		NOT	FOUND
Sulphate (SO4--)		1532.14	73,590
Chloride (Cl-)		1458.96	51,736
8.4 ph c @ 68 °F			
Dissolved Solids on Evap. at 103° - 105° C			
Hardness as Ca CO3		614.21	30,711
Carbonate Hardness as CaCO3 (temporary)		12.40	620
Non-Carbonate Hardness as CaCO3 (permanent)		601.81	30,091
Alkalinity as CaCO3		12.40	620
Specific Gravity c 68° F		1.115	

* mg/l = milligrams per liter
* me/l = milliequivalents per liter

EXHIBIT NO. 6-C

SALT SPRINGS WATER ANALYSIS

SW¼NE¼, Sec. 19, T-20-S, R-33-E
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

UNITED CHEMICAL CORPORATION
OF NEW MEXICO
601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Minerals, Incorporated

Field Salt Lake Field

Lease Bingham Well Sampling Date 10/24/68

Type of Sample NW¼ NW¼ NW¼ 21-20-33

WATER ANALYSIS

IONIC FORM		meq/l *	mg/l *
Calcium (Ca++)		19.86	398
Magnesium (Mg++)		17.19	209
Sodium (Na+)	(cal.)	84.21	1936
Bicarbonate (HCO_3^-)		3.21	196
Carbonate (CO_3^{--})		NOT	FOUND
Hydroxide (OH^-)		NOT	FOUND
Sulphate (SO_4^{--})		18.84	905
Chloride (Cl^-)		99.21	3518
7.5 pH @ 68 °F			
Dissolved Solids on Evap. at 103° - 105° C			
Hardness as $CaCO_3$		37.05	1853
Carbonate Hardness as $CaCO_3$ (temporary)		3.21	161
Non-Carbonate Hardness as $CaCO_3$ (permanent)		33.84	1692
Alkalinity as $CaCO_3$		3.21	161
Specific Gravity @ 68° F		1.005	

EXHIBIT NO. 6-D

BINGHAM WELL WATER ANALYSIS

NW¼NW¼NW¼, Sec. 21, T-20-S, R-33-E
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

RE-TONE

UNITED CHEMICAL CORPORATION
OF NEW MEXICO
601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Minerals, Incorporated

Field Salt Lake Field

Lease Well #3 Wells Sampling Date 10/24/68

Type of Sample

WATER ANALYSIS

IONIC FORM		meq/l	mg/l
Calcium (Ca++		21.61	433
Magnesium (Mg		122.37	1488
Sodium (Na+	(cal.)	561.94	12,919
Bicarbonate (HCO_3^-)		4.60	286
Carbonate (CO_3^{--})		0.80	24
Hydroxide (OH-)		NOT	FOUND
Sulphate (SO_4^{--})		334.54	16,068
Chloride (Cl-)		365.98	12,978
8.3 ph c @ 68 °F			
Dissolved Solids on Evap. at 103° - 105° C			
Hardness as Ca CO_3		143.98	7199
Carbonate Hardness as $CaCO_3$ (temporary)		5.40	270
Non-Carbonate Hardness as $CaCO_3$ (permanent)		138.58	6929
Alkalinity as $CaCO_3$		5.40	270
Specific Gravity c 68° F		1.030	

EXHIBIT NO. 6-E

THREE WELLS WATER ANALYSIS

NW¼SE¼, Sec. 4, T-20-S, R-33-E
Lea County, New Mexico

TELEPHONE: HOBBS 393-6215

UNITED CHEMICAL CORPORATION
OF NEW MEXICO
601 NORTH LEECH P. O. BOX 1499
HOBBS, NEW MEXICO 88240

Company Minerals, Incorporated

Field Salt Lake

Lease Bass #1 Water Well Sampling Date 11/4/68

Type of Sample 18-20S-33E

WATER ANALYSIS

IONIC FORM	mg/l	m.e./l
Calcium (Ca^{++})	59.33	1939
Magnesium (Mg^{++})	105.68	1295
Sodium (Na^{+}) (calculated)	508.85	11.698
Iron		212
Bicarbonate (HCO_3^{-})	0.20	12
Carbonate (CO_3^{--})		Not Found
Hydroxide (OH^{-})		Not Found
Sulphate (SO_4^{--})	81.09	3895
Chloride (Cl^{-})	592.57	(21,013)
5.9 ph @ 68 F		
Dissolved Solids on Evap. at 103° - 105° C		
Hardness as $CaCO_3$	165.01	9251
Carbonate Hardness as $CaCO_3$ (temporary)	0.20	10
Non Carbonate Hardness as $CaCO_3$ (permanent)	164.81	8241
Alkalinity as $CaCO_3$	0.20	10
Specific Gravity @ 68° F 1.025		

Calcium Carbonate Scaling Index - Negative at 86°F
Calcium Sulfate Scaling Index - Negative

EXHIBIT NO. 6-F

BASS WATER WELLS
WATER ANALYSIS

Sec. 18, T-20-S, R-33-E
Lea County, New Mexico

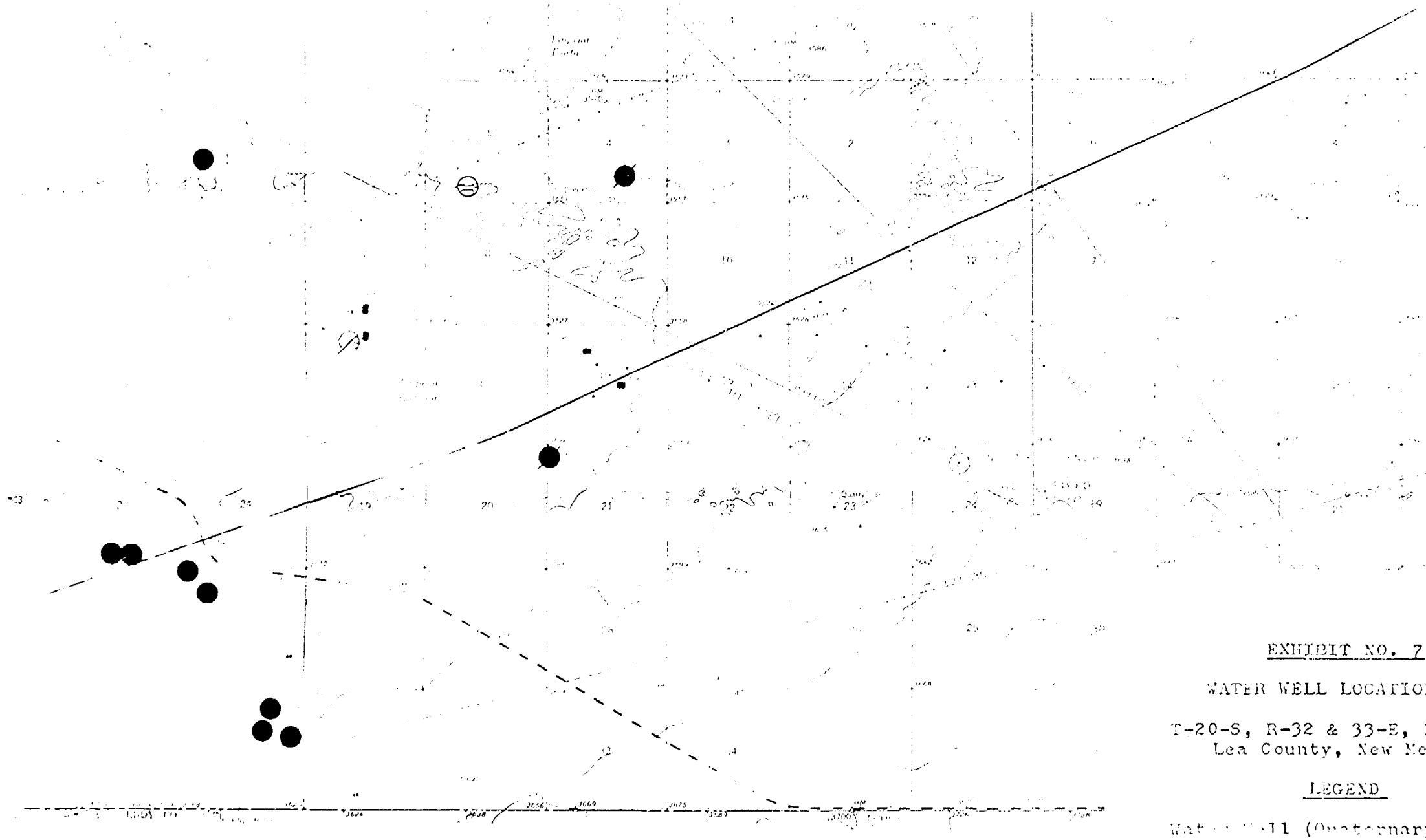

EXHIBIT NO. 7

WATER WELL LOCATION MAP

T-20-S, R-32 & 33-E, N.M.P.M.
Lea County, New Mexico

LEGEND

Water Well (Quaternary) ○

Water Well (Triassic) ◔

Disposal ▭

Water Well ◑

EXHIBIT NO. 4

WELL DATA

West Teas Pool
T-20-S, R-33-E, N.M.P.M.
Lea County, New Mexico

NAME	LOCATION	COMPLETE	DEPTH	CASING	PROD. FM.	PROD. DEPTH	TREATMENT	I.P.P.	P&A	ACCUM. PROD.
Sinclair #1 Federal Lea	O- 9-20-33	5- 6-60	3300'	5" L @ 2974-3300'	P&A		SOF 7,000	Dry	5- 6-60	
Sinclair #2 Federal Lea	N- 9-20-33	8-16-63	3350' PB 3310'	5" L @ 2875-3350'	Yates	3180-3196'	SOF 10,000	58 BO + 2 BWPD		84,937
Cities Service #1 State BF	G-16-20-33	7-25-60	3278' PB 3203'	5" L @ 2925-3275'	Yates	3166-3208'	SOF 29,000	51 BO + 39 BWPD		103,242
Cities Service #2 State BF	K-16-20-33	1-31-61	3225' PB 3224'	5" L @ 2898-3225'	Yates	3094-3208'	SOF 10,000	20 BO + 5 BWPD		22,770
Hanson #1 Atlantic State	C-16-20-33	3- 1-61	3260'	4½" @ 3260'	Yates	3171-3185'	SOF 20,000	58 BO + 0 BWPD		78,641
Read #1 Snyder	J-16-20-33	11- 2-64	3230'	4½" L @ 2636-3222'	7-R	3222-3230'	Natural	42 BOPD		67,404
Read #2 Snyder	O-16-20-33	5-17-65	3295'	10-3/4" @ 365'	P&A			Dry	5-17-65	
Sinclair #1 St. Lea 886	F-16-20-33	12- 5-59	3325' PB 3315'	5½" @ 3325'	7-R	3220-3232'	Acid 500	586 BOPD		130,417
Sinclair #2 St. Lea 886	B-16-20-33	4- 4-60	3360' PB 3220'	5" L @ 2895-3274'	Yates	3182-3206'	SOF 4,000	92 BOPD		126,069
Sinclair #3 St. Lea 886	E-16-20-33	4- 8-60	3260' PB 3226'	5" L @ 2901-3260'	Yates	3166-3195'	Acid 500	1632 BOPD		125,516
Sinclair #2 St. Lea 6019	D-16-20-33	5-21-60	3297' PB 3263'	2-7/8"L @ 1028-3297'	Yates	3194-3199'	SOF 1500	47 BO + 31 BWPD	1965	11,861
Byrom #1 Federal 17	H-17-20-33	7-30-62	3286'	7" @ 2944'	P&A			Dry	7-30-62	

Recd 12-7-68

KELLAHIN AND FOX
ATTORNEYS AT LAW
54½ EAST SAN FRANCISCO STREET
POST OFFICE BOX 1769
SANTA FE, NEW MEXICO 87501

JASON W. KELLAHIN
ROBERT E. FOX

TELEPHONE 982-4315
AREA CODE 505

December 5, 1968

Case 4022

New Mexico Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico

George
Note
pl

Re: Application of Ernest A. Hanson for an exception to the provisions of Order No. R-3221, as amended, Lea County, New Mexico

Gentlemen:

Enclosed please find original and two copies of an application in the above matter to be set for hearing.

Very truly yours,

JASON W. KELLAHIN

jwk:peg
Encl. as stated

DOCKET MAILED
Date 12-7-68

BEFORE THE

OIL CONSERVATION COMMISSION OF NEW MEXICO

APPLICATION OF ERNEST A. HANSON FOR AN EXCEPTION TO THE PROVISIONS OF ORDER NO. R-3221, AS AMENDED, LEA COUNTY, NEW MEXICO

Case 5022

A P P L I C A T I O N

Comes now ERNEST A. HANSON and applies to the Oil Conservation Commission of New Mexico for an exception to the provisions of Oil Conservation Commission Order No. R-3221, as amended, to permit the continued use of unlined surface pits for the disposal of produced water in the West Teas-Yates-Seven Rivers Pool, Lea County, New Mexico, and in support thereof would show the Commission:

1. Applicant is the operator of a well producing from the West Teas-Yates-Seven Rivers Pool, designated as the Ernest A. Hanson No. 1 Atlantic State Well, located 990 feet from the North line, and 1980 feet from the West line of Section 16, Township 20 South, Range 33 East, N.M.P.M., Lea County, New Mexico.

2. At the present time water produced in association with oil production is being disposed of in an unlined surface pit located adjacent to said well.

3. Volume of water produced totals approximately 100 barrels per day.

4. Said surface pit is located in the vicinity of a large surface lake, and within the drainage area of said lake, designated as Laguna Gatuna, which lake contains concentrations of chlorides far in excess of the chloride content of water produced from the West Teas-Yates-Seven Rivers Pool.

5. Continued use of said surface pit will not result

in damage to any underground or surface fresh water supply, nor create any possibility of water pollution not already present under natural conditions, and a requirement that said water be disposed of underground or by means other than in a surface pit will cause waste and is not necessary for the protection of any water supply.

THEREFORE, Applicant prays that this application be set for hearing before the Commission or its duly appointed examiner, and that after notice and hearing as required by law, the Commission enter its order granting an exception to the provisions of Order No. R-3221, as amended, to permit continued use of a surface pit for water disposal, as prayed for.

Respectfully submitted,

ERNEST A. HANSON

BY: Jason W. Kellahin

KELLAHIN & FOX
Post Office Box 1769
Santa Fe, New Mexico

ATTORNEYS FOR APPLICANT

DRAFT

GMH/esr
Jan. 24, 1969

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. 4022

Order No. R-3683

APPLICATION OF ERNEST A. HANSON
FOR AN EXCEPTION TO ORDER NO. R-3221,
AS AMENDED, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 15, 1969, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this_____day of January, 1969, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Ernest A. Hanson, is the owner and operator of the Atlantic State Well No. 1, located in Unit C of Section 16, Township 20 South, Range 33 East, NMPM, West Teas Yates-Seven Rivers Pool, Lea County, New Mexico.

(3) That effective January 1, 1969, Order (3) of Commission Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any

other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicant seeks an exception to the provisions of the aforesaid Order (3) to permit the continued disposal of salt water produced by the aforesaid Atlantic State Well No. 1 in an unlined surface pit located in Unit C of said Section 16.

(7) That there are 5 producing shallow water wells located approximately 3 3/4 to 4 1/4 miles to the southwest of the subject pit.

(8) That there is an abandoned shallow water well, the water from which was reported as too salty for cattle to drink, approximately 3 1/2 miles to the northwest of the subject pit.

(9) That there is an abandoned shallow water well, the water from which was reported as too gypseous for cattle to drink, approximately 1 1/4 miles to the north of the subject pit.

(10) That there is an abandoned shallow water well, the water from which was reported as of poor quality approximately one mile south-southwest of the subject pit.

(11) ~~(11)~~ That the surface and subsurface drainage appears to be in a ~~westerly~~ direction from the subject pit toward a salt lake, known as Laguna Gatuna, located approximately ~~1½~~ 1⅛ miles ~~west~~ of the subject pit.

(12) ~~(13)~~ That there appears to be no water ~~within~~ in the ~~immediate area~~ vicinity of the subject pit for which a present or reasonably foreseeable beneficial use is or will be made that would be impaired by contamination from said pit.

(13) ~~(14)~~ That the applicant should be permitted to continue to dispose of salt water, produced by applicant's said Atlantic State Well No. 1, in the above-described unlined surface pit.

IT IS THEREFORE ORDERED:

(1) That the applicant, Ernest A. Hanson, is hereby granted an exception to Order (3) of Commission Order No. R-3221, as amended, to continue to dispose of water produced in conjunction with the production of oil or gas, or both, by his Atlantic State Well No. 1, located in Unit C of Section 16, Township 20 South, Range 33 East, NMPM, West Teas Yates-Seven Rivers Pool, Lea County, New Mexico, in the unlined surface pit located in said Unit C until further order of the Commission.

(2) That the Commission may by administrative order rescind such authority whenever it reasonably appears to the Commission that such rescission would serve to protect fresh water supplies from contamination.

(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.