

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

Incident ID	nAPP2314353244
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party Hilcorp Energy Company	OGRID 372171
Contact Name Mitch Killough	Contact Telephone 713-757-5247
Contact email mkillough@hilcorp.com	Incident # nAPP2314353244
Contact mailing address 1111 Travis Street, Houston, Texas 77002	

### Location of Release Source

Latitude 36.842775 Longitude -108.262324  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Salty Dog SWD 4	Site Type Salt Water Disposal
Date Release Discovered 5/8/2023 @ 8:18 am MT	API# 30-045-32334

Unit Letter	Section	Township	Range	County
K	01	30N	14W	San Juan

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 10.2 bbls	Volume Recovered (bbls) 5 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

#### Cause of Release:

On 5/8/2023 at 8:18 am (MT), 10.2 bbls produced water was released from an injection wellhead when a pressure gauge that was tied to the backside casing valve failed resulting in the release of produced water. As soon as the release was found during a routine inspection on 5/8/2023, the operator closed the valve to stop the leak. After stopping the leak, a trash-pump was used to recover approximately 5 bbls of standing produced water into the pit tank on location. 5.2 bbl produced water could not be recovered and soaked into the pad surface. The spilled fluids remained on the pad surface.


The spill amount was determined by pulling data from Hilcorp's SCADA software (i.e. Cygnet). Hilcorp will notify NMOCD 48 hrs prior to final confirmation sampling.

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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Mitch Killough</u>	Title: <u>Environmental Specialist</u>
Signature: 	Date: <u>5/23/2023</u>
email: <u>mkillough@hilcorp.com</u>	Telephone: <u>713-757-5247</u>
<b><u>OCD Only</u></b>	
Received by: <u>Jocelyn Harimon</u>	Date: <u>05/24/2023</u>

## SYSTEM IDENTIFICATION

Hilcorp Energy  
Salty Dog #4 SWD  
Pre Filter

Sample ID#: 0  
ID 2203-24-01

Sample Date: 03-09-2022 at 0000  
Report Date: 03-15-2022

## WATER CHEMISTRY

### CATIONS

Calcium(as Ca)	67.10
Magnesium(as Mg)	24.53
Barium(as Ba)	16.61
Strontium(as Sr)	17.25
Sodium(as Na)	5185
Potassium(as K)	20.73
Iron(as Fe)	0.646
Aluminum(as Al)	0.0260
Manganese(as Mn)	0.0670

### ANIONS

Chloride(as Cl)	7400
Sulfate(as SO <sub>4</sub> )	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	70.00
Bicarbonate(as HCO <sub>3</sub> )	1830
Carbonate(as CO <sub>3</sub> )	0.00
Phosphate(as P)	0.489
H <sub>2</sub> S (as H <sub>2</sub> S)	2.00
Boron(as B)	3.13

### PARAMETERS

Temperature(°F)	50.00	Sample pH	7.50
Conductivity	13806	Sp.Gr.(g/mL)	1.009
Resistivity	72.43	T.D.S.	14688

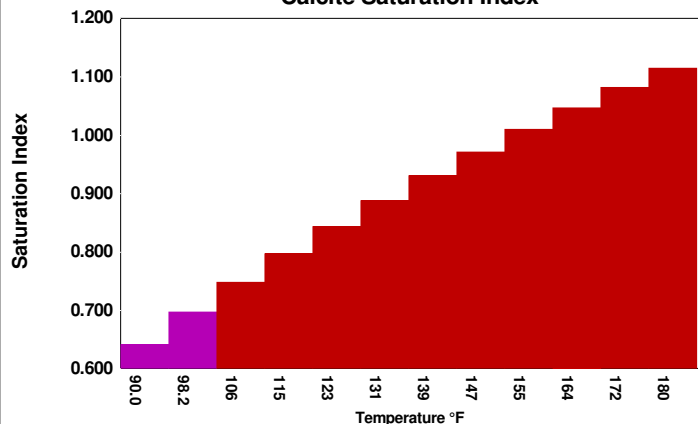
## SCALE AND CORROSION POTENTIAL

Temp. (°F)	Press. (psia)	Calcite CaCO <sub>3</sub>		Anhydrite CaSO <sub>4</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Barite BaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Siderite FeCO <sub>3</sub>		Mackinawite FeS		CO <sub>2</sub> (mpy)	pCO <sub>2</sub> (psia)
90.00	20.00	0.64	3.34	N/A	-1012	N/A	-924.42	N/A	-1.09	N/A	-102.55	1.93	0.442	0.47	0.0632	0.0770	0.921
98.18	27.27	0.70	3.75	N/A	-984.48	N/A	-927.21	N/A	-1.25	N/A	-101.27	2.01	0.441	0.55	0.0702	0.104	1.26
106.36	34.55	0.75	4.14	N/A	-951.82	N/A	-915.33	N/A	-1.42	N/A	-99.80	2.09	0.439	0.61	0.0735	0.128	1.59
114.55	41.82	0.80	4.53	N/A	-914.87	N/A	-882.56	N/A	-1.59	N/A	-98.41	2.16	0.437	0.65	0.0750	0.132	1.93
122.73	49.09	0.84	4.94	N/A	-874.55	N/A	-852.39	N/A	-1.79	N/A	-97.14	2.22	0.434	0.68	0.0753	0.133	2.26
130.91	56.36	0.89	5.36	N/A	-831.70	N/A	-824.61	N/A	-1.99	N/A	-95.98	2.29	0.430	0.69	0.0748	0.128	2.60
139.09	63.64	0.93	5.79	N/A	-787.13	N/A	-799.01	N/A	-2.22	N/A	-94.94	2.35	0.425	0.70	0.0737	0.119	2.93
147.27	70.91	0.97	6.23	N/A	-741.56	N/A	-775.42	N/A	-2.47	N/A	-93.99	2.41	0.418	0.71	0.0721	0.127	3.27
155.45	78.18	1.01	6.69	N/A	-695.63	N/A	-753.68	N/A	-2.73	N/A	-93.15	2.46	0.410	0.71	0.0700	0.138	3.60
163.64	85.45	1.05	7.17	N/A	-649.91	N/A	-733.65	N/A	-3.01	N/A	-92.40	2.51	0.400	0.70	0.0675	0.148	3.94
171.82	92.73	1.08	7.66	N/A	-604.90	N/A	-715.21	N/A	-3.31	N/A	-91.75	2.56	0.388	0.69	0.0645	0.158	4.27
180.00	100.00	1.11	8.16	N/A	-560.98	N/A	-698.25	N/A	-3.64	N/A	-91.18	2.60	0.375	0.68	0.0610	0.139	4.61
		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels		Lbs per 1000 Barrels			
		Log(SR)		Log(SR)		Log(SR)		Log(SR)		Log(SR)		Log(SR)		Log(SR)			

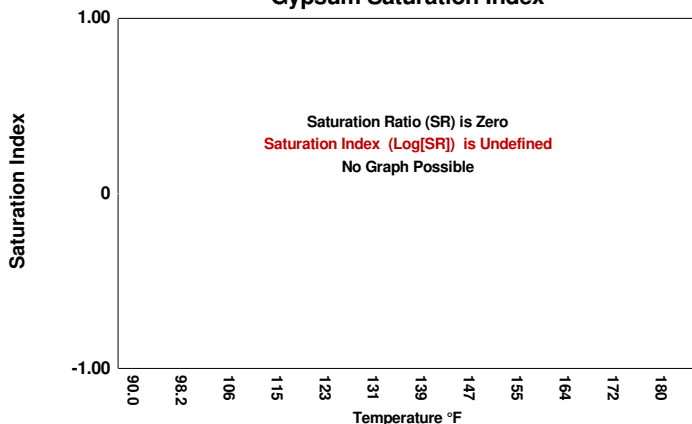
Saturation Ratios (xSAT) are the ratio of ion activity to solubility, e.g. {Ca}{CO<sub>3</sub>}/K<sub>sp</sub>. pCO<sub>2</sub> (psia) is the partial pressure of CO<sub>2</sub> in the gas phase.

Lbs/1000 Barrels scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.

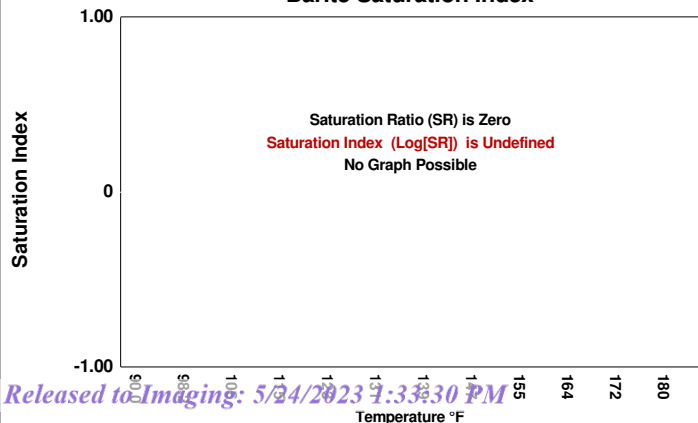
### Calcite Saturation Index



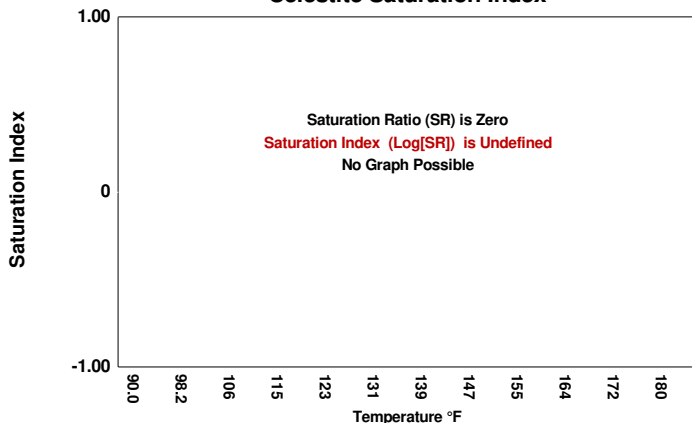
### Gypsum Saturation Index



### Barite Saturation Index



### Celestite Saturation Index



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State of New Mexico  
Energy, Minerals and Natural Resources  
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Santa Fe, NM 87505

CONDITIONS

Action 219888

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 219888
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	None	5/24/2023