

AE Order Number Banner

Application Number: pMSG2325250734

SWD-2571

HILCORP ENERGY COMPANY [372171]

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: _____ OGRID Number: _____
 Well Name: _____ API: _____
 Pool: _____ Pool Code: _____

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

- 1) **TYPE OF APPLICATION:** Check those which apply for [A]
 A. Location – Spacing Unit – Simultaneous Dedication
 NSL NSP (PROJECT AREA) NSP (PRORATION UNIT) SD
- B. Check one only for [I] or [II]
 [I] Commingling – Storage – Measurement
 DHC CTB PLC PC OLS OLM
 [II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
 WFX PMX SWD IPI EOR PPR

- 2) **NOTIFICATION REQUIRED TO:** Check those which apply.
 A. Offset operators or lease holders
 B. Royalty, overriding royalty owners, revenue owners
 C. Application requires published notice
 D. Notification and/or concurrent approval by SLO
 E. Notification and/or concurrent approval by BLM
 F. Surface owner
 G. For all of the above, proof of notification or publication is attached, and/or,
 H. No notice required

<u>FOR OCD ONLY</u>	
<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	Application Content Complete

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

 Print or Type Name

Date



 Signature

Phone Number

e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance Disposal _____Storage
Application qualifies for administrative approval? _____Yes _____No

II. OPERATOR: Hilcorp Energy Company

ADDRESS: 382 Rd 3100, Aztec, NM. 87410

CONTACT PARTY: Amanda Atencio (719) 393-2721 / Mandi Walker (346) 237-2177 PHONE: _____

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.

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.

VI. Attach a tabulation of data on all wells of public record within the area of review which 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.

VII. Attach data on the proposed operation, including:

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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

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

*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.

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 sources of drinking water.

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: Amanda Walker TITLE: Operations Regulatory Tech Sr.

SIGNATURE:  DATE: 09/05/2023

E-MAIL ADDRESS: mwalker@hilcorp.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: 05/01/2004; New drill for injection

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

Side 2

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. 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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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.

Form C-108
Application for Authorization to Inject
Hilcorp Energy Company
Salty Dog #4 SWD
2580' FSL & 1890' FWL
Section 1, T30N, R14W, NMPM
San Juan County, New Mexico

A new C-108 application for authorization to inject is being filed due to a proposed formation top adjustment and request to expand the approved injection interval. The request for adjustment is based on the following:

- A potential casing leak was identified on 05/09/2023. Diagnostic rig work was performed to identify the leaking interval. When the leak interval was identified (2956'–2962') it was isolated from the open perforations below (3118' – 4270'). While the two were isolated, the shut-in pressures at surface were the same. The equalized pressures seen at surface tell us that there is uniform reservoir communication between the leak and the open perforations, and thus, that the leak is within the same formation as the approved injection interval. The cement bond log (filed with NMOCD) shows exceptional cement bond across the zone in question, further supporting the observation that there is reservoir communication opposed to cement integrity issues.
- The current OCD recognized Mesaverde top is at 3106'. However, recent geologic review shows the Mesaverde top is at 2934'. This Mesaverde top is based on open hole logs ran on the subject well during drilling.
- There are two shale barriers, the Kirtland Shale and the Lewis Shale, between the top of the Mesaverde (2934') and the Ojo Alamo (117'). The two shale barriers prevent the vertical migration of injected fluids. The Ojo Alamo is the only known possible source of drinking water penetrated by the subject well.
- Hilcorp Energy Company is proposing an adjustment of the Mesaverde top from 3106' to 2934'; and requesting an expansion of the injection interval to allow injection from the top of the Mesaverde formation at 2934' to the bottom of the Mesaverde formation at 4292'.

The salty Dog 04 SWD is currently shut-in pending a plan of action. Upon C-108 permit approval – an IPI 268 permit will be filed for a new step-rate with the new well configuration. Once approved – the well will be put back on injection.

Form C-108
 Application for Authorization to Inject
 Hilcorp Energy Company
 Salty Dog #4 SWD
 2580' FSL & 1890' FWL
 Section 1, T30N, R14W, NMPM
 San Juan County, New Mexico

V. Lease/Well Map: Attached hereto.

VI. Tabulation of Data: Submitted 05/01/2004 (New Drill application); No Changes within the well's area of review.

VII. Operating Data:

1. Average daily injected volume will be 600 bbls/day. The expected maximum daily injected volume will be 1000 bbls/day.
2. This is a closed system.
3. Average injection pressure will be 1000 psi. The current maximum allowable injection pressure for this well is 1165 psi. A max allowable surface injection pressure of 1165 psi will be requested, with option for additional pressure increase with approved step rate test.
4. Injected water will be produced from the Pictured Cliffs (Harper Hill Fruitland Sand PC) and Fruitland Coal (Basin Fruitland Coal) formations from four State of New Mexico wells (WF State 2-1, 2-2, 2-3, 2-4); six Federal wells (WF Federal 1-2,1-1, 12-1, 12-2, 11-1, 11-4); and nine Lunt wells (Lunt FC 1, 2, 3, 4, 5, 6, 7, 8, 11). Produced water will be injected into the Mesaverde formation. Pictured Cliffs and Fruitland Coal water analyses were submitted 05/01/2004.
5. Injected water is for disposal purposes. An analysis of Mesaverde water was submitted 05/01/2004. This is still representative of the Mesaverde water in the area.

VIII. Geologic Information:

- Injection will be in the Mesaverde formation. The top of the Mesaverde is at 2934', with a total thickness of approximately 1358'. The Ojo Alamo is a possible source of drinking water being at approximately 117'. It is located behind casing and cemented. There are no known sources of drinking water below the proposed injection formation.

<u>Formation</u>	<u>MD</u>	<u>SS</u>	<u>TVD</u>
Kirtland	197	5,538	197
Fruitland Coal	904	4,831	904
Pictured Cliffs	1,491	4,244	1,491
Lewis	1,653	4,082	1,653
Huerfanito Bentonite	2,255	3,480	2,255
Chacra	2,638	3,097	2,638
Cliff House	2,934	2,801	2,934
Menefee	3,250	2,485	3,250
Point Lookout	3,943	1,792	3,943
Mancos	4,293	1,442	4,293

Form C-108
Application for Authorization to Inject
Hilcorp Energy Company
Salty Dog #4 SWD
2580' FSL & 1890' FWL
Section 1, T30N, R14W, NMPM
San Juan County, New Mexico

XI. Stimulation Program:

The Mesaverde formation was acidized upon completion.

X. Logs:

Well logs have been filed with the Division.

XI. Fresh Water Analysis:

There are no known freshwater wells within a one-mile radius of Salty Dog 04 disposal well.

XII. Affirmative Statement:

Hilcorp Energy Company has examined available geologic and engineering data and finds no evidence of open faults or any other hydraulic connection between the proposed disposal well and underground sources of drinking water.

State of New Mexico
 Energy, Minerals & Mining Resources Department
 OIL CONSERVATION DIVISION
 2040 South Pacheco
 Santa Fe, NM 87505

Form C - 102

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

APA Number 30-045- 32334	Pool Code 96160	Pool Name SWD; Mesa Verde
Property Code 24806	Property Name SALTY DOG SWD	Well Number 4
OGRD No. 19219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 5726'

Surface Location

UL or Lot	Sec.	Twp.	Rge.	Lot Id.	Feet from >	North/South	Feet from >	East/West	County
K	1	30 N.	14 W.		2580'	SOUTH	1890'	WEST	SAN JUAN

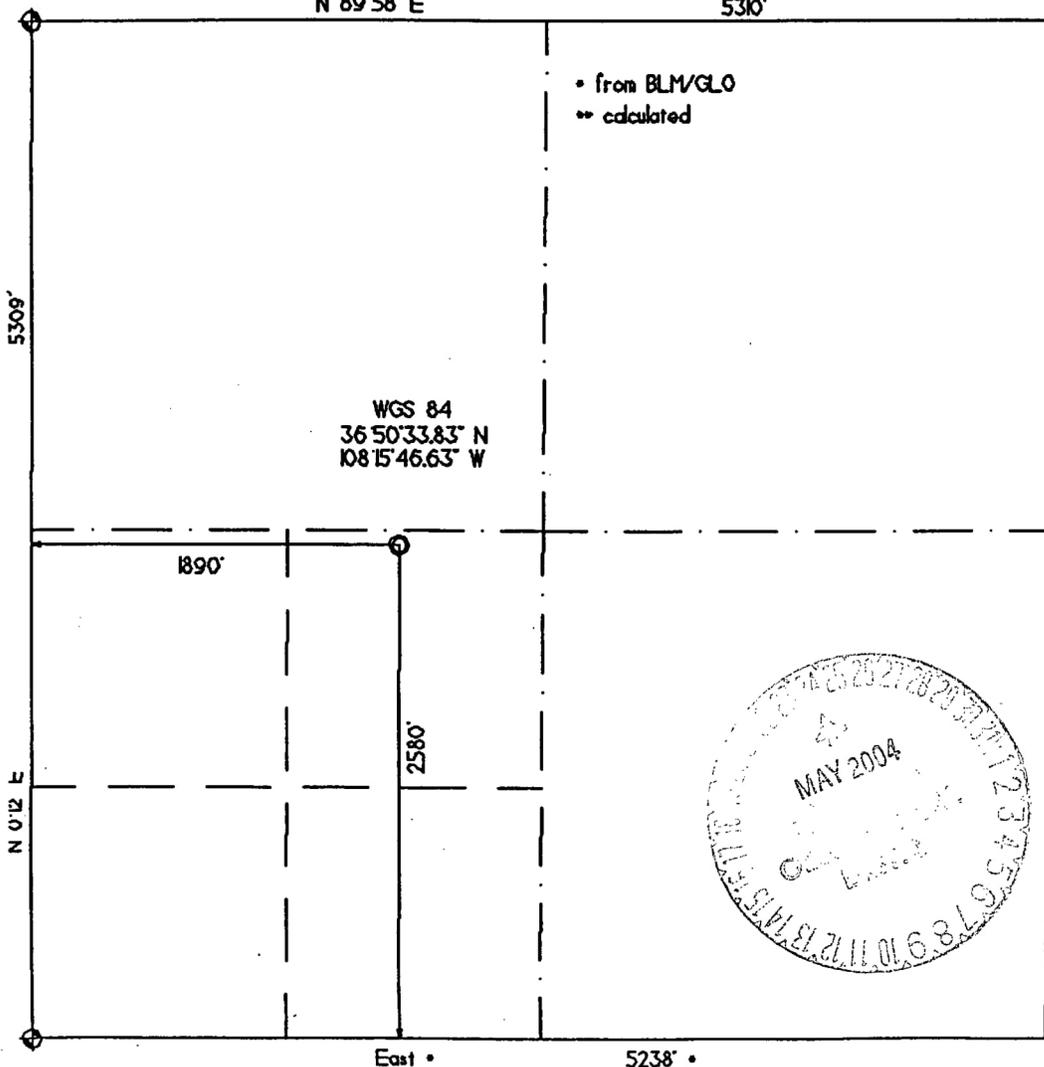
Bottom Hole Location if Different From Surface

UL or Lot	Sec.	Twp.	Rge.	Lot Id.	Feet from >	North/South	Feet from >	East/West	County

Dedication N/A	Joint ?	Consolidation	Order No.
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NO ALLOWABLE WILL ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

N 89°58' E 5310'



• from BLM/GLO
 ** calculated

WGS 84
 36 50'33.83" N
 108 15'46.63" W



OPERATOR CERTIFICATION

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

Signature

Paul Lehrman

Printed Name

Paul Lehrman

Title

Landman

Date

4/27/04

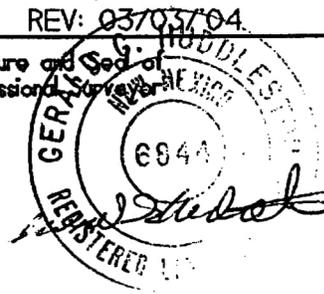
SURVEYOR CERTIFICATION

I hereby certify that the well location on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

REV: 03/03/04

Signature and Seal of Professional Surveyor



Side 1

INJECTION WELL DATA SHEET

OPERATOR: Hilcorp Energy Company

WELL NAME & NUMBER: Salty Dog 04 SWD

WELL LOCATION: 2580' FSL & 1890' FWL K 1 30 North 14 West
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

- Attached

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12-1/4" Casing Size: 8-5/8" (0' - 447')
 Cemented with: 320 sx. *or* _____ ft³
 Top of Cement: surface Method Determined: visual

Intermediate Casing

Hole Size: N/A Casing Size: _____
 Cemented with: _____ sx. *or* _____ ft³
 Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2" (0' - 4,398')
 Cemented with: 765 sx. *or* _____ ft³
 Top of Cement: surface Method Determined: visual
 Total Depth: 4,362' PBTD

Injection Interval

2,934 feet to 4,292' (perforated)

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" Lining Material: Plastic Coated

Type of Packer: 4-5/8" Nickle Coated AS-1X with on/off tool

Packer Setting Depth: 3,038'/current; 2,840'/proposed

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? Yes No

If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: Mesaverde Formation

3. Name of Field or Pool (if applicable): Blanco Mesaverde

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

Above - Pictured Cliffs: (1,491' - 1,652') MD

Below - Mancos: 4,293' MD

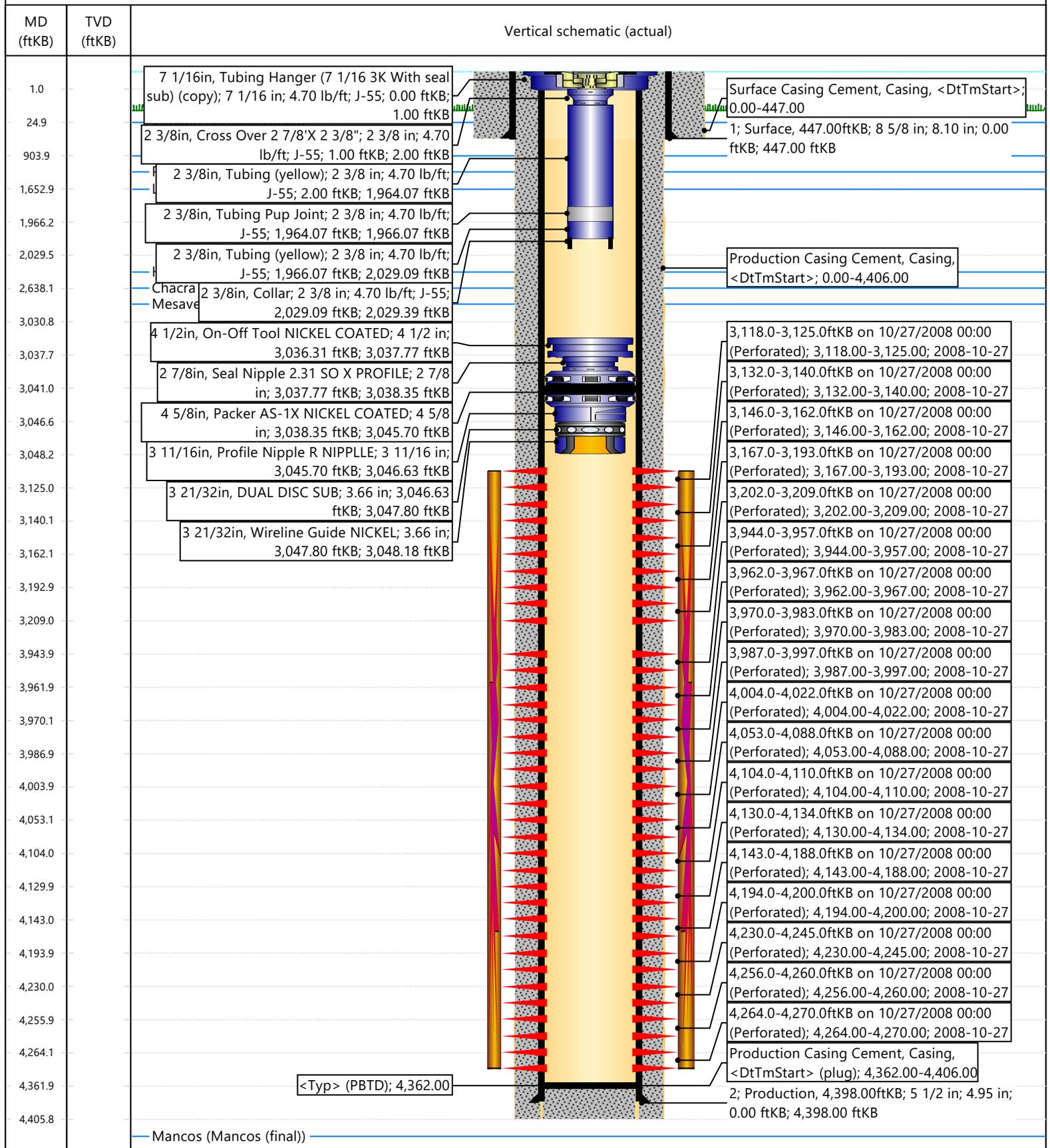


Current Schematic - Version 3

Well Name: SALTY DOG SWD #4

API / UWI 3004532334	Surface Legal Location T30N-R14W-S01	Field Name Entrada Mesaverde	Route 0202	State/Province New Mexico	Well Configuration Type Vertical
Ground Elevation (ft) 5,726.00	Original KB/RT Elevation (ft) 5,734.91	RKB to GL (ft) 8.91	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

Original Hole [Vertical]



27

26

25

30

29

FRAME FAMILY TRUST ET AL ATTN HARRIS FAM

PINON MESA B 1

PINON MESA B 3

PINON MESA B 2E

FEDERAL 3
FEDERAL 6

PINON MESA A 3

PINON MESA A 1

PINON MESA A 2E

PINON MESA A 1F

PEPPER 1S

34

35

36

31

32

PINON MESA A 2

PINON MESA A 1E

PINON MESA A 100
STRIBLING COM 1

STRIBLING 1

PEPPER 2
STATE GAS COM BH 1

UTE 34 44

FOXTAIL 1

PINON MESA A 4

BRYAN 1

ATLANTIS 4

BIG FIELD 3

WF STATE 22

STATE OF NEW MEXICO ATTN FACILITY MANAGE

LITTLE FEDERAL 2

WF FEDERAL 1 2

LITTLE FEDERAL 4

WF STATE 21

SALTY DOG 4 SWD

1

DICK HUNT FEDERAL 2

LUNT FC 3
LUNT 61

MISHON T 6

LUNT FC 1
R & R MCGEE HOLDING COMPANY LLC

3

WAGON ROD RANCH LLC

2

WF STATE 24

DICK HUNT FEDERAL 3

LITTLE FEDERAL 1

WF FEDERAL 1 1

6

LUNT FC 4

MISHON T GOVT 1

MCGEE ROSCOE H JR

LUNT 64
LUNT FC 2

ATLANTIS COM 4S

WF STATE 23

BIG FIELD 90

LISBON 90S

LITTLE FEDERAL 5

WF FEDERAL 12 1

LITTLE FEDERAL 3

LUNT FC 3
LUNT 61

MISHON T GOVT 1

MCGEE ROSCOE H JR

LUNT 64
LUNT FC 2

10

11

12

7

8

LISBON 2
BLAZER 1

WF FEDERAL 11 1

LUNT 67
LUNT FC 5

LUNT FC 6

LUNT FC 11

BIG FIELD 5

LISBON 90

QUEEN 1

WF FEDERAL 11 4

LITTLE FEDERAL 6

WF FEDERAL 12 002

WF FEDERAL 12 2

DICK HUNT FEDERAL 1

LUNT 63
LUNT FC 7

ENGLER GOVT PERMIT 1

SEEBECK ROBERT M AND NANCY L

LISBON 3

BLAZER 2

LITTLE FEDERAL 6

WF FEDERAL 12 002

WF FEDERAL 12 2

DICK HUNT FEDERAL 1

LUNT 63
LUNT FC 7

ENGLER GOVT PERMIT 1

SEEBECK ROBERT M AND NANCY L

FEDERAL

MOLLY PITCHER 5

HUMBLE KIRTLAND COM 90

DINERO 1

HUMBLE NORTH KIRTLAND

BUTTE 2

LUNT FC 10

MAXEY REBA C ET AL TRUSTEES

WOODS CROWLEY JUANITA A

MILLER

15

14

13

18

17

MOLLY PITCHER 90

MOLLY PITCHER 1

MOLLY PITCHER 2

PINON 1

PINON 2

DINERO 1

HUMBLE NORTH KIRTLAND

BUTTE 2

LUNT FC 10

MAXEY REBA C ET AL TRUSTEES

WOODS CROWLEY JUANITA A

MILLER

NEW MEXICO DEPT OF GAME AND FISH

Legend

- Salty Dog 4 SWD
- 1/2 Mile Radius
- Wells Within 2 Mile Radius**
- Gas Well
- Abandoned Loc
- Surface Owner Parcels



SENDER: COMPLETE THIS SECTION

- Complete Items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Bureau of Land Management
 6251 College Blvd
 Suite A
 Farmington, NM 87402



9590 9402 7573 2098 4556 16

2. Article Number (Transfer from service label)

7022 2410 0003 1570 3519

PS Form 3811, July 2020 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent
 Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
- Adult Signature
 - Adult Signature Restricted Delivery
 - Certified Mail®
 - Certified Mail Restricted Delivery
 - Collect on Delivery
 - Collect on Delivery Restricted Delivery
 - Priority Mail Express®
 - Registered Mail™
 - Registered Mail Restricted Delivery
 - Signature Confirmation™
 - Signature Confirmation Restricted Delivery

id Mail
 id Mail Restricted Delivery
 (over \$500)

Salty Dog #4 SWD Domestic Return Receipt B.M.

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE.
CERTIFIED MAIL®



7022 2410 0003 1570 3519
 7022 2410 0003 1570 3519

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com™.

OFFICIAL USE

Certified Mail Fee	
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy)	\$ _____
<input type="checkbox"/> Return Receipt (electronic)	\$ _____
<input type="checkbox"/> Certified Mail Restricted Delivery	\$ _____
<input type="checkbox"/> Adult Signature Required	\$ _____
<input type="checkbox"/> Adult Signature Restricted Delivery	\$ _____
Postage	\$ _____
Total Postage and Fees	\$ _____

Postmark Here
 Salty Dog #4 SWD
 B.M.

Sent To
 Bureau of Land Management
 Street and Apt. No., or PO Box No.
 6251 College Blvd, Suite A
 City, State ZIP+4®
 FMO NM 87402

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions



September 5, 2023

Transmitted Via
Certified USPS

Bureau of Land Management
6251 College Blvd, Suite A
Farmington, NM 87402

Subject: Salty Dog #4 SWD
API No. 30-04-532334
San Juan County, NM

To whom it may concern,

Hilcorp Energy Company is applying, via C-108, to expand the injection interval of its Salty Dog #4 SWD. The subject well is currently injecting into the Mesa Verde formation and Hilcorp proposes that an adjustment of the Mesa Verde interval top be recognized due to recent geologic review.

This letter serves as formal notice of the adjustment to the Mesa Verde interval as described on the enclosed C-108. No action is needed unless you have questions or objections.

- Well Name: Salty Dog #4
- API No.: 30-04-532334
- Location: K-1, T30N, R-14W
- Current Mesa Verde Top: 3106'
- Proposed Mesa Verde Top: 2934'
- Injection Zone: Mesa Verde
- Applicant Name: Hilcorp Energy Company
- Applicant Address: 1111 Travis Street, Houston, TX 77002

Should you have questions or concerns please contact me using the information provided below.

Ben Mitchell
Landman
(505) 324-5179 Direct
bemitchell@hilcorp.com

Enclosure(s)
C-108

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ No

II. OPERATOR: Hilcorp Energy Company

ADDRESS: 382 Rd 3100, Aztec, NM. 87410

CONTACT PARTY: Amanda Atencio (719) 393-2721 / Mandi Walker (346) 237-2177 PHONE: _____

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.

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.

VI. Attach a tabulation of data on all wells of public record within the area of review which 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.

VII. Attach data on the proposed operation, including:

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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

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

*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.

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 sources of drinking water.

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: _____ TITLE: _____

SIGNATURE: _____ DATE: _____

E-MAIL ADDRESS: _____

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: 05/01/2004; New drill for injection

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. 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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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.

Form C-108
Application for Authorization to Inject
Hilcorp Energy Company
Salty Dog #4 SWD
2580' FSL & 1890' FWL
Section 1, T30N, R14W, NMPM
San Juan County, New Mexico

A new C-108 application for authorization to inject is being filed due to a proposed formation top adjustment and request to expand the approved injection interval. The request for adjustment is based on the following:

- A potential casing leak was identified on 05/09/2023. Diagnostic rig work was performed to identify the leaking interval. When the leak interval was identified (2956'–2962') it was isolated from the open perforations below (3118' – 4270'). While the two were isolated, the shut-in pressures at surface were the same. The equalized pressures seen at surface tell us that there is uniform reservoir communication between the leak and the open perforations, and thus, that the leak is within the same formation as the approved injection interval. The cement bond log (filed with NMOCD) shows exceptional cement bond across the zone in question, further supporting the observation that there is reservoir communication opposed to cement integrity issues.
- The current OCD recognized Mesaverde top is at 3106'. However, recent geologic review shows the Mesaverde top is at 2934'. This Mesaverde top is based on open hole logs ran on the subject well during drilling.
- There are two shale barriers, the Kirtland Shale and the Lewis Shale, between the top of the Mesaverde (2934') and the Ojo Alamo (117'). The two shale barriers prevent the vertical migration of injected fluids. The Ojo Alamo is the only known possible source of drinking water penetrated by the subject well.
- Hilcorp Energy Company is proposing an adjustment of the Mesaverde top from 3106' to 2934'; and requesting an expansion of the injection interval to allow injection from the top of the Mesaverde formation at 2934' to the bottom of the Mesaverde formation at 4292'.

The salty Dog 04 SWD is currently shut-in pending a plan of action. Upon C-108 permit approval – an IPI 268 permit will be filed for a new step-rate with the new well configuration. Once approved – the well will be put back on injection.

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V. Lease/Well Map: Attached hereto.

VI. Tabulation of Data: Submitted 05/01/2004 (New Drill application); No Changes within the well's area of review.

VII. Operating Data:

1. Average daily injected volume will be 600 bbls/day. The expected maximum daily injected volume will be 1000 bbls/day.
2. This is a closed system.
3. Average injection pressure will be 1000 psi. The current maximum allowable injection pressure for this well is 1165 psi. A max allowable surface injection pressure of 1165 psi will be requested, with option for additional pressure increase with approved step rate test.
4. Injected water will be produced from the Pictured Cliffs (Harper Hill Fruitland Sand PC) and Fruitland Coal (Basin Fruitland Coal) formations from four State of New Mexico wells (WF State 2-1, 2-2, 2-3, 2-4); six Federal wells (WF Federal 1-2,1-1, 12-1, 12-2, 11-1, 11-4); and nine Lunt wells (Lunt FC 1, 2, 3, 4, 5, 6, 7, 8, 11). Produced water will be injected into the Mesaverde formation. Pictured Cliffs and Fruitland Coal water analyses were submitted 05/01/2004.
5. Injected water is for disposal purposes. An analysis of Mesaverde water was submitted 05/01/2004. This is still representative of the Mesaverde water in the area.

VIII. Geologic Information:

- Injection will be in the Mesaverde formation. The top of the Mesaverde is at 2934', with a total thickness of approximately 1358'. The Ojo Alamo is a possible source of drinking water being at approximately 117'. It is located behind casing and cemented. There are no known sources of drinking water below the proposed injection formation.

<u>Formation</u>	<u>MD</u>	<u>SS</u>	<u>TVD</u>
Kirtland	197	5,538	197
Fruitland Coal	904	4,831	904
Pictured Cliffs	1,491	4,244	1,491
Lewis	1,653	4,082	1,653
Huerfanito Bentonite	2,255	3,480	2,255
Chacra	2,638	3,097	2,638
Cliff House	2,934	2,801	2,934
Menefee	3,250	2,485	3,250
Point Lookout	3,943	1,792	3,943
Mancos	4,293	1,442	4,293

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San Juan County, New Mexico

XI. Stimulation Program:

The Mesaverde formation was acidized upon completion.

X. Logs:

Well logs have been filed with the Division.

XI. Fresh Water Analysis:

There are no known freshwater wells within a one-mile radius of Salty Dog 04 disposal well.

XII. Affirmative Statement:

Hilcorp Energy Company has examined available geologic and engineering data and finds no evidence of open faults or any other hydraulic connection between the proposed disposal well and underground sources of drinking water.

INJECTION WELL DATA SHEET

Side 1

OPERATOR: Hilcorp Energy Company

WELL NAME & NUMBER: Salty Dog 04 SWD

WELL LOCATION: 2580' FSL & 1890' FWL
FOOTAGE LOCATION

UNIT LETTER K

SECTION 1

TOWNSHIP 30 North

RANGE 14 West

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA
Surface Casing

- Attached

Hole Size: 12-1/4" Casing Size: 8-5/8" (0' - 447')

Cemented with: 320 sx. or ft³

Top of Cement: surface Method Determined: visual

Intermediate Casing

Hole Size: N/A Casing Size:

Cemented with: sx. or ft³

Top of Cement: Method Determined:

Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2" (0' - 4,398')

Cemented with: 765 sx. or ft³

Top of Cement: surface Method Determined: visual

Total Depth: 4,362' PBTD

Injection Interval

2,934 feet to 4,292' (perforated)

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" Lining Material: Plastic Coated

Type of Packer: 4-5/8" Nickle Coated AS-1X with on/off tool

Packer Setting Depth: 3,038'/current; 2,840'/proposed

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? Yes No

If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: Mesaverde Formation

3. Name of Field or Pool (if applicable): Blanco Mesaverde

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

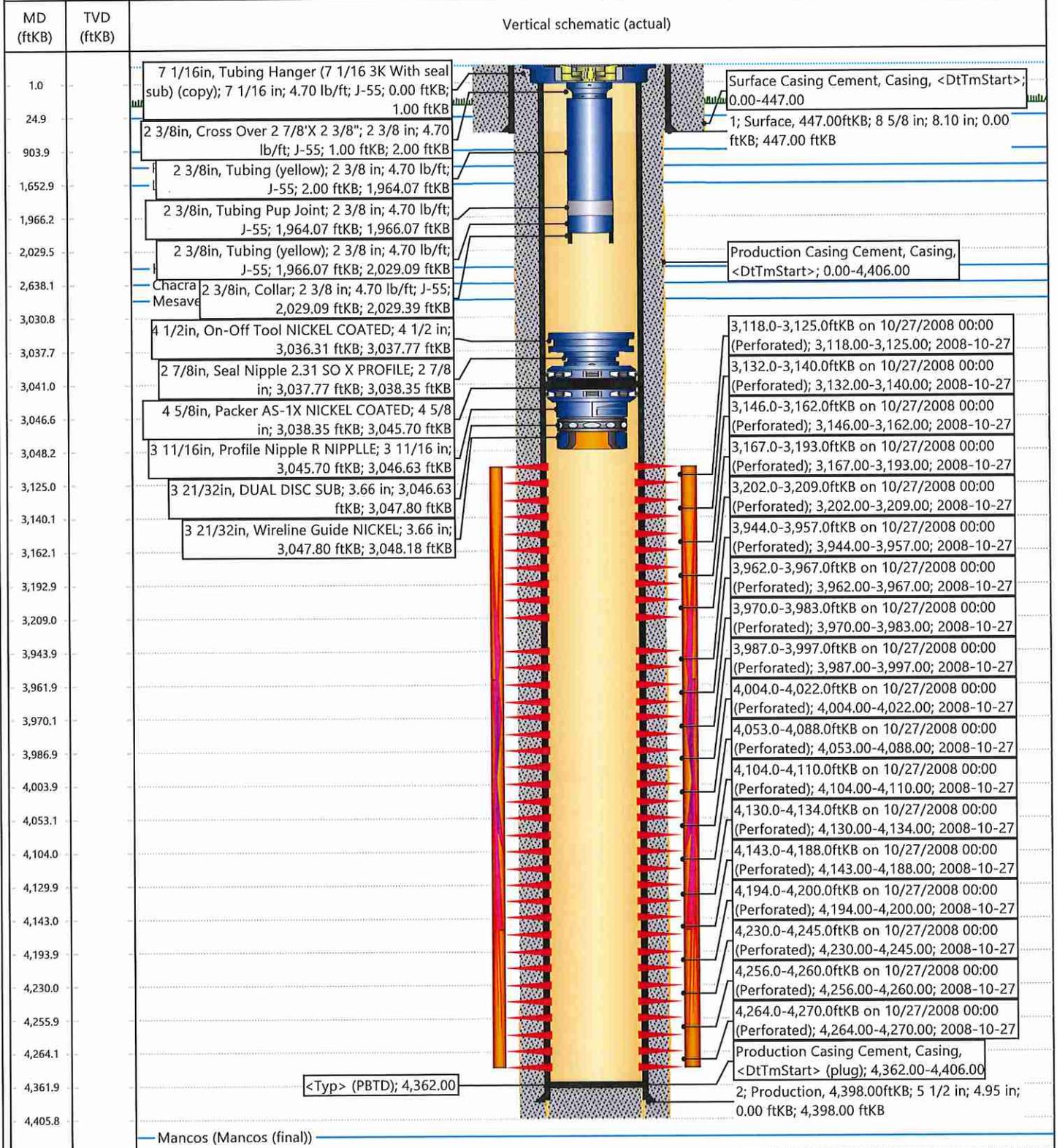
Above - Pictured Cliffs: (1,491' - 1,652') MD

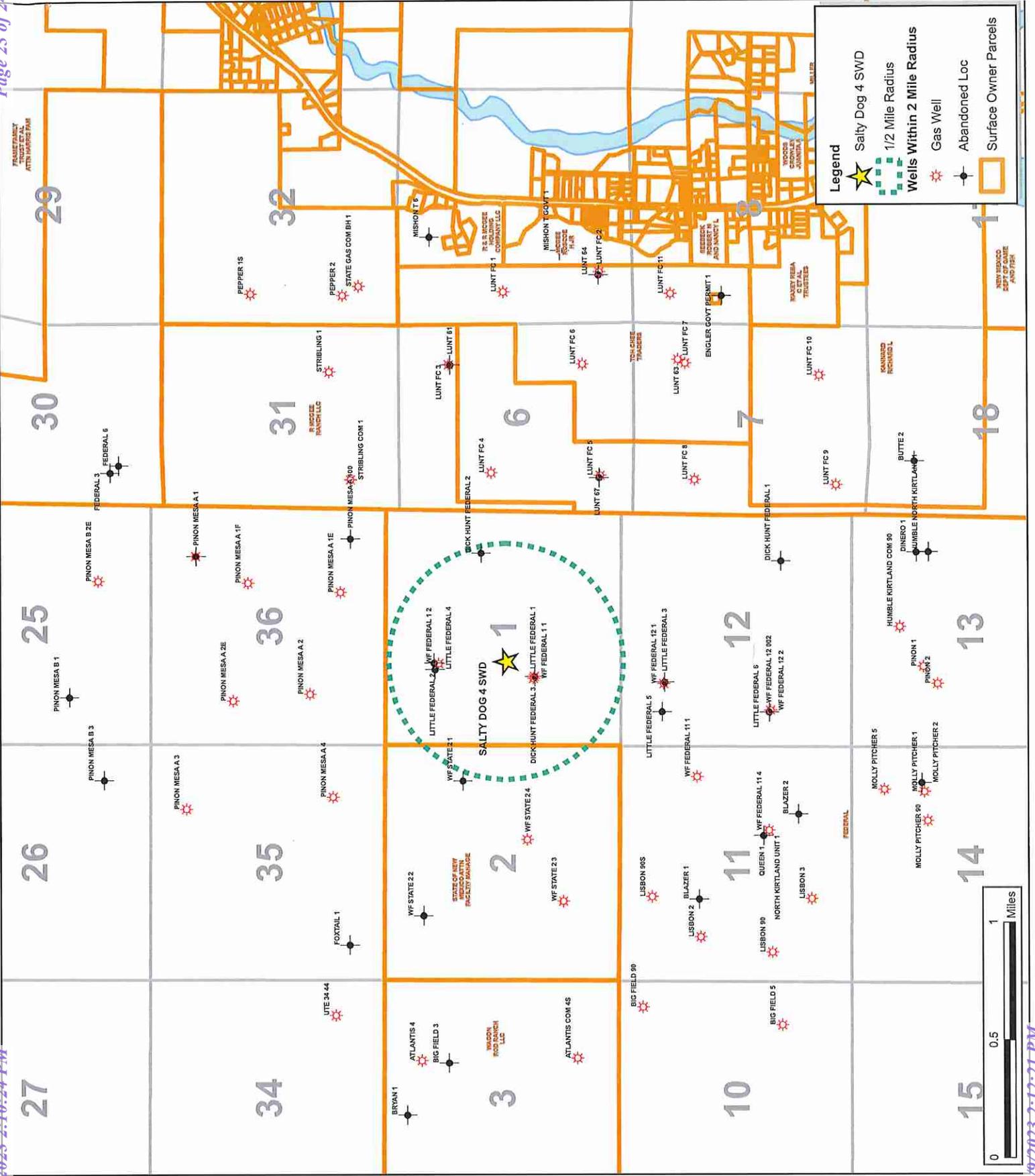
Below - Mancos: 4,293' MD

Well Name: SALTY DOG SWD #4

API / UWI 3004532334	Surface Legal Location T30N-R14W-S01	Field Name Entrada Mesaverde	Route 0202	State/Province New Mexico	Well Configuration Type Vertical
Ground Elevation (ft) 5,726.00	Original KB/RT Elevation (ft) 5,734.91	RKB to GL (ft) 8.91	KB-Casing Flange Distance (ft)	KB-Tubing Hanger Distance (ft)	

Original Hole [Vertical]





Legend

- Salty Dog 4 SWD
- 1/2 Mile Radius
- Wells Within 2 Mile Radius
- Gas Well
- Abandoned Loc
- Surface Owner Parcels



District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 263493

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 263493
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	9/9/2023