EXHIBIT 1

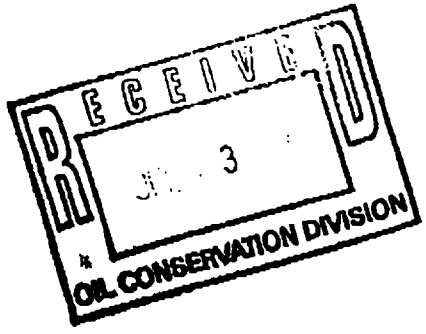
KELLAHIN AND KELLAHIN
ATTORNEYS AT LAW
EL PATIO BUILDING
117 NORTH GUADALUPE
POST OFFICE BOX 2265
SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN*
*NEW MEXICO BOARD OF LEGAL SPECIALIZATION RECOGNIZED SPECIALIST IN THE AREA OF NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285
TELEFAX (505) 982-2047

July 13, 1994



HAND DELIVERED

Mr. David R. Catanach
Hearing Examiner
Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, New Mexico 87504

Re: NMOCD Case 11042: Application
of Meridian Oil Inc. for approval
of the Jillison Federal SWD Well No 1
for Salt Water Disposal,
Rio Arriba County, New Mexico

Dear Mr. Catanach:

Meridian Oil Inc., has been asked by Mr. Paul Candaleria to continue this matter which is currently set on the Division's docket for July 21, 1994 to the next hearing scheduled for August 4, 1994. Meridian Oil Inc. will acquiesce to this request and therefore asks the Division to continue this matter to the August 4, 1994 docket.

Very truly yours,

W. Thomas Kellahin

cc: Van Goebel (Meridian-Farmington)
cc: Donald & Paul Candelaria (Farmington)

KELLAHIN AND KELLAHIN
ATTORNEYS AT LAW
EL PATIO BUILDING
117 NORTH GUADALUPE
POST OFFICE BOX 2265
SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN*
*NEW MEXICO BOARD OF LEGAL SPECIALIZATION RECOGNIZED SPECIALIST IN THE AREA OF NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285
TELEFAX (505) 982-2047

June 29, 1994

HAND DELIVERED

JUN 29 1994

Mr. David R. Catanach
Underground Injection Control
Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

Re: Administrative Application for
Salt Water Disposal Approval
Meridian Oil Inc.'s
Jillison Federal SWD #1 Well
SE/4NW/4 Sec 8, T24N, R3W
Rio Arriba County, New Mexico

Dear Mr. Catanach:

On June 8, 1994, on behalf of Meridian Oil Inc. we hand delivered to you Meridian's form C-108 for the referenced well.

We are now enclosing the following documents concerning notification:

(1) certificate of newspaper publication showing the date of publishing to be June 9, 1994;

(2) notification to Carolynn Clark Wiggins dated June 7, 1994 and her waiver of objection dated June 17, 1994;

(3) notification to Donald & Paul Candelaria dated June 7, 1994.

2/

In addition, the Bureau of Land Management is both the surface owner and the oil & gas mineral owner of the drill site tract and Meridian Oil Inc. has filed its Application for Permit to Drill with the BLM and has undertaken the surface inspections and other various BLM inspections. In verification of the BLM involvement, I have enclosed:

(1) a copy of the topographical map and

(2) the well staking worksheet to demonstrate the BLM involvement in approving this well.

Finally, I have advised Mr. Bryon Ault, Meridian's petroleum engineer for this project, of possible questions from Mr. Bush of the NMOCD-Aztec concerning certain technical items involving the wellbore. Mr. Ault has consulted with Mr. Bush and has revised the wellbore diagram which I am enclosing for your consideration:

(1) Revised wellbore diagram for SWD

Please call me if you need anything else in order to process this request administratively.

Very truly yours,

W. Thomas Kellahin

cc: OCD-Aztec
cc: Van L. Goebel
Meridian Oil Inc. (Farmington)

THE SANTA FE
NEW MEXICAN

KELLAHIN & KELLAHIN
P. O. BOX 2265
CITY 87504-2265

AD NUMBER: 261237 ACCOUNT: 44580

LEGAL NO.: 55509 P.O. #:

53	LINES	at	$ 31.80
Affidavits:			5.25
TAX:			2.32
TOTAL:			$ 39.37

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, IDALEE M. HOLMES being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily news paper published in the English Language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a Newspaper duly qualified to publish legal notices, and advertisements under the provisions of Chapter 167 on the Session Laws of 1937; that the publication # 55509 a copy of which is hereto attached was published in said newspaper Once each WEEK for ONE (consecutive) Week(s) and that the notice was published in the newspaper proper and not in any supplement; the first publication being on the 9th day of JUNE, and that the undersigned has personal knowledge of the matters and things set forth in this affidavit.

/S/ [illegible]
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 9th day of JUNE A.D., 1994.

OFFICIAL SEAL
LAURA E. HARDING
NOTARY PUBLIC — STATE OF NEW MEXICO
MY COMMISSION EXPIRES 11/23/95

PROPOSED SALT WATER DISPOSAL WELL

Meridian Oil, Inc. proposes the drilling of its Jillson Federal SWD Well No. 1 at a location 2415 feet FWL and 2305 feet FNL (Unit F) Section 8, T24N, R3W, NMPM, Rio Arriba County, New Mexico as a salt water disposal well for produced water to be injected into the Entrada Formation from approximately 8,441 feet to 8,683 feet at a maximum injection rate of 8,000 BWPD and at a maximum surface injection pressure of 1690 psi. Any interested party with an objection or request for hearing must notify the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within fifteen (15) days of the publication of this notice. Any questions should be directed to Van Goebel, Meridian Oil, Inc., P.O. Box 4289, Farmington, New Mexico, 87499, telephone (505)326-9759.

Pub. June 9, 1994

MERIDIAN OIL

June 7, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Carolyn Clark Wiggin Oil Properties
P.O. Box 420
Farmington, New Mexico 87499

RE: JILLISON FEDERAL SWD #1
SALTWATER DISPOSAL WELL
SE/4 NW/4 SECTION 8, T-24-N, R-3-W
RIO ARRIBA COUNTY, NEW MEXICO

Dear Madam or Sir:

In my letter of May 17, 1994, I gave you preliminary notice of our proposal to drill the above captioned Disposal well into the Entrada Formation. As follow-up to the May 17, 1994 letter I have enclosed for your information a copy of Meridian's C-108 Application to the Oil Conservation Division for approval to drill the proposed well.

The following attachments are for your review:

- Oil Conservation Division C-108 Application
- Lease map indicating where the well is to be drilled
- Copy of the State of New Mexico C-102
- Offset operator plat.

Application for this proposal has been submitted to the New Mexico Oil Conservation Division for approval. If you have no objections to Meridian's proposal please execute on the line provided on page two (2) and return this letter to this office, to my attention, within fifteen (15) days of receipt of this letter.

Please contact me at (505) 326-9759 if you have questions concerning this matter.

Sincerely,

Van L. Goebel
Senior Landman

VLG/cja
Enclosures
NM-10007

5

S Form 3800, June 1990

Sent to	Carolyn Clark Wiggin Oil Properties
Street & No.	Post Office Box 420
P.O., State & ZIP Code	Farmington, NM 87499
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	$
Postmark or Date	

Certified Mail Receipt
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

P 794 519 671

PS Form 3800, June 1990 (Reverse)

STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE, CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES (see item).

1 If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached and present the article at a post office service window or hand it to your rural carrier (no extra charge).

2 If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach and retain the receipt, and mail the article.

3 If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to the back of article. Endorse front of article RETURN RECEIPT REQUESTED adjacent to the number.

4 If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse RESTRICTED DELIVERY on the front of the article.

5 Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6 Save this receipt and present it if you make inquiry. ☆U.S.G.P.O. 1990-270-193

UNITED STATES POSTAL SERVICE

SENDER:
Complete items 1 and/or 2 for additional services.
Complete items 3, and 4a & b.
Print your name and address on the reverse of this form so that we can return this card to you.
Attach this form to the front of the mailpiece, or on the back if space does not permit.
Write "Return Receipt Requested" on the mailpiece below the article number.
The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
arolyn Clark Wiggin Oil Properties
.O. Box 420
armington, NM 87499

4a. Article Number
P 794 519 671

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

8. Addressee's Address (ONLY if requested and fee paid)

Signature (Addressee)

Signature (Agent)
Frank Smith

Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 DOMESTIC RETURN RECEIPT

Official Business

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S MAIL

JUN 1994
RECEIVED
Land Dept.

Print your name, address and ZIP Code here

MERIDIAN OIL
P.O. Box 8249
Farmington, NM 87499-4289

ATTN: VAN GOEBEL

Thank you for using Return Receipt Service.

PAGE

CAROLYNN CLARK WIGGIN
Oil and Gas Properties
5220 MALIBU DRIVE
EDINA, MINNESOTA 55436-1030
(612) 938-5501

June 17, 1994

Re: Jillison Federal SWC #1
Saltwater Disposal Well
SE/4 NW/4 Sec. 8, T-24, R-3-W
Rio Arriba County, New Mexico

Van L. Goebel
Senior Landman
Meridian Oil
P.O.Box 4289
Farmington, NM 87499-4289

Dear Mr. Goebel:

Enclosed please find the waiver of objection on the above captioned project, signed by me on behalf of Carolynn Clark Wiggin Oil Properties.

Sincerely

Carolynn Clark Wiggin
enclosure

MERIDIAN OIL

June 7, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Donald & Paul Candelaria
3603 N. Buena Vista Avenue
Farmington, New Mexico 87402

RE: JILLISON FEDERAL SWD #1
SALTWATER DISPOSAL WELL
SE/4 NW/4 SECTION 8, T-24-N, R-3-W
RIO ARRIBA COUNTY, NEW MEXICO

Dear Mr. Candelaria:

This letter is to notify you of Meridian Oil Inc.'s intention to drill the above captioned disposal well into the Entrada Formation and to request your signature waiving any objections to our proposed disposal well.

The following attachments are for your review:

- Oil Conservation Division C-108 Application
- Lease map indicating where the well is to be drilled
- Copy of the State of New Mexico C-102
- Offset operator plat.
- Surface Ownership Plat

Application for this proposal has been submitted to the New Mexico Oil Conservation Division for approval. If you have no objections to Meridian's proposal please execute on the line provided on page two (2) and return this letter to this office, to my attention, within fifteen (15) days of receipt of this letter.

Please contact me at (505) 326-9759 if you have questions concerning this matter.

Sincerely,

Van L. Goebel
Senior Landman

VLG/cja
Enclosures
NM-10007

The undersigned this _____ day of _____, 1994, hereby waives objection to Meridian Oil Inc.'s application to drill the Jillison SWD #1 disposal well.

By:_____ Date:_____

Certified Mail Receipt

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to
Donald & Paul Candelaria

Street & No.
3603 N. Buena Vista Ave.

P.O., State & ZIP Code
Farmington, NM 87402

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	$
Postmark or Date	6-7-94

VAN Goebel

PS Form 3800, June 1988

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive following services (for an ex fee):
1. ☐ Addressee's Addre
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
Donald & Paul Candelaria
3603 N. Buena Vista Ave.
Farmington, NM 87402

4a. Article Number
P 794 519 667

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
6-8-94

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if reque and fee is paid)

PS Form 3811, December 1991 *U.S. GPO: 1993—352-714 DOMESTIC RETURN REC

Is your RETURN ADDRESS completed on the reverse side?

UNITED STATES POSTAL SERVICE

Official Business

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

U.S. MAIL

Print your name, address and ZIP Code here

Meridian Oil
P.O. Box 4289
Farmington, NM 87499-4289

ATTN: Van Goebel

STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE, CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES (see front).

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached and present the article at a post office service window or hand it to your rural carrier (no extra charge).

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to the back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If

PS Form 3800, June 1988 (Reverse)

10

Date 5-11-94

MERIDIAN OIL

WELL STAKING WORKSHEET - REVISED 6/3/91

Well Name: JILLSON FEDERAL SWD #1 Formation: ENTRAL

Footage Location: 2305 FNL 2415 FWL Proposed TD: 8500

Section: 8, T-24-N, R-3-W, County: Rio ARRIBA

Surface Owner: BLM Mineral Owner: BLM

Water Supply Point: 3-TRAILWOOD WATER HOLE SWD 10 24

Distance to Nearest Well: 1500

Location & Distance to Get Drill Gas:

Distance to Nearest Town or Post Office: 5 mi LINDRITH

New Road: NO-NEW Percent of Grade:

Bureau of Reclamation Representative Date Meridian Oil

U.S. Forest Service Representative Date Meridian Oil

Sunimal - ARCHAEOS ARCH - 5-9-94 MLE

Archaeologist (include company name) Date Meridian Oil

Bureau of Indian Affairs Representative Date Meridian Oil

Pat Hesick 5-12-94 MLE

Bureau of Land Management Representative Date Meridian Oil

Tribal Representative Date Meridian Oil

Wildlife Biologist (include company name) Date Meridian Oil

Remarks: RND - ALL CORNERS — PRODUCTION FIX EXISTING CULVERT OR WELL NEED TO DIG-OUT + RAISE (EAST SIDE LOCATION)

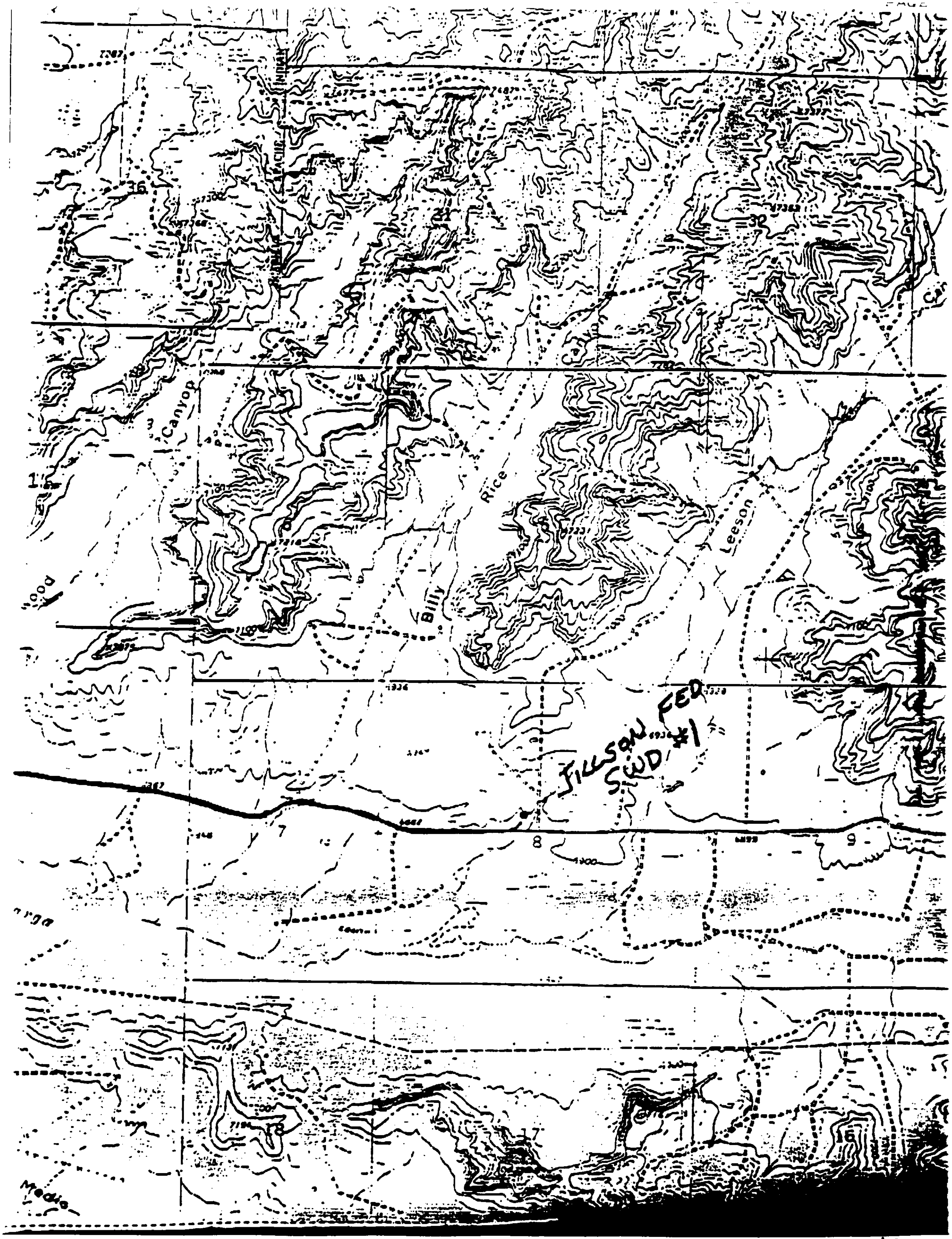
LAT 36-19-32

LONG 107-10-48

ACRES 4.95

Meridian Oil Inc., 3535 East 30th St., P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-327-0251

11



36
31
32
Canyon
Canyon
Billy
Rice
Leeson
Wood
JILSON FED
SWD #1
7
8
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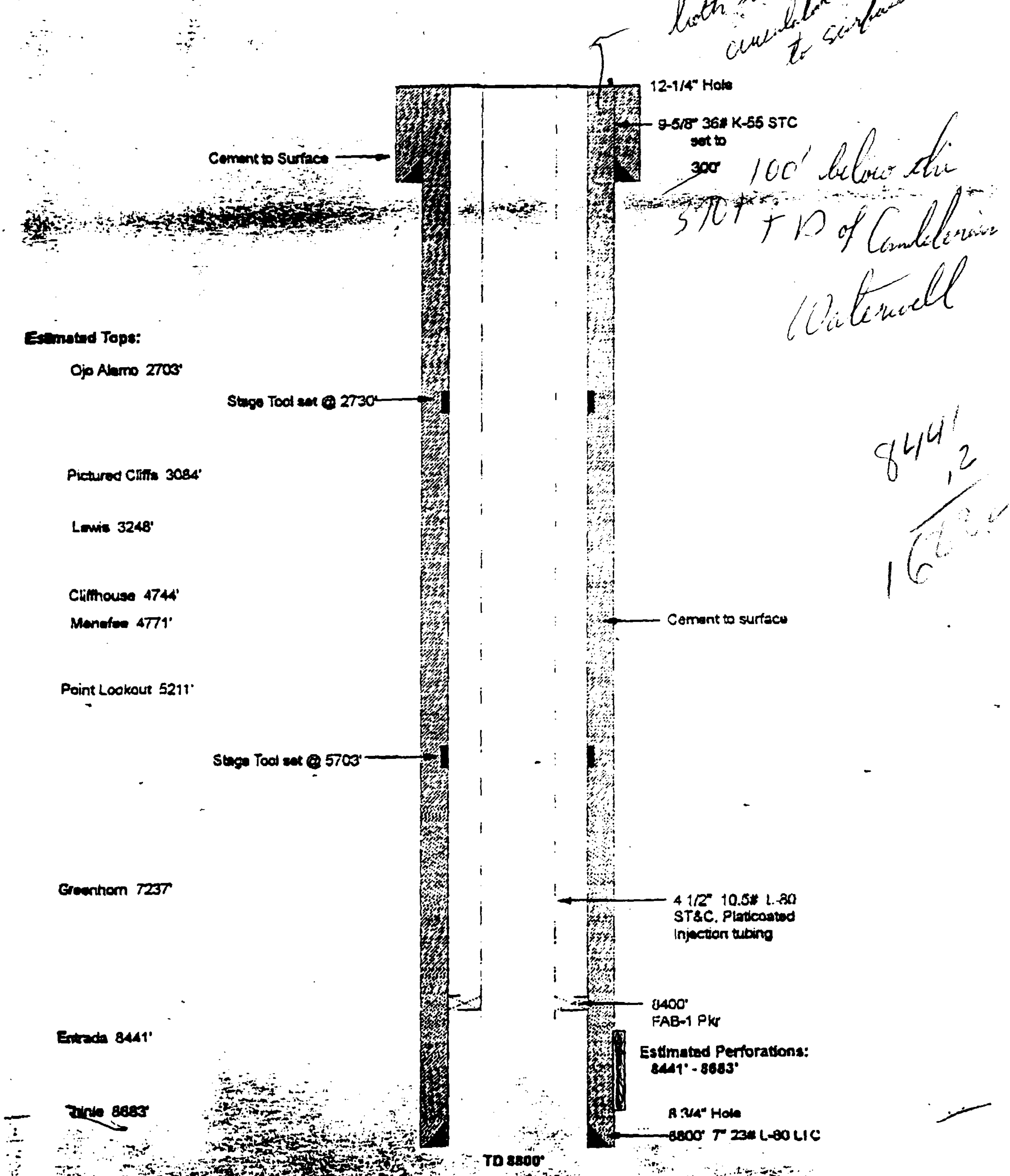
18
17
16
Media

JILLISON FEDERAL SWD #1

Proposed Entrada Disposal Well

Unit F, Sec 08, T24N - R03W



KELLAHIN AND KELLAHIN
ATTORNEYS AT LAW
EL PATIO BUILDING
117 NORTH GUADALUPE
POST OFFICE BOX 2265
SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN*

*NEW MEXICO BOARD OF LEGAL SPECIALIZATION RECOGNIZED SPECIALIST IN THE AREA OF NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285
TELEFAX (505) 982-2047

June 28, 1994

HAND DELIVERED

JUN 29

Mr. Michael E. Stogner
Chief Hearing Examiner
Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

JUN 1994
RECEIVED
Land Dept.

Re: Application for Salt Water Disposal
Approval of Meridian Oil Inc.'s
Jillison Federal SWD #1 Well
SE/4NW/4 Sec 8, T24N, R3W
Rio Arriba County, New Mexico

Dear Mr. Stogner:

On behalf of Meridian Oil Inc., please find enclosed the completed Division Form C-108 which constitutes our referenced application which we request be set for hearing on the next available Examiner's docket now scheduled for July 21, 1994.

By copy of this letter and application, sent certified mail, we are notifying all interested parties of their right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the application and that failure to appear at the hearing may preclude them from any involvement in this case at a later date

Pursuant to the Division's Memorandum 2-90, all parties are hereby informed that if they appear in this case, then they are requested to file a Pre-Hearing Statement with the Division not later than 4:00 PM on Friday, July 15, 1994, with a copy delivered to the undersigned.

Also enclosed is our proposed advertisement of this case for the NMOCD docket.

Very truly yours,

W. Thomas Kellahin

Enclosure

cc: **By Certified Mail - Return Receipt**
All Parties Entitled to Notice
cc: OCD-Aztec (w/ encl.)
cc: Van L. Goebel
Meridian Oil Inc. (Farmington)

Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

JUN - 8 1994

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: MERIDIAN OIL INC.

Address: P.O. BOX 4289, FARMINGTON, NM 87499

Contact party: TRAVIS D. STICE Phone: (505) 326-9812

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary. ATTACHED

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review. ATTACHED

• VI. Attach a tabulation of data on all wells of public record within the area of review whic penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail. ATTACHED

VII. Attach data on the proposed operation, including: ATTACHED

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

•VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval. ATTACHED

IX. Describe the proposed stimulation program, if any. ATTACHED

• X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.) CURRENTLY NOT AVAILABLE

• XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken. ATTACHED

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water. ATTACHED

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: TRAVIS D. STICE Title REGIONAL ENGINEER

Signature: Travis D Stice Date: 6/2/94

• If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this applica The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

III. Well Data

Jillson Federal SWD #1
Form C108 - Attachment Documentation

A. Proposed Disposal Well Data:

1.) Well Location:

Lease Name:	Jillson Federal SWD
Well Number:	1
Location :	T24N-R03W-Section 08
	2305' FNL, 2415' FWL
	Rio Arriba County, New Mexico

2.) Well Bore Casing Configuration:

Casing	Hole Size	Casing Size	Depth Set	Cement Vol.	Proposed Top/Cmt
Surface	12-1/4"	9-5/8" 36 lb.	300'	188 ft^3	Surface
Longstring	8-3/4"	7" 23 lb.	8,800'	2,381 ft^3	Surface

3.) Injection Tubing:

Tubing Size	Tubing Wght/Grd	Lining Material	Depth Set
4-1/2"	10.5 lb., L-80 ST&C	Scotch 650 PlastiCoat	8,400'

4.) Isolation Packer:

Name	Model	Depth Set
Baker	FAB-1, Ret. Prod. Pkr, 4.00" ID	8,400'

B. Proposed Well Data:

1.) Formation:

Formation Name: Entrada

2.) Injection Intervals:

Injection Intervals: Approx. 8,441' - 8,683'

3.) The original purpose for drilling this well is to dispose of produced water.

4.) There will be no additional perforated intervals in the proposed well.

5.) There are no lower producing intervals, and the next higher producing interval is the Dakota at 7285'-7680'.

Meridian Oil Inc.

Jillson Fed. SWD #1

Prepared for: Mr. Brian Alt
Prepared by: David Dolynuik
Baker Oil Tools
Denver, Co.
5-24-94

7" 26# CASING

4-1/2" 10.5# TUBING

BAKER MODEL "F" NON-PORTED SEATING NIPPLE SIZE 3.75 WITH 4-1/2" STC 8RD. BOX X PIN, 316 STAINLESS STEEL

ONE JOINT 4-1/2" 10.5# TUBING

BAKER MODEL "KBH-22" ANCHOR TUBING SEAL NIPPLE SIZE 82FA47 WITH ONE BONDED SEAL UNIT AND 4-1/2" STC 8RD. BOX
4.00" MIN. ID

BAKER MODEL "FAB-1" RETAINER PRODUCTION PACKER SIZE 85FA47 WITH 70 HARD PACKING ELEMENT AND THREADED BOTTOM GUIDE FOR 4-1/2" TUBING
4.00" MIN. ID

20' 4-1/2" 10.5# TUBING

BAKER MODEL "F" NON-PORTED SEATING NIPPLE SIZE 3.688 WITH 4-1/2" STC 8RD. BOX X PIN, 316 STAINLESS STEEL

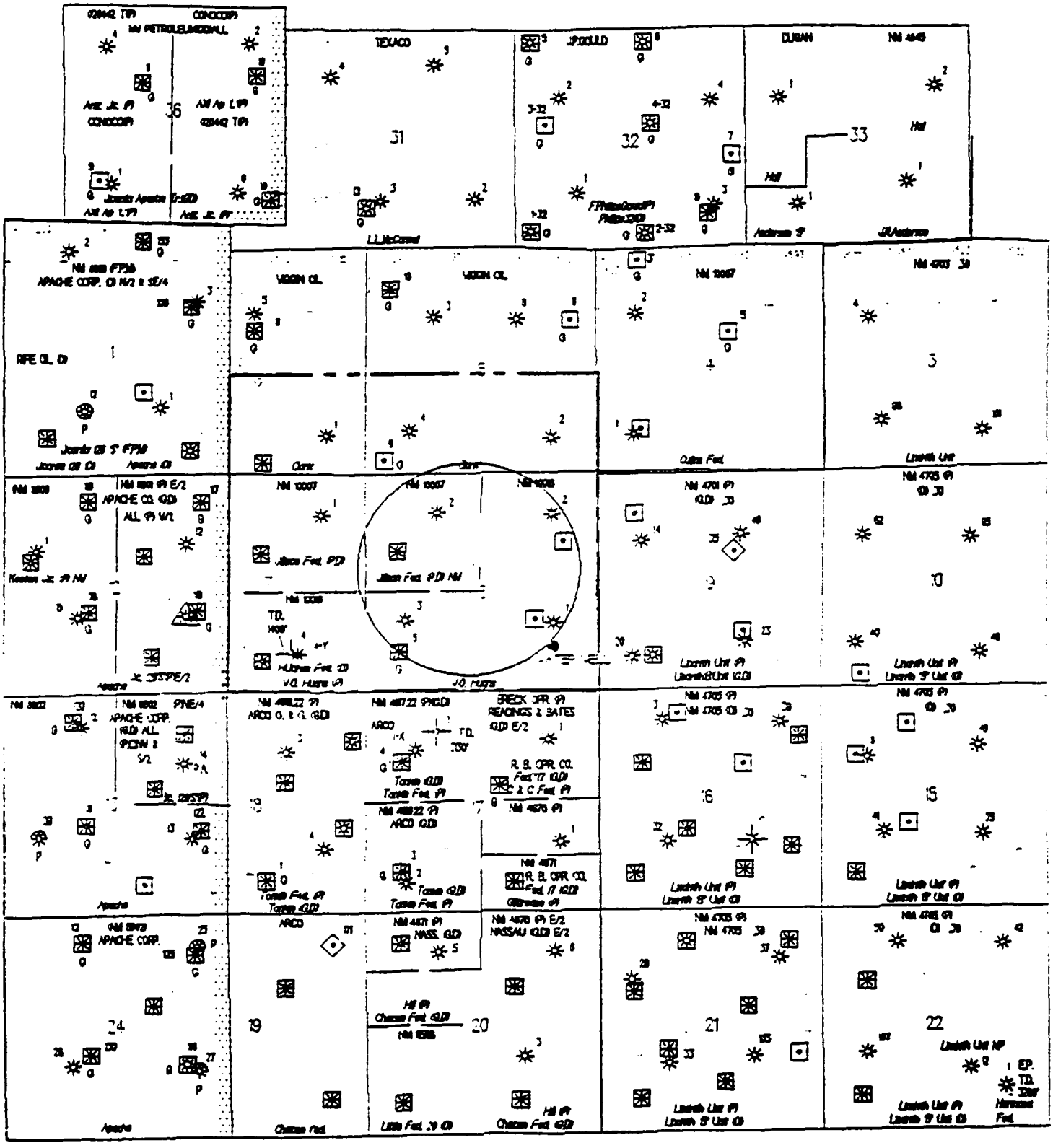
20' 4-1/2" 10.5# TUBING

BAKER MODEL "R" NON-PORTED NO-GO SEATING NIPPLE SIZE 3.688 WITH 4-1/2" STC 8RD. BOX X PIN, 316 STAINLESS STEEL

BAKER WIRELINE ENTRY GUIDE SIZE 4-1/2 WITH 4-1/2" STC 8RD. BOX

V. Identifier Map

JILLISON FEDERAL SWD #1
NW/4 SECTION 8, T24N, R3W



State : New Mexico NM Meri 24N - 3W - 8 se nw se

County: RIO ARRIBA Oper: MOBIL PRODUCING TX & NM

Field : LINDRITH WEST GAL/DK Compl: 11/18/1983 D OG O&G

Well: W O HUGHES #6 Last Info: 01/11/1994
Ftg: 1743 fsl 1341 fel
Lat-Long by GITI: 36.322296 - 107.174911
Oper Address: PO Drawer G, Cortez CO 81321 - 303/565-9558
Obj: 7700 Gallup/Dakota Permit #: 06/30/1983 API: 30-039-2324000
Elev: 6871GR

Spuds 09/06/1983 Contr: Arapahoe #7
TD: 8700 on 09/25/1983 Chinle PB: 7557

Elev: 6871GR FORMATION TOPS (Type: L=Log S=Sample V=True Vertical)
(Source: H=Scout,I=IOG,T=Govt,S=Shell,G=USGS,N=NRIS)

Formation	Depth	Elev	T/S	Formation	Depth	Elev	T/S
Cliff House	4702	2169	L H	Dakota	7286	-415	L H
Menefee	4731	2140	L H	Morrow	7680	-809	L H
Point Lookout	5152	1719	L H	Morrison	7684	-813	L H
Mancos	5362	1509	L H	Todilto	8338	-1467	L H
Gallup	6330	541	L H	Entrada	8400	-1529	L H
Greenhorn	7195	-324	L H	Chinle	8645	-1774	L H
Graneros	7258	-387	L H				

Csg: 13 3/8 @ 412
8 5/8 @ 3300
4 1/2 @ 7601 w/1680 - Dakota

Core : None
DST : None rptd
Logs : FDC CNL DIL
Tubing: 2 3/8 @ 7499 w/pkr @ 7464
Perfs : 7484-7504 (Dakota D)
w/1 SPF - spot 150 gal 7 1/2% HCl - bk dn w/1800 gal 2% KCl wtr 30 ball sealers - frac w/28,000 gal 40# xlink gel 2% KCl wtr 56,000# 20/40 sd - flush w/119 bbl 2% KCl wtr
7280-7404 (Dakota)
w/44 holes @ 7280-7307, 7323-7329, 7336-7342, 7400-7404 - bk dn w/200 gal 7 1/2% HCl 3700 gal 2% KCl 70 ball sealers - frac w/55,000 gal 40# xlink gel 2% KCl wtr 110,000# 20/40 sd -flush w/1 w/118 bbl 2
PZone : 7280-7504 (Dakotaw)
IP : (Dakota 7280-7504) -- P 116 BOPD grav 43; 257 MCFGPD; 40 BWPD
Journal: 9/14/83 drlg @ 4300.
9/22/83 drlg @ 7978.
10/5/83 drlg out cement.
10/19/83 cleaning out sand.
10/27/83 tstg Dakota.
11/22/83 SI; WOPT.
12/6/83 SI; WOPL to potential test.
12/16/83 SI; WOPL to potential test.

State : New Mexico NM Merid 24N - 3W - 8 se nw se

County: RIO ARRIBA Oper: MOBIL PRODUCING TX & NM

Field : LINDRITH WEST GAL/DK Compl: 11/18/1983 D OG O&G

Continued

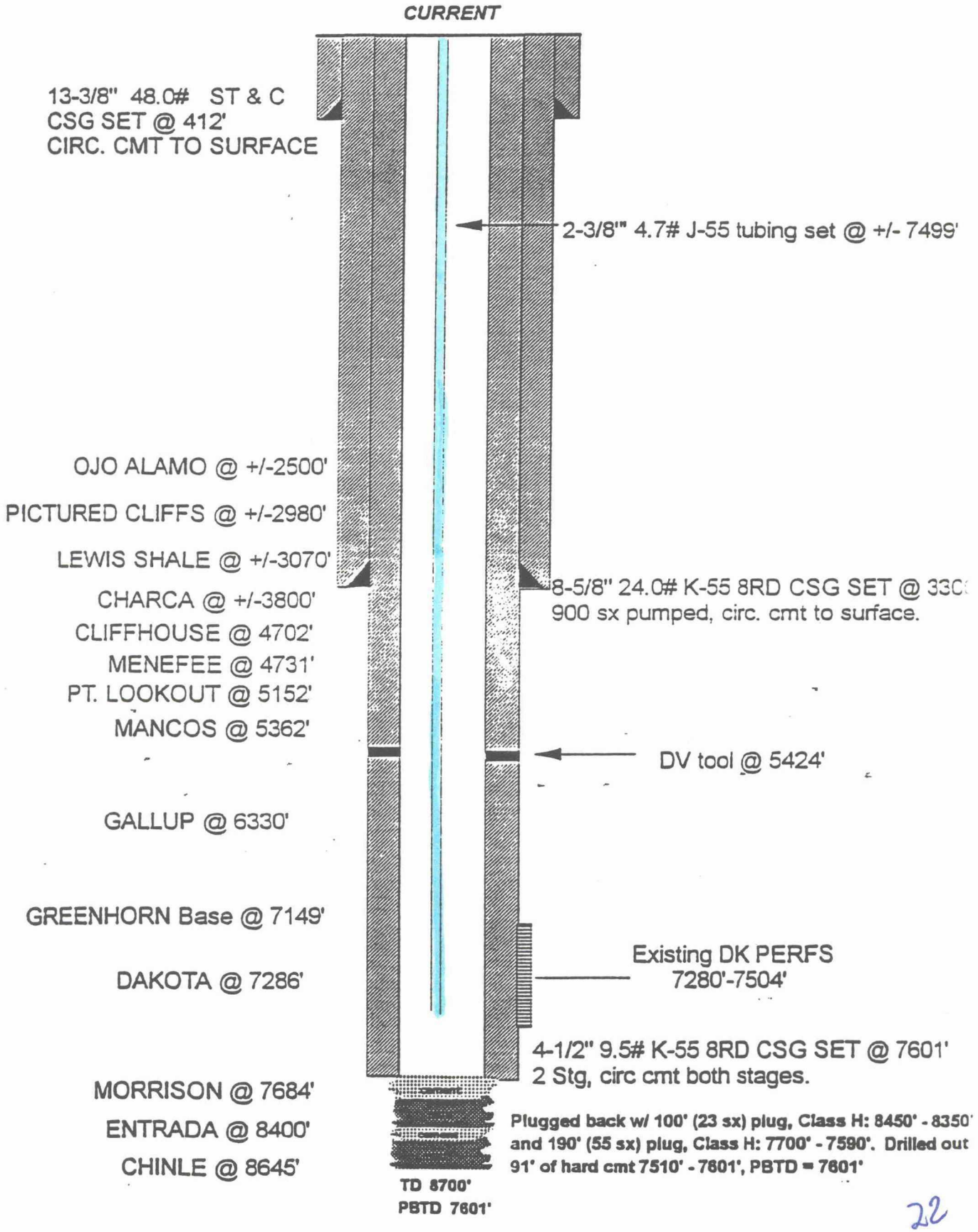
Journal: 2/1/84 SI; WOPL to potential test.
2/29/84 SI; WOPL to potential test.
3/21/84 WOPL to IP.
5/9/84 SI; WOPL to potential test.
6/6/84 WOPL.
7/3/84 WOPL.
8/8/84 completed oil well.

Attachment VI

W. O. Hughes #6

1983

Unit J, Sec. 08, T24N, R03W



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VII. Proposed Disposal Well Operations

Jillson Federal SWD #1
Form C108 - Attachment Documentation

1.) Proposed Injection Rates:

Average Injection Rate: 600 BPD
Maximum Injection Rate: 8000 BPD

2.) The system will be closed.

3.) Proposed Injection Pressures:

Average Injection Pressure: 450 - 600 psi. (anticipated)
Maximum Injection Pressure: 1690 psi

4.) Injection Fluids:

Source:	Fluid Analysis	Compatibility
Fruitland Coal	Sample Included	*Unavailable at this time
Pictured Cliffs	Sample Included	*Unavailable at this time
Chacra	Sample Included	*Unavailable at this time
Mesaverde	Sample Included	*Unavailable at this time
Gallup	Sample Included	*Unavailable at this time
Dakota	Sample Included	*Unavailable at this time

*Upon retrieving a fluid sample from the Entrada formation compatibility tests will be conducted.

5.) Analysis of disposal zone formation water:

Published salinities for the Entrada Formation are relatively scarce except for data from produced waters in known Entrada Formation fields. The following is published data from Four Corners Geological Society publications on San Juan Basin Entrada Formation Oil Fields:

Entrada Field	Location	Depth (ft.)	Cl Salinity (ppm)
Media & SW Media	T19N-R3W	5,300	2,500
Papers Wash	T19N-R5W	5,200	3,010
Eagle Mesa	T19N-R4W	5,500	6,205
Ojo Encino	T20N-R5W	5,900	10,726
Snake Eyes	T21N-R8W	5,600	11,114

* Note the general salinity increase with increasing depth.

Superior Oil reported an Entrada salinity of 80,000 ppm in the Sealy Government #1-7 in Section 7-T25N-R6W from a depth of 8,400 feet. Six miles east of the Jillson Federal SWD location and at the same depth of 8,400 feet, Magnolia Petroleum swabbed oil and a lot of water from the Entrada Formation in the Magnolia Ingwerson Federal #4 (Section 20-T24N-R2W). Based on a general increase in salinity with depth, oil and gas recoveries on production tests and the reported salinity in the Superior Sealy Gov't. #1-7, the Entrada water salinity in the Jillson Federal SWD is expected to be at least 20,000 to 30,000 ppm chlorides.

VII. Proposed Disposal Well Operations

4.) Injection Fluids: (Addendum to 4.) Injection Fluids (previous page)

Injection fluids will include only those materials suitable for a Class II well under the Underground Injection Control Program.

Sample analyses of example Class II fluids are attached for review. These include analyses from:

Well	Location	Formation
Jicarilla 117-E #1	T26N-R03W-SEC 33	Fruitland Coal
Canyon Largo Unit #144	T25N-R06W-SEC 17	Pictured Cliffs
Jicarilla 67 #3	T25N-R05W-SEC 19	Pictured Cliffs
Klein #15	T26N-R06W-SEC 33	Chacra
Klein #16	T26N-R06W-SEC 33	Chacra
Vaughn #30E	T26N-R06W-SEC 28	Mesa Verde
Vaughn #12	T26N-R06W-SEC 26	Mesa Verde
Klein #28E	T26N-R06W-SEC 33	Gallup
Jicarilla 67 #5E	T25N-R05W-SEC 29	Dakota
Canyon Largo Unit Com #295	T25N-R06W-SEC 04	Dakota

In addition to the attached sample analyses, a table documenting additional example analyses is attached.

Foreman: STEVE MC CAMENT

STRICKCO

Water Analysis Laboratories

FARMINGTON, NEW MEXICO 87401

File WA/0514/91

Company MERIDIAN OIL INC. Well Name Jicarrilla 117-E #1 Sample No. One

Formation Fruitland Coal Depth N/A Sampled From Produced

Location N/A Field Basin Fruitland County Rio Arriba State N.M.

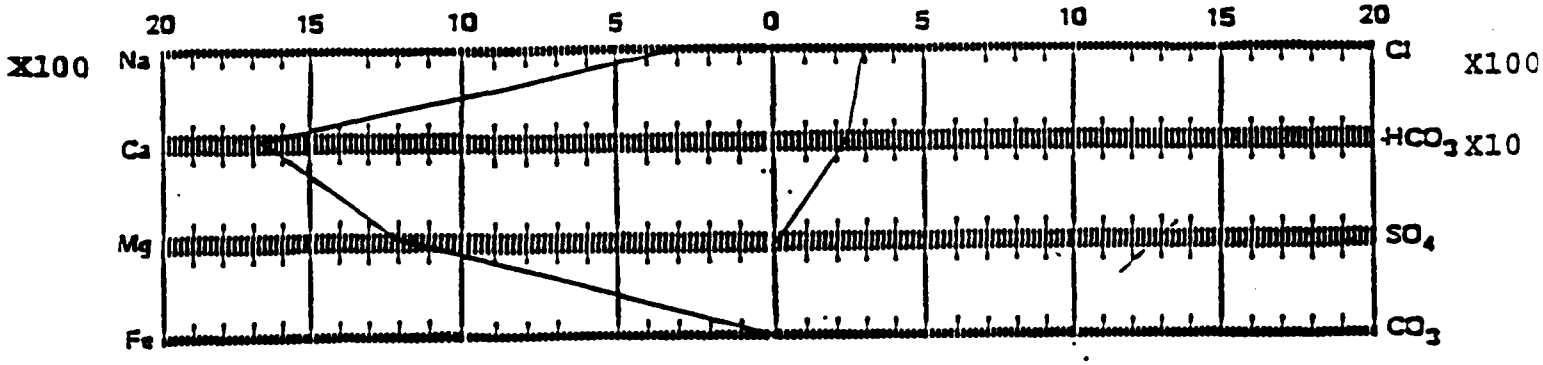
Date Sampled 7/9/91 Date Analyzed 7/10/91 Engineer WDS

Total Dissolved Solids 19,626 mg/L Calculated Sp. Gr. 1.013 @ 78 °F

Resistivity 0.39 ohm-meters @ 78 °F. Measured pH 6.41 @ 78 °F Measur

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	299.6	6,888	Chloride	304.4	10,792
Calcium	16.8	336	Bicarbonate	24.0	1,464
Magnesium	12.0	146	Sulfate	-0-	-0-
Iron	-0-	-0-	Carbonate	-0-	-0-
Hydrogen Sulfide	Absent		Hydroxide	-0-	-0-

Scale: meq/L



All analyses except iron determination performed on a filtered sample.

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WATER ANALYSIS TESTING ENVIRONMENTAL REPORTS

1119 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number: W94-050

Standard A.P.I. Water Analysis Report

Company:	MERIDIAN OIL INC.	Date Collected:	2/25/94
Sample ID:	CANYON LARGO 144	Date Received:	2/28/94
Formation:	Pictured Cliffs	Date Analyzed:	2/28;3/01/94
Location:	J-17-25-6	County:	Rio Arriba State: New Mexico
Collected By:	Joe Golding	Analyst:	Linda Spencer

Remarks:

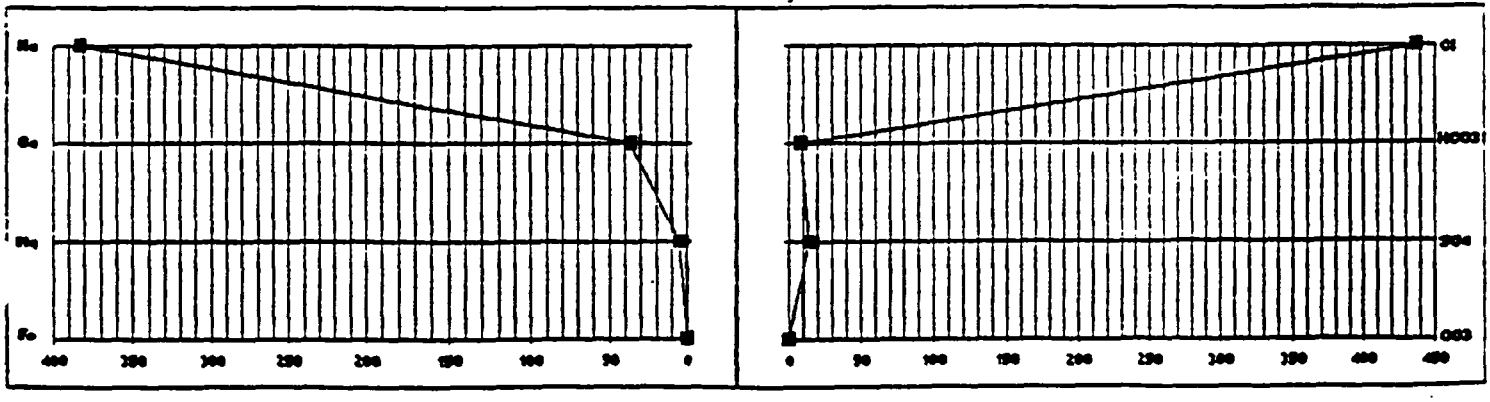
Attention: Lary Byars

PARAMETER	as ION		Comment	PARAMETER	as ION		Comment
Sodium, Na	8,800	mg/l		Chloride, Cl	15,500	mg/l	
Potassium, K	1,700	mg/l					
				Sulfate, SO4	660	mg/l	
Calcium, Ca	740	mg/l					
Magnesium, Mg	60	mg/l		Hydroxide, OH	0	mg/l	
				Carbonate, CO3	0	mg/l	
Iron, Fe (Total)		mg/l	NOT RUN	Bicarbonate, HCO3	500	mg/l	
Sulfide		mg/l	NOT RUN	Resistivity	0.24	ohm-m	
				Conductivity	41,300	uS/cm	
pH	6.3	units		(@25 Degrees C)			
Total Dissolved Solids	28,400	mg/l		Specific Gravity (@60 Degrees F)	1.022		

Remarks:

Anion/Cation: 98%

Stiff Diagram



Scale: Meq/L

Foreman: LARY BYARS

PROPERTY MANAGEMENT & CONSULTING, INC.
P. O. BOX 2596
FARMINGTON, NEW MEXICO 87499-2596
(505) 325-5220

ILLEGIBLE

File WA/0871/93

Company MERIDIAN OIL, INC. Well Name Jicarilla #67-3 Sample No. One

Formation Pictured Cliffs Depth N/A Sampled From Tbg.

Location N/A Field N/A County San Juan State N.M.

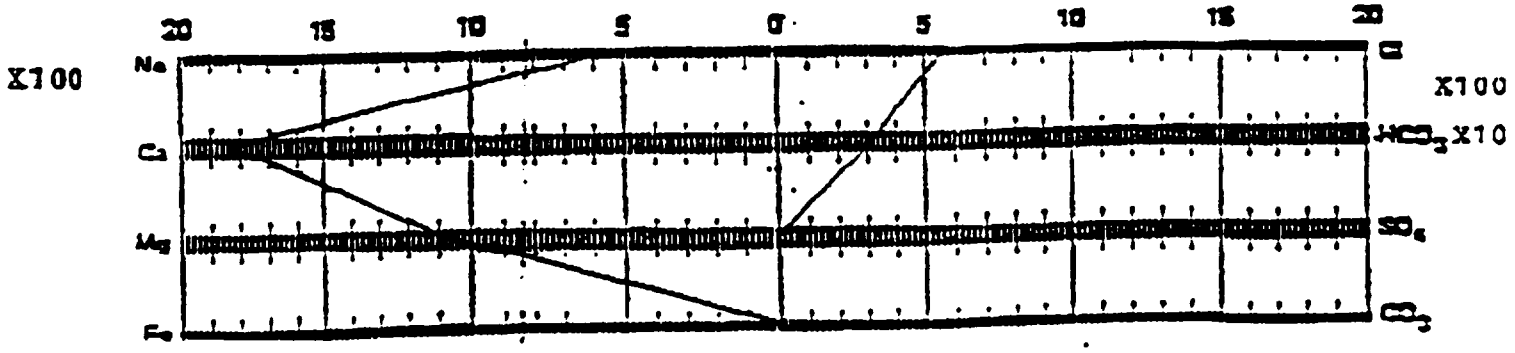
Date Sampled 9/02/93 Date Analyzed 09/07/93 Engineer W. D. Stricklin

Total Dissolved Solids 35,121 mg/L Calculated Sp. Gr. 1.026 @ 70 °F.

Resistivity 0.20 ohm-meters @ 70 °F. Measured pH 6.52 @ 70 °F. Measured

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	361.6	12,912	Chloride	560.8	19,880
Calcium	18.4	368	Bicarbonate	30.0	1,830
Magnesium	10.8	131	Sulfate	TR	TR
Iron	TR	TR	Carbonate	-0-	-0-
Hydrogen Sulfide	Absent		Hydroxide	-0-	-0-

Scale: meq/L



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The Western Company of North America

3250 South Side River Road
Farmington, New Mexico 87401
Phone (505)327-6222
Fax (505)327-5766

API WATER ANALYSIS

Company Meridian Oil | W.C.N.A. Sample No. | Date Sampled

Field | Legal Description | County or Parish | State

Lease or Unit Klein | Well # 15 | Depth | Formation Chacra | Water, B/D

Type of Water (Produced, Supply, ect.) | Sampling Point producer H_2O | Sampled By

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na + Potassium, K (calc)	4062	176
Calcium, Ca	64	3
Magnesium, Mg (calc)	40	3
Barium, Ba		

ANIONS		
Chloride, Cl	5865	166
Sulfate, SO_4	0	
Carbonate, CO_3		
Bicarbonate, HCO_3	10126	166
Hydroxide, OH		

Total Dissolved Solids (calc.) 20176

Iron, $Fe^{2+} + Fe^{3+}$ (total) 0

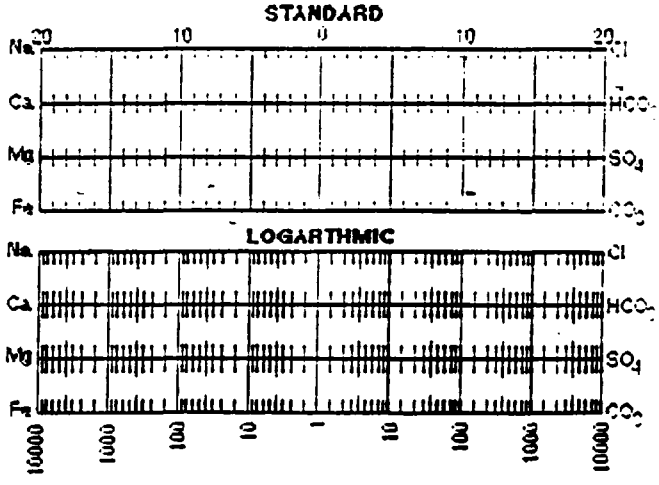
Sulfide, as H_2S

Remarks & Recommendations:

OTHER PROPERTIES

pH	6.65
Specific Gravity, 60/60 F	1.010
Total Hardness	160
Resistivity (ohm-meter) °F	1.10

WATER PATTERNS-me/l



Analyst:
Date Analized:

Dr. HH
1-7-94

Please refer any questions to:
Leon Diede, District Engineer
Thank you.

The Western Company of North America

3250 South Side River Road
Farmington, New Mexico 87401
Phone (505)327-6222
Fax (505)327-5766

API WATER ANALYSIS

Company: Meridian Oil | W.C.N.A. Sample No. | Date Sampled

Field | Legal Description | County or Parish | State

Lease or Unit: Klein | Well: #16 | Depth | Formation: Chacra | Water, B/D

Type of Water (Produced, Supply, ect.) | Sampling Point | Sampled By

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na + Potassium, K (calc)	7208	314
Calcium, Ca	160	8
Magnesium, Mg (calc)	99	8
Barium, Ba		

ANIONS		
Chloride, Cl	10812	305
Sulfate, SO_4	0	
Carbonate, CO_3		
Bicarbonate, HCO_3	18605	305
Hydroxide, OH		

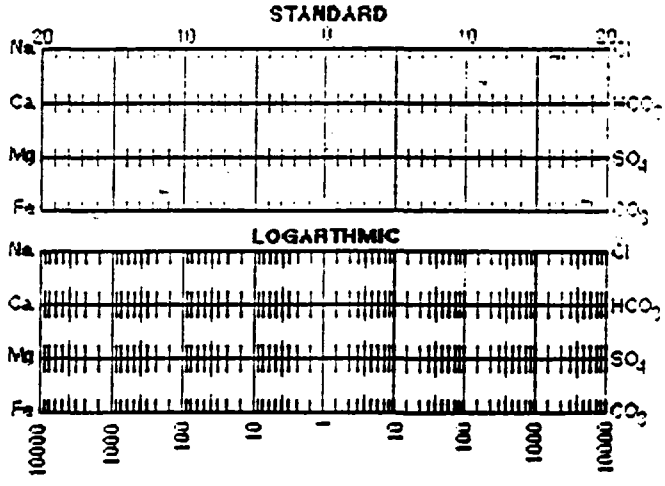
Total Disolved Solids (calc.)	36885
Iron, $Fe^2 + Fe^3$ (total)	0
Sulfide, as H_2S	

Remarks & Recommendations:

OTHER PROPERTIES

pH	6.9
Specific Gravity, 60/60 F	1.016
Total Hardness	400
Resistivity (ohm-meter)	^{o}F .29

WATER PATTERNS-me/l



Analyst:
Date Analized: D. HH 4-7-94

Please refer any questions to:
Loren Diede, District Engineer
Thank you.

Foreman: LARY BYARS

PROPERTY MANAGEMENT & CONSULTING, INC.
P. O. BOX 2596
FARMINGTON, NEW MEXICO 87499-2596
(505) 325-5220

ILLEGIBLE

File NA/ORR//93

Company MERIDIAN OIL, INC. Well Name Vaughn #30-E Sample No. One

Formation Mesa Verde Depth N/A Sampled From Produced

Location N/A Field N/A County Rio Arriba State NM

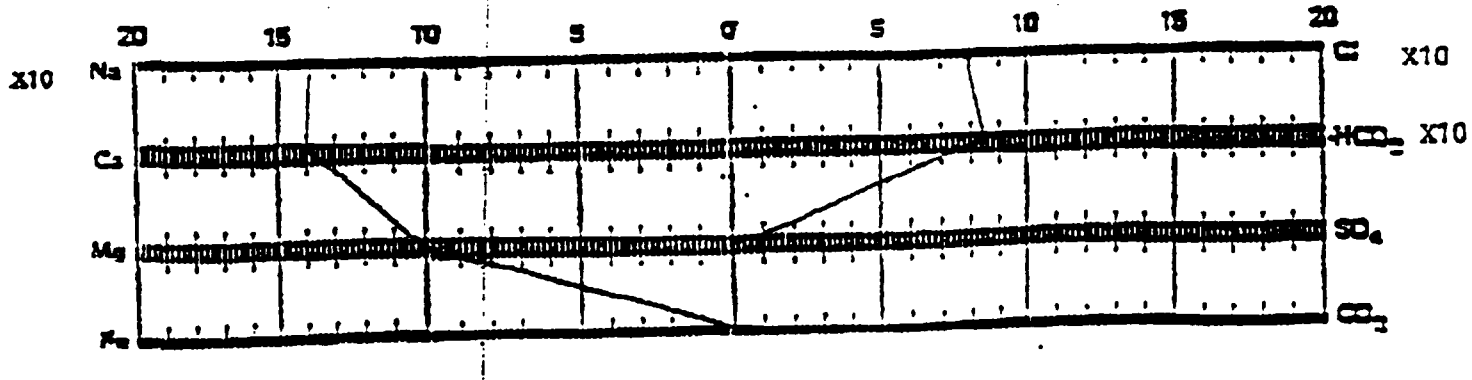
Date Sampled 07/20/93 Date Analyzed 07/21/93 Engineer W. D. Stricklin

Total Dissolved Solids 11,469 mg/L Calculated Sp. Gr. 1.004 @ 77 °F.

Resistivity 0.70 ohm-meters @ 77 °F. Measured pH 6.48 @ 77 °F Measured

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	138.1	3,174	Chloride	78.1	2,769
Calcium	14.0	280	Bicarbonate	84.0	5,124
Magnesium	10.0	122	Sulfate	-0-	-0-
Iron	-0-	-0-	Carbonate	-0-	-0-
Hydrogen Sulfide	Absent		Hydroxide	-0-	-0-

Scale: meq/L



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Foreman: LARY BYARS

PROPERTY MANAGEMENT & CONSULTING, INC.
P. O. BOX 2596
FARMINGTON, NEW MEXICO 87499-2596
(505) 325-6220

ILLEGIBLE

File NA/0655/93

Company MERIDIAN OIL, INC. Well Name Vaughn #12 Sample No. One

Formation Mesa Verde Depth N/A Sampled From Produced

Location N/A Field N/A County Rio Arriba State NM

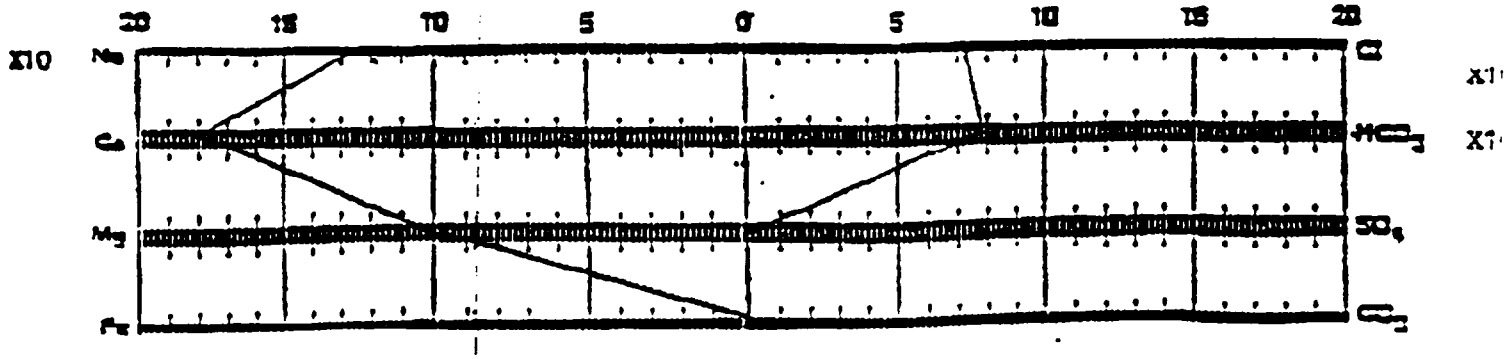
Date Sampled 07/19/93 Date Analyzed 07/20/93 Engineer W. D. Steichlin

Total Dissolved Solids 10,720 mg/L Calculated Sp. Gr. 1.005 @ 77 °F

Resistivity 0.78 ohm-meters @ 77 °F Measured pH 7.04 @ 77 °F Measured

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	124.1	2,853	Chloride	74.1	2,627
Calcium	18.0	360	Bicarbonate	78.0	4,758
Magnesium	10.0	122	Sulfate	-0-	-0-
Iron	-0-	-0-	Carbonate	-0-	-0-
Hydrogen Sulfide	Absent		Hydroxide	-0-	-0-

Scale: meq/L



TOTAL P.02

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The Western Company of North America

3250 South Side River Road
Farmington, New Mexico 87401
Phone (505)327-6222
Fax (505)327-5766

API WATER ANALYSIS

Company Meridian Oil | W.C.N.A. Sample No. | Date Sampled

Field | Legal Description | County or Parish | State

Lease or Unit Klein | Well # 28E | Depth | Formation Gallup | Water, B/D

Type of Water (Produced, Supply, ect.) Produced H_2O | Sampling Point | Sampled By

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na + Potassium, K (calc)	3417	149
Calcium, Ca	285	14
Magnesium, Mg (calc)	176	15
arium, Ba		

ANIONS		
Chloride, Cl	5495	155
Sulfate, SO_4	175	4
Carbonate, CO_3		
Bicarbonate, HCO_3	9455	155
Hydroxide, OH		

Total Dissolved Solids (calc.) 19002

Iron, $Fe^2 + Fe^3$ (total)

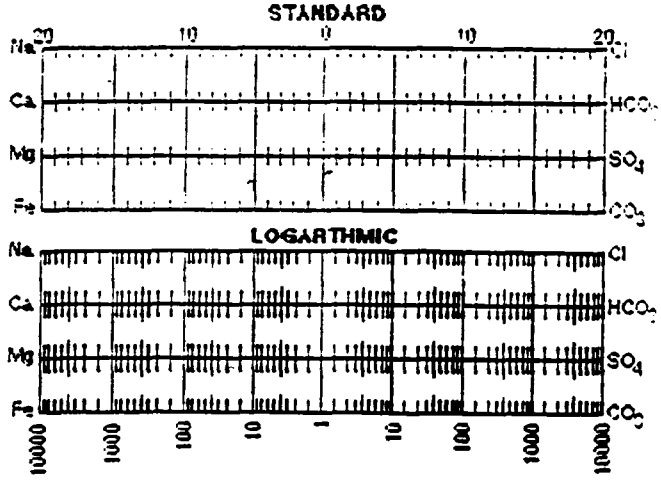
Sulfide, as H_2S

Remarks & Recommendations:

OTHER PROPERTIES

pH		6.04
Specific Gravity, 60/60 F		1.016
Total Hardness		710
Resistivity (ohm-meter)	°F	.88

WATER PATTERNS-me/l



Analyst:
Date Analized:

D. HH
4-7-94

Please refer any questions to:
Loren Diede, District Engineer
Thank you.

WATER ANALYSIS TESTING ENVIRONMENTAL REPORTS

1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1088

Lab Number: W94-084

Standard A.P.I. Water Analysis Report

Company:	MERIDIAN OIL INC.	Date Collected:	4/13/94
Sample ID:	JICARILLA 67-5E	Date Received:	4/13/94
Formation:	Dakota	Date Analyzed:	4/13-15/1994
Location:		County:	State:
Collected By:		Analyst:	Linda Spencer

Remarks: Caught sample off separator when well started unloading.

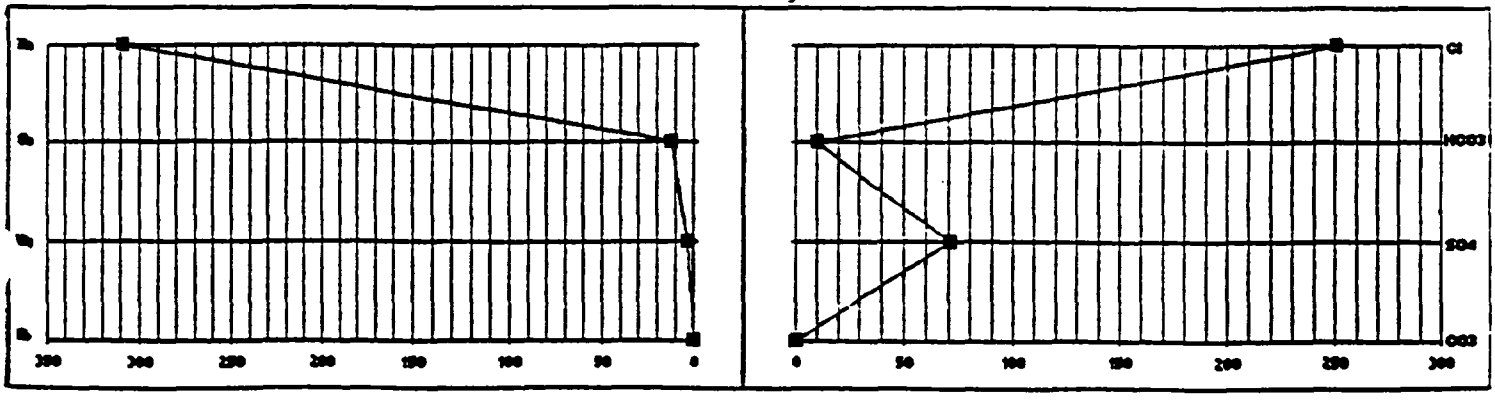
Attention: Lary Byars

PARAMETER	as ION	Comment	PARAMETER	as ION	Comment
Sodium, Na	7,100 mg/l		Chloride, Cl	8,975 mg/l	
Potassium, K	86 mg/l		Sulfate, SO4	3,400 mg/l	
Calcium, Ca	245 mg/l		Hydroxide, OH	0 mg/l	
Magnesium, Mg	40 mg/l		Carbonate, CO3	0 mg/l	
Iron, Fe (Total)	7 mg/l		Bicarbonate, HCO3	610 mg/l	
Sulfide	mg/l	NOT RUN	Resistivity	0.36 ohm-m	
pH	7.5 units		Conductivity (@25 Degrees C)	27,900 uS/cm	
Total Dissolved Solids	20,500 mg/l		Specific Gravity (@60 Degrees F)	1.019	

Remarks: Compared to other Dakota, this water has elevated sodium and chloride.

Anion/Cation: 101%

Stiff Diagram



Scale: Meq/L

WATER ANALYSIS TESTING ENVIRONMENTAL REPORTS

1115 Farmington Avenue - Farmington, NM 87401
(505) 325-1085

Lab Number: W94-107

Standard A.P.I. Water Analysis Report

Company:	MERIDIAN OIL INC.	Date Collected:	4/27/94
Sample ID:	CLU 295	Date Received:	4/27/94
Formation:	Dakota	Date Analyzed:	4/28-29/94
Location:		County:	State:
Collected By:		Analyst:	Sheila F./Linda S.
Remarks:			

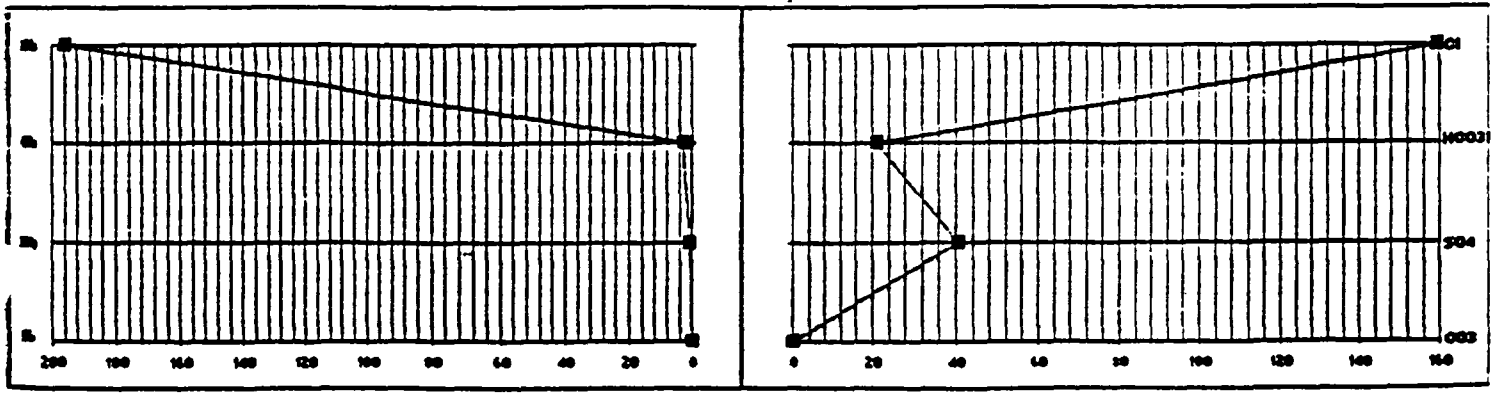
Attention: Lary Byars

PARAMETER	as ION		Comment	PARAMETER	as ION	
Sodium, Na	4,500	mg/l		Chloride, Cl	5,680	mg/l
Potassium, K	60	mg/l				
				Sulfate, SO4	1,950	mg/l
Calcium, Ca	60	mg/l				
Magnesium, Mg	10	mg/l		Hydroxide, OH	0	mg/l
				Carbonate, CO3	0	mg/l
Iron, Fe (Total)		mg/l	NOT RUN	Bicarbonate, HCO3	1,290	mg/l
Sulfide		mg/l	NOT RUN	Resistivity	0.51	ohm-m
				Conductivity	19,750	uS/cm
pH	7.9	units		(@25 Degrees C)		
Total Dissolved Solids	12,800	mg/l		Specific Gravity (@60 Degrees F)	1.012	

Remarks: Sample had organic odor.

Anion/Cation: 1108

Stiff Diagram



Scale: Meq/L

UNIT	WELL NAME	Fm	DATE SAMPLED	Na mg/l	Ca mg/l	Mg mg/l	Cl mg/l	SO4 mg/l	CO3 mg/l	HCO3 mg/l	TDS mg/l	Fe mg/l	pH	S.G.	Resist. ohm-m
P	SJ 27-4-20A S29 T27N R4W	MV	4/28/94	6601	0	41	6745	50-	0	3050	16437	0.4	8.5	1.015	0.05 70 deg F
I	JIC 117E2A S33 T26N R3W	MV	4/28/94	2875	0	34	2130	50-	0	1086	6125	12.2	7	1.01	0.15 70 deg F
K	JIC J 21 S36 T26N R5W	GL/DK	4/26/94	7590	0	37	9585	60	0	3782	21054	0.2	8	1.015	- 70 deg F
M	LIT FED 20-1 S20 T24N R3W	GL/DK	4/29/94	2047	0	37	1420	50-	0	109	3613	2	7	1.01	0.25 70 deg F
E	SJ 27-4 69 S34 T27N R4W	DK	4/28/94	1219	0	34	1775	60	0	293	3381	20+	7	1.01	0.25 70 deg F
G	CULLINS FED 5 S4 T24N R3W	GL/DK	4/27/94	5681	0	39	1775	200+	0	24	7519	0	7	1.01	0.06 70 deg F
H	MEDIO CAN. 3 S36 T27N R4W	GL/DK	4/27/94/	3197	0	609	6390	200+	0	572	10769	2.6	7.5	1.01	0.08 70 deg F
A	JIC. 98-3-A S10 T26N R3W	MV	4/29/94	6371	0	41.3	7100	50-	0	1806	15318	0	8	1.015	0.05 70 deg F
P	JIC. 101-7 S20 T26N R3W	MV	4/29/94	5566	0	41	7100	50	0	2684	15441	0.8	8	1.015	0.05 70 deg F
J	MCCRODEN A8A S9 T25N R3W	MV	4/26/94	5727	0	37	7100	50-	0	1952	14816	2.8	8	1.015	0.06 70 deg F
L	JIC. 101-7 S33 T26N R3W	MV	4/26/94	2944	0	24	2485	50-	0	622	6075	2	7	1.01	0.16 70 deg F
P	JIC. 101-7 S12 T26N R4W	MV	4/27/94	539	0	97	1065	20	0	24	1735	0	7	1.01	0.38 70 deg F
E	FLORENCE 7 S4 T25N R3W	GL	4/26/94	2691	0	29	3905	75	0	439	7139	24	6.5	1.015	0.11 70 deg F
E	MEDIO CAN 7 S35 T24N R4W	GL/DK	4/26/94	7682	0	39	11360	50	0	988	20119	4.9	7	1.02	- 70 deg F
M	JIC 117 E-5 S28 T26N R3W	MV	4/26/94	5681	0	34	7100	54	0	3013	15882	0.8	7.5	1.02	0.055 70 deg F
D	CULLINS 3 S4 T24N R3W	GL/DK	4/27/94	1403	0	34	355	50-	0	24	1816	0	6.5	1.01	0.19 70 deg F
H	W.O. HUGHES 7 S8 T24N R3W	GL/DK	4/27/94	2806	0	29	1065	50-	0	2684	6584	0	6.5	1.01	- 70 deg F
J	JIC 123 G NO 9E S6 T25N R4W	GL/DK	4/27/94	7912	72	37	12070	200+	0	756	20847	2.6	7	1.03	- 70 deg F
D	JIC J NO 9E S26 T26N R5W	MV/GL/DK	4/26/94	6233	0	32	7100	50-	0	5414	18779	0.9	7.5	1.02	- 70 deg F

UNIT	WELL NAME	Fm	DATE SAMPLED	Na mg/l	Ca mg/l	Mg mg/l	Cl mg/l	SO4 mg/l	CO3 mg/l	HCO3 mg/l	TDS mg/l	Fe mg/l	pH	S.G.	Resist. ohm-m
F	JIC G-5M S12 T26N R5W	MV	4/27/94	138	0	170	2485	200+	0	256	3049	5.8	6.5	1.01	0.18 70 deg F
I	CHAC JIC D-10 S27 T23N R3W	GL/DK	4/29/94	7291	0	51	11005	150	0	464	18961	1.8	7	1.02	- 70 deg F
K	ARIZ JIC A5 S13 T25N R4W	MV	4/26/94	1265	0	24	1775	50	0	342	3456	4.2	7	1.01	0.22 70 deg F
M	JIC 95-5 S25 T27N R3W	MV	5/4/94	6555	0	39	2840	50-	0	1720	11154	2.6	8	1.015	0.115 70 deg F
D	JIC 89-6 S T27N R3W	MV	5/4/94	3082	0	37	4260	95	0	2928	10402	6.7	7	1.025	0.74 70 deg F
A	JIC 95-1 S35 T27N R3W	MV	5/4/94	1748	0	39	1775	125	0	1562	7036	4.9	7	1.01	0.144 70 deg F
A	JIC 94-6 S27 T27N R3W	MV	5/4/94	414	0	39	710	200+	0	37	1653	20+	6.5	1.01	0.12 70 deg F
M	JIC 94-5 S23 T27N R3W	MV	5/4/94	2254	0	44	3550	90	0	781	6719	12	7	1.01	0.12 70 deg F
	CANDELARIA W.W. S T R	ATER WEL	5/4/94	460	0	41	355	0	0	769	1625	6	7.5	1.005	0.6 70 deg F
M	JIC 96-7 S1 T26N R3W	MV	4/29/94	2461	0	39	1775	50-	0	610	4885	2.2	7	1.005	0.021 70 deg F
P	JIC 103 NO 14 S18 T26N R4W	GL/DK	4/27/94	7981	0	37	8920	50-	0	3648	20186	1.8	8	1.015	0.5 70 deg F
F	JIC 119N-5A S6 T26N R4W	MV	4/27/94	6463	0	32	7100	50-	0	2049	15644	1.7	8.5	1.015	0.06 70 deg F
M	CHENEY FED 1 S8 T26N R2W	MAN	4/29/94	6854	0	32	2840	50-	0	4331	14057	0.6	8	1.01	0.09 70 deg F
J	SCHMTZ FED 34-1 S34 T24N R1W	MAN	4/29/94	13615	0	56	19170	50-	0	415	33256	13.6	7	1.03	0.5 70 deg F
M	CULLINS 4 S4 T24N R3W	GL/DK	4/27/94	1541	0	44	710	50-	0	24	2319	2.2	7	1.01	0.1 70 deg F
D	JIC 96-1A S1 T26N R5W	MV	4/26/94	2530	0	29	1775	50-	0	769	5103	2.2	7	1.01	0.02 70 deg F
A	JIC JVKD 7 S4 T23N R3W	GL/DK	4/29/94	1794	0	41	1065	50-	0	73	2973	4.4	6	1.01	0.04 70 deg F
M	JIC 99-16 S23 T26N R3W	GL/DK	4/29/94	8119	0	32	10650	50-	0	354	19155	20+	7	1.025	0.5 70 deg F
F	JIC G-5M S12 T26N R5W	DK	4/26/94	2254	0	34	3195	200+	0	351	6034	8.8	7.5	1.015	0.1 70 deg F

UNIT	WELL NAME	FM	DATE SAMPLED	Na mg/l	Ca mg/l	Mg mg/l	Cl mg/l	SO4 mg/l	CO3 mg/l	HCO3 mg/l	TDS mg/l	Fe mg/l	pH	S.G.	Resist. ohm-m
A	JIC 126S-15 S11 T24N R4W	GL/DK	4/26/94	5382	0	27	6390	50-	0	427	12226	1	7	1.02	0.5 70 deg F
M	JIC J NO 12E S35 T26N R5W	MV/GL/DK	4/26/94	4508	0	39	3195	50-	0	3611	11353	0.6	8	1.01	0.01 70 deg F
I	CHAC JIC D-2 S16 T23N R3W	GL/DK	4/29/94	6026	0	51	9250	70	0	293	15670	1.5	7	1.02	0.5 70 deg F
M	SJ 27-4 149 S22 T27N R4W	MV	4/27/94	1564	0	37	710	50-	0	51	2335	1.6	6.5	1.01	0.02 70 deg F
A	MEDIO CAN 1 S25 T24N R4W	GL/DK	4/27/94	7360	0	49	9330	50-	0	878	17517	0.2	7	1.015	0.5 70 deg F
K	HAWK FED 3 S35 T25N R2W	MAN	4/27/94	1334	0	24	355	50-	0	24	1737	0	6.5	1.01	0.09 70 deg F

VIII. Geological Data

Jillson Federal SWD #1
Form C108 - Attachment Documentation

The proposed water injection zone in the Jillson Federal SWD is the Entrada Formation, which is Middle Jurassic in age. The clastic sandstones were deposited in an arid climate by a combination of water and wind (eolian). The sandstones are predominantly white to light gray, very fine- to medium-grained, moderately- to well-sorted quartz grains that are often "frosted" as a result of being transported and deposited by the wind in sand dunes. The Entrada sandstones are massively bedded with only negligible to no shale breaks. Outcrops of the Entrada sandstones are highly cross-bedded, which are highlighted by subtle mineralogical changes and weathering. Porosity in the upper 80 feet ranges from 15% to 25% and averages 22%. Porosity ranges from 10% to 19% and averages 15% in the lower 160 feet of Entrada. Permeabilities range from approximately 100 to 300 millidarcies in the upper sandstone and 25 to 100 millidarcies in the lower sandstones. Interstitial cement varies from siliceous to calcareous and varies in amount from none to about 10% by bulk volume. Cementation most commonly occurs in the lower sandstone units. The Entrada sandstones in a 24 township area around the proposed injection well varies in thickness from 200 feet to 240 feet.

At the Jillson Federal SWD proposed location the top of the Entrada Formation will be encountered at an approximate drill depth of 8,441 feet and the base will be at 8,683 feet. The Entrada Formation is overlain by the Middle Jurassic Todilto Formation, consisting of 50 feet of anhydrites and shales. These shales and especially the anhydrites are very effective "seals" that naturally prevent the vertical migration of fluids. The Triassic Chinle Formation shales underlie the Entrada Formation.

Potable water sources exit in the near surface Tertiary sandstones of the Nacimiento-San Jose Formations, basically from less than 500 feet deep. No known sources of potable water exists in the stratigraphic section from the Cretaceous Kirtland Shale down to Precambrian basement (meta-igneous rocks). The shallow aquifers will be protected by setting surface casing.

JILLSON FEDERAL SWD

Se/4 Nw/4 Section 8, Township 24 North, Range 3 West
Rio Arriba County, New Mexico

STRATIGRAPHIC COLUMN

RECENT	Surface
	Nacimiento
TERTIARY	Ojo Alamo Ss.
CRETACEOUS	Kirtland Shale
	Fruitland Formation
	Pictured Cliffs Ss.
	Lewis Shale
	Chacra
	Mesaverde Group
	Cliffhouse Ss.
	Menefee
	Point Lookout Ss.
	Mancos Shale
	"Gallup"
	Niobrara
	Tocito Ss. (not present this location)
	Juana Lopez
	Lower Mancos Shale
	Greenhorn Ls
	Graneros Shale
	Dakota
CRETACEOUS	Burro Canyon Ss.
JURASSIC	Morrison
	Bluff Ss.
	Summerville Shale
	Todilto
JURASSIC	Entrada Ss.
TRIASSIC	Chinle

IX. Stimulation Program

Jillson Federal SWD #1
Form C108 - Attachment Documentation

JILLSON FEDERAL SWD #1
UNIT F SECTION 08, T24N, R03W
RIO ARRIBA COUNTY, NEW MEXICO
SWD Completion Procedure

ENTRADA COMPLETION

1. Comply with all NMOCD, BLM, and MOI rules & regulations. MOL and RU completion rig. NU 7-1/16" 1500 series BOP and stripping head. Test operation of rams. NU two 2-7/8" relief lines.

2. Place 9 clean 400 bbl tanks on location and fill with 2% KCL water. Filter all water to 1 micron nominal. Total water needed for each frac is 3100 bbls.

3. TIH w/ 6-1/4" bit on 2-7/8" L-80 tbg work string & C.O. to PBTD 8800'. Roll hole w/ 2% KCL water. TOH. Run CBL-CCL log from PBTD 8800' to surface. Relog w/ 1000# pressure, if necessary. Evaluate CBL for sqz operations across perforated intervals.Set 7" RBP at 8730'. Place sand on top of RBP. Pressure test csg to 2500 psi for 30 min & record pressure data.

4. TIH w/ 2-7/8" tbg open ended to 4425' & unload hole w/ N2. TOH.

5. Perf Entrada w/ 2 SPF @ 8441' - 8683'. Total 210 holes. Perforate w/ 4" csg guns and Owens CML X1X # 316 19 gr which give a 0.5" hole w/ 20.05" penetration in Berea.

6. TIH w/ 7" pkr on 2-7/8" tbg & set @ 8400'. Swab at least 85 bbl water & take 4 one quart water samples.

7. Pull into test position; & test tbg to 5000 psi. Reset pkr @ 8400', load & pressure up backside to 1000 psi. Monitor & record backside pressure during breakdown. Breakdown and attempt to balloff Entrada w/ 3500 gal. 15% HCL acid, 400 7/8" 1.3 sp. gr. RCN ballsealers. Max. pressure = 5000 psi. Acid to contain 1 gal/1000 aqua flow, 5 gal/1000 XA-2L (Fe control), and 2 gal/1000 I17 (corrosion inhibitor) based on prejob testing. Lower pkr to 8455' to knock off perf balls. TOH.

8. Prepare to run pre-frac Entrada step rate test. Max pressure is 3000 psi. Ensure that at least 2880 useable bbls of filtered 2% KCL water are available for test. Shut down & use ISIP & surface injection pressures to adjust computer van friction calculations at 8550'. Begin step rate test at 1 BPM for 15 minutes. Increase rate in 1 BPM increments until four points above parting pressure are recorded. Save computer data so datum depth adjustments can be made.

Decision Point (Entrada): Team 9 will decide whether to:

(A.) Proceed with the Entrada frac job. (Injection rate prior to parting pressure is <8 BPM) Go to step #9.

(B.) Injection rate before parting pressure is >15 BPM. Go to Step 12

IX. Stimulation Program

JILLSON FEDERAL SWD #1 - COMPLETION PROCEDURE
Page 2

9. Heat frac fluid to 75 degrees F. Install 7" tree saver & frac Entrada with 220,000# 20/40 Ottawa sand in 108,000 gal 30# X-linked gel water @ 60 BPM. Bottom hole pressure to be monitored by computer van. All sand to be tagged w/ 0.40 mCi/1000# Ir-192 tracer. Anticipated surface pressure = 2350 psi. Max pressure = 5000 psi. Frac using the following schedule:

STAGE	FLUID (GALS.)	SAND VOL. (lbs.)
Pad	30,000	———
1.0 ppg	10,000	10,000
2.0 ppg	12,000	24,000
3.0 ppg	20,000	60,000
3.5 ppg	36,000	126,000
Flush	(13,335)	———
Totals	108,000	220,000#

Treat frac fluid with the following additives per 1000 gallons:

- 6.81 gal J-4L (Gel)
- 3 gal Buffer5-L (Buffer)
- 1 gal CL30 (Borate X-linker)
- 0.3 lb B-5 (Oxydizing Breaker) Test break times at 185°F
- 1 lb Ultra Perm (Encap. Breaker)
- 2% KCL

10. Remove tree saver. Shut well in for 6 hours to allow gel to break. Flow Entrada back slowly. TIH w/ 6-1/4" bit on 2-7/8" tbg & circ out sand to 8730'. TOH.

11. Prepare to run after-frac Entrada step rate test. Max pressure is 3000 psi. Ensure that at least 3100 bbls of filtered 2% KCL water are available for test. Preceed test w/ 3000 gal 15% HCL acid with same additives as step #7 (this is to insure all gel is broken). Shut down & use ISIP & surface injection pressures to adjust computer van friction calculations at 8550'. Begin step rate test at 1 BPM for 15 minutes. Increase rate in 1 BPM increments until four points above parting pressure are recorded. Save computer data so datum depth adjustments can be made.

12. TIH w/ retrieving head on 2-7/8" tbg. Circ sand off retrievable bridge plug @ 8730', retrieve BP, & TOH.

13. TIH w/ 6-1/4" bit on 2-7/8" tbg & clean out to 8800'. TOH. Run after frac gamma ray log from 8750' to 7400'.

TUBING & PACKER INSTALLATION

14. See the attached pkr assemble diagram. MI wireline truck. PU 7" 23# Baker "FAB-1" pkr w/ 4" bore, 20' pup jt. of 4-1/2" 10.5# tbg, "F" nipple (3.688), 20' pup jt. of 4-1/2" 10.5# tbg, seating nipple (3.688), & wireline L-80 re-entry guide. Set pkr @ 8400'.

IX. Stimulation Program

JILLSON FEDERAL SWD #1 - COMPLETION PROCEDURE
Page 3

15. PU Baker Model "KBH-22"Anchor tubing seal nipple, one joint 4-1/2" 10.5# tubing, "F" nipple (3.75), & 4-1/2" L-80 ST&C tbg. Land seal assembly in pkr @ 8400'.

16. Nipple down BOPs & nipple up wellhead. Release rig.

Mechanical Integrity Test and Final Step Rate Test

17. Shut-in well at least 12 hours prior to conducting the MIT. Note pressures on tubing and annulus. Bleed off pressure on annulus.

18. Twenty hours prior to MIT, fill annulus with inhibitor fluid (record volume)

19. At time of test, note and record pressure on injection tubing and casing/tubing annulus.

20. Pressure up casing/tubing annulus to 2000 psi. Note time and pressure when pressure source is turned off.

21. Monitor pressure for 45 min., noting pressures every five (5) min. Fill out appropriate documentation.

22. A loss of 10% pressure in 45 minutes is considered a failure. If loss is slightly more than 12 psi, bleed off pressure and retest.

23. Prepare to run total well step rate test. Notify BLM, & NMOCD to witness step rate test. Maximum pressure is 3000 psi. Ensure that at least 4000 bbls of filtered produced water are available for test. Run electronic gauge to 8440'. Begin step rate test at 3 BPM for 15 min. Increase rate in 1 BPM increments until four points above parting pressure are recorded. Shut well in for 36 hours. Save computer data so datum depth adjustments can be made. Provide 6 hard copies and one disk of pressure data.

Approve:_____
Drilling Superintendent

X. Logs and Test Data

Jillson Federal SWD #1
Form C108 - Attachment Documentation

Logs and test data will be supplied when available. The following log and test program is proposed for this disposal well :

Logging:	Dual Induction Log Gamma ray Caliper Log Spontaneous Potential Formation Density Compensated Neutron Log Photo Electric Curve MicroLog NUMAR Log (Magnetic Resonance Imaging) Dipole Sonic Log Side-Wall Cores Drill Stem Tests
Testing:	Producible hydrocarbons testing following the swabbing. Pre, post and Final step rate tests Mechanical Integrity Test

Schlumberger Dowell

API Water Analysis

Operator	:	**Meridian Oil, Inc.**
Well	:	**C andeleria W.W.**
Field	:	
Formation	:	

Prepared for	:	**Brian Ault**
DS Service Point	:	Farmington, NM
Business Phone No.	:	505 326-5096
Proposal No.	:	
Prepared by	:	Kevin D. Mauth
Date	:	May 16, 1994

X1

Schlumberger
Dowell

Client : Meridian Oil, Inc.
Well : C andeleria W.W.
Formation :
District : Farmington, NM
Country :

WELL DATA

..... Data	.....
Water Source	C andeleria W.W.
Date of Sample	5/4/94
Test Date	5/4/94
Test Performed By	Dustin Jensen

API WATER ANALYSIS

..... Dissolved Solids	... mg/L ...	... me/L ...
Cations		
Sodium, Na (Calc)	460	20
Calcium, Ca	0	0
Magnesium, Mg	41	3.4
Barium, Ba	—	—
Anions		
Chloride, Cl	355	10
Sulfate, SO4	0	0
Carbonate, CO3	0	0
Bicarbonate, HCO3	769	12.6
Hydroxide	0	0

OTHER PROPERTIES

..... Other Properties	.....
Total Dissolved Solids, mg/l	1625
Iron, mg/l	6
pH	7.5
Specific Gravity	1.005
Resisitivity, ohm-meter	0.60
Temperature	70 deg F

45

XII. Zone Isolation

Jillson Federal SWD #1
Form C108 - Attachment Documentation

An examination of geologic and engineering data indicates no evidence of open faults or any hydraulic connection between the disposal zone and any source of drinking water and/or any currently producing formations. This conclusion is based on log data and proof of isolation between gas- and oil-bearing sands above the Entrada within the area of review.

XIII. Proof of Notice

Jillson Federal SWD #1
Form C108 - Attachment Documentation

A copy of the application and support material has been sent by certified mail to the following:

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Fo
Revised February
Instruction
Submit to Appropriate Distr
State Lease -
Fee Lease -

☐ AMENDED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name

⁴ Property Code	⁵ Property Name	⁶ Well Num
	Jillson Federal SWD	1

⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
	Meridian Oil Inc.	6907'

¹⁰ Surface Location

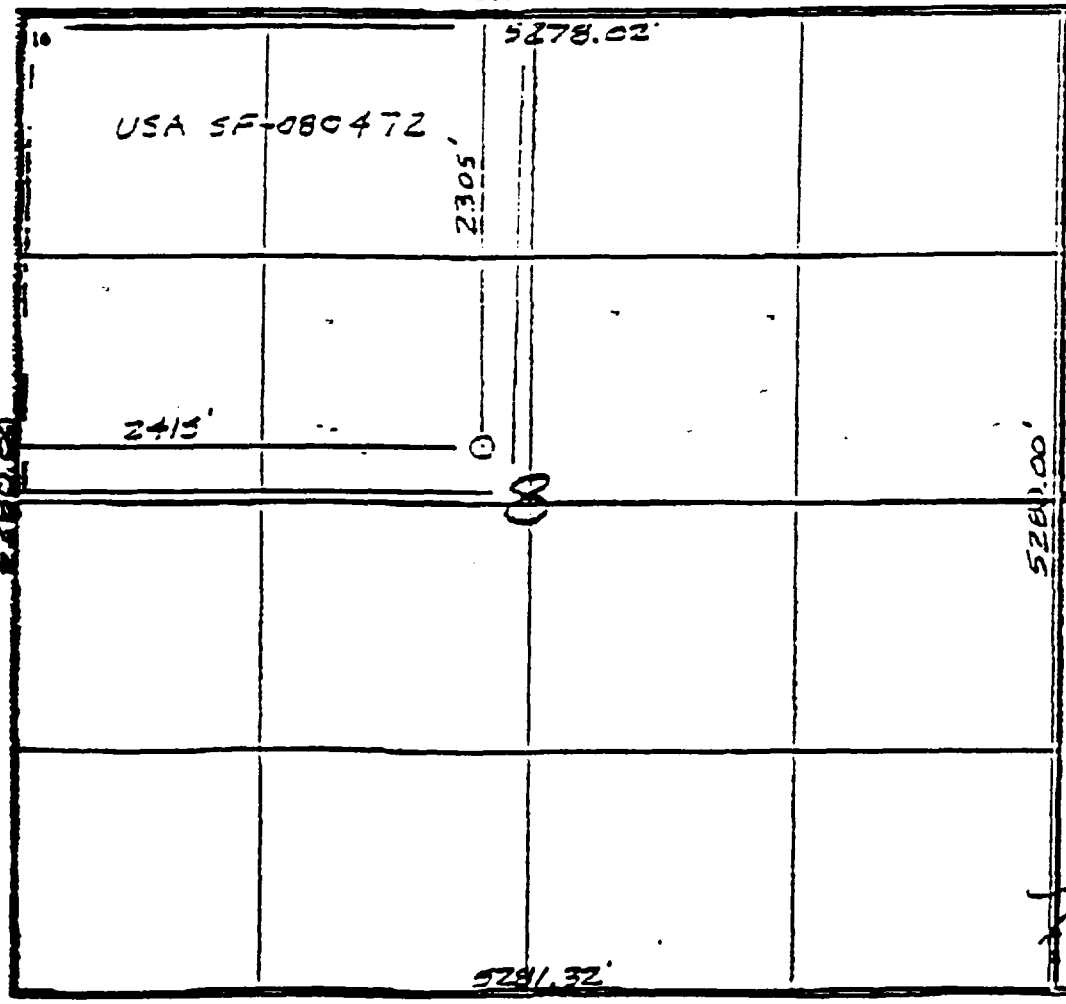
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	8	24 N	3 W		2305	North	2415	West	R.A

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLID
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



¹⁷ OPERATOR CERTIFICA

I hereby certify that the information contained he
true and complete to the best of my knowledge a

Signature

Printed Name

Title

Date

¹⁸ SURVEYOR CERTIFICAT

I hereby certify that the well location shown on th
was plotted from field notes of actual surveys mad
or under my supervision, and that the same is true
correct to the best of my belief.

5-9-94
Date of Survey

Signature and Seal of Professional Surveyor

6857
Certificate Number

48

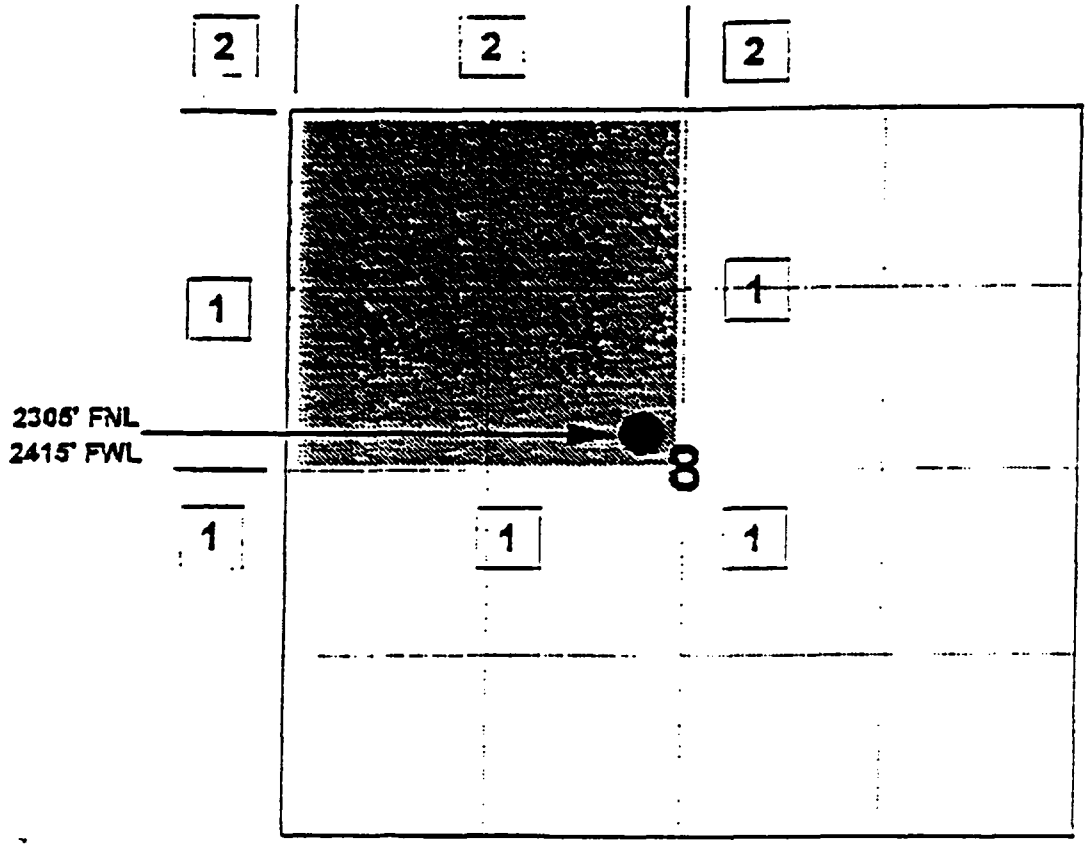
MERIDIAN OIL INC

JILLISON FEDERAL SWD #1

OFFSET OPERATOR PLAT

Saltwater Disposal Well

Township 24 North, Range 3 West



1) Meridian Oil Inc

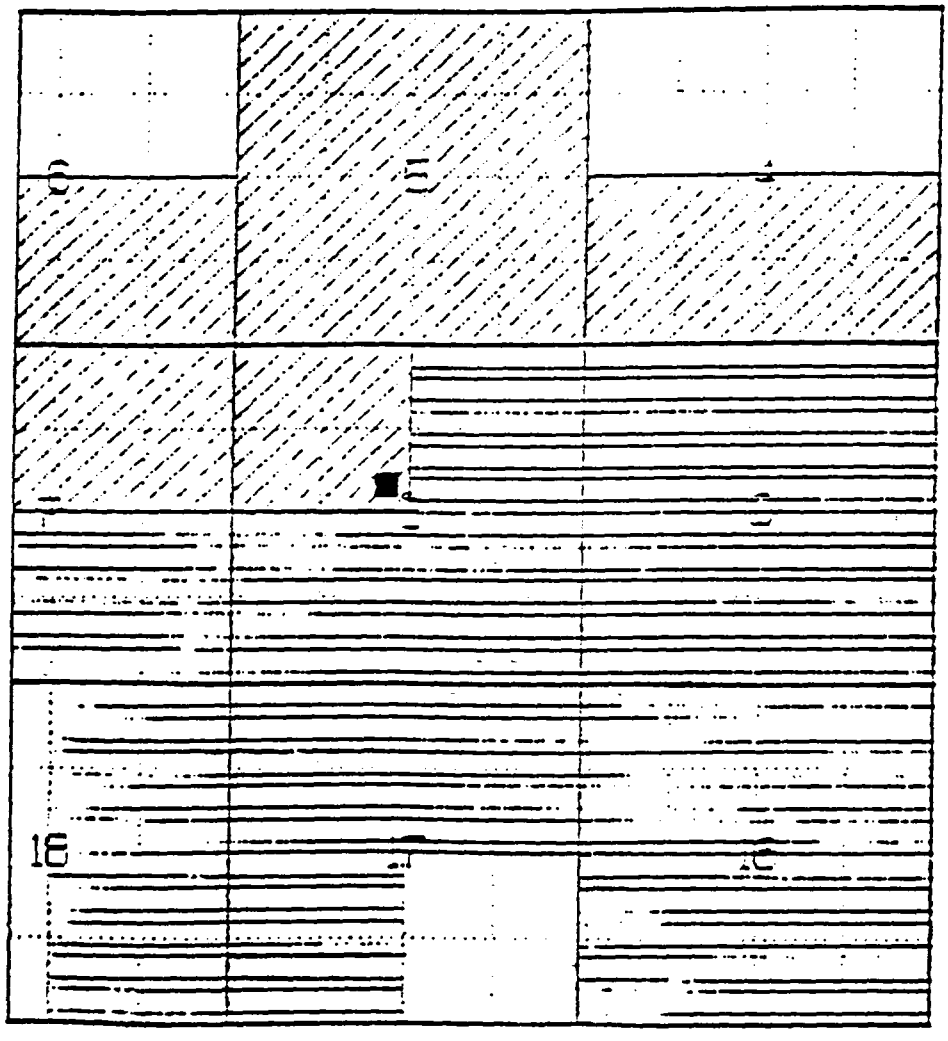
2) Carolyn Clark Wiggin Oil Properties PO Box 420, Farmington, NM 87499

MERIDIAN OIL INC

JILLISON SWD #1
DISPOSAL WELL

TOWNSHIP 24 NORTH, RANGE 3 WEST

2305' From North Line, 2415' From West Line



■ Proposed Well Location

Dakota & Fruitland Formations

Bureau of Land Management

KELLAHIN AND KELLAHIN
ATTORNEYS AT LAW
EL PATIO BUILDING
117 NORTH GUADALUPE
POST OFFICE BOX 2265
SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN*
*NEW MEXICO BOARD OF LEGAL SPECIALIZATION RECOGNIZED SPECIALIST IN THE AREA OF NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285
TELEFAX (505) 982-2047

June 8, 1994

HAND DELIVERED

Mr. David R. Catanach
Underground Injection Control
Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

COPY

Re: Administrative Application for
Salt Water Disposal Approval
Meridian Oil Inc.'s
Jillison Federal SWD #1 Well
SE/4NW/4 Sec 8, T24N, R3W
Rio Arriba County, New Mexico

JUN

Dear Mr. Catanach:

On behalf of Meridian Oil Inc. and in accordance with Division Rule 701, we are enclosing an original and one copy of the completed and signed Application for Authorization to Inject (Division Form C-108 with attachments) for the referenced well.

Copies of the application have been sent to the surface owner and offsetting operator. In addition, we have a newspaper notification by newspaper being published and will forward that certification when it is received.

Please call me if you need anything else in order to process this request.

Very truly yours,

W. Thomas Kellahin

cc: OCD-Aztec (w/ encl.)
cc: Van L. Goebel
Meridian Oil Inc (Farmington)

JUN 1994
RECEIVED
Land Dept.

51