CASE NO.

6548

APPLICATION,

TRANSCRIPTS,

SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
27 June 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of John F. Staver for salt water disposal, San Juan County, New Mexico. CASE 6548

BEFOR: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-2468
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. NUTTER: And now we'll call Case Number 6548.

MR. PADILLA: Application of John F. Staver for salt water disposal, San Juan County, New Mexico.

MR. KELLAHIN: Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant, and I have one witness.

MR. NUTTER: Stand and be sworn, please.

(Witness sworn.)

HANK PULLMAN

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Would you please state your name and occupation?

A. My name is Hank Pullman. I'm a petroleum engineer and geologist consultant.

Q. Have you previously testified before the Oil Conservation Division?

A. Yes, when I worked for the Navajo Tribe during Jack Campbell's time. That's been some years ago.

Q. When did you obtain your degree and from what institution?

A. I got an AA in engineering from East Los Angeles City College in '47. I got a Bachelor's degree in geology from Occidental College in '49. I have about 40 units of graduate work in petroleum engineering from SC, UCLA, Cal Tech, and Penn State.

Q. Have you been employed by the applicant, John F. Staver, to make a study of the two wells involved with regards to this application for salt water disposal?

A. Yes. This, plus the other Staver problems in the Four Corners area.

Q. And have you made such a study and prepared certain exhibits?

A. I have.

Q. Where -- what's your principal place of business?

A. At Farmington, New Mexico.

MR. KELLAHIN: We tender Mr. Pullman as an expert witness.

MR. NUTTER: Mr. Pullman is qualified.

Q. (Mr. Kellahin continuing.) Would you please refer to Exhibit Number One and identify that?

A. That's a map, four inches to a mile. It is prepared to illustrate the general layout, the lease

lines are shown. The two injection wells, No. 22 and 23 are shown with the arrows. There are only two producing wells, the dark spots, No. 20 and No. 5.

Q. All right. Let's relocate the two disposal wells. They're in the south end of Section 34 and indicated by the arrows?

A. That's correct.

Q. And they are Wells 22 and 23?

A. That's correct.

Q. What's indicated by the dashed line on the plat?

A. That's the lease line.

Q. And who owns the lease?

A. Staver, John Staver.

Q. And all the wells on the lease are plugged and abandoned except for two wells in Section 3.

A. That's correct. Some would fall under the category of temporary abandonment. Two, that I know of, and there's probably a few more.

Q. What is Mr. Staver seeking to accomplish?

A. Well, Mr. Staver was tied into this oil company that recently disintegrated and he is now attempting to clean up his leases, giving all the notices that were missing, and generally get everything on line, and that's what we're doing here, repairing lines, cleaning up the

lease, and attending this hearing.

Q. What will be the source of the water to be disposed of in the two disposal wells?

A. It's Dakota water from the producing wells Nos. 20 and 5.

Q. Can you tell me what the volumes of the produced water are?

A. I can't give you a good number on that now. We're testing them; this week, in fact, we're testing the wells. I can furnish that at a little later date.

Q. Are there any other wells that produce water that will be disposed of in these two wells?

A. No, just these two, 20 and No. 5.

Q. Let's look at Exhibit Number Two and have you identify that.

A. Number Two is a diagram of the -- of the injection wells. There are two diagrams.

Q. Exhibit Number Two is the diagram for disposal Well No. 22. If you'll look at that and summarize what that shows.

A. Well, it's -- this shows that the casing is cemented at the top of the Dakota and it's a straight-forward, simple completion. He has 2-7/8ths inch tubing on a packer and it's barefoot completion and no -- nothing special about it.

Q. Would you look at the second page attached to that exhibit and indicate for us when this well was originally drilled?

A. It was spudded in -- on 11-13-61.

Q. Do you know when it last produced?

A. I don't know the answer to that, no.

Q. Do you know if that well is currently capable of producing either oil or gas in paying quantities?

A. I'm almost certain that it's not.

Q. Do you propose to dispose of the water in this disposal well under pressure or will it take it under gravity?

A. Well, we already checked that and we found that we can put away, in this particular case, a fairly high volume of water at 115 pound surface pressure. We don't know exactly how much the volume was, but we will do some additional testing with that.

It's our guess that we can put away all the water we can produce at something less than 150 pounds in both of these wells.

MR. NUTTER: You said that initial test was 115 or 150 pounds?

A. 115 pounds.

MR. NUTTER: But you don't have a definitive number as to the barrels at the present time.

A. Right, we don't have that. We're just getting all that junk in high gear and trying to pump as much as we could and we had 115 pounds.

MR. KELLAHIN: If the Examiner please, we'd like to submit that to you by letter subsequent to the hearing once the tests are completed on the well.

MR. NUTTER: That will be fine.

Q. If you'll look at Exhibit Number Three, Mr. Pullman, and indicate to us if there are any differences between the way the two wells are completed.

A. It's basically the same type of thing. In this case, once again an unknown volume, we put water away with 110 pounds of surface pressure.

No problem. We feel if there is a problem these wells probably haven't been cleaned out for a long time and I think we can acidize and probably treat them and even reduce that pressure, I suspect.

Q. No. 23 well was originally drilled back in 1961, also, I assume.

A. Same date, yes, 11-16-61.

Q. And what's its current status now? Is it a producing well?

A. No, it's just -- it's just an injection well; it's just a disposal well.

Q. Would you look at Exhibit Number Four,

identify that and summarize the information contained on that exhibit?

A. Okay. This is a -- this exhibit is a summary by Bob Law, who's worked this area, and this just happens to be a paper that will be in the Four Corners geologic publication coming out in a couple months.

It's basically a history of what's happened there. It includes a contour map. It includes some production information, a portion of electric logs, and it's included here for general information.

Q. Do you have any current production information on either the -- either of the two producing wells in Section 3, the No. 20 Well or the No. 5 Well?

A. No, we're testing them now.

Q. All right.

A. And this man has had some problem. They've been shut-in for some time and because of notices and things of that sort, and we're just getting everything going again, but we can furnish that at a later date, too, if that's all right with this group here.

Q. All right, let's look at Exhibit Number Five and have you tell me what that is.

A. Five is one of the requirements you gave me, a tabular summary of all wells within 1/2 mile of the disposal wells.

Q. And did you prepare that tabulation?

A. I did.

Q. And how did you prepare it?

A. By using USGS records and any other information I could get. We do not have company records from this area as yet. They're being acquired but, as I say, this come from a pretty good source, USGS records.

Q. And the wells on this tabulation are all wells within a half mile of the disposal wells?

A. That's correct.

There is one thing that's missing here I think I should point out, and I think we can furnish it too.

On the Well No. 318, the only notice I could find in the file on the plugging was the proposed plugging. I never found the final definition of the plugs. I will dig that up perhaps in the State office.

Q. Based upon your examination of those records and the tabulation, this summary, do you have an opinion with regards to whether or not the methods of cementing and plugging of these particular wells will insure that the water disposed of in the two disposal wells will remain confined in the disposal interval?

A. I think that's a true statement.

Q. You're not aware of any of the wells

within a half mile of the disposal wells in which there could be problems of injected waters migrating up through the casing and tubing of any of the wells?

A. I know of no such problems.

Q. All right. Look at Exhibit Number Six and identify that.

A. That's another one of the requirements. The wells within a half mile -- abandoned wells within a half mile. In this case I have shown the plugs. Once again this information was obtained from USGS records.

There are two things on here that I guess should be commented on. Well No. 21, the one that's 660 from the north line, second one from the left, and also No. 25, which is the last one on the right, are as of this date yet, are temporary abandoned. There are no plugs in these things, but looked like a solid string of casing down to the top of the Dakota, and I see no problem.

MR. NUTTER: And again it looks like No. 318, you don't have the plugs shown here. You only have the proposed plugging program rather than the final plugging program.

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Well, I have the plug on top. You see the plug at top of the hole from 75 to surface, and this

once again, though, I think points out that this has to be better checked one way or another.

The proposed plugging only shows the next plug down, starting at 2700 feet. If you'll look at this little summary here.

MR. NUTTER: It would be below this diagram.

A. Right, yeah, below the diagram.

That one has to be investigated some more.

Q. Do you have any logs of the -- either of the two proposed disposal wells?

A. No. There is one log on the No. 22. I don't have it with me but it -- they didn't get it down into the disposal zone. It stopped at around 1080 feet. I don't have a log on the other one.

Q. What is the source of any fresh water in this area?

A. I know of no fresh water in this area; some water a little better than this, but I know of no good water in the area.

Q. Would you look at Exhibit Number Seven and identify that, please?

A. That's just a short summary of -- actually definition of what's been included in this package.

I think the only thing new here would be

a definition of John Staver and his address, phone number.

The other thing is a chemical analysis of the Dakota formation water. I don't see where this is all that important either. We're taking water out of the same zone and putting it back into that zone, so that there's no interreaction.

Q. You've indicated in your testimony a request that the wells be allowed to dispose of water in either or both of the disposal wells up to a maximum of 150 psi at the surface, is that correct?

A. That's correct.

Q. In your opinion will the injection up to 150 psi at the surface cause any fracture of the confining strata within the zone of disposal?

A. No way.

Q. In your opinion will approval of this application be in the best interests of conservation, the prevention of waste, and the protection of correlative rights?

A. I think it will.

Q. Were Exhibits One through Seven either prepared by you directly or compiled under your direction and supervision?

A. Mostly prepared by me.

MR. KELLAHIN: Move the introduction of

Exhibits One through Seven.

MR. NUTTER: Applicant's Exhibits One through Seven will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Pullman, are there any fresh shallow waters in this area?

A. There may be some very, very shallow water, a stream or two. I don't know for sure.

Q. I mean ground waters in the vicinity of the field.

A. Not that I know of.

Q. It appears from your Exhibit Number Six that the wells that do have surface pipe in them have surface pipe at 50 feet or less.

A. Yes, some of them are very shallow, 25 feet, 49 feet, 17 feet.

Q. Now, each of these two disposal wells will be equipped with tubing and a packer. I presume that the annulus of those wells will be loaded with some kind of inert fluid and some sort of leak detection device or the annulus left open so that failure of the tubing or packer could be detected.

A. True. I can't -- I can't precisely an-

swer that in the affirmative, but I can assure you I will answer it in the affirmative in the next week or so.

As I say, we're still putting the lease back together again.

Q. I see.

MR. NUTTER: Are there any other questions of Mr. Pullman? He may be excused.

Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: No, sir, except that we'll supply the missing information by letter, if the Examiner will allow us to.

MR. NUTTER: All right.

Does anyone have anything they wish to offer in Case Number 6548?

We'll take the case under advisement.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
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Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6548 heard by me on 6/27 19.79.

Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6548 heard by me on 6/27 19 79.

Examiner
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6548
Order No. R-6058

APPLICATION OF JOHN F. STAVER
FOR SALT WATER DISPOSAL, SAN
JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on June 27, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 30th day of July, 1979, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, John F. Staver, is the owner and operator of the Table Mesa Well No. 22 in Unit N and the Table Mesa Well No. 23 in Unit O, both located in Section 34, Township 28 North, Range 17 West, NMPM, Table Mesa-Dakota Oil Pool, San Juan County, New Mexico.

(3) That the applicant proposes to utilize said wells to dispose of produced Dakota water into the Dakota formation, with injection into the open hole interval from approximately 1410 feet to 1412 feet in the Table Mesa Well No. 22 and in the perforated and open hole interval from 1394 feet to 1402 feet in the Table Mesa Well No. 23.

(4) That the injection into each of said wells should be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 1365 feet in the No. 22 well and 1352 feet in the No. 23 well; that the casing-tubing annulus in each well should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be

attached to each annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection wells or system should be equipped with a pressure limiting device or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 275 psi.

(6) That the operator should notify the supervisor of the Aztec district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(8) That no injection into the subject wells should occur until applicant's Well No. 3-18 located in Unit F of Section 3, Township 27 North, Range 17 West, NMPM, has been reentered and a cement plug set across the Dakota formation in said well, from approximately 1360 feet to approximately 1560 feet.

(9) 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, John F. Staver, is hereby authorized to utilize his Table Mesa Well No. 22 in Unit N and his Table Mesa Well No. 23 in Unit O, both in Section 34, Township 28 North, Range 17 West, NMPM, Table Mesa-Dakota Oil Pool, San Juan County, New Mexico, to dispose of water produced from the Dakota formation back into the Dakota formation, injection to be accomplished through 2 7/8-inch tubing installed in packers set at approximately 1365 feet and 1352 feet, respectively, with injection into the open hole interval from approximately 1410 feet to 1412 feet in his Table Mesa Well No. 22 and in the perforated and open hole interval from 1394 feet to 1402 feet in his Table Mesa Well No. 23;

PROVIDED HOWEVER, that the casing-tubing annulus in each well shall be filled with an inert fluid; and that a pressure gauge shall be attached to such annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection wells or system shall be equipped with a pressure limiting device or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 275 psi.

(3) That the operator shall notify the supervisor of the Aztec district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Division's Aztec district office of the failure of the tubing, casing, or packer, in said wells or the leakage of water from or around said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

(5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

PROVIDED FURTHER, that no injection into the aforesaid wells shall occur until after applicant's Well No. 3-18 located in Unit F of Section 3, Township 27 North, Range 17 West, NMPM, has been reentered and a cement plug has been set across the Dakota formation in said well, from approximately 1360 feet to approximately 1560 feet.

(6) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

/d/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

July 31, 1979

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

Re: CASE NO. 6548
ORDER NO. ~~R-6058~~

Applicant:

John F. Staver

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD x

Other

Dockets Nos. 25-79 and 26-79 are tentatively set for hearing on July 11 and 25, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 27, 1979

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

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 6545: (Continued from May 23, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Corinne Grace, Travelers Indemnity Company, and all other interested parties to appear and show cause why the Kuklah Baby Well No. 1 located in Unit G of Section 24, Township 22 South, Range 26 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6549: (Continued from May 23, 1979, Examiner Hearing)

Application of Gulf Oil Corporation for pool creation, discovery allowable, and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new Bone Springs oil pool for its Lea "YH" State Well No. 1 located in Unit O of Section 25, Township 18 South, Range 34 East. Applicant also seeks a discovery allowable and promulgation of special pool rules, including a provision for 80-acre spacing.

CASE 6563: (Continued from June 13, 1979, Examiner Hearing)

Application of Roy L. McKay for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for his North Woolworth Ranch Unit Area, comprising 1,280 acres, more or less, of State lands in Township 23 South, Range 35 East.

CASE 6548: (Continued from May 23, 1979, Examiner Hearing)

Application of John F. Staver for salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Dakota formation through the open hole interval from 1408 feet to 1412 feet in his Table Mesa Well No. 22 located in Unit N and from 1394 feet to 1400 feet in his Table Mesa Well No. 23 located in Unit O, both in Section 34, Township 28 North, Range 17 West, Table Mesa-Dakota Oil Pool.

CASE 6576: Application of Bass Enterprises Production Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Townsend Unit Area, comprising 320 acres, more or less, of State lands in Township 15 South, Range 34 East.

CASE 6577: Application of Oil Processing for an oil treating plant permit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority for the construction and operation of an oil treating plant for the purpose of treating and reclaiming sediment oil at a site in the NE/4 SE/4 of Section 8, Township 20 South, Range 37 East.

CASE 6578: Application of Mesa Petroleum Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 of Section 28, Township 17 South, Range 27 East, to be dedicated to a well to be drilled in Unit G of said Section 28. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6579: Application of R. N. Hillin for an unorthodox well location and approval of infill drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of a Morrow gas well at an unorthodox location 800 feet from the South line and 2000 feet from the East line of Section 34, Township 19 South, Range 28 East, is necessary to effectively and efficiently drain that portion of the E/2 of said Section 34 which cannot be so drained by the existing well.

CASE 6580: Application of Continental Oil Company for a carbon dioxide injection project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to initiate a pilot carbon dioxide injection project in the Grayburg-San Andres formation in Units H and I of Section 20, Township 17 South, Range 32 East, Maljamar Pool, for tertiary recovery purposes.

CASE 6581: Application of Belco Petroleum Corporation for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Warren-American State Well No. 2 660 feet from the South and West lines of Section 32, Township 9 South, Range 33 East, Flying "M"-San Andres Pool, the W/2 SW/4 of said Section 32 to be dedicated to the well.

CASE 6582: Application of Belco Petroleum Corporation for a non-standard proration unit and unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 40-acre non-standard proration unit comprising the NE/4 SW/4 of Section 31, Township 9 South, Range 33 East, Flying "M"-San Andres Pool, to be dedicated to its Federal 31 Well No. 2 to be drilled at an unorthodox location 1980 feet from the South and West lines of said section.

Dockets Nos. 23-79 and 24-79 are tentatively set for hearing on June 13 and 27, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 23, 1979

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

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 6545: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Corinne Grace, Travelers Indemnity Company, and all other interested parties to appear and show cause why the Kuklah Baby Well No. 1 located in Unit G of Section 24, Township 22 South, Range 26 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6422: (Continued from February 28, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Helton Engineering & Geological Services, Inc., Travelers Indemnity Company, and all other interested parties to appear and show cause why the Brent Well No. 1 located in Unit M of Section 29 and the Brent Well No. 3 located in Unit G of Section 19, both in Township 13 North, Range 6 East, Sandoval County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6546: Application of Black River Corporation for compulsory pooling and non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the SW/4 of Section 32, Township 23 South, Range 37 East, to form a 160-acre non-standard gas proration unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6536: (Continued from May 9, 1979, Examiner Hearing)

Application of Black River Corporation for two non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for two 80-acre non-standard gas proration units in the Jalmat Gas Pool as follows: the N/2 SE/4 of Section 22, Township 23 South, Range 36 East, to be dedicated to applicant's well to be drilled in Unit J of said Section 22; and the S/2 SE/4 of said Section 22 to be dedicated to El Paso Natural Gas Company's Shell State Well No. 3 located in Unit P.

CASE 6535: (Continued from May 9, 1979, Examiner Hearing)

Application of Torreon Oil Company for a waterflood project, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the San Luis-Mesaverde Pool by the injection of water into the Menefee formation through two wells located in Section 21, Township 18 North, Range 3 West, Sandoval County, New Mexico.

CASE 6547: Application of American Petrofina Company of Texas for the creation of a waterflood buffer zone, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a waterflood buffer zone comprising the NE/4 SE/4 of Section 26, Township 17 South, Range 32 East, Maljamar Grayburg-San Andres Pool, to enable applicant to produce its Johns B Well No. 4 located thereon at an unrestricted rate.

CASE 6548: Application of John F. Staver for salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Dakota formation through the open hole interval from 1408 feet to 1412 feet in his Table Mesa Well No. 22 located in Unit N and from 1394 feet to 1400 feet in his Table Mesa Well No. 23 located in Unit O, both in Section 34, Township 28 North, Range 17 West, Table Mesa-Dakota Oil Pool.

CASE 6549: Application of Gulf Oil Corporation for pool creation, discovery allowable, and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new Bone Springs oil pool for its Lea "YH" State Well No. 1 located in Unit O of Section 25, Township 18 South, Range 34 East. Applicant also seeks a discovery allowable and promulgation of special pool rules, including a provision for 80-acre spacing.

CASE 6550: Application of Yates Petroleum Corporation for an unorthodox gas well location and compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp through Mississippian formations underlying the S/2 of Section 12, Township 19 South, Range 24 East, to be dedicated to its Allison Federal "CQ" Well No. 2 to be drilled at an unorthodox location 1980 feet from the South line and 660 feet from the West line of said Section 12. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6492: (Continued from May 9, 1979, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the NE/4 NW/4 of Section 13, Township 17 South, Range 25 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6551: Application of Bass Enterprises Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox Lower Morrow gas well location 1980 feet from the North line and 660 feet from the East line of Section 1, Township 19 South, Range 28 East, the N/2 of said Section 1 to be dedicated to the well.

CASE 6528: (Continued from April 25, 1979, Examiner Hearing)

Application of Bass Enterprises Production Co. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox Morrow test well location to be drilled 660 feet from the North and West lines of Section 10, Township 21 South, Range 32 East, Lea County, New Mexico, the W/2 of said Section 10 to be dedicated to the well.

CASE 6552: Application of Maddox Energy Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 of Section 3, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6553: Application of The Atlantic Richfield Company for approval of infill drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the Division waived existing well-spacing requirements and found that the drilling of additional wells was necessary to effectively and efficiently drain those portions of the proration units in the Empire Abo Unit located in Townships 17 and 18 South, Ranges 27, 28 and 29 East, which could not be so drained by the existing wells.

CASE 6554: Application of The Atlantic Richfield Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all royalty interests in the Devonian, McKee, and Ellenburger formations underlying the E/2 of Section 20, Township 22 South, Range 36 East, Langlie Field, to be dedicated to a well to be drilled at a standard location thereon.

CASE 6555: Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, all of said Section 30 to be dedicated to the well.

CASE 6556: Application of Curtis Little for the amendment of Order No. R-5962, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5962 to provide for the unorthodox location of a well to be drilled 1000 feet from the South line and 50 feet from the East line of Section 11, Township 28 North, Range 12 West, Basin-Dakota Pool, and for the extension of the date to commence drilling.

CASE 6435: (Continued from February 28, 1979, Examiner Hearing)

Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its W. A. Weir "B" Well No. 3 located in Unit B of Section 26, Township 19 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6559: Application of Roy L. McKay for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for his Morton Solid State Unit Area, comprising 1,480 acres, more or less, of State lands in Township 15 South, Range 34 East.

CASE 6487: (Continued from February 28, 1979, Examiner Hearing)

Application of El Paso Natural Gas Company for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Shell E State Com Well No. 2 located in Unit N of Section 6, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6471: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Freeman Well No. 1-A to be located in Unit C of Section 11, Township 31 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6472: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Jenny Well No. 1-A to be located in Unit P of Section 13, Township 26 North, Range 4 West, Basin-Dakota Pool, Rio Arriba County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6473: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its McIntyre Well No. 1-A to be located in Unit K of Section 11, Township 26 North, Range 4 West, Basin-Dakota Pool, Rio Arriba County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6474: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Williams Well No. 1-A to be located in Unit C of Section 24, Township 31 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6475: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Montoya Well No. 1-A to be located in Unit I of Section 35, Township 32 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

DOCKET: COMMISSION HEARING - TUESDAY - MAY 29, 1979

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6557: Application of Getty Oil Company for pool creation and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new Morrow gas pool for its State 35 Well No. 1 located in Unit K of Section 35, Township 21 South, Range 34 East, and its Getty Two State Well No. 1 located in Unit F of Section 2, Township 22 South, Range 34 East, and for promulgation of special pool rules, including provision for 640-acre gas well spacing.

CASE 6497: (DE NOVO)

Application of Llano, Inc. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be located 1650 feet from the South line and 660 feet from the East line of Section 34, Township 21 South, Range 34 East, Grama Ridge-Morrow Gas Pool, the E/2 of said Section 34 to be dedicated to the well.

Upon application of Getty Oil Company this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6558: Application of Llano, Inc. for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 320-acre non-standard gas proration unit comprising the E/2 of Section 34, Township 21 South, Range 34 East, to be dedicated to its Llano 34 State Com Well No. 1 located in Unit I of said Section 34.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
23 May 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of John F. Staver for salt water disposal, San Juan County, New Mexico. CASE 6548

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

MR. STAMETS: Call next case 6548.

MR. PADILLA: Application of John F. Staver for salt water disposal, San Juan County, New Mexico.

MR. STAMETS: The Division has received a request that this case be continued to June 27th examiner hearing, and it will be so continued.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd CSR
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6548 heard by me on 5-23 19 82.

Richard L. Stamets, Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
5030 Plaza Blanca (505) 471-2463
Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
23 May 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of John F. Staver for salt water disposal, San Juan County, New Mexico. CASE 6548

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

MR. STAMETS: Call next case 6548.

MR. PADILLA: Application of John F. Staver for salt water disposal, San Juan County, New Mexico.

MR. STAMETS: The Division has received a request that this case be continued to June 27th examiner hearing, and it will be so continued.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
[illegible] Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

Pohlmann and Associates

FARMINGTON, NEW MEXICO AND HOUSTON, TEXAS

200 PETROLEUM PLAZA BLDG.
FARMINGTON, NEW MEXICO 87401
PHONE (505) 325-4608

July 3, 1979

TO: Oil Conservation Commission
State of New Mexico
P.O. Box 2088
Santa Fe, NM 87501

FROM: Pohlmann & Associates for:
John Staver
Box 950
Virginia, Minn. 55792

SUBJECT: Requested Additional Information to Allow John Staver to Dispose of Water in the Dakota-Table Mesa Field

The hearing concerning this matter took place on June 27th.

The main item that concerned the Commission(and us) was if the Dakota horizon in abandoned well No. 3-18 (1980 FNL, 1980 FWL - 3-27N-17W) was properly isolated. The original record we obtained and furnished was lacking.

In order to prove the Dakota is isolated, we reverted to the original Continental record. Please see attached diagram and copy of U.S.G.S. records. Note the Dakota is not only behind pipe, it is also cemented through a stage collar located 160' below the base of the zone of interest.

Other questions concerned production rates. The daily production rates follow:

Well NO.	BOPD	BWPD
5	8	91
20	7	81

Monthly estimate of total volume of water to be disposed is 4700 barrels.

Disposal well No. 22 has a defective packer. That packer is being replaced today. The annular space between the tubing and packer will be filled with water treated with a corrosion inhibitor. Disposal well No. 23 has checked out O.K. and the annular space in this well will also be filled with treated water. Both wells will have the casing valves open to atmosphere so annulus fluid can be checked.

We have also cleaned up the lease, repaired flow lines, repacked the triplex pump, repaired leaking well heads and most important of all - prepared and turned in all due notices to the U.S.C.S. and New Mexico Oil Conservation Commission.

Hank Pohlmann

HP:wb
Enclosures:

cc: John Staver
Box 950
Virginia, Minn. 55792

Al Kendrick
N.M. Oil Conservation Commission
1000 Rio Brazos Rd.
Aztec, NM 87410

CONTINENTAL 3-18
1980 FNL 1980 FWL
3-27N-17W
ORIGINAL COMPLETION 5-10-61

13 3/8" @ 500'
CMTD. TO SURFACE
W/ 375 SKS.

17½" HOLE TO 503'

TOP CEMENT 1063'

TOP DAKOTA 1387'

BASE DAKOTA 1552'

8 5/8" STAGE
COLLAR @ 1712'
W/ 150 SKS.

TOP CEMENT 4000'

8 5/8" @ 5000', 250 SKS.

11" HOLE TO 5000'

TOP CEMENT 6670'

5½" @ 7113', 200 SKS.

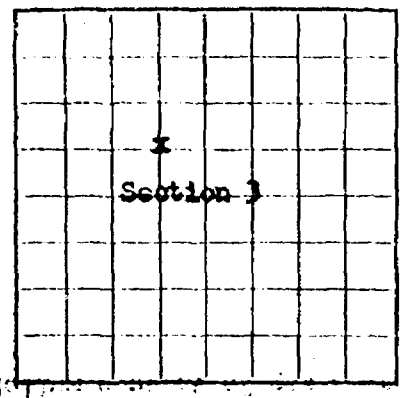
7 7/8" HOLE TO 7113'

Form 9-880

Budget Bureau No. 42-R358.4
Approval expires 12-31-60.

U. S. LAND OFFICE .....
SERIAL NUMBER .....
LEASE OR PERMIT TO PROSPECT .....

Navajo Tribe
Lease No. 1-89-IND-57



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Continental Oil Company Address P. O. Box 3312, Durango, Colorado
Lessor or Tract Navajo Field Table Mesa State New Mexico
Well No. 18 Sec. 3 T. 27N R. 17W Meridian NMPM County San Juan
Location 1980 ft. {N/S} of N. Line and 1980 ft. {E/W} of W. Line of Sec. 3 Elevation 5360'

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed
Date November 29, 1961 Title District Superintendent

The summary on this page is for the condition of the well at above date.

Commenced drilling March 27, 1961 Finished drilling May 10, 1961

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 1392 to 1410 No. 4, from to
No. 2, from 6975 to 7011 (O) No. 5, from to
No. 3, from 7082 to 7114 (O) No. 6, from to

IMPORTANT WATER SANDS

No. 1, from 1422 to 1800 No. 3, from to
No. 2, from to No. 4, from to

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
13 3/8"	48#	8 RD	H-40	503'					Surface
8 5/8"	32#	8 RD	J-55	5012'	Baker				Intermediate
5 1/2"	14#	8 RD	J-55	2971'	Baker				Production
5 1/2"	15.5#	8 RD	J-55	3618'					
5 1/2"	17#	8 RD	J-55	2495'			7027	7113	

MUDDING AND CEMENTING RECORD

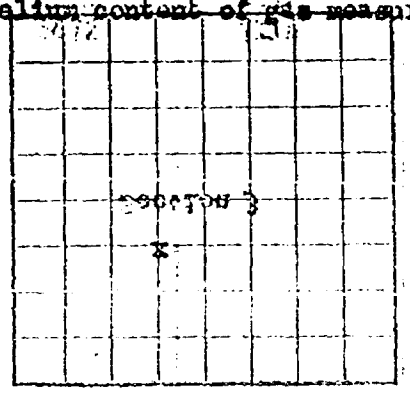
Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13 3/8"	503' RB	375	Displacement		
8 5/8"	5000' RB	400	Displacement		
5 1/2"	7113' RB	200	Displacement		

FARK

HISTORY OF OIL OR GAS WELL

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

Spudded 3-27-61. Drilled and reamed 17 1/4" hole to 503'. Ran 16 jts. of 13 3/8", 48# surface casing and set at 503'. Cemented to surface with 375 sacks regular. Drilled 11" hole with mud to 5000'. Ran IES log. Ran 121 jts. 8 5/8", 32#, J-55 intermediate casing, landed at 5000'. Stage collar at 1712'. Cemented through shoe with 250 sacks regular. Cemented through stage collar with 150 sacks regular. Drilled out collar. Dried up hole to drill with air. Drilled 7 3/4" hole with air from 5000' to 6909'. Core #1 from 6909' to 6917'. Mudded up, cut core #2 from 6917' to 6952'. Lost circulation at 6952'. DST #1, 6922-6975', recovered 5' drilling mud. Core #3, 6975' to 7009'. Lost circulation at 6989'. Ran radiation tool, found lost circulation zone 6172-6500' in Hermosa. Spotted 100 sacks neat with 100 cu/ft. pozmix followed with 100 sacks neat at 6530'. Drilled cement plug to 6474', lost circulation. Spotted 150 sacks cement. Found cement at 6320'. Spotted 120 sacks regular cement. Drilled cement from 5900' to 6470'. No lost circulation. Drilled cement from 6470' to 6530', circulated to bottom. Drilled hole from 7009' to 7011'. DST #2, 6975-7011'. Gas to surface in 14 mins., recovered 210' HGCM. Bucket of mud settled out to 70% free oil. Core #4, 7011' to 7027'. Drilled 7027'-7029'. Core #5, 7029' to 7066'. Core #6, 7069' to 7113'. Drilling break at 7101'. Mud wgt. 10.2#/gal. Well started cutting gas. Closed rams and opened 3" kill line. Well started blowing mud out of hole. Closed 3" kill line. Rams blew out on blowout preventer from increase in pressure. Tried to kill well with mud but due to lost circulation, mud supply became exhausted before well could be brought under control. Well blowing out of control. Gas cut hole in drill pipe and drill pipe parted. Closed blind rams. Well killed 5-13-61 by pumping in 12.8#/gal. mud. Set bridge in 8 5/8" casing at 4900' and shut off well. Installed new blowout preventer and manifold. Drilled out plug and cleaned out to T.D. of 7113'. Ran 227 jts. 5 1/2" casing from surface to 7113'. Cemented with 200 sacks regular. Cement top found at 6370'. Drilled out shoe plus 14' hole to T.D. of 7114'. Perforated 5 1/2" casing from 7097' to 7113' with 4 jets per foot. Released rig 5-25-61. Ran SIP survey. FBR at 7000', 3731 psig. Average gas gradient 0.10. Set production test unit. Tested for four days. Calculated absolute open flow potential, 21,500 MCFGPD and 333 barrels 71.6° API gravity condensate. Helium content of gas measured 5.1%. Well shut-in pending gas sales contract.



GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR

UNITED STATES

FOLD

PLUGS AND ADAPTERS

Heaving plug—Material ..... Length ..... Depth set .....

Adapters—Material ..... Size .....

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from 0 feet to 7114 feet, and from ..... feet to ..... feet

Cable tools were used from ..... feet to ..... feet, and from ..... feet to ..... feet

DATES

November 29, 1961 Testing Put to ~~producing~~ May 29, 1961

The ~~production~~ test for the first 24 hours was 333 barrels of ~~fluid~~ condensate of which ..... % was oil; ..... % emulsion; ..... % water; and ..... % sediment. Gravity, ~~Be°~~ °API 71.6

If gas well, cu. ft. per 24 hours 21,500 (CAOF) Gallons gasoline per 1,000 cu. ft. of gas .....

Rock pressure, lbs. per sq. in. 3731

EMPLOYEES

....., Driller Contractor; Aspen Drilling Company, Driller

....., Driller ....., Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
1280	1387	107	Greenhorn
1387	1552	165	Dakota
1552	2615	1063	Morrison
2615	2637	22	Todilto
2637	2733	96	Entrada
2733	2785	52	Carmel
2785	3248	463	Navajo
3248	3886	638	Chinle
3886	4034	148	Shinarump
4034	4121	87	Moenkopi
4121	4735	594	De Chelly
4715	6035	1320	Organ Rock
6035	6641	606	Hermosa
6641	6672	31	Paradox
6672	7114	442	Paradox Limestone

FORMATION RECORD—Continued (OVER)

16—43031-4

USGS(3) NMOCC(2) REW HOLLY HH

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

John F. Staver

3. ADDRESS OF OPERATOR

Box 51, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface

1070' FEL

1070' FEL

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo

9. WELL NO.

1-10

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec. 10, T 31 N, R 17 W

12. COUNTY OR PARISH

13. STATE

San Juan

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING		WATER SHUT-OFF	REPAIRING WELL
FRACTURE TREAT	☐	MULTIPLE COMPLETE		FRACTURE TREATMENT	ALTERING CASING
SHOOT OR ACIDIZE	☐	ABANDON*	X	SHOOTING OR ACIDIZING	ABANDONMENT*
REPAIR WELL	☐	CHANGE PLANS		(Other)	
(Other)				(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Starting March - 1975

Propose to plug & abandon this well

Gallup 519' - Dakota 1391' Morrison 1555' -

Tops are as follows: Gallup 519 - Dakota 1391 - Morrison 1555' -
Entrada 2610' DeChelly 4210 Hermosa 6035 - Paradox 6691 Paradox
Entrada 2610 - DeChelly 4210 - Hermosa 6035 - Paradox 6691 - Paradox
Limestone 6672 T.D. 7113' perforated in Paradox 7097' - 7113'
Limestone 6672 - T.D. 7113' - perforated in Paradox 7097' - 7113'

Pipe program as follows: 2⅜" tubing 7097' - 5½ J-55 set at
Pipe program as follows: 2⅜" tubing 7097' - 5½ J-55 set at
7113' K.b. with 200 sks. - 8⅝" J-55 set at 5817' with 250 sks. —
7113' K.b. with 200 sks. - 8⅝" J-55 set at 5817' with 250 sks. —
Stage collar 1712 with 150 sks. - 13⅜" casing at 503 with 375 sks
Stage collar 1712 with 150 sks. - 13⅜" casing at 503 with 375 sks

Proposed plugging sequence: T.D. 7113' - 6/— ₵ 10— circulate &
Proposed plugging sequence: T.D. 7113' - 6/— ₵ 10— circulate &
6100' - 6000' ₵ 75' Bottom & 4½" 6171' ₵ 100' - 4260' = 160' ₵ 100
6100' - 6000' ₵ 75' Bottom & 4½" 6171' ₵ 100' - 4260' = 160' ₵ 100
3800' - 3700' ₵ 45' - 75' - 0 with mud between plugs —
2800' - 2700' ₵ 75' - 75' - 0 with mud between plugs —
Propose to pull 2⅜" tubing - 5½" casing - 8⅝" casing - cutting
Propose to pull 2⅜" tubing - 5½" casing - 8⅝" casing - cutting
plug as directed - erect dry hole marker & clean location
plug as directed - erect dry hole marker & clean location

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] TITLE Manager DATE September 24, 1975

(This space for Federal or State office use)

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

TITLE DATE

*See Instructions on Reverse Side

Memo

From **A. R. KENDRICK**
Supervisor

7/16/79

To Dan Nutter:

Hank Pohlmann and "Mo" Seelinger think that Conoco circulated cement thru the Dakota when they cemented the 8 5/8" thru the stage c collar @ 1712'. They consider this enough cement for a good job.

If you'd like them to set a plug inside of the 8 5/8" across the Dakota, they'll be glad to do it.

There was no concern about water disposal in the area when the well was plugged.

If you want a plug there, just write it in the order.

NEW MEXICO OIL CONSERVATION COMMISSION – AZTEC, NEW MEXICO

DAN NUTTER Cs 6548

Al Kendrick -

Staver proposes to dispose of water into Wells # 22 and 23, units N and O of 34-28-17.

Wree No. 18 in F of 3-27-17 TD 7114 may or may not have been plugged, but in any event does not have a cmt plug above the Dakota according to our info.

Do you think they should put a cmt plug in this well at say 1375 to 1425 before disposing into #22 which is exactly ½ mile away.

There is nothing in our well file to indicate the well was ever plugged, but Hank Pahlman, who testified at the hearing, sent me the attached Fed Form 9-331 which I can scarcely read. It says they will "set plugs as directed."

DAN NUTTER

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*

SUNDRY NOTICES AND REPORTS ON WELLS

1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR
John F. Staver

3. ADDRESS OF OPERATOR
Box 51, Farmington, New Mexico 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface

1050' FSL 1050' FWL

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH 13. STATE

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	REPAIRING WELL
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	ALTERING CASING
SHOOT OR ACIDIZE	☐	ABANDON*	X	SHOOTING OR ACIDIZING	ABANDONMENT*
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)	
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Starting March — 1995

Propose to plug & abandon this well

Gallup 519 - Dakota 1591 Morrison 1555'

Tops are as follows: Gallup 519 - Dakota 1591 - Morrison 1555 -
Entrada 2416 - DeChelly 4210 - Hermosa 6035 - Paradox 6641 Paradox
Limestone 6672 TD 7113' perforated in Paradox 7097' - 7113'.

Pipe program as follows: 2 7/8" tubing 7097' - 5 1/2 J-55 set at
7113' K.B. with 200 sks. - 8 5/8" J-55 set at 3817' with 250 sks. -
stage collar 1712 with 150 sks. - 13 3/8" casing at 503 with 375 sks
circulated.

Proposed plugging sequence: T.D. 7113' - 67__ & 10__'
6100' - 6000' & 75' ... & 100' - 4250' - ___' & 100
2800' - 2700' & 75' - 75' - 0 with dry hole marker ...

Propose to pull 2 7/8" tubing - 5 1/2" casing - 8 5/8" casing - setting
plug as directed - erect dry hole marker & clean location

18. I hereby certify that the foregoing is true and correct

SIGNED [signature] TITLE ______ DATE ______ 1995

(This space for Federal or State office use)

APPROVED BY ______ TITLE ______ DATE ______
CONDITIONS OF APPROVAL, IF ANY:

RECEIVED
JUL 17 1979
OIL CONSERVATION DIVISION
SANTA FE

*See Instructions on Reverse Side

DISTRICT ...

CONTINENTAL 3-18
1980 FNL 1980 FWL
3-27N-17W
ORIGINAL COMPLETION 5-10-61

13⅜" @ 500'
CMTD. TO SURFACE
W/ 375 SKS.

17½" HOLE TO 503'

TOP CEMENT 1063'

TOP DAKOTA 1307'

BASE DAKOTA 1552'

8⅝" STAGE
COLLAR @ 1712'
W/ 150 SKS.

TOP CEMENT 4660'

8⅝" @ 5002', 250 SKS.

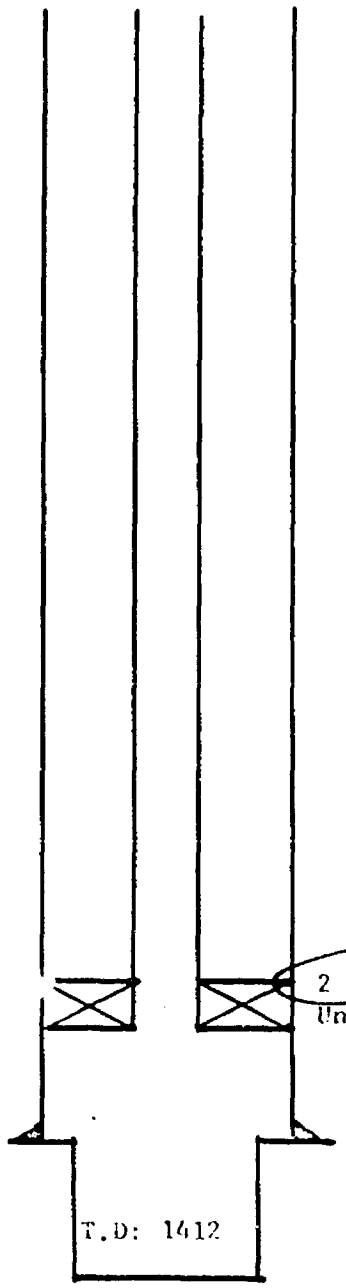
11" HOLE TO 5002'

TOP CEMENT 5070'

5½" @ 7113', 200 SKS.

7⅞" HOLE TO 7114'

Elev: 5294 DF (8' AGL)



2 7/8", 6.5#, J-55 tbg.on Guiberson Uni-Packer @ 1365'

5½", 14#, J-55 csg.@ 1410'
Cmt'd. w/300 sx. circ. to surf.

T.D: 1412

Pay: Dakota

Init. Stim: SOF w/ 10,000 gal.
10,000# sand

Init. Pot: Jan. 1962 - Pmp'd
68 BO, 1680 BW/D.

Recent Test: Inject water @ 115#

Well will take consideraable water @ 115 psi now testing to determine BPD

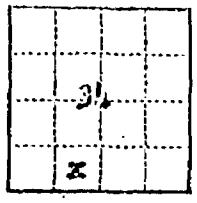
BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Staver EXHIBIT NO. 2
CASE NO. 6548

JOHN F. STAVER

TABLE MESA DAKOTA FIELD
San Juan Co., New Mexico

John F. Staver No. 22
Proposed Water Disposal Well
660'FSL, 1980'FWL Section 34
T29N, R17W.

Form 9-331 b
(April 1952)



Budget Bureau No. 42-R359.4.
Approval expires 12 31-60.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency Navajo

Allottee

Lease No. 1-89-IND-57

SUNDRY NOTICES AND REPORTS ON WELLS

RECEIVED
JAN 22 1962
U.S. GEOLOGICAL SURVEY
FARMINGTON, N. MEX.

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	X
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 18, 19 62

Well No. 22 is located 660 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 34

NW/4 Section 34 (¼ Sec. and Sec. No.) T28N, R17W (Twp.) (Range) NMPM (Meridian)

Table Mesa (Field) San Juan (County or Subdivision) New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 5349 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 11-13-61 with rotary tools. Drilled to 1410'. Ran IES log. Ran 46 joints of 5 1/2", 14#, J-55 casing, landed at 1410'. Cemented with 300 sacks of regular cement with good returns to surface. Moved rotary out and cable tools in, drilled to 1412'. Sand fraced with 10,000# sand and 7,500 gallons of crude. Swabbed clean. Ran tubing and submersible pump. IP, 68 BOPD and 1680 MCFPD. Gas TSTM. Completed as pumping well from 1410'-1412' (open-hole).

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Continental Oil Company

Address P. O. Box 3312

Durango, Colorado

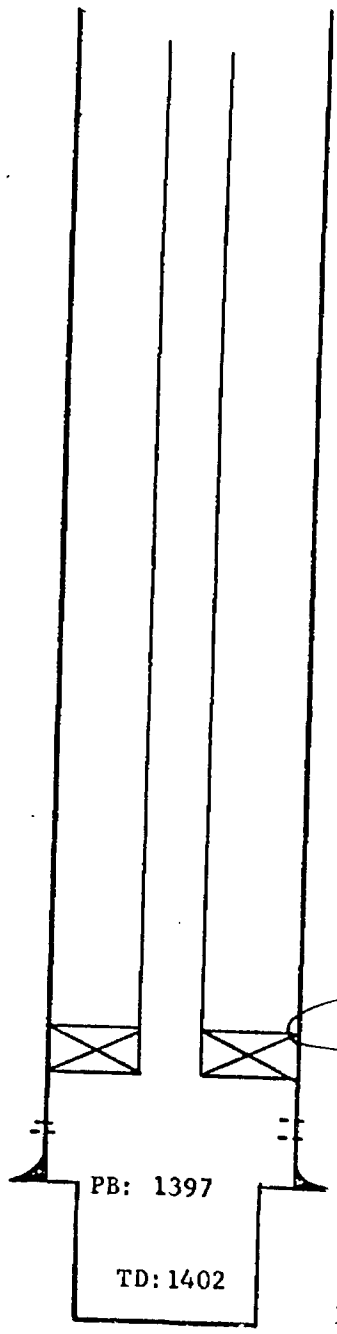
Original Signed By:
By H. D. HALEY

Title District Superintendent

USGS(3) NMOCC(2) CHC HOLLY HMI

U. S. GOVERNMENT PRINTING OFFICE 16—84376-8

Elev: 5336 DF ((8'AGL)



Gallup Top @ 410'
Bottom @ 625'

1394
+2
278.8

Cement Top: Circulated

2 7/8", 6.5#, J-55 tbg. on Guiberson Uni-Packer @ 1352'

Perf: 1394-1396 w/ 2 spf.

5½", 14#, J-55 csg. @ 1400'RB
Cement w/300 sx neat circ to surface.

Pay: Dakota Top @ 1386RB.

Init. Stim: SOF 10,000gal
10,000# sd

Init. Pot: 35 BO, 1750 BW/D
1961

Recent Test: Inject water @ 110#
6-14-79

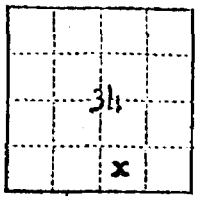
BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
STAver EXHIBIT NO. 3
CASE NO. 6548

JOHN F. STAVER

TABLE MESA DAKOTA FIELD
San Juan Co., New Mexico

John F. Staver Well No. 23
Proposed Water Disposal Well
625'FSL, 1980'FEL Section 34
T28N, R17W.

Form 9-331b
(April 1952)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

Indian Agency Navajo

Allottee

Lease No. 1-89-IND-57

SUNDRY NOTICES AND REPORTS ON WELLS

RECEIVED
JAN 1962
U.S. GEOLOGICAL SURVEY
FARMINGTON, NEW MEXICO

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	X
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 16, 1962

Well No. 23 is located 625 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 34

SE/4 Section 34 (¼ Sec. and Sec. No.) | T28N, R17W (Twp. / Range) | NMPM (Meridian)

Table Mesa (Field) | San Juan County (County or Subdivision) | New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 5336 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 11-16-61 with rotary tools. Drilled to 540' RB. Cut Core #1, 540'-590' in Gallup formation. Drilled to 1400' RB. Ran 46 joints 5 1/2", 14#, J-55 casing set at 1400'. Cemented with 300 sacks neat cement with good returns to surface. Moved out rotary, moved in cable tools. Drilled 2' of sand to 1402'. Ran Gamma Ray log. Found top of Dakota at 1386'. Plugged hole back to 1397' RB. Perforated at 1390'. Unable to sand frac formation. Perforated from 1394'-1396' with 2 shots per foot. Sand fraced with 10,000# sand, 10,000 gallons crude oil, and 1000# ADOMITE. Ran tubing and submersible pump. IPP, 35 BOPD and 1750 BWPD. Gas TSTM. Completed as Dakota pumping well from 1394'-1396' RB.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Continental Oil Company

Address P. O. Box 3312

Durango, Colorado

Original Signed By:
By H. D. HALEY

Title District Superintendent

USGS(3) NMOCC(2) CHC HOLLY

U. S. GOVERNMENT PRINTING OFFICE 16—84376-8

Table Mesa Dakota
(Oil)
T. 27 N., R. 17 W., NMPM
San Juan County,
New Mexico

By: Robert E. Lauth
Geological Consultant

GEOLOGY

Regional Setting: Western San Juan Basin

Surface Formations: Mancos Formation

Exploration Method Leading to Discovery: Surface - plane table mapping

Type of Trap: Anticlinal structure with a minor cross-fault

Producing Formation: Upper Dakota Sandstone

Gross Thickness and Lithology of Reservoir Rocks: 200 feet

Geometry of Reservoir Rock: Alternating beds of sandstone and shale with some coal beds

Other Significant Shows: Minor shows in Gallup Sandstone at 500 feet

Oldest Stratigraphic Horizon Penetrated: In Continental No. 17 Table Mesa (1-15-1951) located in SE SE SW sec. 3, T. 27 N., R. 17 W., drilled into Ignacio Quartzite

DISCOVERY WELL

Name: (Present Operator: John F. Staver dba Saguaro Oil Company)
Continental Oil Co. No. 1 Table Mesa

Location: NW SE SW, sec. 3, T. 27 N., R. 17 W., NMPM

Elevation (KB): 5327 feet

Date of Completion: September 25, 1925

Total Depth: 1333 feet, plugged back to 1320 feet

Production Casing: 5 3/16" @ 1315 feet

Perforations: Open hole 1315 to 1320 feet

Stimulation: Natural completion

Initial Potential: 312 BOD flowing, no water

Bottom Hole Pressure: In excess of 427 psig

DRILLING AND COMPLETION PRACTICES

Present Practice: Mud-drill to approximately 600 feet or below the Gallup Sandstone. Set 5 1/2" casing, cement with 60 sacks. Air drill into top of Dakota Sandstone. If clean, open up about 3 feet. Set 2 7/8" with seating nipple and open hole packer to top of Dakota Sandstone. Run rods and pump and complete. If not productive in upper lenses, then drill deeper, checking additional lenses.

RESERVOIR DATA

Productive Area:

Proved: 100 acres

Unproved: 20 acres

Approved Spacing: 2 1/2 acres

No. of Producing Wells: 2

No. of Abandoned Wells: 31

No. of Dry Holes: 11 excluding Continental's 19 coreholes

Average Net Pay: 12 feet; aggregate total in all productive lenses (estimated)

Porosity: Average 20 percent (estimated)

Permeability: Average 200 millidarcies (estimated)

Water Saturation: Original 28 percent (estimated)

Initial Field Pressure: Unknown - The wells flowed so it is in excess of 427 psig (estimated 500 psig)

Type of Drive: Water drive

Gas Characteristics and Analysis: None

Oil Characteristics and Analysis: Yellow green, paraffin base; 56.4° API gravity; pour point, below 5° F; sulfur less than 0.1 percent

Associated Water Characteristics and Analysis: Sulfur water

Original Gas, Oil, and Water Contact Datums: Unknown, each individual sand lense was different (estimated + 3990 south of fault and + 3980 north of fault

Estimated Primary Recovery:

Type of Secondary Recovery: From 1963 to 1969, a pressure maintenance program was in effect; all produced water was re-injected back in reservoir

Estimated Ultimate Recovery: The reservoir is essentially depleted. Present production is the result of flushing of residual oil.

Present Daily Average Production: Average 10 BOPD

Market Outlets: Trucked by Thriftway to their refinery in Bloomfield

FIELD COMMENTARY

The Table Mesa field is located east of the Shiprock-Gallup highway about thirteen miles south of Shiprock, New Mexico. The Table Mesa Anticline lies just west of the Hogback ridge on the Navajo Indian Reservation. The original test well drilled in 1924 in the NW/4 SW/4 of section 3, T. 27 N., R. 17 W., by Producers and Refiners Corporation to a total depth of 3010 feet found water in all sands penetrated.

Continental Oil Company drilled the discovery well, NW SE SW of section 3, T. 27 N., R. 17 W. in 1925. It was completed for 312 BOPD flowing. The original development of the Table Mesa-Dakota Field was during the period 1925 to 1927. A total of twelve wells were drilled, five of which were dry holes. Table Mesa No.s 1, 2, and 3 flowed initially at rates in excess of 200 BOPD and no water. The remaining four wells were structurally lower and produced at rates of about 50 BOPD and some water.

The second stage of development was during the period 1939 to 1948. Five wells, No.s 12 through 16, were completed and produced at rates somewhat less than 50 BOPD and some water.

The fourth stage was during the period 1961 to 1962 during which time eight wells were drilled. All but one of the wells were completed. At this time it was necessary to install high volume lift equipment to produce the water. In 1963 a pressure maintenance project was initiated whereby all the produced water was re-injected back into the reservoir. This project continued until 1969 when it was sold to Eastern Petroleum and subsequently to John F. Staver (Saquero Oil Company). It is presently in a stripper or final stage. Approximately 20 acres in the SW/4 NW/4 of section 3, T. 27 N., R. 17 W., north of the cross fault appears to be not completely drained or flushed by reinjected water.

REFERENCES

Personal files
Files of Continental Oil Company
New Mexico Oil and Engineering Committee
Production Records

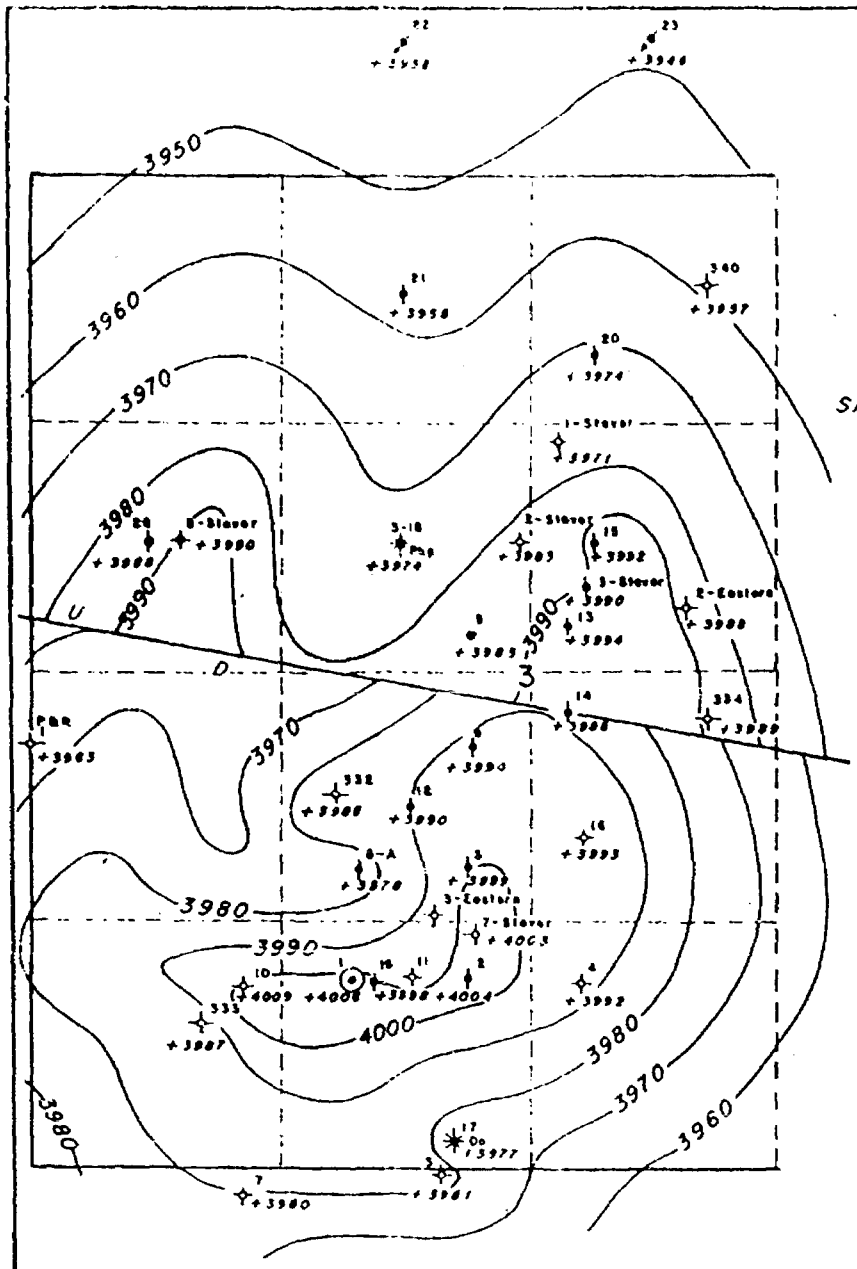
TABLE MESA
DAKOTA FIELD

STRUCTURE MAP

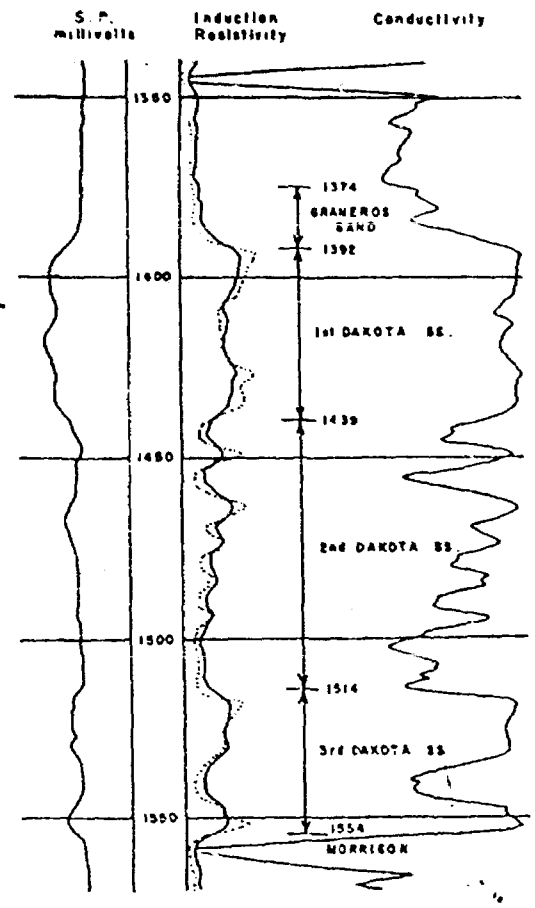
DATUM: TOP OF DAKOTA SS.

CONTOUR INTERVAL: 10 feet

SAN JUAN COUNTY, NEW MEXICO



SECTION 3
TOWNSHIP 27 NORTH
RANGE 17 WEST



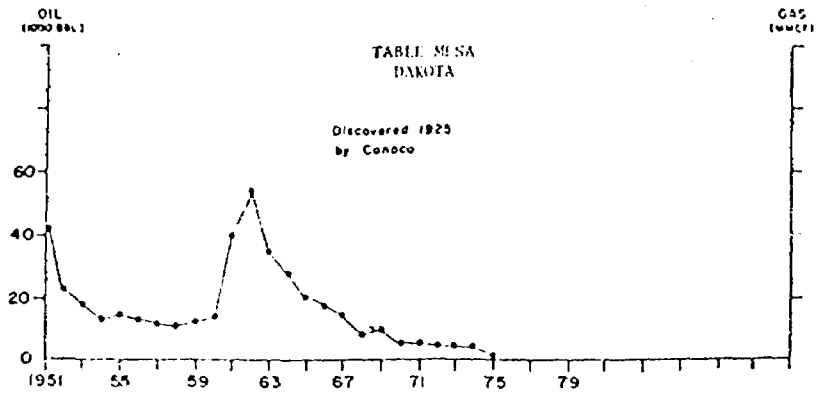
CONTINENTAL OIL CO. NO. 3-18 TABLE MESA

SCALE

0 500' 1000' 2000' 3000' 4000' 5000'

1" = 1000 feet

NUMBER OF WELLS AT YEARS END				- PRODUCTION - OIL IN BARRELS GAS IN MCF	
YEAR	TYPE	PROD	S.I./ABN	ANNUAL	CUMULATIVE
1951	OIL	8	9	42,600	939,700
1952	OIL	8	9	33,709	973,409
1953	OIL	8	9	19,020	992,569
1954	OIL	8	9	13,974	1,006,543
1955	OIL	8	9	16,084	1,022,627
1956	OIL	8	9	13,807	1,036,434
1957	OIL	8	9	12,407	1,048,901
1958	OIL	8	9	11,690	1,060,591
1959	OIL	8	9	13,564	1,074,155
1960	OIL	8	9	15,292	1,089,447
1961	OIL	13	12	39,991	1,129,438
1962	OIL	12	13	55,703	1,185,141
1963	OIL	10	15	35,212	1,220,353
1964	OIL	7	18	28,974	1,249,327
1965	OIL	7	18	21,403	1,270,730
1966	OIL	5	20	18,747	1,289,477
1967	OIL	5	20	15,144	1,304,621
1968	OIL	4	21	9,250	1,313,871
1969	OIL	3	22	10,403	1,324,274
1970	OIL	3	22	6,166	1,330,440
1971	OIL	3	25	6,595	1,337,035
1972	OIL	3	25	5,308	1,342,343
1973	OIL	2	26	5,231	1,347,574
1974	OIL	2	26	4,663	1,352,237
1975	OIL	2	26	1,279	1,353,516
1976	OIL	2	31		
1977	OIL	2	31		



TABULAR SUMMARY_ ALL WELLS WITHIN ONE HALF MILE OF DISPOSAL WELLS_ STAVER 22 + 23

WELL NO.	WELL LOCATION	CASING	TOTAL DEPTH	PRODUCING INTERVAL	ABANDONMENT DATE	CEMENT PLUGS	ELEVATION	TOP DAKOTA
20	990 FNL, 2310 FEL, S_27N_17W	5.5", 14#, 1382, 300 SKS.	1372	1365 - 1372	PRODUCING	NONE	6309 GL	1371
21	330 FNL, 1980 FEL, 3-27N-17W	NONE	1551	NEVER PROD.	MAY 55	1225-1525, 305 SKS. 550-400, 150 SKS 0-10, 10 SKS	5341 GL	1383
21	660 FNL, 1980 FWL, S_27N_17W	5½" @ 1385' w/ 300 SKS. (YW)	1430	1385 - 1432	11-17-72 (T.A.)	NONE	5361 DF	1393
8	1183 FNL, 1189 FWL, S_27N_17W	8⅝" 24# @ 20' w/ 5 SKS. 4.5", 9.5# @ 1375' w/ 35 SKS.	1381	NEVER PROD.	1-22-73	565-559, 20 SKS. 450-470, 20 SKS 60', 10 SKS 5 SKS. @ SURFACE	5369 GL	1374
15	1980 FNL, 2310 FEL, S_27N_17W	8⅝" @ 49' w/ 15 SKS. 7" @ 644' } PULLED 5" @ 1340' } (NO CEMENT)	1371	1341 - 1352	1-17-73	1352-1244, 14 SKS 0-10, 35 SKS.	5332 GL	1341
3-18	1980 FNL, 1980 FWL, S_27N_17W	13⅜ @ 502 w/ 175 SKS. (48#) 8⅝ @ 5000 w/ 250 SKS (32#) 5½ @ 7113 w/ 200 SKS. (14 TO 17#)	7114	BARKER CREEK 7097_7113	APPROVED 3-4-75	PROPOSED 7113-6700, 100 SKS 6100-6000, 75 SKS 5017-5118, 150 SKS 4260-4160, 100 SKS 2900-2700, 7 SKS 75 - SURFACE 9 SKS	5360 DF	1387
1	665 FNL, 2054 FEL, S_27N_17W	8⅝", 27#, 17' w/ 5 SKS. 5½", 17#, 687 NO CEMENT (PULLED)	1389	NEVER PROD.	3-10-76	1100-1589, 20 SKS. 950-750, 95 SKS 0-10', 5 SKS.	5352 GR.	1356
2	1152 FNL, 2295 FEL, S_27N_17W	8⅝", 27# @ 17' w/ 5 SKS. 5½", 17# @ 673' NO CEMENT (PULLED)	1358	NEVER PROD.	2-17-76	1400-1259, 185 SKS. 400-300, 45 SKS 0-10', 5 SKS.	5340 GR.	1356
1	1650 FSL, 1650 FEL, 34_28N_17W	4.5", 9.5#, 1390, ? SACKS	1395	NEVER PROD.	7-23-71	1400-1300, 100 SKS 800-595, 80 SKS 0-100, 100 SKS	5314 GL	?
1A	1650 FSL, 1250 FEL, 34_28N_17W	4.5", 9.5#, 1367, NO SACKS (PULLED)	1384	NEVER PROD.	8_16_71	1284-1284, 206 SKS 790-520, 90 SKS 0-100', 100 SKS	5314 GL	1390
25	1980 FSL, 1980 FWL, 34_28N_17W	5.5", 14#, 1411, 300 SKS.	1456	1415_1456	8_4_62 (T.A.)	NONE	5339 DF	1415

needs final plugging report on this well

Pohlmann and Associates

FARMINGTON, NEW MEXICO AND HOUSTON, TEXAS

200 PETROLEUM PLAZA BLDG.
FARMINGTON, NEW MEXICO 87401
PHONE (505) 325-4608

June 26, 1979

Subject: Application for Approval of Water Disposal Injection Wells

Area: Table Mesa Field in 34-28N-17W and 3-27N-17W, the Navajo Reservation in San Juan County, New Mexico

Zone: Dakota Sandstone

Operator: John F. Staver
Box 950
Virginia, Minnesota 55792
(218) 741-4122

Summary: Wells 22 and 23 in the S½ of 34-28N-17W are the proposed disposal holes. Diagrams and word description of the subject holes are included in this package.

A chemical analysis of the Dakota Formation water from Conoco's No. 27 in the NE¼SW¼ 4-27N-17W follows:

Dissolved Solids	1076	PPM
Total Alkalinity	204	"
Carbonate	40	"
Hydroxide	0	"
Bi-Carbonate	164	"
Chloride	32	"
Calcium	20	"
Sulphate	240	"
Fluorite	1.75	"
Magnesium	20	"
Iron	0.12	"
Hardness	40	"
PH	8.7	
Conductance	1370.0	

see p 2

Staver

6.548

The remainder of the information contained here consists of:

(1) Table Mesa geologic-production and history summary with contour map, electric log and other details.

(2) Tabular summary of all wells within one-half mile of the proposed disposal wells.

(3) Diagram of all plugged and abandoned wells within one-half mile of the disposal wells.

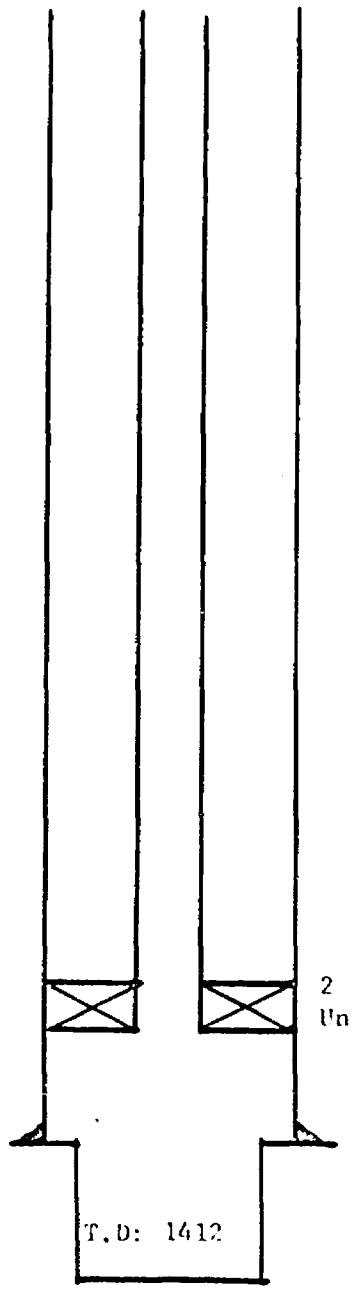
(4) Map (4" = 1 mile) of Table Mesa Field showing well locations and lease lines.

Recent tests (June, 1979) indicate we can inject all anticipated volumes of produced water (two producing wells) at surface pressure of less than 150 psi. The is considerably less than the 0.2 psi per foot (280 psi for a well depth of 1400') presently allowed. If any future problem in this regard is encountered, the disposal wells will be cleaned up and chemically treated.

Hank Pohlmann

Hank Pohlmann

Elev: 5394 DF (8' AGL)



2 7/8", 6.5#, J-55 tbg.on Guiberson Uni-Packer @ 1365'

5½", 14#, J-55 csg.@ 1410'
Cmt'd. w/300 sx. circ. to surf.

Pay: Dakota

T.D: 1412

Init. Stim: SOF w/ 10,000 gal.
10,000# sand

Init. Pot: Jan. 1962 - Pmp'd
68 BO, 1680 BW/D.

Recent Test: Inject water @ 115#

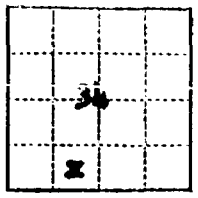
JOHN F. STAVER

TABLE MESA DAKOTA FIELD
San Juan Co., New Mexico

John F. Staver No. 22
Proposed Water Disposal Well
660'FSL, 1980'FWL Section 34
T28N, R17W.

Exhibit 2
Case 6548

Form 9-331 b
(April 1952)



Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency Navajo

Allotte.

Lease No. 1-89-IND-57

SUNDRY NOTICES AND REPORTS ON WELLS

RECEIVED
JAN 22 1962
U.S. GEOLOGICAL SURVEY
FARMINGTON, NEW MEXICO

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	X
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 18, 1962

Well No. 22 is located 660 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 34

SW/4 Section 34 (¼ Sec. and Sec. No.) T28N, R17W (Twp.) (Range) NMPM (Meridian)

Table Mesa (Field) San Juan (County or Subdivision) New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 5349 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 11-13-61 with rotary tools. Drilled to 1410'. Ran IES log. Ran 46 joints of 5 1/2", 14#, J-55 casing, landed at 1410'. Cemented with 300 sacks of regular cement with good returns to surface. Moved rotary out and cable tools in, drilled to 1412'. Sand fraced with 10,000# sand and 7,500 gallons of crude. Swabbed clean. Ran tubing and submersible pump. IP, 68 BOPD and 1680 BWPD. Gas TSTM. Completed as pumping well from 1410'-1412' (open-hole).

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Continental Oil Company

Address P. O. Box 3312

Durango, Colorado

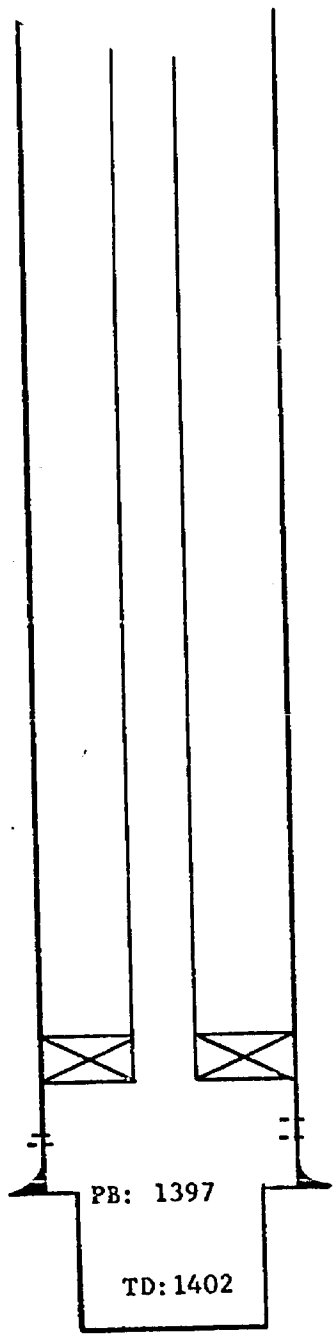
Original Signed By
By H. D. HALEY

Title District Superintendent

USGS(3) NMOCC(2) CHC HOLLY HHH

U. S. GOVERNMENT PRINTING OFFICE 16—84376-3

Elev: 5336 DF ((8'AGL)



Gallup Top @ 410'
Bottom @ 625'

Cement Top: Circulated

2 7/8", 6.5#, J-55 tbg. on Guiberson Uni-Packer @ 1352'

Perf: 1394-1396 w/ 2 spf.

5½", 14#, J-55 csg. @ 1400'RB
Cement w/300 sx neat circ to surface.

Pay: Dakota Top @ 1386RB.

Init. Stim: SOF 10,000gal
10,000# sd

Init. Pot: 35 BO, 1750 BW/D
1961

Recent Test: Inject water @ 110#
6-14-79

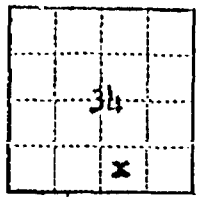
JOHN F. STAVER

TABLE MESA DAKOTA FIELD
San Juan Co., New Mexico

John F. Staver Well No. 23
Proposed Water Disposal Well
625'FSL, 1980'FEL Section 34
T28N, R17W.

Exhibit 3
Case 6548

Form 9-331 b
(April 1952)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

Indian Agency Navajo

Allottee

Lease No. 1-09-IND-57

SUNDRY NOTICES AND REPORTS ON WELLS

RECEIVED
JAN 1962
U.S. GEOLOGICAL SURVEY
FARMINGTON, NEW MEXICO

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
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NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	X
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 18, 1962

Well No. 23 is located 625 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 34

SE/4 Section 34 (¼ Sec. and Sec. No.) | T28N, R17W (Twp. / Range) | NMPM (Meridian)

Table Mesa (Field) | San Juan County (County or Subdivision) | New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 5336 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 11-16-61 with rotary tools. Drilled to 540' RB. Cut Core #1, 540'-590' in Gallup formation. Drilled to 1400' RB. Ran 46 joints 5 1/2", 14#, J-55 casing set at 1400'. Cemented with 300 sacks neat cement with good returns to surface. Moved out rotary, moved in cable tools. Drilled 2' of sand to 1402'. Ran Gamma Ray log. Found top of Dakota at 1386'. Plugged hole back to 1397' RB. Perforated at 1390'. Unable to sand frac formation. Perforated from 1394'-1396' with 2 shots per foot. Sand fraced with 10,000# sand, 10,000 gallons crude oil, and 1000# ADOMITE. Ran tubing and submersible pump. IPP, 35 BOPD and 1750 BWPD. Gas TSTM. Completed as Dakota pumping well from 1394'-1396' RB.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Continental Oil Company

Address P. O. Box 3312

Durango, Colorado

Original Signed By:
By H. D. HALEY

Title District Superintendent

USGS(3) NMOCC(2) OHC HOLLY U. S. GOVERNMENT PRINTING OFFICE 16—84376-3

Table Mesa Dakota
(Oil)
T. 27 N., R. 17 W., NMPM
San Juan County,
New Mexico

By: Robert E. Lauth
Geological Consultant

GEOLOGY

Regional Setting: Western San Juan Basin

Surface Formations: Mancos Formation

Exploration Method Leading to Discovery: Surface - plane table mapping

Type of Trap: Anticlinal structure with a minor cross-fault

Producing Formation: Upper Dakota Sandstone

Gross Thickness and Lithology of Reservoir Rocks: 200 feet

Geometry of Reservoir Rock: Alternating beds of sandstone and shale with some coal beds

Other Significant Shows: Minor shows in Gallup Sandstone at 500 feet

Oldest Stratigraphic Horizon Penetrated: In Continental No. 17 Table Mesa (1-15-1951) located in SE SE SW sec. 3, T. 27 N., R. 17 W., drilled into Ignacio Quartzite

DISCOVERY WELL

Name: (Present Operator: John F. Staver dba Saguaro Oil Company)
Continental Oil Co. No. 1 Table Mesa

Location: NW SE SW, sec. 3, T. 27 N., R. 17 W., NMPM

Elevation (KB): 5327 feet

Date of Completion: September 25, 1925

Total Depth: 1333 feet, plugged back to 1320 feet

Production Casing: 5 3/16" @ 1315 feet

Perforations: Open hole 1315 to 1320 feet

Stimulation: Natural completion

Initial Potential: 312 BOD flowing, no water

Bottom Hole Pressure: In excess of 427 psig

Exhibit 4
Case 6548

DRILLING AND COMPLETION PRACTICES

Present Practice: Mud-drill to approximately 600 feet or below the Gallup Sandstone. Set 5 1/2" casing, cement with 60 sacks. Air drill into top of Dakota Sandstone. If clean, open up about 3 feet. Set 2 7/8" with seating nipple and open hole packer to top of Dakota Sandstone. Run rods and pump and complete. If not productive in upper lenses, then drill deeper, checking additional lenses.

RESERVOIR DATA

Productive Area:

Proved: 100 acres

Unproved: 20 acres

Approved Spacing: 2 1/2 acres

No. of Producing Wells: 2

No. of Abandoned Wells: 31

No. of Dry Holes: 11 excluding Continental's 19 coreholes

Average Net Pay: 12 feet; aggregate total in all productive lenses (estimated)

Porosity: Average 20 percent (estimated)

Permeability: Average 200 millidarcies (estimated)

Water Saturation: Original 28 percent (estimated)

Initial Field Pressure: Unknown - The wells flowed so it is in excess of 427 psig (estimated 500 psig)

Type of Drive: Water drive

Gas Characteristics and Analysis: None

Oil Characteristics and Analysis: Yellow green, paraffin base; 56.4° API gravity; pour point, below 5° F; sulfur less than 0.1 percent

Associated Water Characteristics and Analysis: Sulfur water

Original Gas, Oil, and Water Contact Datums: Unknown, each individual sand lense was different (estimated + 3990 south of fault and + 3980 north of fault

Estimated Primary Recovery:

Type of Secondary Recovery: From 1963 to 1969, a pressure maintenance program was in effect; all produced water was re-injected back in reservoir

Estimated Ultimate Recovery: The reservoir is essentially depleted. Present production is the result of flushing of residual oil.

Present Daily Average Production: Average 10 BOPD

Market Outlets: Trucked by Thriftway to their refinery in Bloomfield

FIELD COMMENTARY

The Table Mesa field is located east of the Shiprock-Gallup highway about thirteen miles south of Shiprock, New Mexico. The Table Mesa Anticline lies just west of the Hogback ridge on the Navajo Indian Reservation. The original test well drilled in 1924 in the NW/4 SW/4 of section 3, T. 27 N., R. 17 W., by Producers and Refiners Corporation to a total depth of 3010 feet found water in all sands penetrated.

Continental Oil Company drilled the discovery well, NW SE SW of section 3, T. 27 N., R. 17 W. in 1925. It was completed for 312 BOPD flowing. The original development of the Table Mesa-Dakota Field was during the period 1925 to 1927. A total of twelve wells were drilled, five of which were dry holes. Table Mesa No.s 1, 2, and 3 flowed initially at rates in excess of 200 BOPD and no water. The remaining four wells were structurally lower and produced at rates of about 50 BOPD and some water.

The second stage of development was during the period 1939 to 1948. Five wells, No.s 12 through 16, were completed and produced at rates somewhat less than 50 BOPD and some water.

The fourth stage was during the period 1961 to 1962 during which time eight wells were drilled. All but one of the wells were completed. At this time it was necessary to install high volume lift equipment to produce the water. In 1963 a pressure maintenance project was initiated whereby all the produced water was re-injected back into the reservoir. This project continued until 1969 when it was sold to Eastern Petroleum and subsequently to John F. Staver (Saquero Oil Company). It is presently in a stripper or final stage. Approximately 20 acres in the SW/4 NW/4 of section 3, T. 27 N., R. 17 W., north of the cross fault appears to be not completely drained or flushed by reinjected water.

REFERENCES

Personal files
Files of Continental Oil Company
New Mexico Oil and Engineering Committee
Production Records

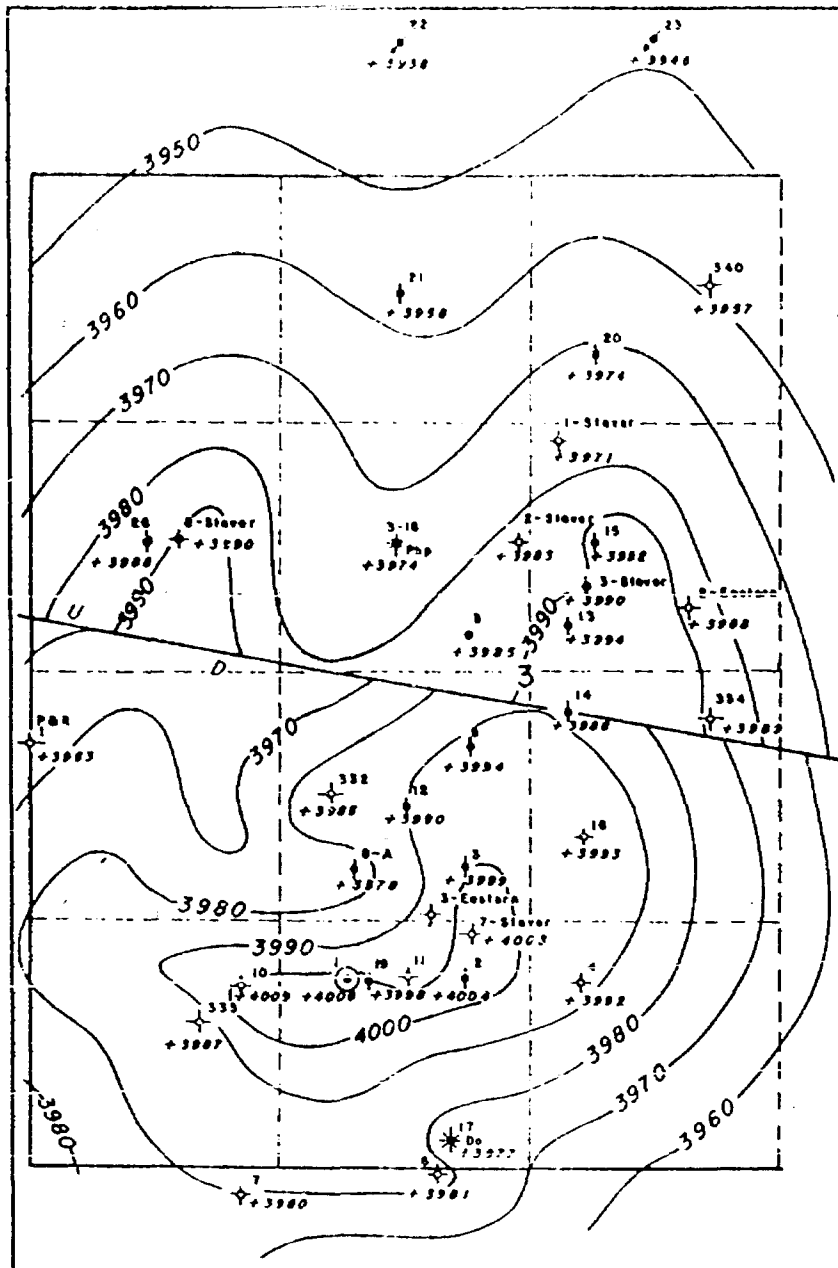
TABLE MESA
DAKOTA FIELD

STRUCTURE MAP

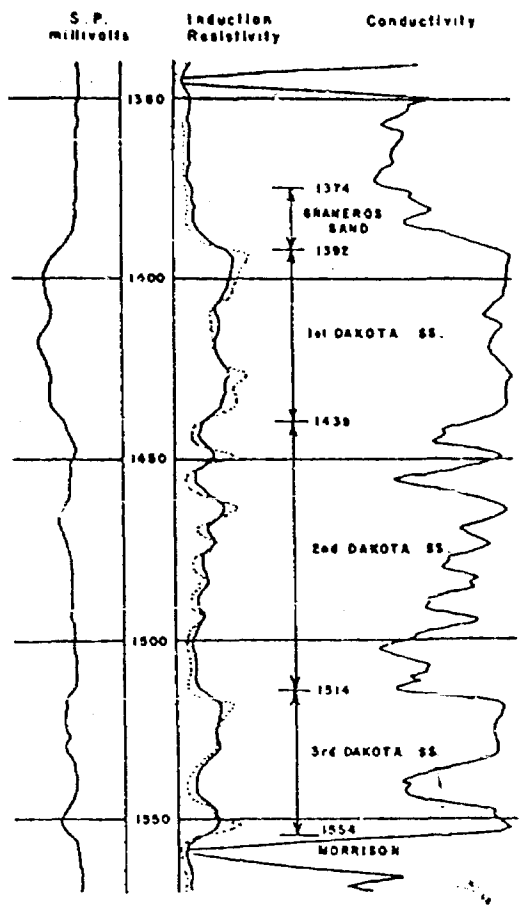
DATUM: TOP OF DAKOTA SS.

CONTOUR INTERVAL: 10 feet

SAN JUAN COUNTY, NEW MEXICO



SECTION 3
TOWNSHIP 27 NORTH
RANGE 17 WEST



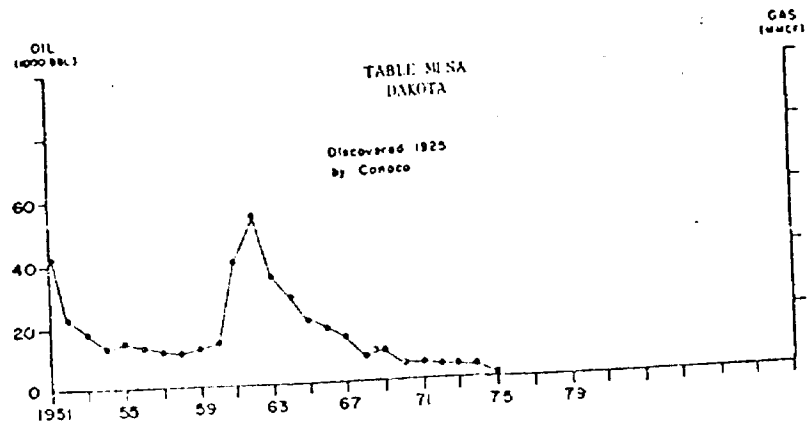
CONTINENTAL OIL CO. NO. 3-18 TABLE MESA

SCALE

0 500' 1000' 2000' 3000' 4000' 5000'

1" = 1000 feet

NUMBER OF WELLS AT YEARS END				- PRODUCTION - OIL IN BARRELS GAS IN MCF	
YEAR	TYPE	PROD	SI/ABN	ANNUAL	CUMULATIVE
1951	OIL	8	9	42,609	919,790
1952	OIL	8	9	33,709	953,499
1953	OIL	8	9	19,070	972,569
1954	OIL	8	9	13,974	1,000,543
1955	OIL	8	9	16,084	1,022,627
1956	OIL	8	9	13,867	1,036,494
1957	OIL	8	9	12,407	1,048,901
1958	OIL	8	9	11,690	1,060,591
1959	OIL	8	9	13,564	1,074,155
1960	OIL	8	9	15,292	1,089,447
1961	OIL	13	12	39,991	1,129,438
1962	OIL	12	13	55,703	1,185,141
1963	OIL	10	15	35,212	1,220,353
1964	OIL	7	18	28,974	1,249,327
1965	OIL	7	18	21,403	1,270,730
1966	OIL	5	20	18,747	1,289,477
1967	OIL	5	20	15,144	1,304,621
1968	OIL	4	21	9,250	1,313,871
1969	OIL	3	22	10,403	1,324,274
1970	OIL	3	22	6,166	1,330,440
1971	OIL	3	25	6,595	1,337,035
1972	OIL	3	25	5,308	1,342,343
1973	OIL	2	26	5,231	1,347,574
1974	OIL	2	26	4,663	1,352,237
1975	OIL	2	26	1,279	1,353,516
1976	OIL	2	31		
1977	OIL	2	31		



TABULAR SUMMARY — ALL WELLS WITHIN ONE HALF MILE OF DISPOSAL WELLS — STAVER 22 + 23

WELL NO.	WELL LOCATION	CASING	TOTAL DEPTH	PRODUCING INTERVAL	ABANDONMENT DATE	CEMENT PLUGS	ELEVATION	TOP DAKOTA
20	990 FNL, 2310 FEL, 3-27N-17W	5.5", 14#, 1382, 300 SKS.	1372	1365 - 1372	PRODUCING	NONE	5309 GL	1371
21	330 FNL, 1980 FEL, 3-27N-17W	NONE	1551	NEVER PROD.	MAY 55	1225-1325, 30 SKS. 550-400, 24 SKS 0-10, 10 SKS	5341 GL	1383
21	660 FNL, 1980 FWL, 3-27N-17W	5½" @ 1385' w/ 300 SKS. (14#)	1430	1385 - 1432	11-17-72 (T.A.)	NONE	5361 DF	1393
8	1183 FNL, 1189 FWL, 3-27N-17W	8⅝" 24# @ 20' w/ 5 SKS. 4.5", 9.5# @ 1375' w/ 35 SKS.	1381	NEVER PROD.	1-22-73	565-589, 20 SKS. 450-474, 20 SKS 69', 10 SKS 5 SKS. @ SURFACE	5369 GL	1374
15	1980 FNL, 2310 FEL, 3-27N-17W	8⅝" @ 49' w/ 15 SKS. 7" @ 644' } PULLED 5" @ 1340' } (NO CEMENT)	1371	1341 - 1352	1-17-73	1352-1244, 14 SKS 0-10, 5 SKS.	5332 GL	1341
3-18	1980 FNL, 1980 FWL, 3-27N-17W	13⅜ @ 502 w/ 175 SKS. (48#) 8⅝ @ 5000 w/ 250 SKS (32#) 5½ @ 7113 w/ 200 SKS. (14 TO 17#)	7114	BARKER CREEK 7097 - 7113	APPROVED 3-4-75	PROPOSED 7113-6700, 100 SKS 6100-6000, 75 SKS 5017-5418, 50 SKS 4260-4160, 100 SKS 2800-2700, 7 SKS 75 - SURFACE 9 SKS	5360 DF	1387
1	665 FNL, 2054 FEL, 3-27N-17W	8⅝", 27#, 17' w/ 5 SKS. 5½", 17#, 687 NO CEMENT (PULLED)	1389	NEVER PROD.	3-10-76	1100-1389, 30 SKS. 950-750, 45 SKS 0-10', 5 SKS.	5352 GR.	1356
2	1152 FNL, 2295 FEL, 3-27N-17W	8⅝", 27# @ 17' w/ 5 SKS. 5½", 17# @ 673' NO CEMENT (PULLED)	1358	NEVER PROD.	2-17-76	1200-1359, 18 SKS. 400-700, 48 SKS 0-10', 5 SKS.	5340 GR.	1356
1	1650 FSL, 1650 FEL, 34-28N-17W	4.5", 9.5#, 1390, ? SACKS	1395	NEVER PROD.	7-23-71	1400-1300, 100 SKS 800-525, 80 SKS 0-100, 100 SKS	5314 GL	?
1A	1650 FSL, 1350 FEL, 34-28N-17W	4.5", 9.5#, 1367, NO SACKS (PULLED)	1384	NEVER PROD.	8-16-71	1384-1284, 100 SKS 790-580, 90 SKS 0-100', 100 SKS	5314 GL	1390
25	1980 FSL, 1980 FWL, 34-28N-17W	5.5", 14#, 1411, 300 SKS.	1456	1415 - 1456	8-4-62 (T.A.)	NONE	5339 DF	1415

Exhibit 5
Case 6548

Pohlmann and Associates

FARMINGTON, NEW MEXICO AND HOUSTON, TEXAS

200 PETROLEUM PLAZA BLDG.
FARMINGTON, NEW MEXICO 87401
PHONE (505) 325-4608

June 26, 1979

Subject: Application for Approval of Water Disposal Injection Wells

Area: Table Mesa Field in 34-28N-17W and 3-27N-17W, the Navajo Reservation in San Juan County, New Mexico

Zone: Dakota Sandstone

Operator: John F. Staver
Box 950
Virginia, Minnesota 55792
(218) 741-4122

Summary: Wells 22 and 23 in the S½ of 34-28N-17W are the proposed disposal holes. Diagrams and word description of the subject holes are included in this package.

A chemical analysis of the Dakota Formation water from Conoco's No. 27 in the NE¼SW¼ 4-27N-17W follows:

Dissolved Solids	1076	PPM
Total Alkalinity	204	"
Carbonate	40	"
Hydroxide	0	"
Bi-Carbonate	164	"
Chloride	32	"
Calcium	20	"
Sulphate	240	"
Fluorite	1.75	"
Magnesium	20	"
Iron	0.12	"
Hardness	40	"
PH	8.7	
Conductance	1370.0	

Exhibit 7
Case 6548

The remainder of the information contained here consists of:

(1) Table Mesa geologic-production and history summary with contour map, electric log and other details.

(2) Tabular summary of all wells within one-half mile of the proposed disposal wells.

(3) Diagram of all plugged and abandoned wells within one-half mile of the disposal wells.

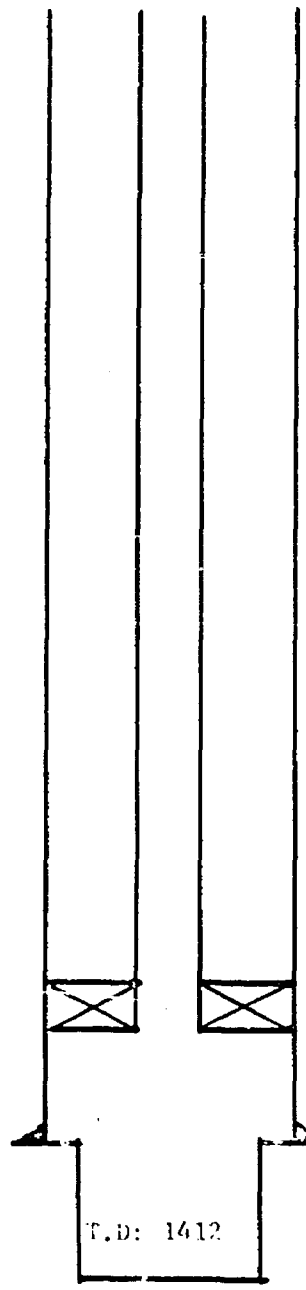
(4) Map (4" = 1 mile) of Table Mesa Field showing well locations and lease lines.

Recent tests (June, 1979) indicate we can inject all anticipated volumes of produced water (two producing wells) at surface pressure of less than 150 psi. The is considerably less than the 0.2 psi per foot (280 psi for a well depth of 1400') presently allowed. If any future problem in this regard is encountered, the disposal wells will be cleaned up and chemically treated.

Hank Pohlmann

Hank Pohlmann

Elev: 5394 DF (8' AGL)



2 7/8", 6.5#, J-55 tbg.on Guiberson Uni-Packer @ 1365'

5½", 14#, J-55 csg.@ 1410'
Cmt'd. w/300 sx. circ. to surf.

T.D: 1412

Pay: Dakota

Init. Stim: SOF w/ 10,000 gal. 10,000# sand

Init. Pot: Jan. 1962 - pmp'd 68 BO, 1680 BW/D.

Recent Test: Inject water @ 115#

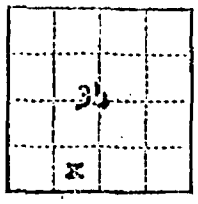
JOHN F. STAVER

TABLE MESA DAKOTA FIELD
San Juan Co., New Mexico

John F. Staver No. 22
Proposed Water Disposal Well
660'FSL, 1980'FWL Section 34
T29N, R17W.

Exhibit 2
Case 6548

Form 9-331 b
(April 1952)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R358.4.
Approval expires 12-31-60.

Indian Agency Navajo

Allottee

Lease No. 1-89-IND-57

SUNDRY NOTICES AND REPORTS ON WELLS

RECEIVED
JAN 22 1962
U. S. GEOLOGICAL SURVEY
FARMINGTON, NEW MEXICO

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	X
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 18, 1962

Well No. 22 is located 660 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 34

SW/4 Section 34 (¼ Sec. and Sec. No.) T28N, R17W (Twp.) (Range) NMPM (Meridian)

Table Mesa (Field) San Juan (County or Subdivision) New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 5349 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 11-13-61 with rotary tools. Drilled to 1410'. Ran IES log. Ran 46 joints of 5 1/2", 14#, J-55 casing, landed at 1410'. Cemented with 300 sacks of regular cement with good returns to surface. Moved rotary out and cable tools in, drilled to 1412'. Sand fraced with 10,000# sand and 7,500 gallons of crude. Swabbed clean. Ran tubing and submersible pump. IP, 68 BOPD and 1680 BWPD. Gas TSTM. Completed as pumping well from 1410'-1412' (open-hole).

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Continental Oil Company

Address P. O. Box 3312

Durango, Colorado

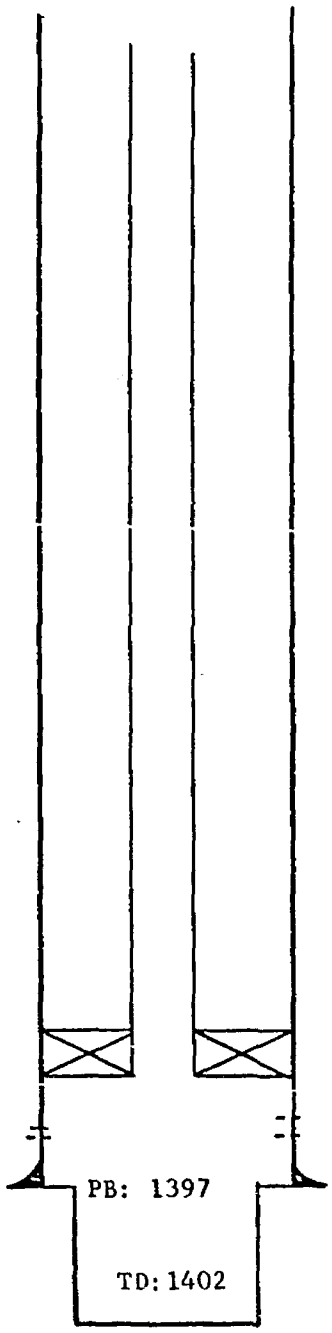
Original Signed By:
By H. D. HALEY

Title District Superintendent

USGS(3) NMOCC(2) CHC HOLLY HDH

U. S. GOVERNMENT PRINTING OFFICE 16—84376-8

Elev: 5336 DF ((8'AGL)



Gallup Top @ 410'
Bottom @ 625'

Cement Top: Circulated

2 7/8", 6.5#, J-55 tbg. on Guiberson Uni-Packer @ 1352'

Perf: 1394-1396 w/ 2 spf.

5½", 14#, J-55 csg. @ 1400'RB
Cement w/300 sx neat circ to surface.

Pay: Dakota Top @ 1386RB.

Init. Stim: SOF 10,000gal
10,000# sd

Init. Pot: 35 BO, 1750 BW/D
1961

Recent Test: Inject water @ 110#
6-14-79

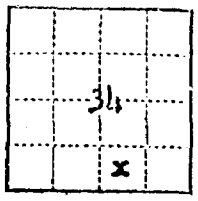
JOHN F. STAVER

TABLE MESA DAKOTA FIELD
San Juan Co., New Mexico

John F. Staver Well No. 23
Proposed Water Disposal Well.
625'FSL, 1980'FEL Section 34
T28N, R17W.

Exhibit 3
Case 6548

Form 9-331 b
(April 1952)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

Indian Agency Navajo

Allottee

Lease No. 1-09-IND-57

SUNDRY NOTICES AND REPORTS ON WELLS

RECEIVED
JAN 1962
U. S. GEOLOGICAL SURVEY
FARMINGTON, NEW MEXICO

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	X
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 18, 1962

Well No. 23 is located 625 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 34

SE/4 Section 34 (¼ Sec. and Sec. No.) T28N, R17W (Twp., Range) NMPM (Meridian)

Tabla Mesa (Field) San Juan County (County or Subdivision) New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 5336 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 11-16-61 with rotary tools. Drilled to 590' RB. Cut Core #1, 540'-590' in Gallup formation. Drilled to 1400' RB. Ran 46 joints 5 1/2", 14#, J-55 casing set at 1400'. Cemented with 300 sacks neat cement with good returns to surface. Moved out rotary, moved in cable tools. Drilled 2' of sand to 1402'. Ran Gamma Ray log. Found top of Dakota at 1386'. Plugged hole back to 1397' RB. Perforated at 1390'. Unable to sand frac formation. Perforated from 1394'-1396' with 2 shots per foot. Sand fraced with 10,000# sand, 10,000 gallons crude oil, and 1000# ADOMITE. Ran tubing and submersible pump. IPP, 35 BOPD and 1750 BWPD. Gas TSTM. Completed as Dakota pumping well from 1394'-1396' RB.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Continental Oil Company

Address P. O. Box 3312

Durango, Colorado

Original Signed By:
By H. D. HALEY

Title District Superintendent

USGS(3) NMOCC(2) GHG HOLLY

U. S. GOVERNMENT PRINTING OFFICE 16—81371-3

Table Mesa Dakota
(Oil)
T. 27 N., R. 17 W., NMPM
San Juan County,
New Mexico

By: Robert E. Lauth
Geological Consultant

GEOLOGY

Regional Setting: Western San Juan Basin

Surface Formations: Maneos Formation

Exploration Method Leading to Discovery: Surface - plane table mapping

Type of Trap: Anticlinal structure with a minor cross-fault

Producing Formation: Upper Dakota Sandstone

Gross Thickness and Lithology of Reservoir Rocks: 200 feet

Geometry of Reservoir Rock: Alternating beds of sandstone and shale with some coal beds

Other Significant Shows: Minor shows in Gallup Sandstone at 500 feet

Oldest Stratigraphic Horizon Penetrated: In Continental No. 17 Table Mesa (1-15-1951) located in SE SE SW sec. 3, T. 27 N., R. 17 W., drilled into Ignacio Quartzite

DISCOVERY WELL

Name: (Present Operator: John F. Staver dba Saguaro Oil Company)
Continental Oil Co. No. 1 Table Mesa

Location: NW SE SW, sec. 3, T. 27 N., R. 17 W., NMPM

Elevation (KB): 5327 feet

Date of Completion: September 25, 1925

Total Depth: 1333 feet, plugged back to 1320 feet

Production Casing: 5 3/16" @ 1315 feet

Perforations: Open hole 1315 to 1320 feet

Stimulation: Natural completion

Initial Potential: 312 BOD flowing, no water

Bottom Hole Pressure: In excess of 427 psig

Exhibit 4
case 6548

DRILLING AND COMPLETION PRACTICES

Present Practice: Mud-drill to approximately 600 feet or below the Gallup Sandstone. Set 5 1/2" casing, cement with 60 sacks. Air drill into top of Dakota Sandstone. If clean, open up about 3 feet. Set 2 7/8" with seating nipple and open hole packer to top of Dakota Sandstone. Run rods and pump and complete. If not productive in upper lenses, then drill deeper, checking additional lenses.

RESERVOIR DATA

Productive Area:

Proved: 100 acres

Unproved: 20 acres

Approved Spacing: 2 1/2 acres

No. of Producing Wells: 2

No. of Abandoned Wells: 31

No. of Dry Holes: 11 excluding Continental's 19 coreholes

Average Net Pay: 12 feet; aggregate total in all productive lenses (estimated)

Porosity: Average 20 percent (estimated)

Permeability: Average 200 millidarcies (estimated)

Water Saturation: Original 28 percent (estimated)

Initial Field Pressure: Unknown - The wells flowed so it is in excess of 427 psig (estimated 500 psig)

Type of Drive: Water drive

Gas Characteristics and Analysis: None

Oil Characteristics and Analysis: Yellow green, paraffin base; 56.4° API gravity; pour point, below 5° F; sulfur less than 0.1 percent

Associated Water Characteristics and Analysis: Sulfur water

Original Gas, Oil, and Water Contact Datums: Unknown, each individual sand lense was different (estimated + 3990 south of fault and + 3980 north of fault

Estimated Primary Recovery:

Type of Secondary Recovery: From 1963 to 1969, a pressure maintenance program was in effect; all produced water was re-injected back in reservoir

Estimated Ultimate Recovery: The reservoir is essentially depleted. Present production is the result of flushing of residual oil.

Present Daily Average Production: Average 10 BOPD

Market Outlets: Trucked by Thriftway to their refinery in Bloomfield

FIELD COMMENTARY

The Table Mesa field is located east of the Shiprock-Gallup highway about thirteen miles south of Shiprock, New Mexico. The Table Mesa Anticline lies just west of the Hogback ridge on the Navajo Indian Reservation. The original test well drilled in 1924 in the NW/4 SW/4 of section 3, T. 27 N., R. 17 W., by Producers and Refiners Corporation to a total depth of 3010 feet found water in all sands penetrated.

Continental Oil Company drilled the discovery well, NW SE SW of section 3, T. 27 N., R. 17 W. in 1925. It was completed for 312 BOPD flowing. The original development of the Table Mesa-Dakota Field was during the period 1925 to 1927. A total of twelve wells were drilled, five of which were dry holes. Table Mesa No.s, 1, 2, and 3 flowed initially at rates in excess of 200 BOPD and no water. The remaining four wells were structurally lower and produced at rates of about 50 BOPD and some water.

The second stage of development was during the period 1939 to 1948. Five wells, No.s 12 through 16, were completed and produced at rates somewhat less than 50 BOPD and some water.

The fourth stage was during the period 1961 to 1962 during which time eight wells were drilled. All but one of the wells were completed. At this time it was necessary to install high volume lift equipment to produce the water. In 1963 a pressure maintenance project was initiated whereby all the produced water was re-injected back into the reservoir. This project continued until 1969 when it was sold to Eastern Petroleum and subsequently to John F. Staver (Saquero Oil Company). It is presently in a stripper or final stage. Approximately 20 acres in the SW/4 NW/4 of section 3, T. 27 N., R. 17 W., north of the cross fault appears to be not completely drained or flushed by reinjected water.

REFERENCES

Personal files
Files of Continental Oil Company
New Mexico Oil and Engineering Committee
Production Records

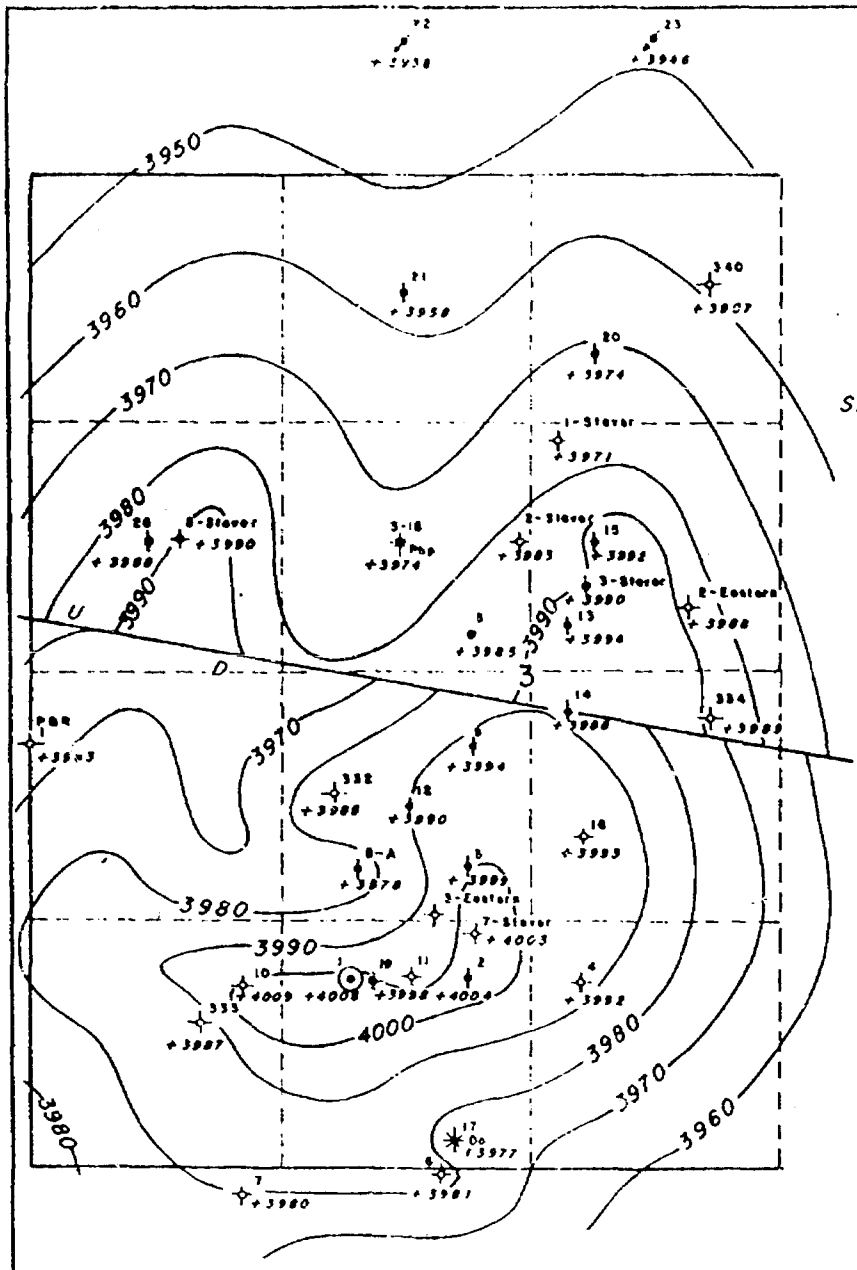
TABLE MESA
DAKOTA FIELD

STRUCTURE MAP

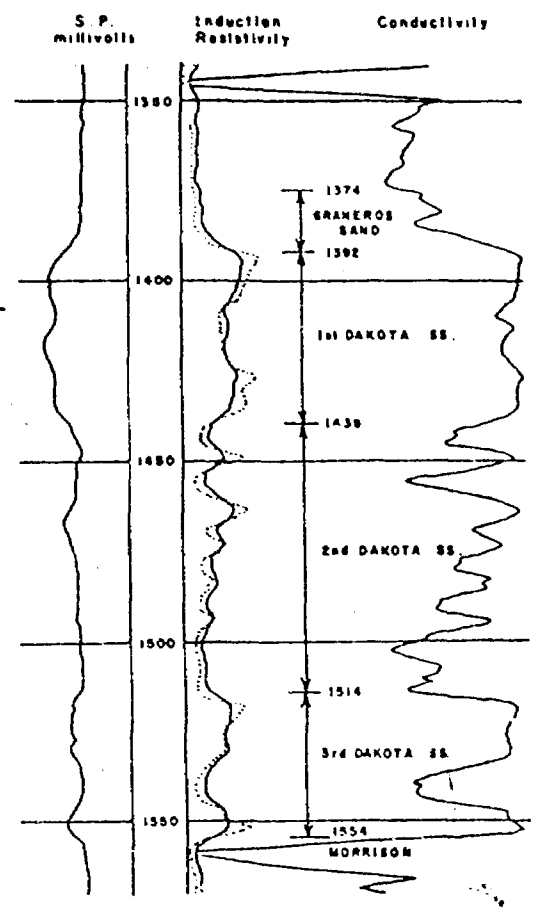
DATUM: TOP OF DAKOTA SS.

CONTOUR INTERVAL: 10 feet

SAN JUAN COUNTY, NEW MEXICO



SECTION 3
TOWNSHIP 27 NORTH
RANGE 17 WEST



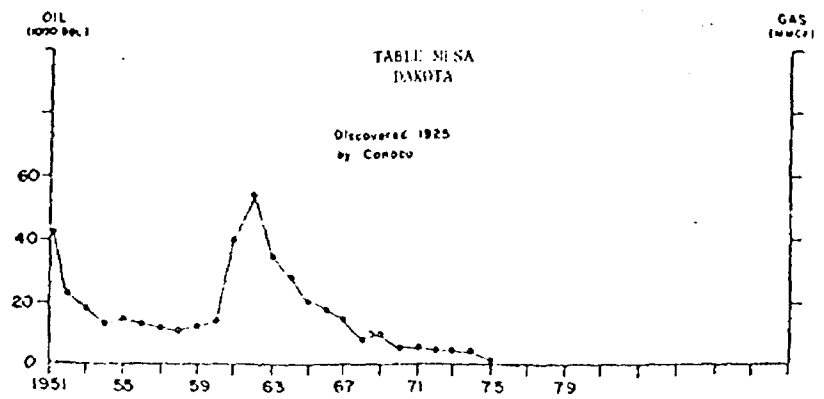
CONTINENTAL OIL CO. NO. 3-18 TABLE MESA

SCALE

0 500' 1000' 2000' 3000' 4000' 5000'

1" = 1000 feet

NUMBER OF WELLS AT YEARS END				- PRODUCTION - OIL IN BARRELS GAS IN MCF	
YEAR	TYPE	PROD	SI/ABN	ANNUAL	CUMULATIVE
1951	OIL	8	9	42,600	919,700
1952	OIL	8	9	23,709	943,409
1953	OIL	8	9	19,070	962,569
1954	OIL	8	9	13,924	1,000,513
1955	OIL	8	9	16,064	1,022,627
1956	OIL	5	9	13,867	1,036,494
1957	OIL	5	9	12,407	1,048,901
1958	OIL	5	9	11,690	1,060,591
1959	OIL	8	9	13,564	1,074,155
1960	OIL	8	9	15,292	1,089,147
1961	OIL	13	12	39,991	1,129,438
1962	OIL	12	13	55,703	1,185,141
1963	OIL	10	15	35,212	1,220,353
1964	OIL	7	18	28,974	1,249,327
1965	OIL	7	18	21,403	1,270,730
1966	OIL	5	20	18,747	1,289,477
1967	OIL	5	20	15,144	1,304,621
1968	OIL	4	21	9,250	1,313,871
1969	OIL	3	22	10,403	1,324,274
1970	OIL	3	22	6,166	1,330,440
1971	OIL	3	25	6,595	1,337,035
1972	OIL	3	25	5,308	1,342,343
1973	OIL	2	26	5,231	1,347,574
1974	OIL	2	26	4,663	1,352,237
1975	OIL	2	26	1,279	1,353,516
1976	OIL	2	31		
1977	OIL	2	31		



TABULAR SUMMARY_ ALL WELLS WITHIN ONE HALF MILE OF DISPOSAL WELLS _ STAVER 22 + 23

WELL NO.	WELL LOCATION	CASING	TOTAL DEPTH	PRODUCING INTERVAL	ABANDONMENT DATE	CEMENT PLUGS	ELEVATION	TOP DAKOTA
20	990 FNL, 2310 FEL, 3-27N-17W	5.5", 14#, 1382, 300 SKS.	1372	1365 - 1372	PRODUCING	NONE	6309 GL	1371
21	330 FNL, 1980 FEL, 3-27N-17W	NONE	1551	NEVER PROD.	MAY 55	1225-1325, 30 SKS. 530-430', 24 SKS 0-10', 10 SKS	5341 GL	1383
21	660 FNL, 1980 FWL, 3-27N-17W	5½" @ 1385' w/ 300 SKS. (14#)	1430	1385-1432	11-17-72 (T.A.)	NONE	5361 DF	1393
8	1183 FNL, 1189 FWL, 3-27N-17W	8⅝" 24# @ 20' w/ 5 SKS. 4.5"; 9.5# @ 1375' w/ 95 SKS.	1381	NEVER PROD.	1-22-73	585-589, 20 SKS. 450-470, 20 SKS 40', 10 SKS 5 SKS. @ SURFACE	5369 GL	1374
15	1980 FNL, 2310 FEL, 3-27N-17W	8⅝" @ 49' w/ 15 SKS. 7" @ 644' } PULLED 5" @ 1340' } (NO CEMENT)	1371	1341-1352	1-17-73	1353-1241, 14 SKS 0-10, 35 SKS.	5332 GL	1341
3-18	1980 FNL, 1980 FWL, 3-27N-17W	13⅜ @ 502 w/ 175 SKS. (48#) 8⅝ @ 5000 w/ 250 SKS (32#) 5½ @ 7113 w/ 200 SKS. (14 TO 17#)	7114	BARKER CREEK 7077-7113	APPROVED 2-4-75	PROPOSED 7113-6700, 100 SKS 6400-6000, 75 SKS 5017-5118, 100 SKS 4240-4140, 100 SKS 3900-3780, 7 SKS 75 - SURFACE 75 SKS	5360 DF	1307
1	665 FNL, 2054 FEL, 3-27N-17W	8⅝", 27#, 17' w/ 5 SKS. 5½", 17#, 687 NO CEMENT (PULLED)	1389	NEVER PROD.	3-10-76	1100-1389, 30 SKS. 850-750, 95 SKS 0-10', 5 SKS.	5352 GR.	1356
2	1152 FNL, 2295 FEL, 3-27N-17W	8⅝", 27# @ 17' w/ 5 SKS. 5½", 17# @ 672' NO CEMENT (PULLED)	1358	NEVER PROD.	2-17-76	1100-1359, 185 SKS. 450-350, 485 SKS. 0-10', 5 SKS.	5340 GR.	1356
1	1650 FSL, 1650 FEL, 34-28N-17W	4.5", 9.5#, 1390, ? SACKS	1395	NEVER PROD.	7-23-71	1400-1300, 100 SKS 800-535, 80 SKS 0-100, 100 SKS	5314 GL	?
1A	1650 FSL, 1350 FEL, 34-28N-17W	4.5", 9.5#, 1367, NO SACKS (PULLED)	1384	NEVER PROD.	8-16-71	1594-1294, 100 SKS 790-520, 90 SKS 0-100', NO SKS	5314 GL	1390
25	1980 FSL, 1980 FWL, 34-28N-17W	5.5", 14#, 1411, 300 SKS.	1456	1415-1456	8-4-62 (T.A.)	NONE	5339 DF	1415

Exhibit 5
Case 6548

Pohlmann and Associates

FARMINGTON, NEW MEXICO AND HOUSTON, TEXAS

200 PETROLEUM PLAZA BLDG.
FARMINGTON, NEW MEXICO 87401
PHONE (505) 325-4608

June 26, 1979

Subject: Application for Approval of Water Disposal Injection Wells

Area: Table Mesa Field in 34-28N-17W and 3-27N-17W, the Navajo Reservation in San Juan County, New Mexico

Zone: Dakota Sandstone

Operator: John F. Staver
Box 950
Virginia, Minnesota 55792
(218) 741-4122

Summary: Wells 22 and 23 in the S½ of 34-28N-17W are the proposed disposal holes. Diagrams and word description of the subject holes are included in this package.

A chemical analysis of the Dakota Formation water from Conoco's No. 27 in the NE¼SW¼ 4-27N-17W follows:

Dissolved Solids	1076	PPM
Total Alkalinity	204	"
Carbonate	40	"
Hydroxide	0	"
Bi-Carbonate	164	"
Chloride	32	"
Calcium	20	"
Sulphate	240	"
Fluorite	1.75	"
Magnesium	20	"
Iron	0.12	"
Hardness	40	"
PH	8.7	
Conductance	1370.0	

Exhibit 7
Case 6548

The remainder of the information contained here consists of:

(1) Table Mesa geologic-production and history summary with contour map, electric log and other details.

(2) Tabular summary of all wells within one-half mile of the proposed disposal wells.

(3) Diagram of all plugged and abandoned wells within one-half mile of the disposal wells.

(4) Map (4" = 1 mile) of Table Mesa Field showing well locations and lease lines.

Recent tests (June, 1979) indicate we can inject all anticipated volumes of produced water (two producing wells) at surface pressure of less than 150 psi. The is considerably less than the 0.2 psi per foot (280 psi for a well depth of 1400') presently allowed. If any future problem in this regard is encountered, the disposal wells will be cleaned up and chemically treated.

Hank Pohlmann

Hank Pohlmann

OIL CONSERVATION COMMISSION
Aztec DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE April 24, 1979

RE: Proposed MC ____
Proposed DHC ____
Proposed NSL ____
Proposed SWD X
Proposed WFX ____
Proposed PMX ____

Gentlemen:

I have examined the application dated April 24, 1979
for the John E. Staver, Subb Mesa #22, N-34-28N-17-W
Operator, Lease and Well No., Unit, S-T-R

and my recommendations are as follows:

Require tubing and packer with leak detection device on annulus. Order should specify that only water produced from the Dakota formation may be disposed of in this well.

Yours very truly,

Frank E. Chavez

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR	ADDRESS
JOHN F. STAVER	P.O.Box 51, Farmington, N.M. 87401

LEASE NAME	WELL NO.	FIELD	COUNTY
Table Mesa	22	Table Mesa	San Juan

LOCATION

UNIT LETTER _____; WELL IS LOCATED 660 FEET FROM THE South LINE AND 1980 FEET FROM THE West LINE, SECTION 34 TOWNSHIP 28N RANGE 17W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
INTERMEDIATE					
LONG STRING	5½"	1408		Surface	Circulated
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	1408	1412

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	Open Hole	1408-1412

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Production	No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
	None	6740

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
300	200	400	Open	Pressure	100#

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Fresh	Yes	No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Navajo

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

NONE

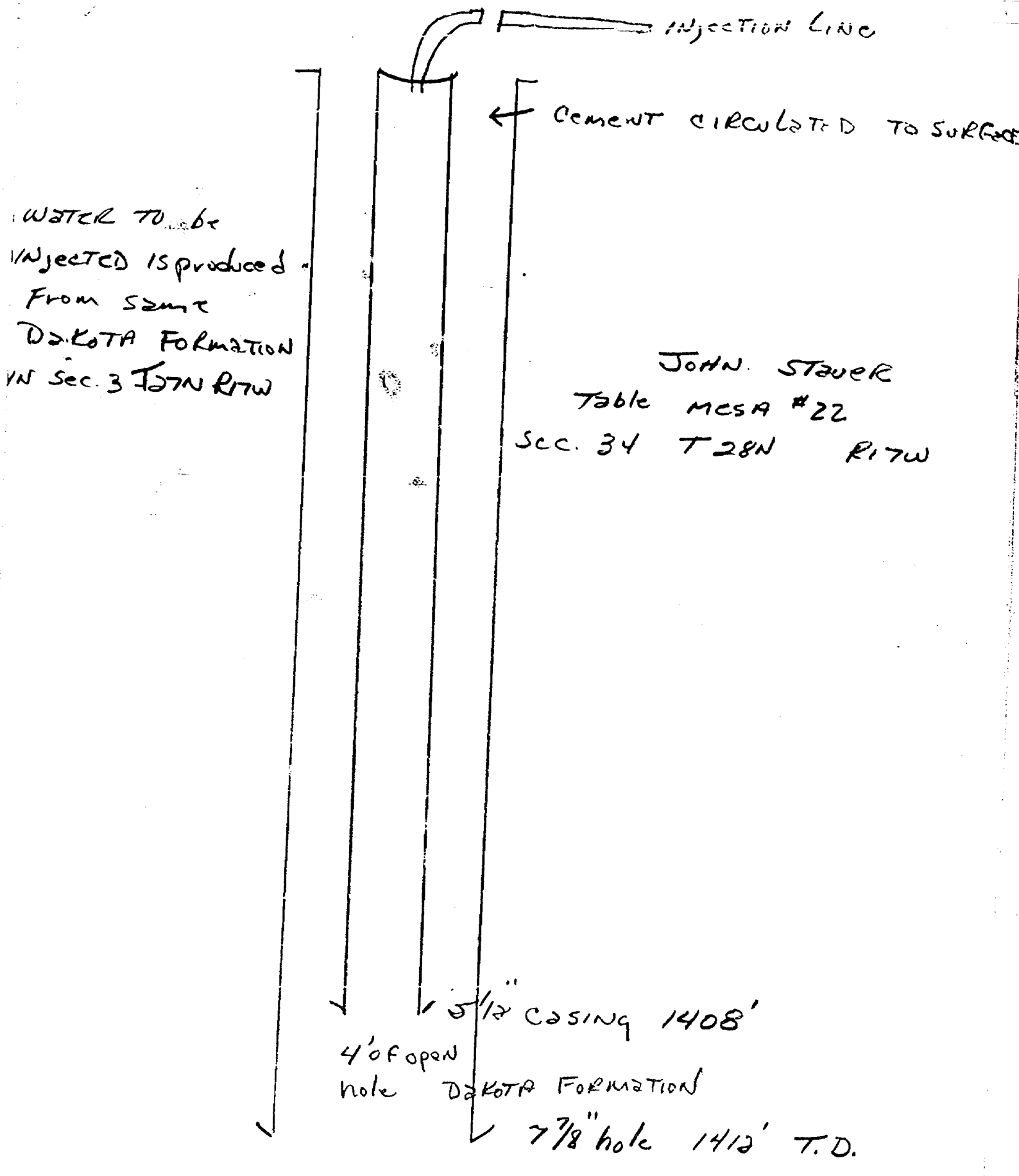
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	No	None	No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	None	Yes

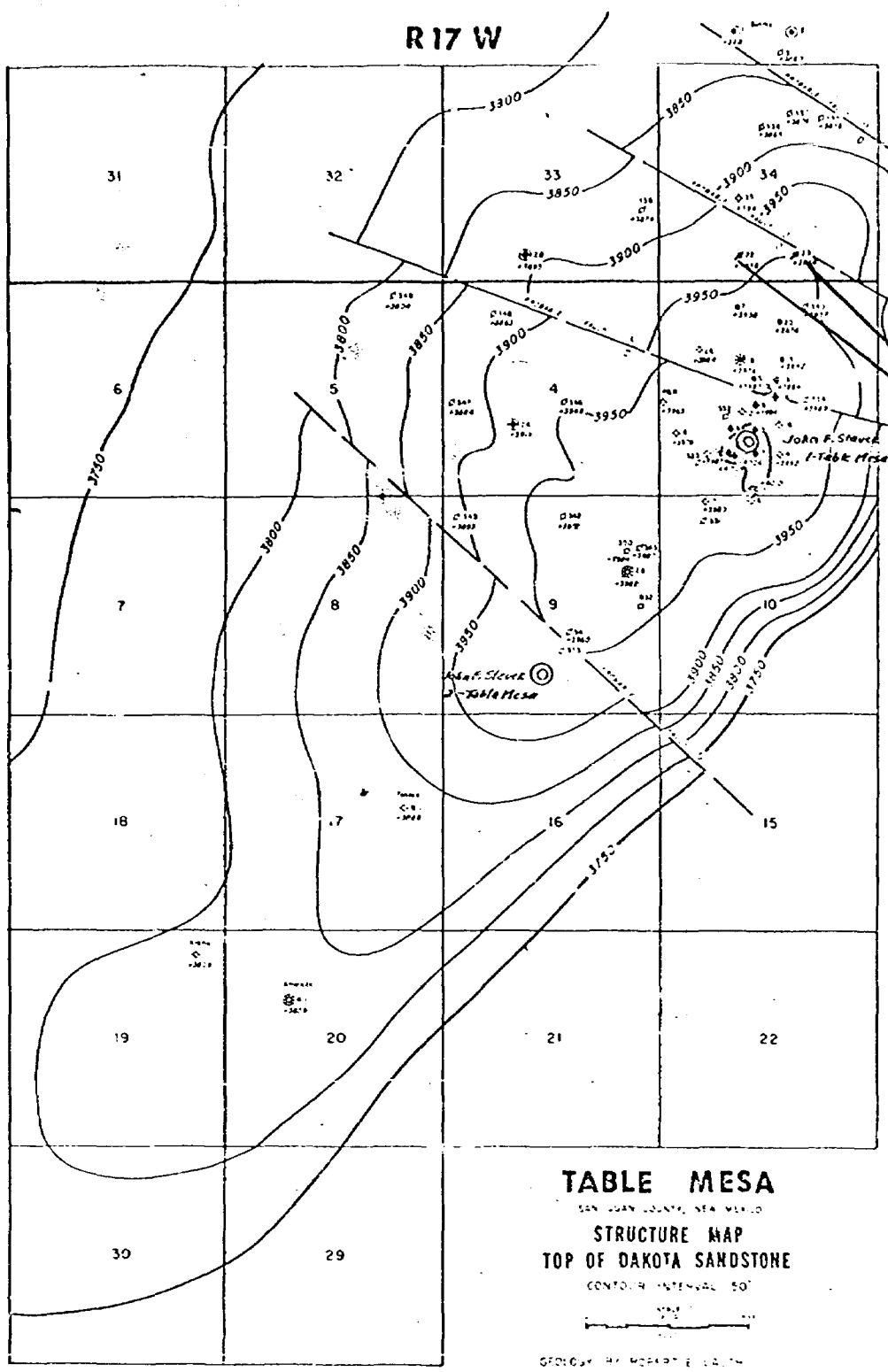
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

John Cunningham — Manager — 4-24-79

(Signature) (Title) (Date)

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


INJECTION LINE
CEMENT CIRCULATED TO SURFACE
WATER TO be
INJECTED IS produced
FROM SAME
DAKOTA FORMATION
IN SEC. 3 T27N R17W
JOHN STAUER
Table MESA #22
SEC. 34 T28N R17W
5 1/2" CASING 1408'
4' OF OPEN
hole DAKOTA FORMATION
7 7/8" hole 1412' T.D.



PROPOSED INJECTION WELL'S
#33 & #53 NO OTHER OPERATORS
WITHIN 3 miles

OIL CONSERVATION COMMISSION
Aztec DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE April 24, 1979

RE: Proposed MC ____
Proposed DHC ____
Proposed NSL ____
Proposed SWD X
Proposed WFX ____
Proposed PMX ____

Gentlemen:

I have examined the application dated April 24, 1979
for the John F. Stowe, Sable Mesa #23 O-34-28N-17W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Require tubing and packer with leak detection device on annulus. Order should specify that only water produced from the Dakota formation may disposed of in this well.

Yours very truly,

Frank E. Chavez

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR		ADDRESS	
JOHN F. STAVER		P.O.Box 51, Farmington, N.M. 87401	
LEASE NAME	WELL NO.	FIELD	COUNTY
Table Mesa	23	Table Mesa	San Juan

LOCATION

UNIT LETTER _____ ; WELL IS LOCATED 625 FEET FROM THE South LINE AND 1980 FEET FROM THE East LINE, SECTION 34 TOWNSHIP 28N RANGE 17W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
INTERMEDIATE					
LONG STRING	5½"	1401		Surface	Circulated
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	1394	1400

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	Open Hole	1394-1400

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Production	No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
	None	6740

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
300	200	400	Open	Pressure	100#

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Fresh	Yes	No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Navajo

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

NONE

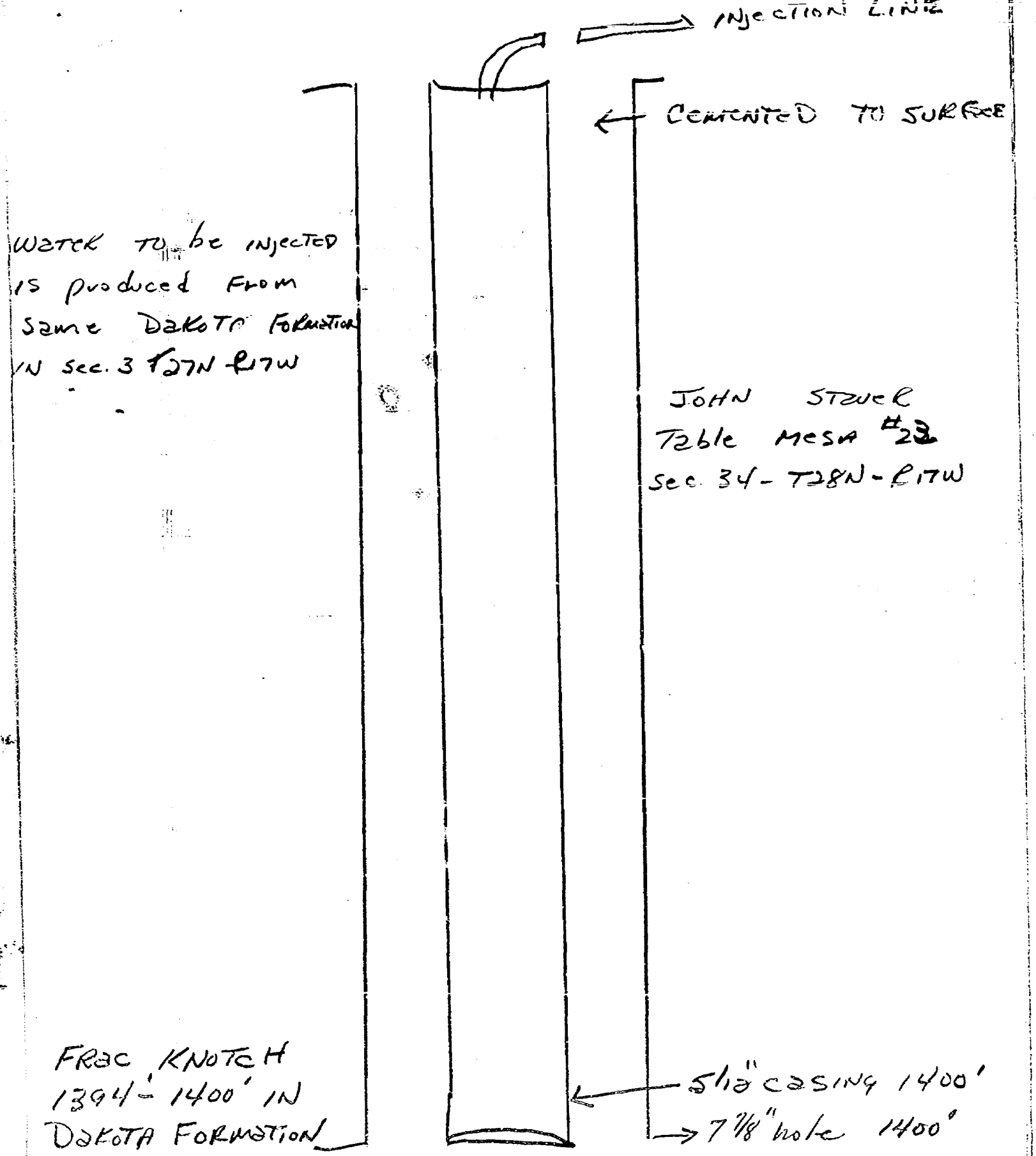
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	No	None	No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	None	Yes

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

John Cunningham — Manager — 4-24-79

(Signature) (Title) (Date)

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


INJECTION LINE
CEMENTED TO SURFACE
WATER TO be INJECTED
IS produced FROM
SAME DAKOTA FORMATION
IN Sec. 3 T27N-R17W
JOHN STOVER
Table MESA #23
Sec. 34 - T28N - R17W
FRAC KNOTCH
1394' - 1400' IN
DAKOTA FORMATION
5 1/2" CASING 1400'
7 7/8" hole 1400'

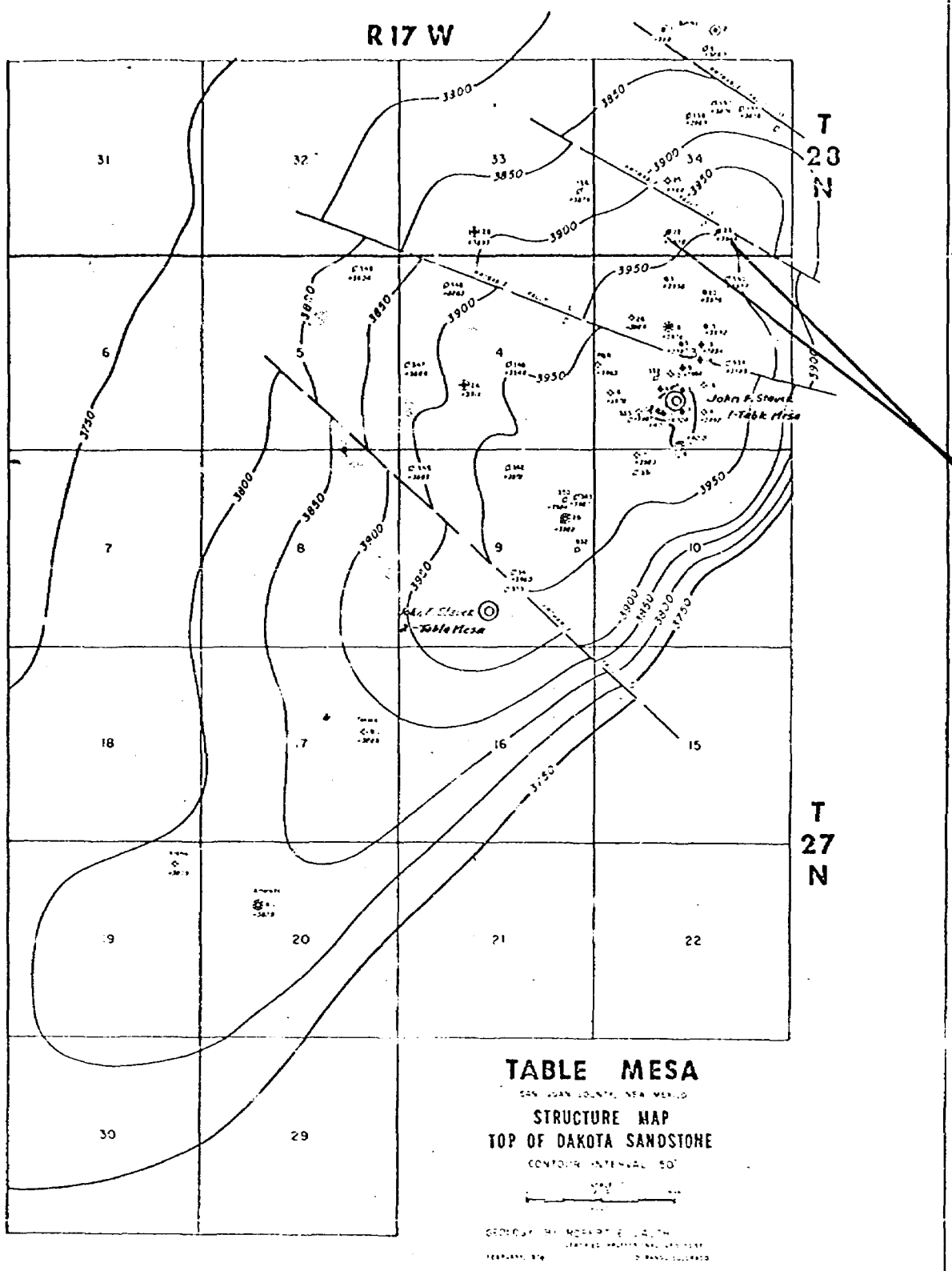


TABLE MESA

SAN JUAN COUNTY, NEW MEXICO

STRUCTURE MAP

TOP OF DAKOTA SANDSTONE

CONTOUR INTERVAL 50'

Proposed injection well's
#33 & #33 No other operators
within 3 miles

Form C-108
Revised 1-1-65

Case 6548

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR	ADDRESS
JOHN F. STAVER	P.O.Box 51, Farmington, N.M. 87401

LEASE NAME	WELL NO.	FIELD	COUNTY
Table Mesa	23	Table Mesa	San Juan

LOCATION

UNIT LETTER O ; WELL IS LOCATED 625 FEET FROM THE South LINE AND 1980 FEET FROM THE East LINE, SECTION 34 TOWNSHIP 28N RANGE 17W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
INTERMEDIATE					
LONG STRING	5½"	1401		Surface	Circulated
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	1394	1400

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	Open Hole	1394-1400

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Production	No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
	None	6740

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
300	200	400	Open	Pressure	100#

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Fresh	Yes	No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Navajo

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

NONE

RECEIVED
APR 27 1979
OIL CONSERVATION DIVISION
SANTA FE

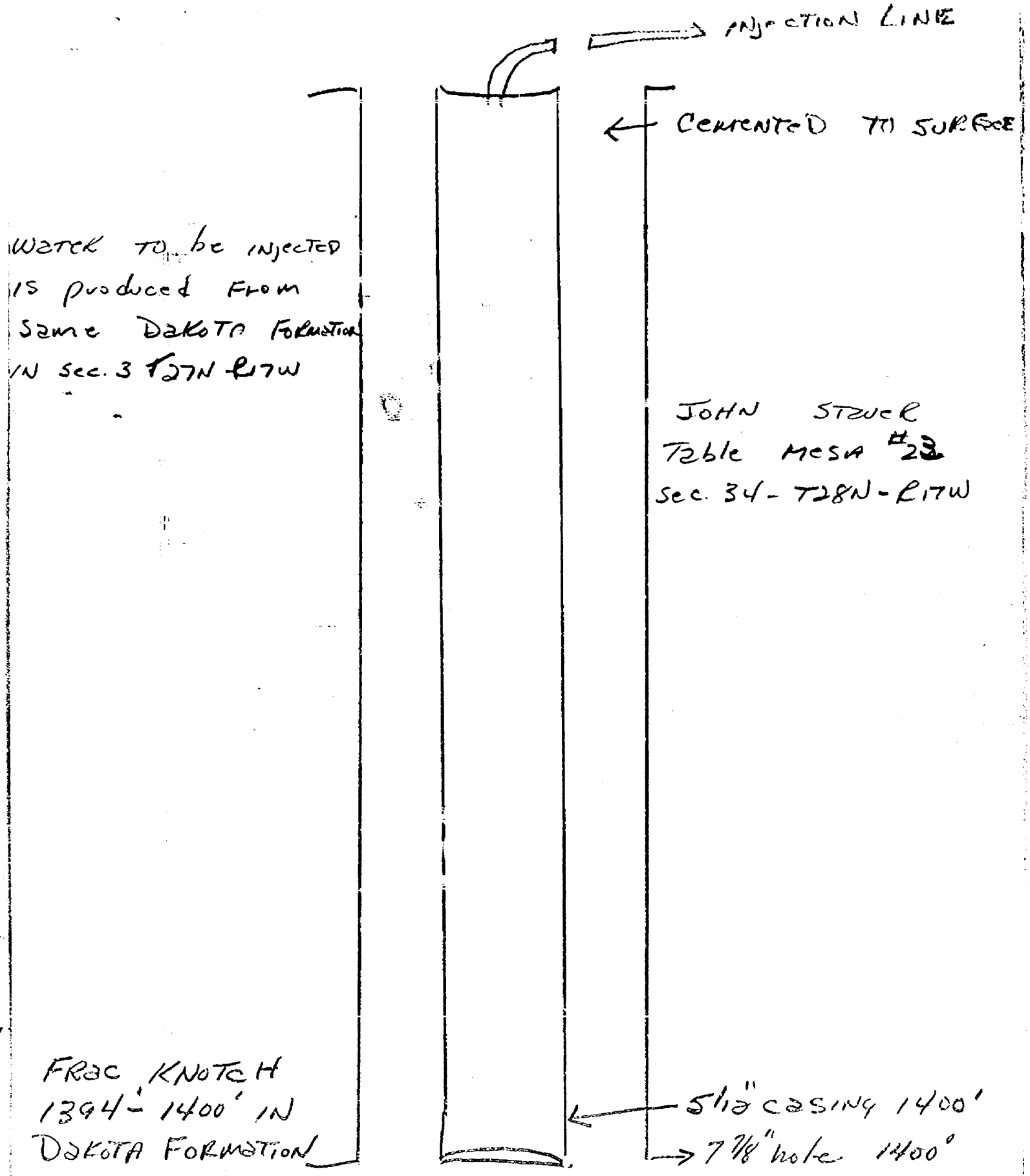
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	No	None	No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OR AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	None	Yes

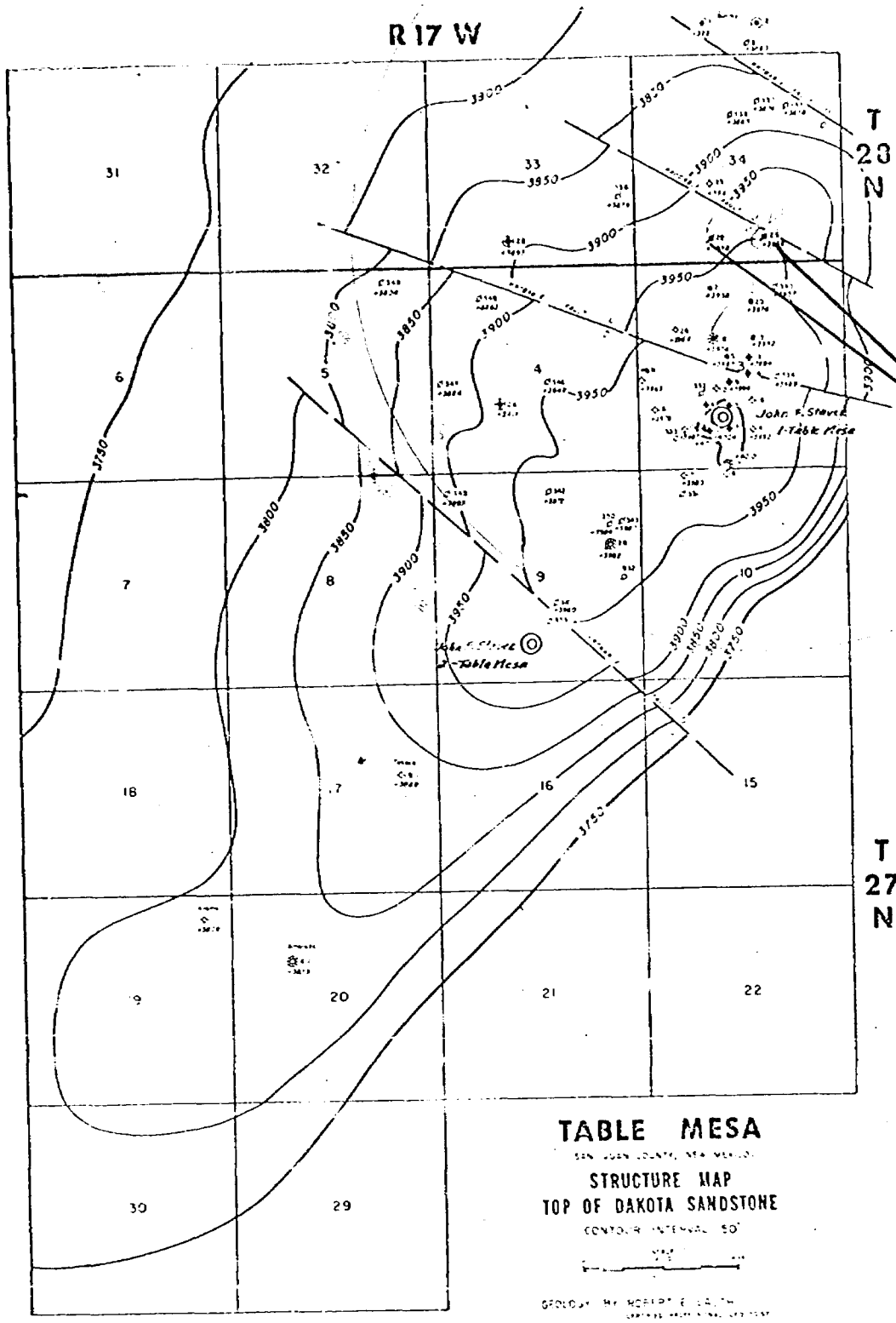
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

John Cunningham — Manager — 4-24-79

(Signature) (Title) (Date)

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


INJECTION LINE
CEMENTED TO SURFACE
WATER TO be INJECTED
IS produced FROM
Same DAKOTA FORMATION
IN Sec. 3 T27N R17W
JOHN STUCK
Table MESA #2
Sec. 34 - T28N - R17W
FRAC KNOTCH
1394 - 1400' IN
DAKOTA FORMATION
5 1/2" CASING 1400'
7 7/8" hole 1400'



PROPOSED INJECTION WELL'S
#33 & #34 NO OTHER OPERATORS
WITHIN 3 miles

TABLE MESA

SAN JUAN COUNTY, NEW MEXICO

STRUCTURE MAP
TOP OF DAKOTA SANDSTONE

CONTOUR INTERVAL 50'

GEOLOGY BY ROBERT E. SMITH

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR		ADDRESS	
JOHN F. STAVER		P.O.Box 51, Farmington, N.M. 87401	
LEASE NAME	WELL NO.	FIELD	COUNTY
Table Mesa	23	Table Mesa	San Juan

LOCATION

UNIT LETTER _____ ; WELL IS LOCATED 625 FEET FROM THE South LINE AND 1980 FEET FROM THE East LINE, SECTION 34 TOWNSHIP 28N RANGE 17W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
INTERMEDIATE					
LONG STRING	5½"	1401		Surface	Circulated
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	1394	1400

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	Open Hole	1394-1400

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Production	No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
	None	6740

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
300	200	400	Open	Pressure	100#

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Fresh	Yes	No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Navajo

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

NONE

RECEIVED
APR 27 1979
OIL CONSERVATION DIVISION
SANTA FE

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	No	None	No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	None	Yes

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

John Cunningham — Manager — 4-24-79

(Signature) (Title) (Date)

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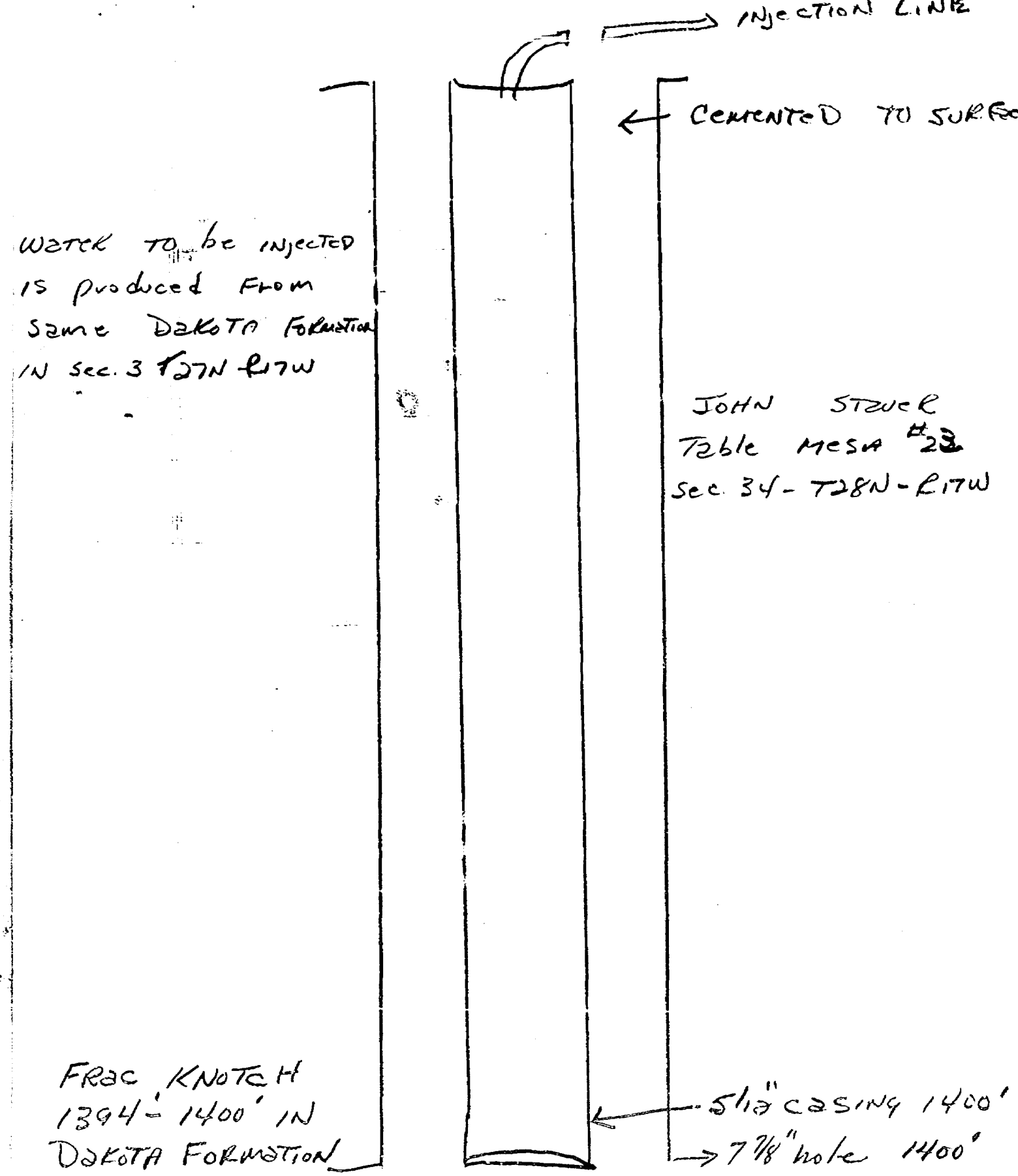
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JOHN STUCK
Table MESA #23
Sec. 34 - T28N - R17W
FRAC KNOTCH
1394 - 1400' IN
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5½" CASING 1400'
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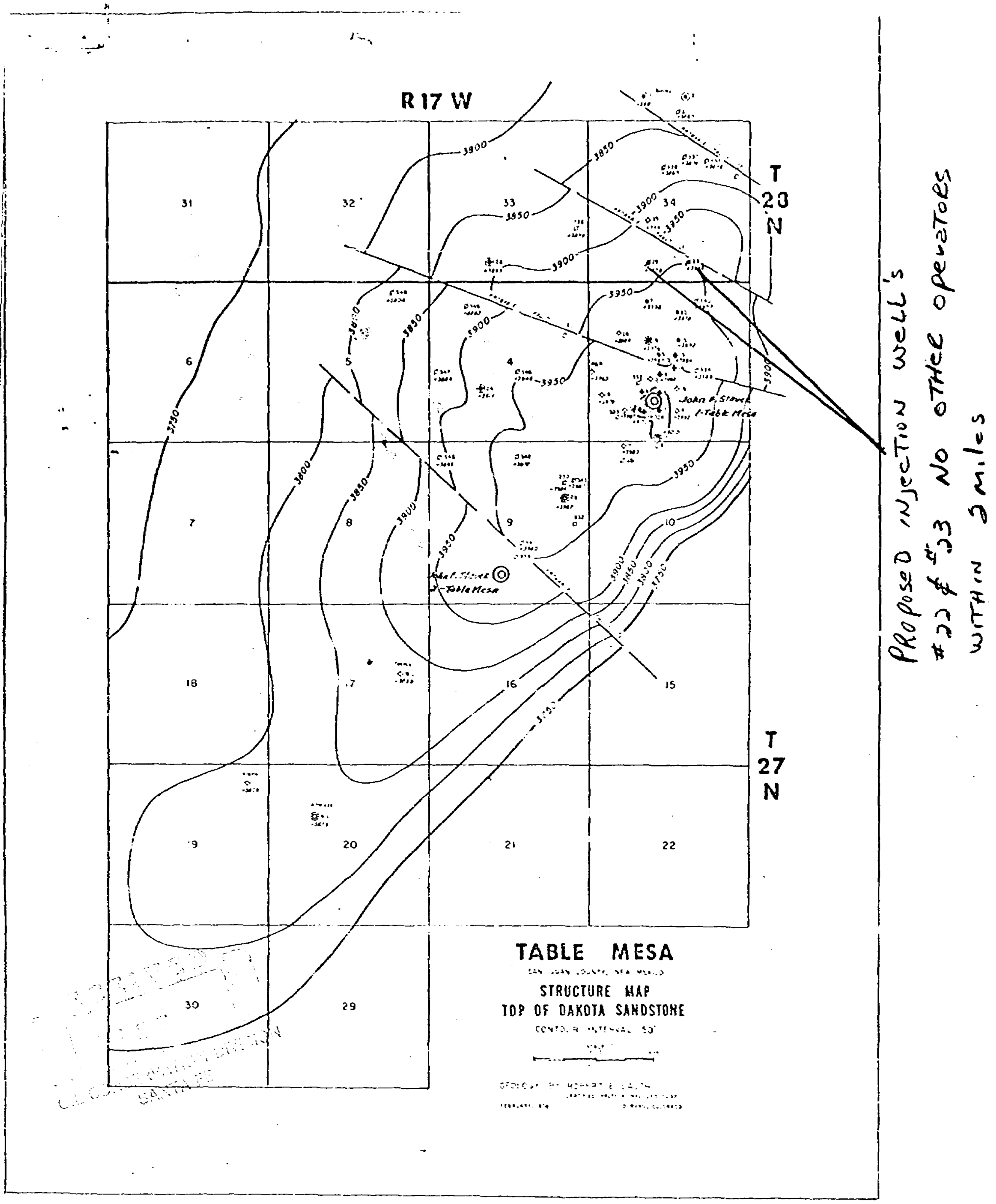
R 17 W
T 28 N
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15
19
20
21
22
30
29
3750
3800
3850
3900
3950
John F. Staver 1-Table Mesa
John F. Staver 2-Table Mesa
TABLE MESA
STRUCTURE MAP
TOP OF DAKOTA SANDSTONE
PROPOSED INJECTION WELL'S #22 & #33 NO OTHER OPERATORS WITHIN 2 MILES

Form C-108
Revised 1-1-65

Case 6548

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR		ADDRESS	
JOHN F. STAVER		P.O.Box 51, Farmington, N.M. 87401	
LEASE NAME	**WELL NO.**	**FIELD**	**COUNTY**
Table Mesa	22	Table Mesa	San Juan

LOCATION

UNIT LETTER N ; WELL IS LOCATED 660 FEET FROM THE South LINE AND 1980 FEET FROM THE West LINE, SECTION 34 TOWNSHIP 28N RANGE 17W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
INTERMEDIATE					
LONG STRING	5½"	1408		Surface	Circulated
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	1408	1412

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	Open Hole	1408-1412

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Production	No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
	None	6740

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
300	200	400	Open	Pressure	100#

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Fresh	Yes	No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Navajo

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

NONE

RECEIVED
APR 27 1979
OIL CONSERVATION DIVISION
SANTA FE

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	No	None	No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	**PLAT OF AREA**	**ELECTRICAL LOG**	**DIAGRAMMATIC SKETCH OF WELL**
	Yes	None	Yes

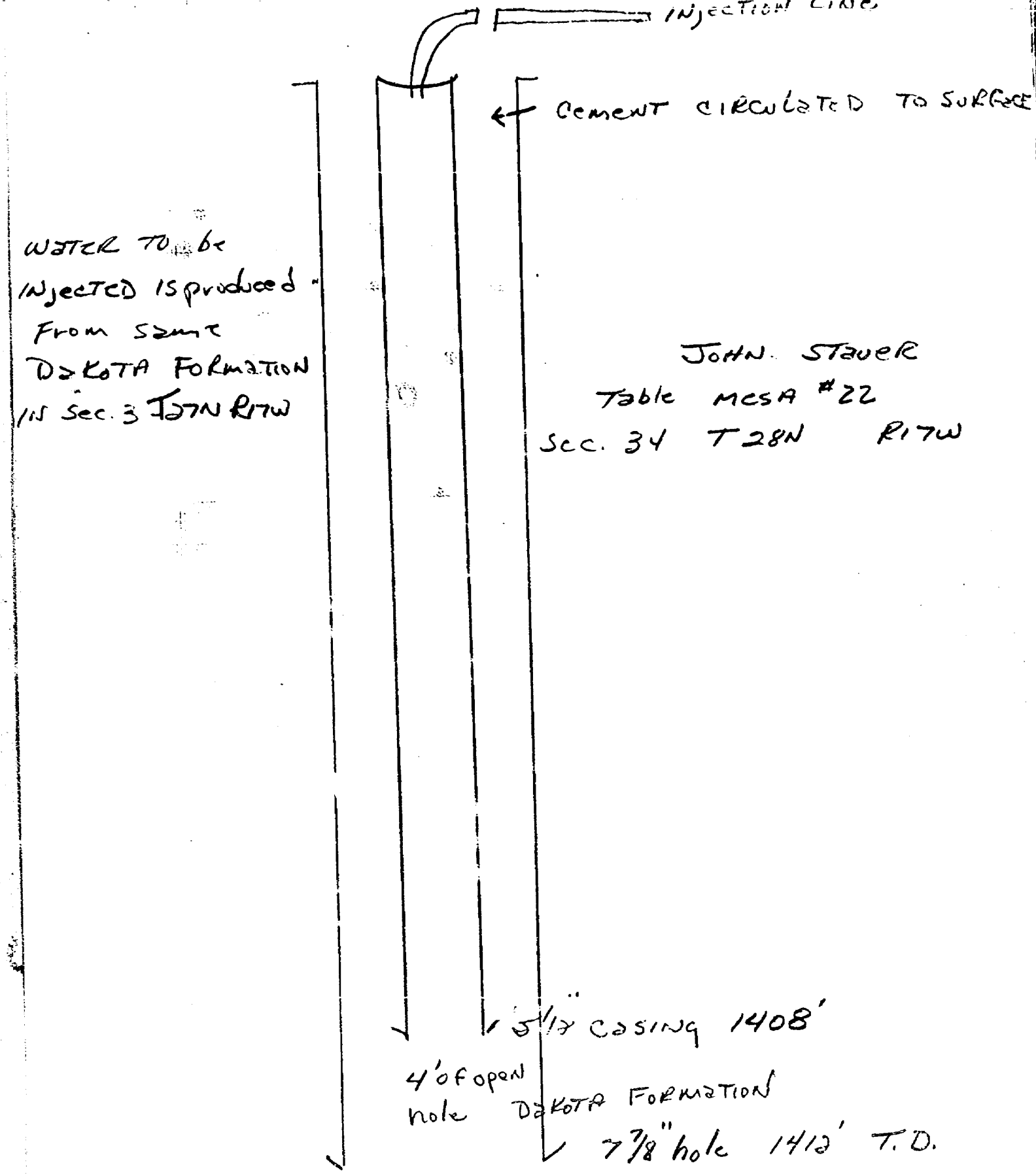
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

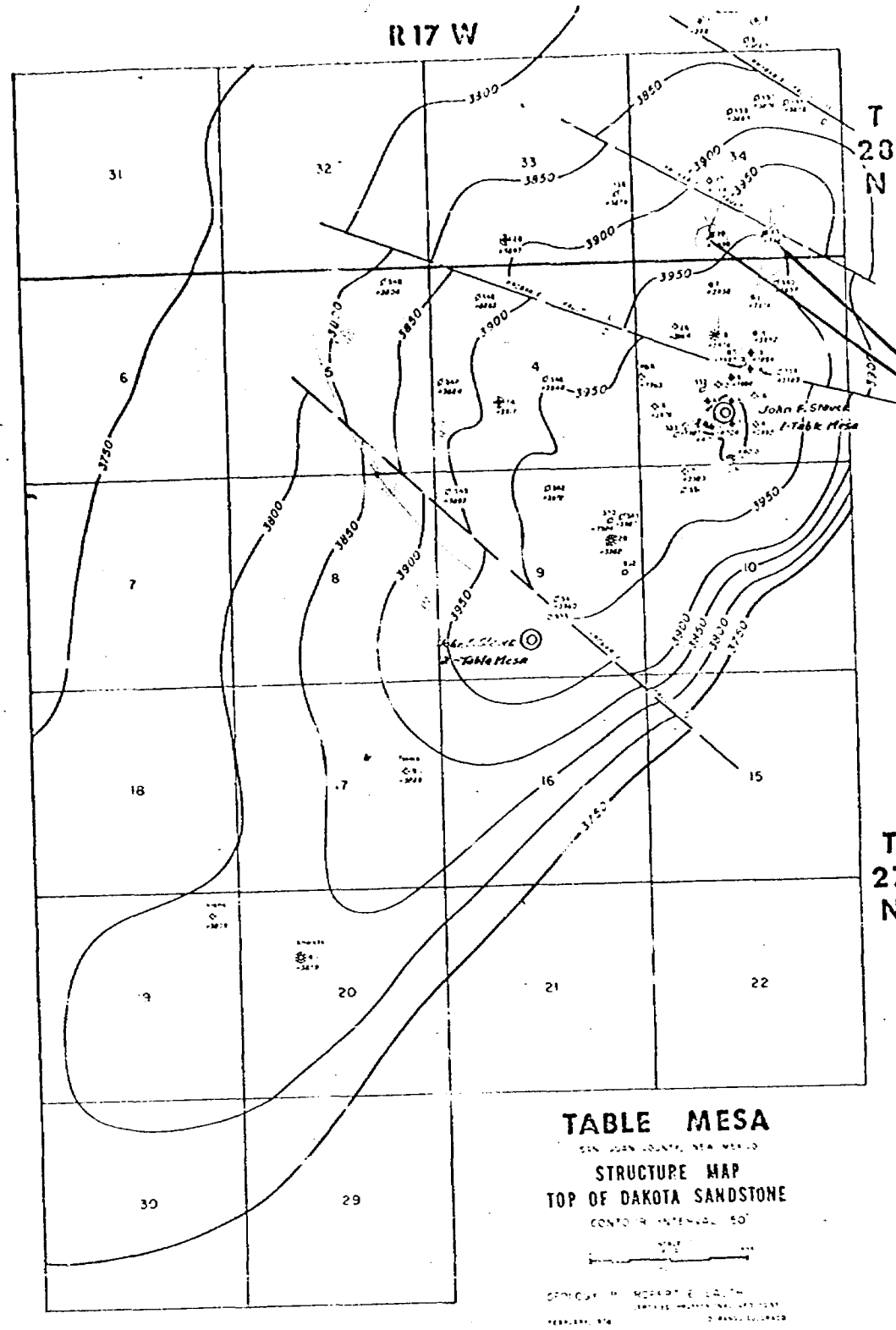
John Cunningham — (Signature)

Manager — (Title)

4-24-79 — (Date)

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


INJECTION LINE
CEMENT CIRCULATED TO SURFACE
WATER TO be INJECTED IS produced FROM SAME DAKOTA FORMATION IN Sec. 3 T27N R17W
JOHN STAUER
Table MESA #22
Sec. 34 T28N R17W
5 1/2" CASING 1408'
4' of open hole DAKOTA FORMATION
7 7/8" hole 1413' T.D.



PROPOSED INJECTION WELL'S
#33 & #33 NO OTHER OPERATORS
WITHIN 3 miles

Form C-108
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR	ADDRESS
JOHN F. STAVER	P.O.Box 51, Farmington, N.M. 87401

LEASE NAME	WELL NO.	FIELD	COUNTY
Table Mesa	22	Table Mesa	San Juan

LOCATION

UNIT LETTER ..... WELL IS LOCATED 660 FEET FROM THE South LINE AND 1980 FEET FROM THE West LINE, SECTION 34 TOWNSHIP 28N RANGE 17W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING					
INTERMEDIATE					
LONG STRING	5½"	1408		Surface	Circulated
TUBING			NAME, MODEL AND DEPTH OF TUBING PACKER		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	1408	1412

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Casing	Open Hole	1408-1412

IS THIS A NEW WELL DRILLED FOR DISPOSAL?	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE?
No	Production	No

LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA
	None	6740

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
300	200	400	Open	Pressure	100#

ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE —	WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
	Fresh	Yes	No

NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)

Navajo

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (½) MILE OF THIS INJECTION WELL

NONE

RECEIVED
APR 27 1979
OIL CONSERVATION DIVISION
SANTA FE

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	THE NEW MEXICO STATE ENGINEER
	No	None	No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	None	Yes

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

John Cunningham — (Signature)

Manager — (Title)

4-24-79 — (Date)

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

INJECTION LINE
CEMENT CIRCULATED TO SURFACE
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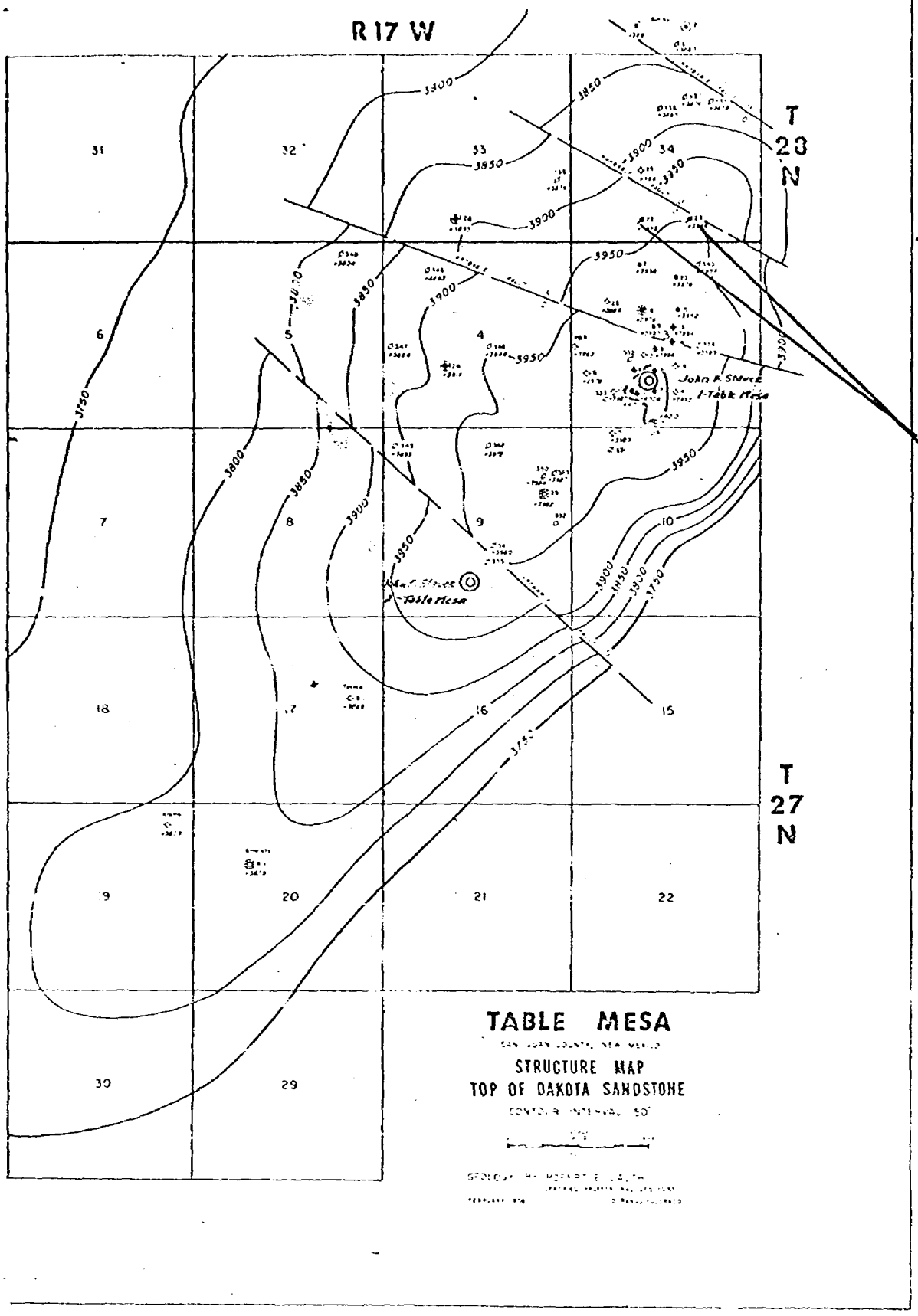

PROPOSED INJECTION WELL'S
#33 & #23 NO OTHER OPERATORS
WITHIN 3 miles

ROUGH

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

Hold for add'l info.

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 6548

Order No. R- 6058

APPLICATION OF JOHN F. STAVER FOR SALT WATER DISPOSAL, SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on June 27 ~~May 25~~, 19 79, at Santa Fe, New Mexico, before Examiner DSN ~~Richard L. Stamets~~

NOW, on this _____ day of _____, 19 79, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, John F. Staver, is the owner and operator of the Table Mesa Well No. 23 in Unit O, both Table Mesa Well No. 22 in Unit N and the/ located in ~~xxxxxxxxxxx~~ Section 34, Township 28 North, Range 17 West, NMPM, Table Mesa-Dakota Oil Pool, San Juan County, New Mexico.

(3) That the applicant proposes to utilize said wells to dispose of produced ~~salt~~ Dakota water into the Dakota formation, with injection into the open hole interval from approximately ~~1400~~ 1410 feet to 1412 feet in the Table Mesa Well No. 22 and 1394 feet to 1402 feet in the Table Mesa Well No. 23

(4) That the injection should be accomplished through 2 7/8 -inch ~~plastic lined~~ tubing installed in a packer set at approximately 1365 feet in the No. 22 well and 1352 feet in the No. 23 well; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to ~~the~~ each annulus in order

in the perforated and open hole interval from

to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a ~~pop-off valve~~ pressure limiting device or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 275 psi.

(6) That the operator should notify the supervisor of the Aztec district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(8) 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, John F. Staver, is hereby authorized to utilize his Table Mesa Well No. 23 in Unit O, both in Section 34, Township 28 North, Range 17 West, NMPM, Table Mesa-Dakota Oil Pool, San Juan County, New Mexico, to dispose of produced water from the ~~salt water~~ Dakota formation back into the Dakota formation, injection to be accomplished through 2 7/8-inch tubing installed in packers set at approximately 1365 and 1352 feet, respectively, feet with injection into the open hole interval from approximately 1410 feet to 1412 feet in his Table Mesa Well No. 22 and in the perforated and open hole interval from 1394 feet to 1402 feet in his Table Mesa Well No. 23;

PROVIDED HOWEVER, ~~that the tubing shall be plastic lined;~~ that the casing-tubing annulus in each well shall be filled with an inert fluid; and that a pressure gauge shall be attached to ~~the~~ such annulus

(8) That no injection into the subject wells should occur until applicant's Well No. 3-18 located in Unit F of Section 3, Township 27 North, Range 17 West, NMPM, has been recentered and replugged to a cement plug set across the Dakota formation in said well, from approximately 1360 feet to approximately 1560 feet.

or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well, or system shall be equipped with a ~~pop-off valve~~ pressure limiting device or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 275 psi.

(3) That the operator shall notify the supervisor of the Aztec district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Division's Aztec district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(6) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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

PROVIDED FURTHER, that no injection into the aforesaid ~~said~~ well shall occur until after applicant's Well No. 3-18 located in Unit F of Section 3, Township 27 North, Range 17 West, NMPM, has been cemented and a cement plug has been set across the Dakota formation in said well, from approximately 1560 feet to approximately 1560 feet.