Case Number

6018

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
31 August 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Walter Duncan for salt water disposal, San Juan County, New Mexico.

CASE 6018

BEFORE: Daniel S. Nutter.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Richard Tully, Esq.
Farmington, New Mexico

I N D E X

E X H I B I T S

MR. NUTTER: We'll call next Case Number 6018.

MS. TESCHENDORF: Case 6018. Application of Walter Duncan for salt water disposal, San Juan County, New Mexico.

MR. TULLY: May it please the Commission, I'm Walter Tully, representing Walter Duncan. I have one witness to be sworn, Tom Dugan.

(Witness sworn.)

MR. TULLY: Are Mr. Dugan's qualifications acceptable to the Commission?

MR. NUTTER: Mr. Dugan has testified before. We consider him qualified.

MR. TULLY: We have certain exhibits we'll be presenting and submitting to you in triplicate. We'll identify these exhibits as we go through.

MR. NUTTER: Have you stamped them?

THOMAS A. DUGAN

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

DIRECT EXAMINATION

BY MR. TULLY:

Q. Would you state your name, please?

A. Thomas A. Dugan.

Q. And your address?

A. 907 Hallett Circle, Farmington, New Mexico.

Q. And occupation?

A. I'm a consulting petroleum engineer and an independent oil and gas producer.

Q. Now, you have in front of you several exhibits. The first one I'm referring to is called the application to dispose of salt water for the North Hogback No. 1 Well No. 24 and North Hogback No. 6 No. 3. Let's call these exhibits Number 1 and Number 1-A. Is that acceptable?

MR. NUTTER: Now, which is -- what is what in there.

MR. TULLY: Okay. Walter Duncan is appearing here for an application to dispose of salt water by injection into two separate wells, and we have previously submitted applications. The two I'm referring to now are the applications that were submitted on the New Mexico Oil Conservation Commission Form C-108.

MR. NUTTER: Okay, so the 108 will be the 1 and the 1-A for the two wells, is that it?

MR. TULLY: Yes.

Q. (Mr. Tully continuing.) Would you identify and explain what Exhibit 1 and 1-A are?

A. That's merely an application for approval to inject produced water back into the Dakota Formation where --

the production is from the Dakota Formation on the two Walter Duncan leases.

Q. Okay, now referring to what we will call Exhibit Number 2, and this is a plat map showing wells in the general location of these two particular wells, would you identify this and explain this exhibit, please?

A. Okay. The Walter Duncan leases involved are in Section 6 of Township 29 North, 16 West, and Section 1 of Township 29 North, 17 West, which is on the Navajo Reservation west of Farmington, approximately thirty miles, and about five miles east of Shiprock on the south side of the highway.

The leases involved is in the Slickrock Dakota Pool, which is just north of the old Hogback Dakota Pool, which war the first oil and gas production in New Mexico, by the way.

Q. Okay, let's refer now to --

A. So this is just a general map showing wells in the vicinity of the leases involved.

Q. Let's refer now to what we will call Exhibit Number 3. It's a larger map showing Sections 1 and 16. Would you identify and explain this exhibit, also?

A. Okay, this is a more detailed map showing the two leases involved, the producing wells, and the injection -- two injection -- proposed injection wells, which are pointed

at -- these two arrows are pointing to the proposed injection wells, and you can see the Highway 550 just to the north of the wells and the San Juan River just to the south.

Q. Let's --

MR. NUTTER: What are the little cross-hachured squares on that map, Mr. Dugan?

A. Houses.

MR. NUTTER: Houses, okay.

Q. (Mr. Tully continuing.) Let's put this exhibit, and we'll refer to it a little bit further on.

A. Okay.

Q. Now, refer to the diagrammatic sketches for the North Hogback 1, No. 24, and North Hogback 6 No. 3 Wells.

Let's call these Exhibits 4 and 4-A.

MR. NUTTER: I believe there's only one exhibit for the two wells, isn't there?

A. No, we have two.

MR. TULLY: No, there's two of these.

MR. NUTTER: I only have one of that. Oh, here's another one. Okay.

Q. Would you identify these and explain this exhibit, please?

A. Okay. These are -- shows the casing that is set in the wells. You'll note that the wells are relatively shallow, and the casing is set just into the top of the Dakota

Formation and then the wells are just completed open hole in the Dakota Formation. The 1-24, the North Hogback 1-24 Well is only 706 feet deep, is the total depth, and the 4-1/2 casing is set at 687 and the 4-1/2 casing is cemented back to the surface on this well and we propose to run 2-inch tubing in the well and inject water through the tubing underneath a Baker Model-A packer that we'll set at approximately 635 feet.

The North Hogback 6 No. 3 Well is very similar and completed in the same manner. Both wells were drilled as potential producers but produced a very small amount of oil, so we propose to convert them to water-injection wells.

Q. Let's refer back now to this Exhibit Number 3. How do you propose to transport the water, or store the water, before injecting again into these two wells?

A. Well, the east lease -- Section 6 is one lease and Section 1 is a separate lease, and each lease has a central tank battery where all the produced oil and water is going to the central tank battery, so the oil and water is separated at that point and the water will be put into a 300-barrel epoxy-coated tank and then as it is accumulated injected into the two wells. We will have to lay approximately 600 feet of fiberglass pipeline on the 6 lease and approximately 1000 feet of fiberglass line from the existing tank battery to the injection well on the North Hogback 1

lease.

Q. Would you point out to us on this exhibit where these tank batteries are?

A. Well, the tank battery on the 6 lease is just to the north very close to the Well No. 6-6, if you'll note -- see it there. The tank battery on the No. 1 lease is just to the north and very close to that Well No. 1-5.

Q. And what type of pump do you plan to use to inject this water into these wells?

A. That's a -- that's a small triplex pump that -- with a electric motor .

Q. Referring now to the annual report of the New Mexico Oil and Gas Engineering Committee for 1975, let's call this Exhibit Number 5, and the annual report for 1976. Let's call it Exhibit Number 6.

Would you identify and explain these two exhibits, please?

A. Well, it's just a Xeroxed copy of the production reports from the New Mexico Oil and Gas Engineering Committee Report. It shows the Slickrock Dakota Pool and Walter Duncan Wells; the North Hogback 1 lease is the first lease involved there, and the North Hogback 6 lease is the second lease involved. And so -- but I think it's fairly self-explanatory, the '75. We might go on to the '76 one. It shows that Duncan has four leases in this area and he pro-

duced a total of 89,686 barrels of oil during 1976 and 6,970 barrels of water during 1976. The two leases involved, the North Hogback 1 lease is producing approximately 23 barrels of water per day and the North Hogback 6 lease is producing approximately 19 barrels of water per day, and this exceeded the USGS water production standards and that's really why we're here is to inject the produced water from the wells.

Q. You are aware, then, of the Notice to Leasees 2-B that was issued by the USGS, then?

A. Unfortunately I'm aware of it, yes.

Q. And are you also aware that October 1, 1977, is the date that the produced waters need to be taken care of if they exceed the limits set by the USGS?

A. Yes.

Q. Let's refer now to two exhibits entitled Basin Testing Service for these two particular wells, and call them Exhibits 7 and 8, and would you identify these exhibits, please, and explain them.

Q. Yes, sir. This is water analysis from each of the leases, the North Hogback 1 lease and the North Hogback 6 lease, and you'll note that very little chlorides, very little salt in the water. There's some sulfates and some bicarbonates, but it's really pretty good water by the San Juan Basin standards, so it's practically fresh water, but it's the type of water that's produced in association with

these shallow Dakota reservoirs.

Q. Were all of these exhibits prepared under your supervision and control?

A. Yes.

Q. In your opinion will the approval of this application prevent waste and not impair or infringe upon correlative rights or any offsetting operators or lessees?

A. Yes.

MR. TULLY: I have no further questions.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Dugan, we have 20 feet of surface pipe set in one well and 40 feet of surface pipe in the other.

A. Yes, sir.

Q. Are there any fresh waters in this area that are shallow?

A. Yes, sir.

Q. And at what depth are those encountered?

A. Well, they're -- see, it's right along the San Juan River and the water table is about two feet, so there's a lot of surface water, but you're spudding in the Mancos Shale and -- well, actually you're spudding in the alluvial plane from the river, and then -- which is boulders and sand and unconsolidated gravel, so we have to set surface pipe

through this and into the Mancos Shale and then from then on there isn't any water. So it's just -- it's just the surface water that's involved.

Q. Now we had all those houses on that one exhibit.

A. Yeah.

Q. Where do they get their water?

A. Well, I think they probably have wells.

Q. And what depth are the normal water wells? Are they just very shallow wells in this --

A. Yes.

Q. -- alluvial?

A. Just ten or fifteen -- ten or fifteen feet, yes, sir.

Q. In this gravel?

A. Yes, sir.

Q. And so these -- the surface pipe on these two wells goes through the gravel --

A. Oh, yeah.

Q. -- and comes out to the Mancos Shale.

A. Right, you've got to get through the alluvial -- there's all unconsolidated, so you have to get through there into the Mancos Shale to drill your hole.

Q. Uh-huh.

A. It won't stand up, so --

Q. And then your --

A. -- we don't have a choice in this case.

Q. And then your long string is circulated in both cases here?

A. Yes, sir.

Q. And the chloride content of the water is -- I think it's 57 in the case of one well and 71 in the case of the other well?

A. Yes, sir, it's very low. Actually, it's got some H_2S in it; it smells a little bit; other than that, it's pretty good water.

Q. What -- now you mentioned this USGS directive. That was NTL-2?

MR. TULLY: 2-B.

Q. 2-B, yeah, and what is the criteria there for requiring the underground disposal?

A. Well, I think 5 barrels a day, in excess of 5 barrels a day.

Q. It's not based on total dissolved solids or weight of solids?

A. Well, I think -- yes, I think it is. There's a part -- there is a clause in there on that.

Q. But the volume here is what caused the --

A. Yes, the volume; also we've had a lot of trouble trying to dispose of the produced water in the surface pits, anyway, because the water table is so high it won't soak up,

or evaporate, so we get surface water into our pits about as fast as we produce water, so we've had problems disposing of the water, so we really need to figure out a way of getting it back in the ground.

Q. Well, I notice that your water production from the pool was 6900 barrels last year, I think.

A. Uh-huh.

Q. But this rate of production you've got today is about 42 barrels per day, which is about twice what you had last year. Is the water production increasing here?

A. Yeah, it -- we've added some wells and then also we've had some one or -- at least one well, maybe two wells, that we didn't produce because of the excessive water. So if we find a way, if we get a way to inject the water, why we'll probably go back to producing those wells, yeah.

Q. I see.

MR. NUTTER: Are there any further questions of this witness? He may be excused.

Do you have anything further, Mr. Tully?

MR. TULLY: No, sir, thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 6018?

We'll take the case under advisement.

MR. TULLY: I'll offer Applicant's Exhibits 1 through 8 in evidence.

MR. NUTTER: Applicant's Exhibits 1 through 8 will be admitted in evidence.

(Hearing concluded.)

REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6018, heard by me on 8/31, 1977.

New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

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

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO

STATE GEOLOGIST
EMERY C. ARNOLD

September 7, 1977

Re: CASE NO. 6018
ORDER NO. R-5525

Mr. Richard Tully
Walter Duncan
Box 234
Farmington, New Mexico 87401

Applicant:

Walter Duncan

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC x

Other

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 6018
Order No. R-5525

APPLICATION OF WALTER DUNCAN FOR
SALT WATER DISPOSAL, SAN JUAN
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 31, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of September, 1977, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Walter Duncan, is the owner and operator of the North Hogback 1 Well No. 24, located in Unit G of Section 1, Township 29 North, Range 17 West, NMPM, and the North Hogback 6 Well No. 3, located in Unit L of Section 6, Township 29 North, Range 16 West, both in the Slickrock-Dakota Pool, San Juan County, New Mexico.

(3) That the applicant proposes to utilize said wells to dispose of produced salt water into the Dakota formation, with injection into the open-hole interval from 687 feet to 706 feet and 691 feet to 702 feet, respectively.

(4) That the injection into the aforesaid wells should be accomplished through 2 3/8-inch tubing installed in packers set at approximately 635 feet and 630 feet, respectively; 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 annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection wells or system should be equipped with pop-off valves or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 140 psi.

(6) That the operator should notify the supervisor of the Aztec district office of the Commission 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, Walter Duncan, is hereby authorized to utilize his North Hogback 1 Well No. 24, located in Unit G of Section 1, Township 29 North, Range 17 West, NMPM, and his North Hogback 6 Well No. 3 located in Unit L of Section 6, Township 29 North, Range 16 West, NMPM, both in the Slickrock-Dakota Pool, San Juan County, New Mexico, to dispose of produced salt water into the Dakota formation, injection to be accomplished through 2 3/8-inch tubing installed in packers set at approximately 635 feet and 630 feet, respectively, with injection into open-hole intervals from approximately 687 feet to 706 feet and 691 feet to 702 feet, respectively.

PROVIDED HOWEVER, that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the 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 pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 140 psi.

(3) That the operator shall notify the supervisor of the Aztec district office of the Commission 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 Commission'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 Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

S E A L

dr/

Docket No. 27-77

Dockets Nos. 28-77 and 30-77 are tentatively set for hearing on September 14 and 28, 1977. Applications for hearing must be filed at least 22 days in advance of hearing date.

CASES: EXAMINER HEARING - THURSDAY - AUGUST 31, 1977

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

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

CASE 6016: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Land Oil Company, American Employers' Insurance Company, and all other interested parties to appear and show cause why the Conner Well No. 1 located in Unit O of Section 23, Township 14 South, Range 29 East, Chaves County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 6017: Application of E. L. Mathes, Jr. and Ray G. Burton, Jr., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the E/2 NE/4 of Section 30, Township 9 South, Range 33 East, Flying M-San Andres Pool, Lea 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 6018: Application of Walter Duncan 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 687 feet to 706 feet in his North Hogback 1 Well No. 24 located in Unit C of Section 1, Township 29 North, Range 17 West, and from 691 feet to 702 in his North Hogback 6 Well No. 3 in Unit L of Section 6, Township 29 North, Range 16 West, Glickrock Dakota Pool, San Juan County, New Mexico.

CASE 6019: Application of Gulf Oil Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Littlefield "32" Federal Com. Well No. 1 located in Unit J of Section 20, Township 18 South, Range 31 East, Eddy County, New Mexico, to produce gas from undesignated Atoka and Morrow gas pools.

CASE 6020: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Blevins "I-K" Well No. 1 to be drilled 660 feet from the North and West lines of Section 35, Township 17 South, Range 26 East, Eddy County, New Mexico, to test the Morrow formation, the N/2 of said Section 35 to be dedicated to the well.

CASE 6021: Application of Yates Petroleum Corporation for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the interval from 962 feet to 1240 feet in its Federal HJ Well No. 1 located in Unit A of Section 31, Township 6 South, Range 26 East, Linda-San Andres Pool, Chaves County, New Mexico.

CASE 6022: Application of Continental Oil Company for an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Conoco 29-4 Well No. 2 to be drilled 2265 feet from the South line and 1639 feet from the West line of Section 20, Township 29 North, Range 4 West, Gobernador-Pictured Cliffs Pool, Rio Arriba County, New Mexico, the SW/4 of said Section to be dedicated to the well.

CASE 6023: Application of Inexco Oil Company for downhole commingling and a tubing exception, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority for the downhole commingling of Upper Penn and Strawn production in the wellbore of its Federal 10 State Com Well No. 1 located in Unit L of Section 10, Township 21 South, Range 26 East, Avalon Gas Field, Eddy County, New Mexico. Applicant further seeks an exception to Commission Rule 107(d) to permit setting tubing 370 feet above the uppermost perforation in said well.

CASE 2997: (Continued from July 6, 1977, Examiner Hearing)

Application of Belco Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 8 and in the other Pennsylvanian formations underlying the E/2 of said Section 8, Township 24 South, Range 35 East, Cinta Roja-Morrow Gas Pool, Lea 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 6027: (Continued From August 17, 1977, Examiner Hearing)

Application of [illegible] for a non-standard proration unit, [illegible] Applicant, in the above-styled cause, seeks approval for a non-standard proration unit, consisting of [illegible] dedication [illegible] cause, [illegible] except the [illegible] Section 4, Township 30 North, Range 12 West, [illegible] New Mexico, to be [illegible] and Nos. 12 and 13, at [illegible] in Units G and F, respectively, of said Section 4.

CASE 6030: (Continued from August 17, 1977, Examiner Hearing)

Application of Texaco Inc. for compulsory pooling and an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pictured Cliffs formation underlying the W/2 of Section 13, Township 30 North, Range 12 West, Undesignated Fruitland-Pictured Cliffs Pool, San Juan County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location 790 feet from the South line and 1450 feet from the West line of said Section 13. 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 6031: (Continued from August 17, 1977, Examiner Hearing)

Application of Tenneco Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Blanco Mesaverde and Basin Dakota production in the wellbores of its Jicarilla "A" Well No. 1 in Unit J of Section 18, "B" Well No. 6 in Unit B of Section 19, "C" Wells Nos. 4, 5, 6, 7, and 8, located, respectively, in Units F and J of Section 24, F of Section 24, and F and E of Section 13, all in Township 26 North, Range 5 West, Rio Arriba County, New Mexico.

Walter Duncan OIL PROPERTIES

1300 WRITERS' CENTER IV • 1720 SOUTH BELLAIRE STREET
AREA CODE 303 TEL. 759-3303 • DENVER, COLORADO 80222

August 15, 1977

Mr. Joe D. Ramey
New Mexico Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Re: Walter Duncan
6-3 N. Hogback
Sec. 6-29N-16W &
1-24 N. Hogback
Sec. 1-29N-17W
San Juan County, New Mexico

Dear Mr. Ramey:

This is a request by Walter Duncan Oil Properties for the scheduling of a hearing for approval to inject produced water into the aquifer underlying the Dakota oil producing zone on the above captioned leases.

Enclosed are copies of form C-108 on the subject wells.

Yours truly,

WALTER DUNCAN OIL PROPERTIES

Robert E. Dunn
Production Superintendent

RED:jm
Enclosures

3-NMOCC (Aztec) 1-NM State Engineer (Santa Fe) 1-Duncan 1-Gallaway 1-Imbt 1-Amoco
1-C.S.T. Enterprises 1-Fast Enterprises 1-NIIP 1-File

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	
Walter Duncan		Box 234, Farmington, NM 87401	
LEASE NAME	**WELL NO.**	**FIELD**	**COUNTY**
North Hogback 6	3	Slickrock Dakota	San Juan

LOCATION: UNIT LETTER L ; WELL IS LOCATED 2385 FEET FROM THE South LINE AND 330 FEET FROM THE West LINE, SECTION 6 TOWNSHIP 29N RANGE 16W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	7"	40'	Driven		
INTERMEDIATE					
LONG STRING	4-1/2"	691'	50 sx	115	Calculation
TUBING	2-3/8"	691'	NAME, MODEL AND DEPTH OF TUBING PACKER: Baker Model "A" packer will be set @ 630'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	691'	702'

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Tubing	Open Hole	691-702'

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	Oil 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	None	None

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
10	0	20		Pressure	200 psi

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?
	Yes	Yes	Yes

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

NIIP - Hogback Area, Shiprock, New Mexico 87420

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

W. M. Gallaway, 101-2 Petroleum Plaza Building, Farmington, NM 87401

W. C. Imbt, 210 West 38th Street, Farmington, NM 87401

C.S.T. Enterprises, Box 1200, Farmington, NM 87401

Fast Enterprises, Box 1200, Farmington, NM 87401

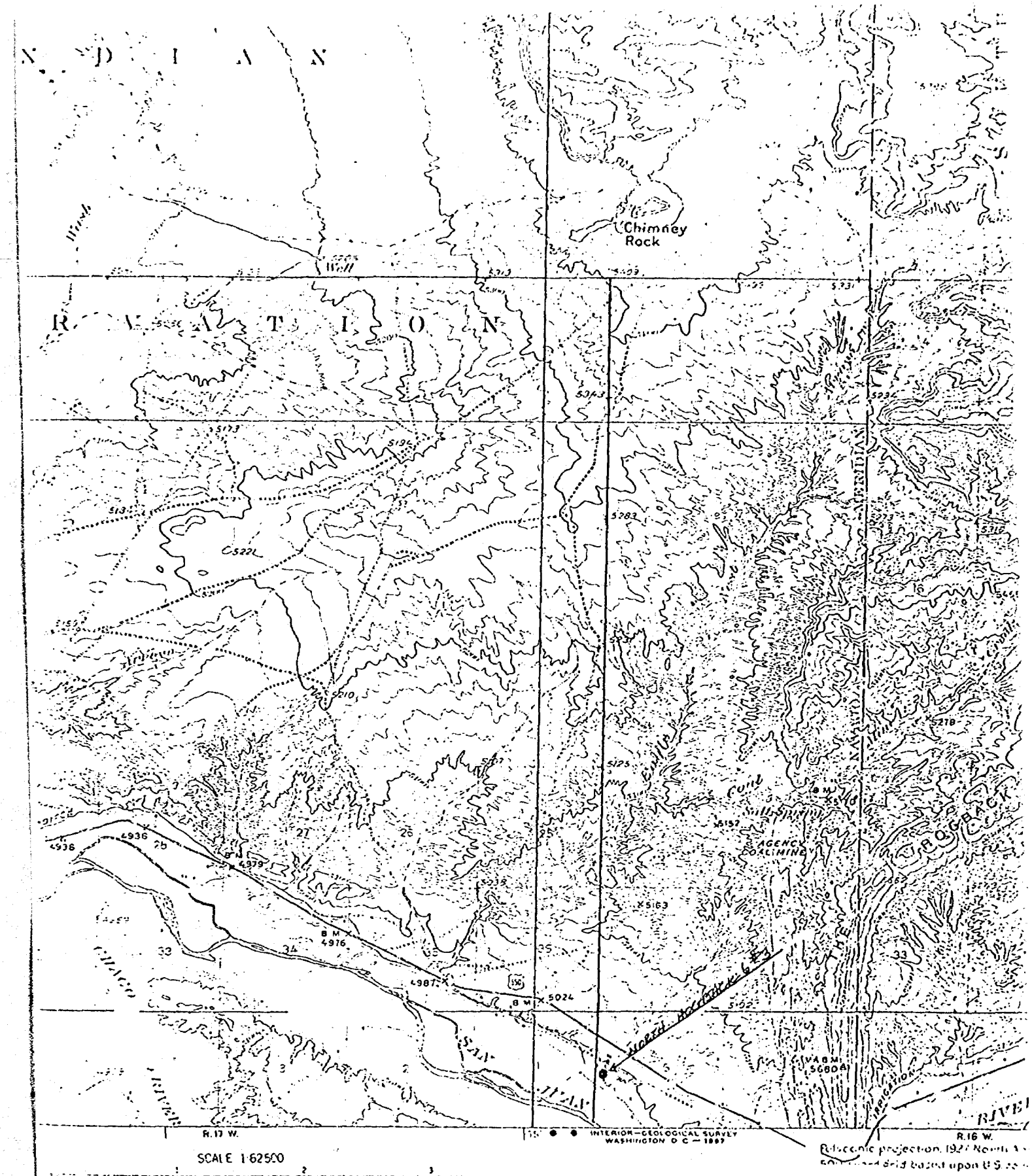
Amoco Production Company, 501 Airport Drive, Farmington, NM 87401

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
	Yes	Yes	Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	**PLAT OF AREA**	**ELECTRICAL LOG**	**DIAGRAMMATIC SKETCH OF WELL**
	Yes	No	No

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

F. L. Crane (Signature) — Agent (Title) — 8-2-77 (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.


Chimney Rock
R. 17 W.
R.16 W.
INTERIOR—GEOLOGICAL SURVEY
WASHINGTON D C — 1967
SCALE 1:62500
Contour interval 20 feet
Datum is mean sea level
WALTER DUNCAN
North Hogback 6 #3
2385' FSL - 330' FWL
Sec 6, T29N, R16W
San Juan County, NM
N3645—W10830/1

BASIN TESTING SERVICE
P. O. Box 188
Flora Vista, N. M. 87415

Analysis No. 326 Date Aug. 1, 1977

Operator Dugan Production Well Name Hogback 6 #3

Location _____ County _____ State _____

Field _____ Formation _____

Sampled From _____

Date Sampled July 28, 1977 by _____

Tubing Pressure _____ Casing Pressure _____ Surface casing pressure _____

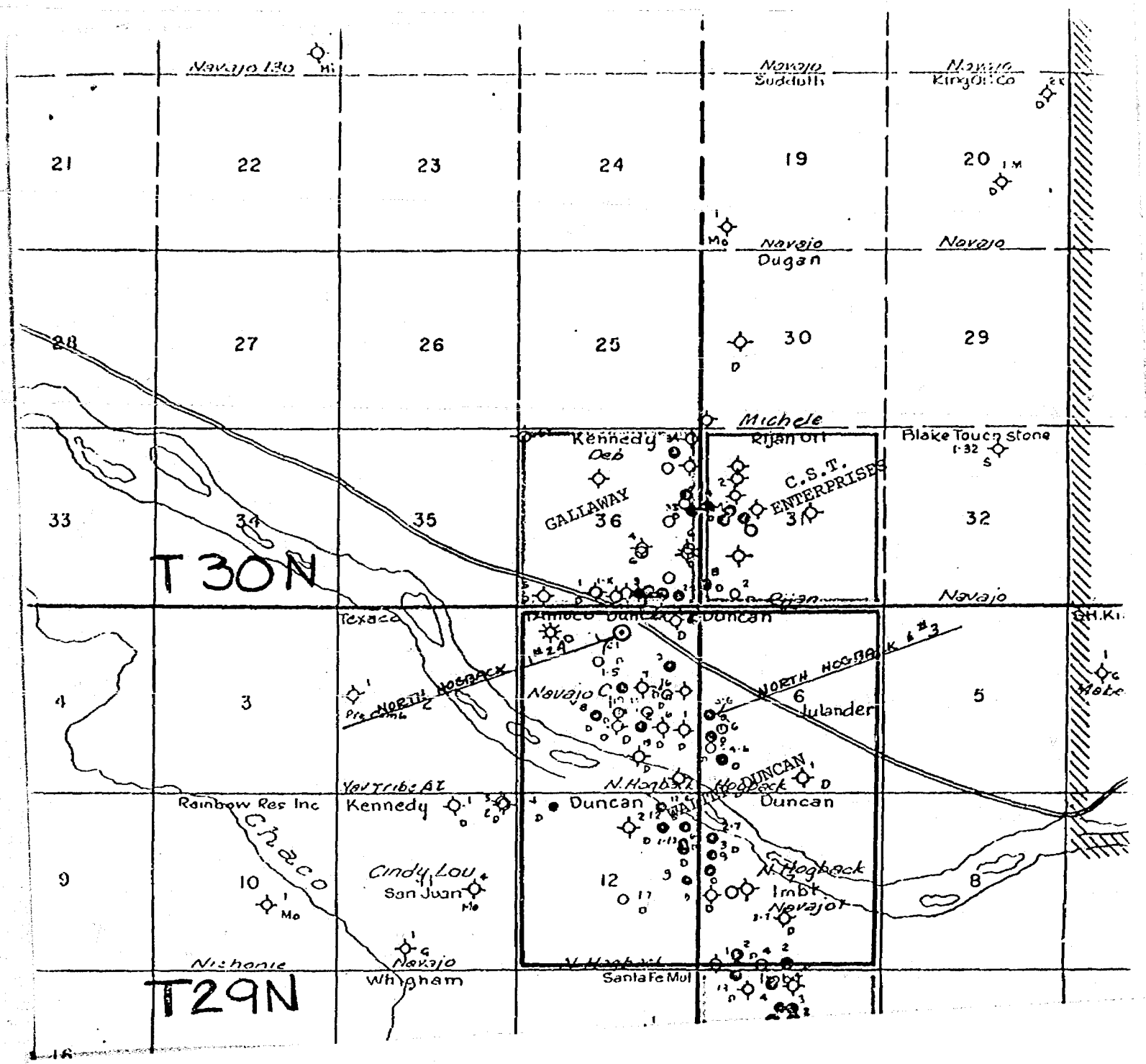
	ppm	epm		ppm	epm
Sodium	1072	46.6	Chloride	57	1.6
Calcium	8	.4	Bicarbonate	2074	34.0
Magnesium	2	.2	Sulfate	286	5.9
Iron	Present		Carbonate	170	5.7
H_2S	Present		Hydroxide	0	0

Total Solids 540
Dissolved

pH 9.5

Sp. Gr. 1.0004 at 60°F

Resistivity 300 ohm-cm at 70 °


T30N
T29N
Navajo 130
Navajo Suddath
Navajo Kingoil Co
Navajo Dugan
Navajo
Michele
Kennedy Oeb
GALLAWAY
Rijan Oil
C.S.T. ENTERPRISES
Blake Touch Stone
Rijan
Navajo
Texaco
Duncan
NORTH HOGBACK #2A
NORTH HOGBACK #3
Navajo C
Julander
Yav Tribe AZ
N. Hogback
Hogback
Duncan
Rainbow Res Inc
Kennedy
Chaco
Cindy Lou
San Juan
N. Hogback
Imbk
Navajo
Nichonie
Navajo
Whigham
Santa Fe Mul
Imbk
21
22
23
24
19
20
28
27
26
25
30
29
33
34
35
36
31
32
4
3
6
5
9
10
12
8

3-NMOCC (Aztec) 1-NM State Engineer (Santa Fe) 1-Duncan/ 1-Gallaway 1-Imbt 1-Amoco
1-C.S.T. Enterprises 1-Fast Enterprises 1-Lee Jim 1-File

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
Walter Duncan	Box 234, Farmington, NM 87401

LEASE NAME	WELL NO.	FIELD	COUNTY
North Hogback 1	24	Slickrock Dakota	San Juan

LOCATION

UNIT LETTER G ; WELL IS LOCATED 1600 FEET FROM THE North LINE AND 2530 FEET FROM THE East LINE, SECTION 1 TOWNSHIP 29N RANGE 17W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	7"	20'	3	Surface	
INTERMEDIATE					
LONG STRING	4-1/2"	687'	75		Calculation to Surface
TUBING	2-3/8"	Will be set @ 682'	NAME, MODEL AND DEPTH OF TUBING PACKER: Baker Model "A" packer will be set @ 635' X		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	687'	706'

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Tubing	Open Hole	687-706'

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	Oil 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	None	None

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
30	0	30	Closed	Pressure	200 psi

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?
	Yes	Yes	Yes

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

Lee Jim, Shiprock, New Mexico 87420

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

W. M. Gallaway, 101-2 Petroleum Plaza Building, Farmington, NM 87401

W. C. Imbt, 210 West 38th Street, Farmington, NM 87401

C.S.T. Enterprises, Box 1200, Farmington, NM 87401

Fast Enterprises, Box 1200, Farmington, NM 87401

Amoco Production Company, 501 Airport Drive, Farmington, NM 87401

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
	Yes	Yes	Yes

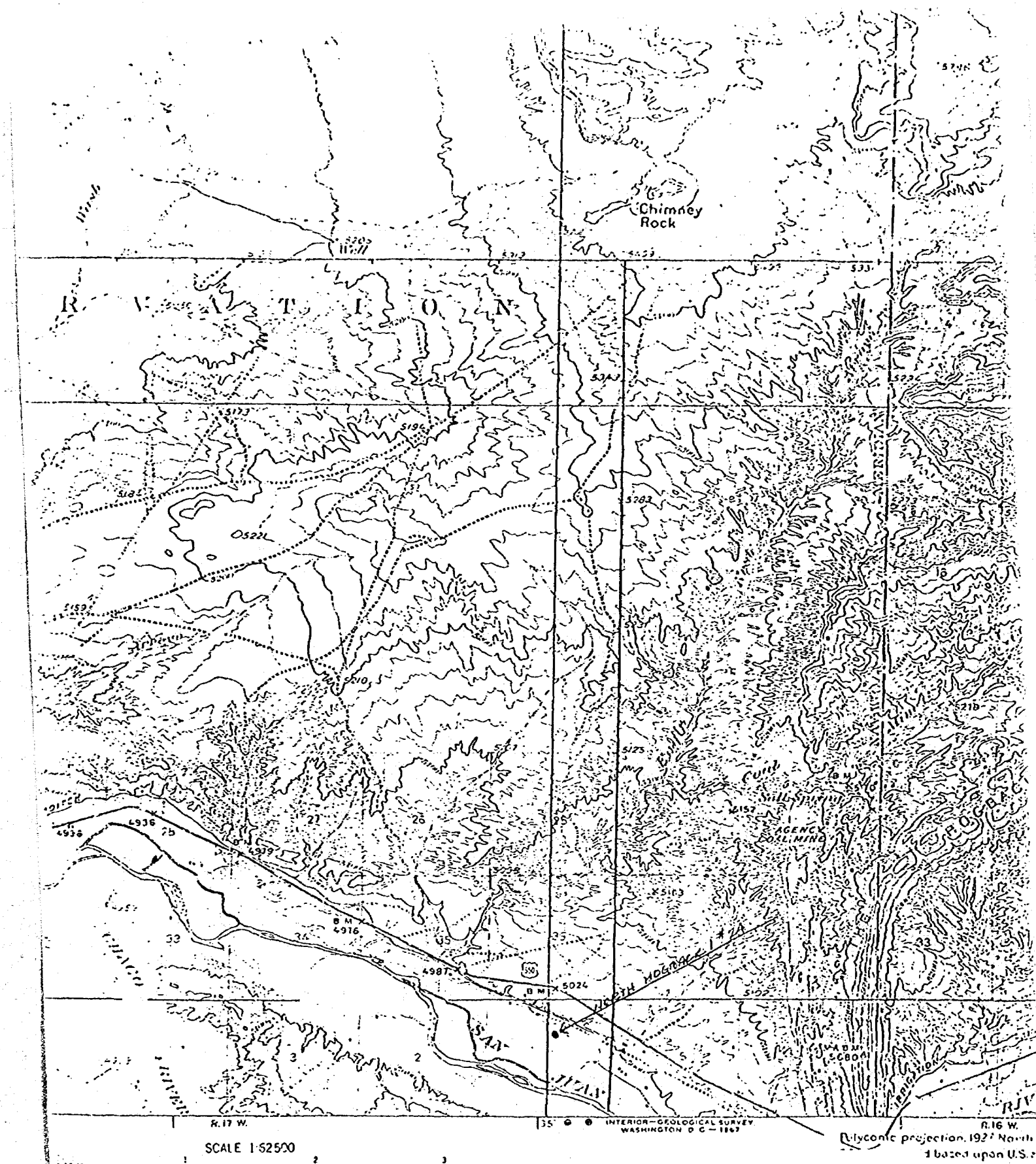
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	No	No

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

F. L. Crane | Agent | 8-2-77

F. L. Crane *(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.



WALTER DUNCAN
North Hogback 1 #24
1600' FNL - 2530' FEL
Sec 1, T29N, R17W
San Juan County, NM

Y ROCK, N.
N3645—W10830
1934

BASIN TESTING SERVICE
P. O. Box 188
Flora Vista, N. M. 87415

Analysis No. 325 Date Aug. 1, 1977

Operator Dugan Production Well Name Hogback #1

Location County State

Field Formation

Sampled From

Date Sampled July 28, 1977 by

Tubing Pressure Casing Pressure Surface casing pressure

	ppm	epm		ppm	epm
Sodium	1030	44.8	Chloride	71	2.0
Calcium	3	.2	Bicarbonate	2050	33.6
Magnesium	3	.2	Sulfate	229	4.8
Iron	Present		Carbonate	144	4.8
H_2S	Present		Hydroxide	0	0

Total Solids Dissolved 486

pH 9.7

Sp. Gr. 1.0004 at 60°F

Resistivity 350 ohm-cm at 70 °F

3-NMOCC (Aztec) 1-NM State Engineer (Santa Fe) 1-Duncan 1-Gallaway 1-Imbt 1-Amoco
1-C.S.T. Enterprises 1-Fast Enterprises 1-Lee Jim 1-File

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
Walter Duncan	Box 234, Farmington, NM 87401

LEASE NAME	WELL NO.	FIELD	COUNTY
North Hogback 1	24	Slickrock Dakota	San Juan

LOCATION

UNIT LETTER G ; WELL IS LOCATED 1600 FEET FROM THE North LINE AND 2530 FEET FROM THE East LINE, SECTION 1 TOWNSHIP 29N RANGE 17W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	7"	20'	3	Surface	
INTERMEDIATE					
LONG STRING	4-1/2"	687'	75		Calculation to Surface
TUBING	2-3/8"	Will be set @ 682'	NAME, MODEL AND DEPTH OF TUBING PACKER: Baker Model "A" packer will be set @ 635'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	687'	706'

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Tubing	Open Hole	687-706'

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	Oil 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	None	None

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
30	0	30	Closed	Pressure	200 psi

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?
	Yes	Yes	Yes

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

Lee Jim, Shiprock, New Mexico 87420

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

W. M. Gallaway, 101-2 Petroleum Plaza Building, Farmington, NM 87401

W. C. Imbt, 210 West 38th Street, Farmington, NM 87401

C.S.T. Enterprises, Box 1200, Farmington, NM 87401

Fast Enterprises, Box 1200 Farmington, NM 87401

Amoco Production Company, 501 Airport Drive, Farmington, NM 87401

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
	Yes	Yes	Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAT OF AREA	ELECTRICAL LOG	DIAGRAMMATIC SKETCH OF WELL
	Yes	No	No

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

F. L. Crane — Agent — 8-2-77

F. L. Crane (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.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
CASE NO. 6018 EXHIBIT NO. 1

APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL

SAN JUAN COUNTY, NEW MEXICO

Exhibit No. 1

3-NMOCC (Aztec) 1-NM State Engineer (Santa Fe) 1-Duncan 1-Gallaway 1-Imbt 1-Amoco
1-C.S.T. Enterprises 1-Fast Er rprises 1-NIIP 1-File

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	
Walter Duncan		Box 234, Farmington, NM 87401	
LEASE NAME	**WELL NO.**	**FIELD**	**COUNTY**
North Hogback 6	3	Slickrock Dakota	San Juan

LOCATION

UNIT LETTER L ; WELL IS LOCATED 2385 FEET FROM THE South LINE AND 330 FEET FROM THE West LINE, SECTION 6 TOWNSHIP 29N RANGE 16W NMPM.

CASING AND TUBING DATA

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	7"	40'	Driven		
INTERMEDIATE					
LONG STRING	4-1/2"	691'	50 sx	115	Calculation
TUBING	2-3/8"	691'	NAME, MODEL AND DEPTH OF TUBING PACKER: Baker Model "A" packer will be set @ 630'		

NAME OF PROPOSED INJECTION FORMATION	TOP OF FORMATION	BOTTOM OF FORMATION
Dakota	691'	702'

IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?	PERFORATIONS OR OPEN HOLE?	PROPOSED INTERVAL(S) OF INJECTION
Tubing	Open Hole	691-702'

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	Oil 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	None	None

ANTICIPATED DAILY INJECTION VOLUME (BBLS.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
10	0	20		Pressure	200 psi

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?
	Yes	Yes	Yes

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

NIIP - Hogback Area, Shiprock, New Mexico 87420

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

W. M. Gallaway, 101-2 Petroleum Plaza Building, Farmington, NM 87401

W. C. Imbt, 210 West 38th Street, Farmington, NM 87401

C.S.T. Enterprises, Box 1200, Farmington, NM 87401

Fast Enterprises, Box 1200, Farmington, NM 87401

Amoco Production Company, 501 Airport Drive, Farmington, NM 87401

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
	Yes	Yes	Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	**PLAT OF AREA**	**ELECTRICAL LOG**	**DIAGRAMMATIC SKETCH OF WELL**
	Yes	No	No

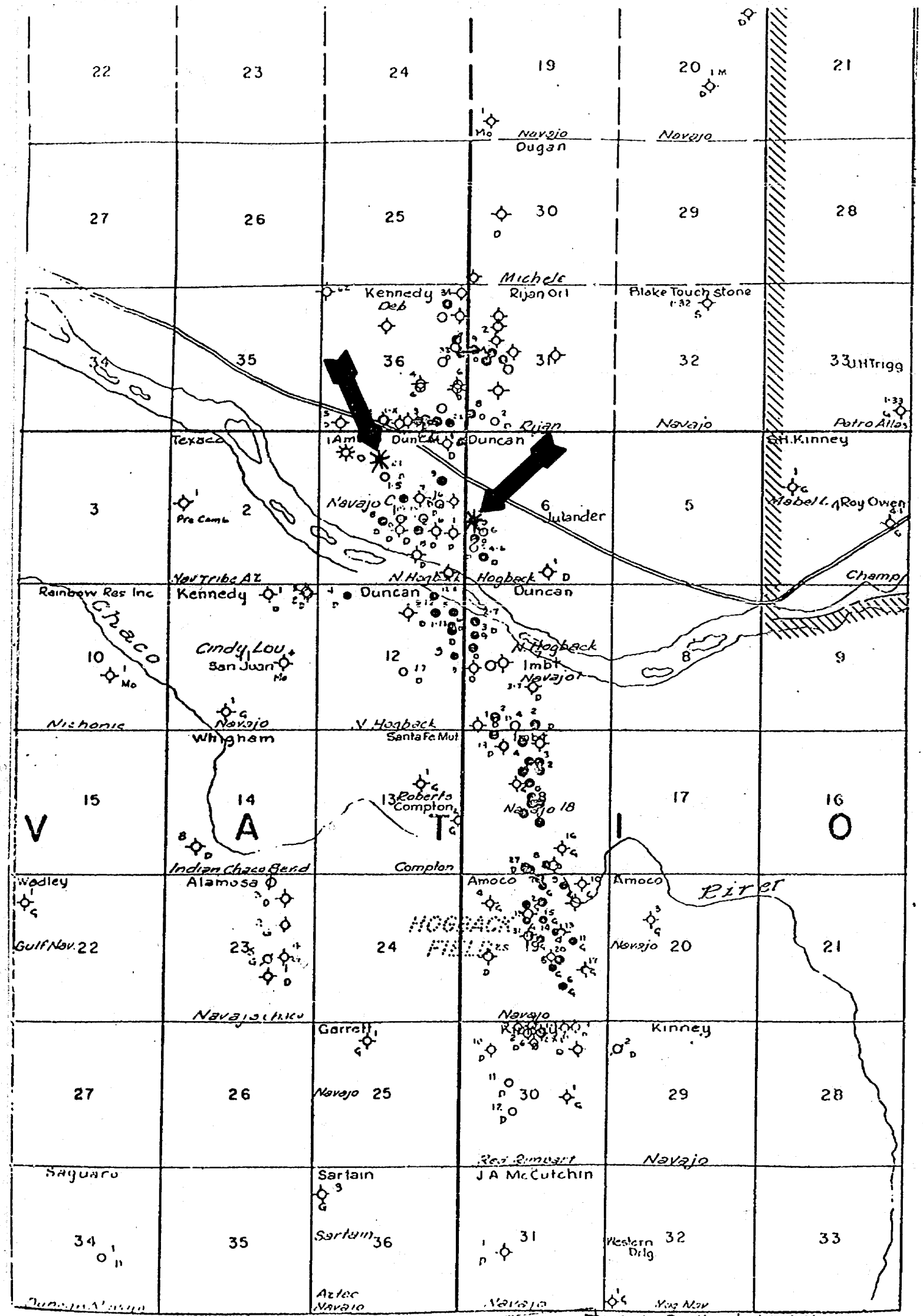
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

F. L. Crane (Signature) — Agent (Title) — 8-2-77 (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.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
app EXHIBIT NO. 1-A
CASE NO. 6018

APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL
SAN JUAN COUNTY, NEW MEXICO
Exhibit No. 1-A



T-29-N, R-17-W, N.M.P.M.

T-29-N, R-16-W, N.M.P.M.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 6018

APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL

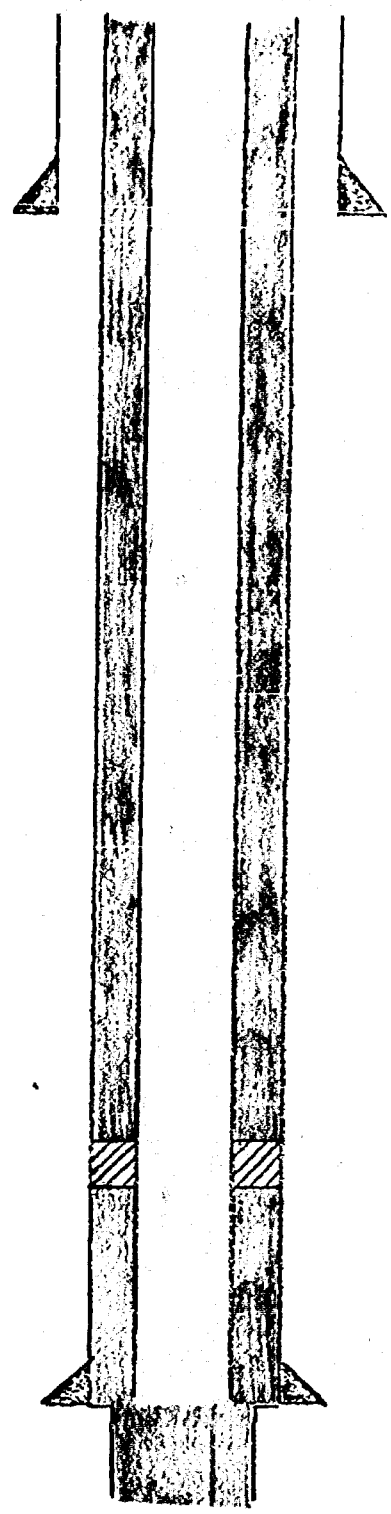
SAN JUAN COUNTY, NEW MEXICO

✱ Proposed Injection Wells

Exhibit No._____

DIAGRAMMATIC SKETCH OF COMPLETION

NORTH HOGBACK 1 #24 WELL



7" Casing set @ 20'

2-3/8" Tubing to be set @ 682'

Baker Model "A" Packer to be set @ 635'

4-1/2" Casing set @ 687' GR. Cemented w/75 sx Class "B" neat; maximum cementing pressure 450 psi; good mud returns while cementing.

Completed Open Hole

TD 706'

cmt to surf

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
appl EXHIBIT NO. 4
CASE NO. 6018

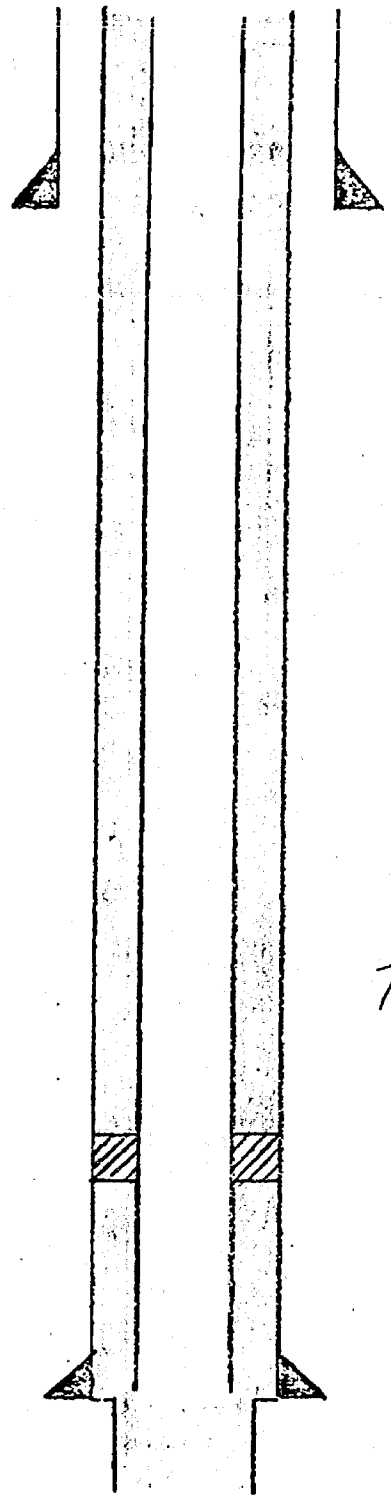
APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL

SAN JUAN COUNTY, NEW MEXICO

Exhibit No._____

DIAGRAMMATIC SKETCH OF COMPLETION

NORTH HOGBACK 6 #3 WELL



7" Casing set @ 40'

691 .2 = 1382

687 .2 = 1374

Baker Model "A" Packer
to be set @ 630'

2-3/8" Tubing set
@ 691' GR

4-1/2" Casing set @ 691' GR.
Cemented w/50 sx Class "A"
plus 2% CaCl; cement circu-
lated.

Completed Open Hole

TD 702'

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. Appl. A
CASE NO. 6018

APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL

SAN JUAN COUNTY, NEW MEXICO

Exhibit No._____

ANNUAL REPORT

OF THE

NEW MEXICO OIL & GAS ENGINEERING COMMITTEE

HOBBS, NEW MEXICO

VOLUME II

Northwest New Mexico

1975

APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL

SAN JUAN COUNTY, NEW MEXICO

Exhibit No. 6

WELL	S	T	R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	MP	ACCUM.
10H	29	N	18W	OIL	PLUGGING APPROVED 1969														2409
14H	29	N	18W	OIL	PLUGGING APPROVED 1969														1391
15C	29	N	18W	OIL	PLUGGING APPROVED 1962														1260
15G	29	N	18W	OIL	PLUGGING APPROVED 1959														5236
NAVAJO (J F																			
31F	29	N	18W	OIL	38	34	72	27	40	34	33	36	28	35	27	30	4375	P	34852
71F	29	N	18W	OIL														P	
NAVAJO (J G																			
15G	29	N	18W	OIL	133	122	256	90	142	122	105	132	102	123	94	102	1524	P	12426
23C	29	N	18W	OIL														P	
55C	29	N	18W	OIL														P	
57G	29	N	18W	OIL														P	
71G	29	N	18W	OIL														P	
73C	29	N	18W	OIL														P	
75C	29	N	18W	OIL														P	
93G	29	N	18W	OIL														P	
NAVAJO (J-H																			
29H	29	N	18W	OIL	94	88	184	66	102	87	76	95	74	83	68	73	1097	P	28740
75H	29	N	18W	OIL														P	
77H	29	N	18W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	4578
93H	29	N	18W	OIL															
SHIPROCK I																			
	1I	29	N	18W	OIL	PLUGGING APPROVED 1968													212
X	1I	29	N	18W	OIL	222	388	417	196	336	383	315	313	235	270	216	234	3535	P	5208
	2I	29	N	18W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	14505
	4I	29	N	18W	OIL														
	6I	29	N	18W	OIL														
	8I	29	N	18W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	3084
X	10I	29	N	18W	OIL	PLUGGING APPROVED 1969														7731
	14I	29	N	18W	OIL														
	15I	29	N	18W	OIL														
	16I	29	N	18W	OIL														
SHIPROCK L																			
	7L	29	N	18W	OIL	19	34	36	18	35	33	28	27	21	24	19	21	213	P	6892
	8L	29	N	18W	OIL													36	P	18784
	11L	29	N	18W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	191
SHIPROCK J																			
	1J	29	N	18W	OIL	6	25	15	15	34	44	55	37	51	63	42	29	416	P	11255
	2J	29	N	18W	OIL														P	
X	3J	29	N	18W	OIL														P	
	5J	29	N	18W	OIL	PLUGGING APPROVED 1969													P	
	6J	29	N	18W	OIL															611
	7J	29	N	18W	OIL	PLUGGING APPROVED 1970														8285
	10J	29	N	18W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	
	11J	29	N	18W	OIL														P	
	13J	29	N	18W	OIL	PLUGGING APPROVED 1974														
	15J	29	N	18W	OIL														P	
	17J	29	N	18W	OIL														P	
	21J	29	N	18W	OIL														P	
	23J	29	N	18W	OIL														P	
SHIPROCK K																			
	5K	29	N	18W	OIL	10	5	6	13	15	21	14	19	24	15	11	154	P	11072
	6K	29	N	18W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	310
	7K	29	N	18W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	13739
COMPANY TOTAL				OIL	514	701	985	418	762	719	631	651	531	628	483	500	7523		203459
SIMPSON GALLUP								5M TO 6M											
ANOCO PRODUCTION CO																			
GALLEGOS CANYON UNIT																			
83A	26	28N	12W	OIL	667	579	605	407	583	496	568	587	486	486	522	575	6743	P	246545
				GAS	4879	3844	4526	4207	4132	3132	3702	3414	4326	4191	4110	4870	49315		
				WAT	18	14	15	15	16	15	16	15	15	16	15	15	183		
123C	25	28N	12W	OIL/GAS	LAST PROD. PRIOR TO 6/73													U	141876
153N	34	28N	12W	OIL	LAST PROD. PRIOR TO 6/73													U	60823
126H	26	28N	12W	OIL	LAST PROD. PRIOR TO 6/73													U	151812
GALLEGOS CANYON UNIT				NP															
126K	26	28N	12W	OIL	LAST PROD. PRIOR TO 6/73													T	22860
V M MCMANUS																			
1M	22	28N	12W	OIL	260	183	247	211	206	142	215	185	217	216	195	220	2506	P	108961
				GAS	2073	1361	1856	1848	1812	1727	1988	1579	2067	2031	1586	1331	21599		
				WAT	15	14	15	15	16	10	12	16	15	15	15	16	175		
T L RHODES																			
1P	30	28N	11W	OIL	PLUGGING APPROVED 1973														60354
COMPANY TOTAL				OIL	927	762	852	618	791	645	763	772	703	702	717	795	9247		813231
				GAS	4952	5407	6382	6055	6034	4859	5690	5033	6393	6222	5696	6171	70914		
				WAT	31	28	30	30	32	25	28	31	30	32	30	31	358		
DUGAN PRODUCTION CORPORATION																			
GALLEGOS																			
11	28	28N	12W	OIL	195	237	264	220	243	234	207	232	253	253	238	231	2843	P	18997
				GAS	843	855	856	677	682	540	860	435	413	287			4269		
2E	22	28N	12W	OIL	109	133	148	150	140	131	116	131	39	103	97	95	1442	P	7357
				GAS	305	368	313	269	263	192	47	177	167	117			2223		
COMPANY TOTAL				OIL	304	370	412	370	383	365	323	363	352	356	335	326	4285		26354
				GAS		848	1023	849	746	753	532	731	612	577	404		6492		
SLEEPER PICTURED CLIFFS								0M TO 5M											
ANOCO PRODUCTION CO																			
JICARILLA APACHE A 218																			
1A	26	26N	3W	OIL	121	127	117	116	157	135	115	140	131	129	119	9	1405	P	37542
				GAS	187	337	337	337	337	337	384	493	434	457	421	83	4276		
				WAT	4	4	4	4	4	4	4	4	6	4	4	4	50		
MOBIL OIL CORPORATION																			
JICARILLA D																			
4M	23	26N	3W	OIL						7	89	97	121	51	130	125	620	P	25950
				GAS						2242							2242		
15	12	26N	3W	OIL	98	80	30	80	82	63	215	235	263	110	278	267	1798	P	4703
				GAS	3472	2649	1313	2750	1742	2242	1217	1491	2240	2047	2577	1847	23587		
COMPANY TOTAL				OIL	98	80	30	80	82	63	215	235	263	110	278	267	1798		30653
				GAS	3472	2649	1313	2750	1742	2242	1217	1491	2240	2047	2577	1847	23587		
SLICK ROCK DAKOTA								0M TO 5M											
WALTER DUNCAN																			
NORTH HOGBACK I																			
2J	29	29N	17W	OIL	295	293	322	484	196	426	508	281	198	255	383	456	4067	P	65069
				WAT	10	16	16	31	13	33	31	55	34	42	37	33	416		
3G	29	29N	17W	OIL	507	433	492	268	367	249	237	376	435	405	243	249	4464	P	32343
				WAT	24	20	28	17	16	15	16	16	17	18	14	16	234		
8K	29	29N	17W	OIL/GAS	LAST PROD. DATE 11/73													F	14710
9M	29	29N	17W	OIL	57		69	68	82	60	61	79	94	93	89	91	822	F	3262
13A	29	29N	17W	OIL	PLUGGING APPROVED 1972														1750
13A	29	29N	17W	OIL	PLUGGING APPROVED 1973														1750
V	13	29N	17W	OIL					920	389	292	313	355	326	271	256	3132	P	31332
	13	29N	17W	OIL						307	205	116	87	62	69	63	913	P	9726
	13	29N	17W	OIL					520	286	246	208	235	222	193	198	2107	F	2107
NORTH HOGBACK K																			
1L	29	29N	16W	OIL	536	462	435	425	373	455	481	430	318	218	210	216	4569	P	37853
				WAT	24	28	30	30	31	33	31	31	33	30	29	31	385		
3L	29	29N	16W	OIL	LAST PROD. DATE 11/74													F	4640
4M	29	29N	16W	OIL	38	54	58	73	253	343	305	264	133	159	138	126	2012	F	8979
5M	29	29N	16W	OIL	406	356	393	243	120	89	100	93	79	83	85	73	1856	F	2209
				WAT	33	25	12	14	17	16	16	16	16	15	15	16	226		
6L	29	29N	16W	OIL				25	42	39	42	42	40	42	56	46	494	F	494
NORTH HOGBACK Y																			
1E	29	29N	16W	OIL	58	72	57	74	111	133	136	163	240	184	120	92	1439	P	23975
				GAS	18	15	12	12	27	35	26	33	33	28	15	21	268		
2D	29	29N	16W	OIL/GAS	LAST PROD. DATE 06/74													F	1622
3E	29	29N	16W	OIL	111		256	222	70	56	44	79	73	63	54	90	1113	P	1513
				GAS			15	13	7								37		
				WAT															
4E	29	29N	16W	OIL	92	102	119	60	56	75	53	96	376	169	101	82	1381	F	1631
5D	29	29N	16W	OIL										189	210	105	484	F	484
NORTH HOGBACK Z																			
1M	27	29N	17W	OIL/GAS	LAST PROD. PRIOR TO 6/73													S	300
2A	35	29N	17W	OIL	LAST PROD. DATE 11/74													F	11369
4A	35	29N	17W	OIL	450	231	595	583	883	785	500	685	533	573	550	620	7062	P	22894
				GAS	54	26	80	54	41	59	41	31	24	25	31	40	406		
5A	12	29N	17W	OIL	550	211	503	494	410	682	580	454	304	355	372	480	5583	P	35159
				GAS	70	21	87	28	31	53	37	33	26	25	15	16	285		
6H	12	29N	17W	OIL	420	522	559	569	458	980	959	1055	1341	1076	1006	1098	9921	P	17544
				WAT	12	10	14	16	16	17	14	16	12	13	13	16	169		

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	HP	ACCUM.
7A1329N17W	OIL	420	302	309	304	511	369	121	622	485	585	490	404	5143	F	5149
9N1229N17W	OIL	1529	1706	1604	1617	930	1429	1181	1395	1342	1360	1176	1392	16601	F	17077
	MAT										38	31	38	158		
10A1229N17W	OIL	1060	1005	1060	1009	256	1482	1108	1163	1212	1181	980	1124	12652	F	12652
COMPANY TOTAL	OIL	6021	6027	6720	6503	6673	8421	7335	7340	7713	7593	6786	7459	86201		331218
	MAT	242	136	224	221	219	227	205	238	282	282	180	209	2649		
W. H. GALLAWAY OIL																
2P1630N17W	OIL	PLUGGING APPROVED 1972														41512
X 3P1630N17W	OIL	42	24	50	62	48	78	11	63	13			7	378	P	1735
3D1630N17W	OIL	PLUGGING APPROVED 1972														84
9P1630N17W	OIL	PLUGGING APPROVED 1972														1200
15P1630N17W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	12284
17I1630N17W	OIL	77	87	80	56	51	38	69	59	45	2	34	5	427	P	8284
	MAT											31		31		31
18P1630N17W	OIL													519	P	519
21M1630N17W	OIL	PLUGGING APPROVED 1972														11588
31A1630N17W	OIL	PLUGGING APPROVED 1972														160
COMPANY TOTAL	OIL	119	111	130	118	99	116	80	122	62	2	105	12	1056		78116
CLAUDE C. KENNEDY OIL																
12D1630N17W	OIL	PLUGGING APPROVED 1969														1424
REJAN OIL COMPANY INCORPORATED REJAN																
5E3130N16W	OIL	PLUGGING APPROVED 1968														109
8N3130N16W	OIL	LAST PROD. PRIOR TO 6/73													P	578
9E3130N16W	OIL	52	38	134	38	5	25	50	46	36	28		80	544	P	10672
	MAT	30	40	135	43	6	29	70	58	60	43		20	539		
11E3130N16W	OIL												40	40	P	5120
	MAT												70	70		
13L3130N16W	OIL	27	38	130	5	18	45	50	40	50	20		60	483	P	7821
	MAT	35	40	140	6	22	53	55	40	54	30		95	572		
COMPANY TOTAL	OIL	52	77	264	43	23	70	117	86	106	48		180	1027		24616
	MAT	65	80	275	53	30	82	125	98	114	73		185	1174		
TABLE MESA DAKOTA					OK TO SN											
CONTINENTAL OIL COMPANY TABLE MESA																
23K3428N17W	OIL	INJECTION WELL													I	
TABLE MESA FEDERAL																
17N 32?N17W	OIL	PLUGGING APPROVED 1963														1029797
COMPANY TOTAL	OIL															1029797
EASTERN PETROLEUM COMPANY TABLE MESA																
22N3428N17W	OIL	PLUGGING APPROVED 1973														13282
23N3428N17W	OIL	PLUGGING APPROVED 1973														8004
26E 327N17W	OIL	PLUGGING APPROVED 1973														25576
COMPANY TOTAL	OIL															47863
JOHN F. STAVER TABLE MESA																
7F 327N17W	OIL	296							243	261	256			1021	P	92317
	MAT	2640							2611	2841	2730			10822		
9K 327N17W	OIL	LAST PROD. PRIOR TO 6/73													G	593
13G 327N17W	OIL	LAST PROD. PRIOR TO 6/73													G	28716
16J 327N17W	OIL	LAST PROD. PRIOR TO 6/73													G	36148
17C 327N17W	OIL	LAST PROD. PRIOR TO 6/73													G	39957
19N 327N17W	OIL	LAST PROD. PRIOR TO 6/73													G	2569
20B 327N17W	OIL										223			223	P	55081
	MAT										1945			1945		
21C 327N17W	OIL	LAST PROD. PRIOR TO 6/73													U	10635
COMPANY TOTAL	OIL	296							243	261	479			1379		276082
	MAT	2640							2611	2841	4675			12767		
TABLE MESA PENN C					7N TO 8N											
EASTERN PETROLEUM COMPANY TABLE MESA																
28N3328N17W	OIL	CONVERTED TO SWD														12295
JOHN F. STAVER TABLE MESA																
18F 327N17W	OIL	86												86	P	110653
	MAT	2160												2160		
25K 327N17W	OIL	PLUGGING APPROVED 1975														33138
29H 327N17W	OIL	PLUGGING APPROVED 1975														10134
COMPANY TOTAL	OIL	86												86		161925
	MAT	2160												2160		
TAPACITO GALLUP (ASSOCIATED)					6N TO 7N											
CAULKINS OIL COMPANY BREECH F																
24R413?6N 6W	OIL	102	323	362	433	251		34	135	111	201	210	313	2375	F	111319
	GAS	2407	6032	5069	4129	2748	1528	1903	2492	4216	4206	4148	2854	41727		
JEROME P. MCHUGH JICARILLA																
502926N 4W	OIL	455	357	305	277	64	233	147		141	81	30	364	2456	P	51358
	GAS	35412	24350	21158	23763	5121	17819	17292		2934	3355	2435	30399	184685		
SOUTHERN UNION PRODUCTION COMPANY JICARILLA M																
7K1926N 4W	OIL														F	4893
	GAS					7	165	52			27			251	T	
8P1926N 4W	OIL															
JICARILLA J																
10I2626N 5W	OIL														F	1973
	GAS	281	309	222	262	98	137	129	47	196	88	176	256	2201		
COMPANY TOTAL	OIL															6866
	GAS	281	309	222	262	105	302	181	47	196	115	176	256	2452		
TENNECO OIL COMPANY JICARILLA A																
2S1826N 5W	OIL	6		59	69	15	8	32	9	37	14		26	258	F	18664
	MAT			10	11	3	1	5		27	14			71		
3A1926N 5W	OIL	154	122	126	120	161	131	42		7	127	214	30	1217	F	27925
	GAS	19023	17172	17647	12234	15737	13213	7480		3541	13242	16603	15084	155196		
	MAT										61	86	30	177		
5G2026N 5W	OIL	187	182	186	250	147	240	116		16	253	250	177	1705	F	38036
	GAS	33435	29724	25711	20356	27730	22334	11919			9776	24910	21926	227720		
	MAT		61	62	83	49	80	38			123	43	118	677		
8H1726N 5W	OIL	314	52	370	376	298	432	128	302	260	269	319	265	3425	F	139021
	GAS	11198	11002	16586	16243	16977	16761	12567	13078	12943	11555	18030	16385	170021		
	MAT		15	59	60	48	108	50	110	87	82	64	29	692		
JICARILLA B																
4H2126N 5W	OIL	118	149	86	60	191	80	132		38	152	148	98	1232	F	23873
	GAS	10828	16307	12415	11932	15416	11862	6807		3561	11058	13736	13274	124695		
	MAT	23	31	18	13	40	17	24		8	32	31	21	260		
7K1426N 5W	OIL	LAST PROD. PRIOR TO 6/73													S	2505
9J1626N 5W	OIL	PLUGGING APPROVED 1970														868
JICARILLA C																
312326N 5W	OIL		26	3	187	8	62			2	63	53	28	432	F	10221
	GAS	2077	2115	1355	1811	2124	2304	1322	1061	916	1901	2366	2616	22768		
COMPANY TOTAL	OIL	779	601	830	1061	670	959	509	305	350	865	984	644	8687		261203
	GAS	76561	76970	73514	62534	75273	66454	38775	14548	20557	47332	75654	70085	698428		
	MAT	25	107	149	167	140	206	117	110	122	292	244	198	1677		
TOCITO DOME PENN D (ASSOCIATED)					6N TO 7N											
AMOCO PRODUCTION CO NAVAJO TRIBAL N																
1H1726N16W	OIL	LAST PROD. DATE 07/74													P	67802
2G2026N16W	OIL	CONVERTED TO SWD														479004

ANNUAL REPORT

OF THE

NEW MEXICO OIL & GAS ENGINEERING COMMITTEE

HOBBS, NEW MEXICO

VOLUME II

Northwest New Mexico

1975

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 6018

APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL
SAN JUAN COUNTY, NEW MEXICO
Exhibit No. 5
Case No. 6018

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	MP	ACCUM.
71F1729N16W	OIL														P	
NAVAJO 11-G																
37G1729N16W	OIL	90	104	98	48	54	100	27		15	54		44	634	P	13060
53G1729N16W	OIL														P	
55G1729N16W	OIL														P	
57G1729N16W	OIL														P	
71G1729N16W	OIL														P	
73G1729N16W	OIL														P	
75G1729N16W	OIL														P	
93G1729N16W	OIL														P	
NAVAJO 11-M																
59M1729N16W	OIL	65	74	70	34	39	72	27		15	54		44	494	P	29234
75M1729N16W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	6578
93M1729N16W	OIL														P	
SHIPROCK I																
11I1726N16W	OIL	PLUGGING APPROVED 1968														716
X 31I1729N16W	OIL	225	213	40	91			297	168	139	51		81	1305	P	7115
41I1729N16W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	14505
61I1729N16W	OIL														P	
81I1729N16W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	3086
X 101I1729N16W	OIL	PLUGGING APPROVED 1969														7731
121I1729N16W	OIL															
141I1729N16W	OIL														P	
161I1729N16W	OIL														P	
661I1729N16W	OIL														P	
SHIPROCK L																
7L1629N16W	OIL	90	18	4	8			61	34	28	10		16	269	P	7161
8L1629N16W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	10784
7L1629N16W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	191
SHIPROCK J																
13J1729N16W	OIL	33	6	152	13			57						261	P	11516
23J1729N16W	OIL														P	
X 31J1729N16W	OIL	PLUGGING APPROVED 1969													P	
51J1729N16W	OIL														P	
61J1729N16W	OIL														P	
71J1729N16W	OIL	PLUGGING APPROVED 1970													P	611
101J1729N16W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	6285
111J1729N16W	OIL															
131J1729N16W	OIL	PLUGGING APPROVED 1974														
151J1729N16W	OIL															
171J1729N16W	OIL														P	
31J1729N16W	OIL														P	
44J1729N16W	OIL														P	
SHIPROCK K																
5K1729N16W	OIL	12	14	57	31			28						142	P	11216
6K1729N16W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	310
7K1729N16W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL													P	13759
COMPANY TOTAL	OIL	541	459	449	238	108	200	511	202	204	197		206	3315		206774
SIMPSON GALLUP						5M TO 6M										
AMOCO PRODUCTION CO																
GALLEGOS CANYON UNIT																
83A2626N12W	OIL	585	504	450	529	500	468	481	462	413	531	504	482	5909	P	252454
	GAS	5336	4363	4594	5028	4692	3658	4583	4746	4737	5030	4781	3206	54704		
	WAT	16	15	13	15	16	15	15	15	26	29	30	27	232		
123C2528N12W	OIL	PLUGGING APPROVED 1976														141876
125K2428N12W	OIL	LAST PROD. PRIOR TO 6/73													U	60823
126K2328N12W	OIL	LAST PROD. PRIOR TO 6/73													U	22860
128H2528N12W	OIL	LAST PROD. PRIOR TO 6/73													U	151812
V M MCMANUS																
1H2228N12W	OIL	221	208	191	211	204	216	195	232	215	212	170	220	2495	P	111456
	GAS	1545	1035	1086	1342	1720	1407	1909	1946	1972	1903	1678	1151	19194		
	WAT	15	15	13	15	16	15	16	16	15	8	10	10	164		
F L RHODES																
1F3028N11W	OIL	PLUGGING APPROVED 1973														60354
COMPANY TOTAL	OIL	806	712	641	740	704	684	676	694	628	743	674	702	8404		821635
	GAS	6881	5398	5680	6870	6402	5345	6672	6692	6709	6933	6459	4357	73898		
	WAT	31	30	26	30	32	30	31	31	41	37	40	37	396		
DUGAN PRODUCTION CORPORATION																
GALLEGOS																
1E2128N12W	OIL	219	286	293	273	258	194	239	268	256	221	236	251	3036	P	22033
	GAS			246	48	150	94	183	274	329	218	182	132	1856		
2E2228N12W	OIL	85	85	119	113	106	79	106	107	105	96	109	106	1216	P	8573
	GAS			609	119	451	230	449	639	769	510	426	307	4509		
COMPANY TOTAL	OIL	304	371	412	388	364	273	365	375	361	315	365	359	4252		30606
	GAS			855	167	601	324	632	913	1098	728	608	439	6365		
SLEEPER PICTURED CLIFFS						0K TO 5M										
AMOCO PRODUCTION CO																
JICARILLA APACHE A 119																
1A2626N 3W	OIL	70	226	151	131	151	69	121	127	121	109	145	113	1554	P	39096
	GAS	247	247	533	83	534	83	83	83	83	83	83	83	2227		
	WAT		4	4	4	4	4	4	4	4	4	4	4	44		
MOBIL OIL CORPORATION																
JICARILLA O																
4M2326N 3W	OIL	100	89	98	85	76	80	71	65	85	112	48		909	S	26859
	GAS	6	5	5	6	5	4	3		4	11	3		52		
1512326N 3W	OIL	314	101	111	97	87	92	73	74	57	72	72	54	1011	P	5714
	GAS	1581	1341	1505	1571	1482	1094	680	67	720	1767	1445	1140	14391		
COMPANY TOTAL	OIL	214	190	209	182	163	171	142	139	142	187	127	54	1920		32573
	GAS	1587	1346	1508	1577	1487	1098	683	67	724	1778	1448	1140	14443		
SLICK ROCK DAKOTA						0M TO 5M										
C.S.T. ENTERPRISES INC																
RIJAN																
8M3130N16W	OIL	LAST PROD. PRIOR TO 6/73													S	596
9E3130N16W	OIL	120		52	55	50	50	13	37	21	31	32	23	506	P	11476
	WAT	40		17	20	15	15	4	11	8	12	12	10	169		
11E3130N16W	OIL	130		80	92	95	92	42	47	52	52	52	38	840	P	5960
	WAT	200		52	64	71	66	26	45	31	40	42	34	671		
13L3130N16W	OIL	122		70	76	78	78	34	44	34	42	65	35	678	P	8499
	WAT	195		44	50	49	49	17	32	17	23	39	18	533		
COMPANY TOTAL	OIL	372		202	223	223	220	92	128	110	144	192	116	2022		26531
	WAT	435		113	136	135	126	47	88	56	75	103	62	1378		
WALTER DUNCAN																
NORTH HOGBACK	1															
2J 129N17W	OIL	455	420	418	283	233	209	224	200	212	201	174	161	3190	P	68259
	WAT	31	29	32	30	31	26	30	117	174	166	174	168	1028		
5G 129N17W	OIL	255	238	249	233	200	169	166	130	105	102	86	108	2061	P	34404
	WAT	16	16	34	16	16	15	15	93	145	155	140	140	801		
8K 129N17W	OIL	LAST PROD. DATE 11/73													S	14310
9H 129N17W	OIL	62	58	315	397	386	65							1283	F	6585
	WAT				29	16	4							49		
14A 129N17W	OIL	PLUGGING APPROVED 1972														290
15A 129N17W	OIL	PLUGGING APPROVED 1973														1759
Y 16J 129N17W	OIL	220	203	625	705	681	600	587	606	392	367	342	414	5732	P	8864
	WAT								9	15	16	15	13	68		
19J 129N17W	OIL	62	59	564	532	522	509	483	546	653	584	480	467	5441	P	6420
	WAT				28	31	30	30	82	76	124	124	114	641		
21F 129N17W	OIL	159	140	410	384	383	386	408	412	345	287	250	333	3897	F	5984
	WAT								9	15	16	15	13	68		
22F 129N17W	OIL			721	1160	890	828	788	594	302	250	255	420	6208	F	6208
NORTH HOGBACK	6															
1L 629N16W	OIL	202	113	172	142	94	68	53	66	121	145	116	124	1516	P	39267
	WAT	27	16	26	11	16	15	16	126	201	190	180	146	1010		
3L 629N16W	OIL	LAST PROD. DATE 11/74													S	4660
4K 629N16W	OIL	106	54	182	138	129	97	61	47	82	58	47	31	1032	F	10011
	WAT			20	13	15	5	16	71	131	93	30	31	355		
5M 629N16W	OIL	64	45	254	148	138	102	174	169	90	93	86	68	1431	F	3640
	WAT	9	9	4	9									26		
6L 629N16W	OIL	31	30	260	311	304	325	280	263	198	156	154	149	2461	F	2955
NORTH HOGBACK	7															
1E 729N16W	OIL	30	121	72	66	77	78	93	82	50	89	93	104	995	P	24970
	WAT	7	9	15	14	16	15	16	75	120	124	120	124	647		
2D 729N16W	OIL	LAST PROD. DATE 04/74													S	1622

Lse #1 23 BWPD
Lse #6 19 BWPD) current wtr prod.

WELL	S	T	R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	MP	ACCUM.
3E	29	29N	16W	OIL	30	25	41	53	62	58	39	64	59	44	32	16	218	P	2031
				WAT								36	60	62	12		231		
4E	29	29N	16W	OIL	71	191	187	107	188	151	162	145	150	171	63	102	1683	F	3319
				WAT		7	29	18	16	15	16	24	30	31	14	25	225		
5D	29	29N	16W	OIL	211	216	228	137	107	89	205	212	194	121	135	72	1947	F	1947
				WAT						15	30	7					52		
6D	29	29N	16W	OIL	47	52	49	69	70	54	45	72	62	73	90	44	727	F	1211
NORTH MOCCASIN																			
1H	29	29N	17W	OIL	LAST PROD. PRIOR TO 6/73													S	300
2A	29	29N	17W	OIL	LAST PROD. DATE 11/74													S	11359
4A	29	29N	17W	OIL	475	329	401	340	380	375	358	354	357	363	287	36	4195	P	26997
				WAT	28	21	24	30	30	30	31	99	160	155	118	27	733		
5A	29	29N	17W	OIL	490	363	430	417	315	323	309	332	310	340	256	391	4276	P	39494
				WAT	17	11	20	30	31	30	31	24	14	16	13	16	253		
6N	29	29N	17W	OIL	1048	526	994	992	979	960	980	962	801	814	501	509	10065	P	27609
				WAT	4							34	52	62	48	67	267		
7A	29	29N	17W	OIL	602	407	450	392	317	429	514	518	459	471	406	441	5406	F	10615
9H	29	29N	17W	OIL	1361	754	1256	1238	1010	1004	1017	1030	951	997	410	456	11135	F	28461
				WAT	27	21	22	22	14	15	14	14	58	97	75	93	472		
10A	29	29N	17W	OIL	911	1165	1186	1201	1286	1250	1264	1260	1220	1240	1115	1205	14532	F	26979
COMPANY TOTAL				OIL	6892	5559	9466	9365	8871	8149	8229	8064	7151	6968	5361	5611	89636		420901
				WAT	168	139	228	228	226	215	247	862	1238	1273	1121	1015	6970		
W. M. GALLAWAY																			
DEB																			
	2P	36	30N	17W	OIL	PLUGGING APPROVED 1972													41512
X	2P	36	30N	17W	OIL	98	69	81	48	66	5	2	2	23	9	2	405	P	1560
	3O	36	30N	17W	OIL	PLUGGING APPROVED 1972													11
	4P	36	30N	17W	OIL	PLUGGING APPROVED 1974													1268
	15P	36	30N	17W	OIL	28											28	J	14012
	11	36	30N	17W	OIL	41	82	31	42	22	24	11	1	10	42	80	79	485	P	8775
	16P	36	30N	17W	OIL	MORE THAN ONE WELL IN PRORATION UNIT, PRODUCTION REPORTED IN ANOTHER WELL												P	51
	3H	36	30N	17W	OIL	PLUGGING APPROVED 1972													11688
	37A	36	30N	17W	OIL	PLUGGING APPROVED 1972													160
COMPANY TOTAL				OIL	69	180	100	143	70	90	16	3	12	65	89	81	918		79034
CLAUDE C. KENNEDY																			
DEB																			
	1	20	34	30N	17W	OIL	PLUGGING APPROVED 1969												5424
RIJAN OIL COMPANY INCORPORATED																			
RIJAN																			
	SE	31	30N	16W	OIL	PLUGGING APPROVED 1968													109
TABLE MESA DAKOTA								0M TO 5M											
CONTINENTAL OIL COMPANY																			
TABLE MESA																			
	25K	36	28N	17W	OIL	INJECTION WELL												I	
TABLE MESA FEDERAL																			
	17N	32	27N	17W	OIL	PLUGGING APPROVED 1960													1029797
COMPANY TOTAL				OIL															1029797
EASTERN PETROLEUM COMPANY																			
TABLE MESA																			
	22N	34	28N	17W	OIL	PLUGGING APPROVED 1973													13292
	23O	34	28N	17W	OIL	PLUGGING APPROVED 1973													9001
	24E	32	27N	17W	OIL	PLUGGING APPROVED 1973													25570
COMPANY TOTAL				OIL															47863
JOHN F. STAVER																			
TABLE MESA																			
	1F	32	27N	17W	OIL	299	267	214	173	180	220	265	293	135	265		2311	P	95126
				WAT		3163	2430	2045	1943	2180	2640	2793	3006	1565	2143		23908		
	9K	32	27N	17W	OIL	LAST PROD. PRIOR TO 6/73												U	592
	13G	32	27N	17W	OIL	LAST PROD. PRIOR TO 6/73												U	28712
	14J	32	27N	17W	OIL	LAST PROD. PRIOR TO 6/73												U	46199
	15G	32	27N	17W	OIL	LAST PROD. PRIOR TO 6/73												U	39957
	16N	32	27N	17W	OIL	LAST PROD. PRIOR TO 6/73												U	2589
	20B	32	27N	17W	OIL	269	214	185	152	213	202	243	269	114	209		2050	P	57558
				WAT		2840	2063	1760	1411	1975	1940	2641	2504	1340	1870		20342		
	21C	32	27N	17W	OIL	LAST PROD. PRIOR TO 6/73												U	10635
COMPANY TOTAL				OIL	568	481	399	325	393	422	508	562	269	474			4361		281368
				WAT		6003	4493	3805	3354	4153	4580	5434	5510	2905	4013		44250		
TABLE MESA PENN C								7M TO 8M											
EASTERN PETROLEUM COMPANY																			
TABLE MESA																			
	28N	33	28N	17W	OIL	CONVERTED TO SWD													12295
JOHN F. STAVER																			
TABLE MESA																			
	18F	32	27N	17W	OIL	LAST PROD. DATE 01/75												U	110653
	24K	32	27N	17W	OIL	PLUGGING APPROVED 1975													33136
	29H	32	27N	17W	OIL	PLUGGING APPROVED 1975													10134
COMPANY TOTAL				OIL															161925
TAPACITO GALLUP (ASSOCIATED)								6M TO 7M											
CAULKINS OIL COMPANY																			
BREECH C																			
	240	A1	32	6N	6W	OIL	150					60					210	F	111529
						GAS	2540					500					3040		
JEROME P. MCHUGH																			
JICARILLA																			
	50	29	26N	4W	OIL	14	113	321	211	109	51		38	70	31	46	278	1282	P	52640
					GAS	40759	24913	31011	11025	15351							24939	148088	
SOUTHERN UNION PRODUCTION COMPANY																			
JICARILLA H																			
	7H	19	26N	4W	OIL	LAST PROD. DATE 10/75												U	4893
	8H	19	26N	4W	OIL													U	
JICARILLA J																			
	10	12	26N	5W	OIL													P	1573
					GAS	130	246	365	32	169	9	1	2			39	55	1049	
COMPANY TOTAL					OIL														6466
					GAS	130	246	365	32	169	9	1	2			39	55	1048	
TENNECO OIL COMPANY																			
JICARILLA A																			
	28	18	26N	5W	OIL	59	40	62	54	64		31	31	31	40	45	26	483	F	19147
					WAT	30	40	31	27	32								160	
	3A	19	26N	5W	OIL	90	100	217	140	111	60		8	147	129	105		1107	F	29032
					GAS	15049	14021	10939	13943	9820	6806		102	9128	8838	12611		100857	
					WAT	40	47	93	84	26	30							390	
	5G	20	26N	5W	OIL	226	197	260	300	189	148				115	226		1661	F	39697
					GAS	24038	23410	17498	22353	15659	12060				16981	23902		155881	
					WAT	129	112	65	210	95	59							670	
	8H	17	26N	5W	OIL	319	206	217	345	260	237	132		259	201	196		2272	F	141293
					GAS	11126	12648	12335	13649	12990	8554	8924	14399	13726	12282	6923	3075	130640	
					WAT	125	147	87	144	58	89	53		57	57	56		813	
JICARILLA B																			
	4H	21	26N	5W	OIL	125	140	130	126	112	117		15	32	143	91	137	1158	F	25031
					GAS	13129	12755	9336	11393	7852	6164		1548	487	11852	9431	10433	94384	
					WAT	26	29	27	26	24	25		3	7	30	19	27	243	
	7H	16	26N	5W	OIL	LAST PROD. PRIOR TO 6/73												S	2595
	9J	16	26N	5W	OIL	PLUGGING APPROVED 1970													868
JICARILLA C																			
	3I	23	26N	5W	OIL	29	50	49	3	13	29		13	28	31	40	6	231	F	10512
					GAS	2187	1360	1475	518	1469	1155		1212	1205	1176	2229	3042	17088	
COMPANY TOTAL					OIL	748	733	935	468	749	591	163	59	358	562	616	490	6972		268175
					GAS	69527	64194	51583	62056	47599	34539	8924	17321	15418	34436	44383	53063	490030	
					WAT	370	395	303	491	265	203	53	3	64	87	75	27	2336	
TOCITO DOME PENN D (ASSOCIATED)									6M TO 7M										
AMOCO PRODUCTION CO																			
NAVAJO TRIBAL M																			
	IM	17	26N	16W	OIL					32						422	313	767	P	68569
					GAS					175						1059	1232	2466	
					WAT					436						3210	3348	7494	

BASIN TESTING SERVICE
P. O. Box 188
Flora Vista, N. M. 87415

Analysis No. 325 Date Aug. 1, 1977

Operator Walter Duncan Well Name Hogback #1 - 24

Location _____ County _____ State _____

Field _____ Formation _____

Sampled From _____

Date Sampled July 28, 1977 by _____

Tubing Pressure _____ Casing Pressure _____ Surface casing pressure _____

	ppm	epm		ppm	epm
Sodium	1030	44.8	Chloride	71	2.0
Calcium	3	.2	Bicarbonate	2050	33.6
Magnesium	3	.2	Sulfate	229	4.8
Iron	Present		Carbonate	144	4.8
H_2S	Present		Hydroxide	0	0

Total Solids Dissolved 486

pH 9.7

Sp. Gr. 1.0004 at 60°F

Resistivity 350 ohm-cm at 70 °F

APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL

SAN JUAN COUNTY, NEW MEXICO

Exhibit No. _____

BASIN TESTING SERVICE
P. O. Box 188
Flora Vista, N. M. 87415

Analysis No. 326 Date Aug. 1, 1977

Operator Walter Duncan Well Name Hogback 6 #3

Location _____ County _____ State _____

Field _____ Formation _____

Sampled From _____

Date Sampled July 28, 1977 by _____

Tubing Pressure _____ Casing Pressure _____ Surface casing pressure _____

	ppm	epm		ppm	epm
Sodium	1072	46.6	Chloride	57	1.6
Calcium	8	.4	Bicarbonate	2074	34.0
Magnesium	2	.2	Sulfate	286	5.9
Iron	Present		Carbonate	170	5.7
H_2S	Present		Hydroxide	0	0

Total Solids Dissolved 540

pH 9.5

Sp. Gr. 1.0004 at 60°F

Resistivity 300 ohm-cm at 70 °F

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. 8
CASE NO. 6018

APPLICATION OF WALTER DUNCAN
FOR SALT WATER DISPOSAL

SAN JUAN COUNTY, NEW MEXICO

Exhibit No. _____

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 6018

Order No. R- 5525

APPLICATION OF WALTER DUNCAN FOR
SALT WATER DISPOSAL, SAN JUAN
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 31, 19 77, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of September, 19 77, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Walter Duncan, is the owner and operator of the North Hogback 1 Well No. 24, located in Unit G of Section 1, Township 29 North, Range 17 West, NMPM, and the North Hogback 6 Well No. 3, located in Unit L of Section 6, Township 29 North, Range 16 West, both in the Slickrock-Dakota Pool, San Juan County, New Mexico.

(3) That the applicant proposes to utilize said wells to dispose of produced salt water into the Dakota formation , with injection into the open-hole interval from 687 feet to 706 feet and 691 feet to 702 feet, respectively.

(4) That the injection should be accomplished through into ~~each~~ the aforesaid wells, 1 2 3/8 -inch ~~plastic lined~~ tubing installed in packers set at approximately 635 feet and 630 feet, respectively; 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 annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection wells or system should be equipped with pop-off valves or acceptable substitute which will limit the wellhead pressure on the injection well to no more than ~~700~~ 140 psi.

(6) That the operator should notify the supervisor of the Aztec district office of the Commission 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, Walter Duncan, is hereby authorized to utilize his North Hogback 1 Well No. 24, located in Unit G of Section 1, Township 29 North, Range 17 West, NMPM, and his North Hogback 6 Well No. 3 located in Unit L of Section 6, Township 29 North, Range 16 West, NMPM, both in the Slickrock-Dakota Pool, San Juan County, New Mexico, to dispose of produced salt water into the Dakota formation, injection to be accomplished through 2 3/8 -inch tubing installed in packers set at

approximately 635 feet and 630 feet, respectively, with injection into open-hole intervals from approximately 687 feet to 706 feet and 691 feet to 702 feet, respectively.

PROVIDED HOWEVER, ~~that the tubing shall be plastic lined;~~ that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus 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 pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1400 psi.

(3) That the operator shall notify the supervisor of the Aztec district office of the Commission 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 Commission'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 Commission Rules and Regulations.

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

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