

District I  
1625 N French Dr , Hobbs, NM 88240  
District II  
1301 W Grand Avenue, 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

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

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

30-045-30812

**OPERATOR**

☐ Initial Report ☒ Final Report

Name of Company <b>XTO Energy Inc.</b>	Contact <b>Kim Champlin</b>	
Address <b>#382 County Road 3100 Aztec, NM 87410</b>	Telephone No. <b>(505) 333-3207</b>	
Facility Name <b>Salty Dog #2</b>	Facility Type <b>Salt Water Disposal</b>	
Surface Owner <b>Federal</b>	Mineral Owner	Lease No. <b>NMSF 079968</b>

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>J</b>	<b>05</b>	<b>29N</b>	<b>14W</b>	<b>1495</b>	<b>South</b>	<b>1477</b>	<b>East</b>	<b>San Juan</b>

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

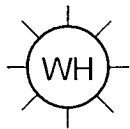
**NATURE OF RELEASE**

Type of Release <b>Produced Water</b>	Volume of Release <b>Approx 500 bbl</b>	Volume Recovered <b>Approx 80 bbl</b>
Source of Release <b>Pipeline</b>	Date and Hour of Occurrence <b>07/08/07, time unknown</b>	Date and Hour of Discovery <b>07/08/07 8:45 PM</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Brandon Powell- OCD Mark Kelly- BLM</b>	<b>RCVD MAY 23 '08 OIL CONS. DIV.</b>
By Whom? <b>Lisa Winn</b>	Date and Hour <b>07/09/07 9:00AM</b>	<b>DIST 3</b>
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse <b>Approximately 400 bbl</b>	
If a Watercourse was Impacted, Describe Fully.* <b>Approximately 400 bbl of produced water entered an unnamed dry wash adjacent to the location and traveled approximately 300 yards down the wash. Due to recent dry weather conditions the produced water was absorbed into the wash bed. Samples were collected along the area of the wash where the impact occurred. XTO is working with the BLM on treating the elevated chlorides within the impacted areas with gypsum.</b>		
Describe Cause of Problem and Remedial Action Taken * <input type="checkbox"/> A lease operator noticed a water leak on location during a routine visit on July 8, 2007. The leak was discovered in a water can cellar where multiple lines merge. The leaking pipeline was isolated and repaired. Approximately 500 barrels of produced water was released running off location approximately 140 feet into an unnamed dry wash. Appropriate notifications were made and a vac truck dispatched. Approximately 80 barrels of water was recovered from inside the water can cellar. Dry weather conditions caused the rest of the water to be absorbed into the ground on location and in the wash bed.		
Describe Area Affected and Cleanup Action Taken.* <b>A vac truck was used to recover water on location. Samples were collected and BLM was contacted to determine treatment of affected areas. Gypsum will be applied and worked into the alluvium for displacement of sodium and chloride ions.</b>		
<b>XTO applied 800 lbs of gypsum to the affected areas- the south side of the location to the end of the spill in the wash. The area was resampled once weather allowed. Lab data for both sample events and a diagram are included.</b>		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.		
Signature <i>Kim Champlin</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Kim Champlin</b>	Approved by District Supervisor: <i>Jonathan D. Kelly</i>	
Title: <b>Environmental Representative</b>	Approval Date: <i>2/07/2012</i> Expiration Date:	
E-mail Address: <b>Kim.Champlin@xtoenergy.com</b>	Conditions of Approval	
Date: <b>05/22/08</b>	Phone <b>505-333-3207</b>	Attached <input type="checkbox"/>

n5K1203848011

Well-Name: Salty Dog # 2, 1495' FSL, 1477' FEL  
Field: San Juan County, NM  
Serial Number: Lease # NMSF-079968  
Section: Sec. 5, T-29N, R-14W, NMPM

Bldg



Gate

Check Valve  
Source

Fence

Approx.  
140'

X SD # 2 BG  
Approx 70'  
From Beginning

Spill  
Beginning

64'

X SD # 2L

X SD # 2 B

45' Wide

X SD # 2 M

18 5'

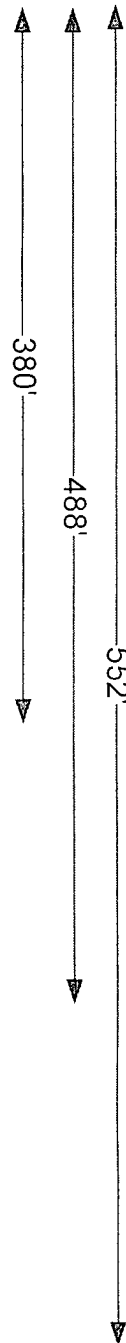
9'

X SD # 2 T

End Spill 552'

Drainage

N



SD#2BG- Background Sample  
SD# 2L- Liquid Sample  
SD # 2 B -Beginning Sample  
SD # 2 M -Middle Sample  
SD # 2 T - Terminus Sample

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

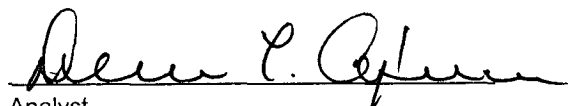
Client: XTO Energy  
Sample ID: SD #2BG  
Laboratory Number: 42352  
Chain of Custody: 2966  
Sample Matrix: Soil Extract  
Preservative: Cool  
Condition: Cool & Intact

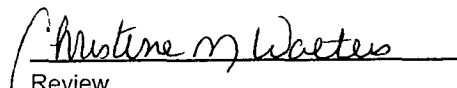
Project #: 98031-121  
Date Reported: 07-10-07  
Date Sampled: 07-09-07  
Date Received: 07-09-07  
Date Extracted: 07-09-07  
Date Analyzed: 07-10-07

Parameter	Analytical Result	Units		
pH	9.25	s.u.		
Conductivity @ 25° C	151	umhos/cm		
Total Dissolved Solids @ 180C	67.2	mg/L		
Total Dissolved Solids (Calc)	65.5	mg/L		
SAR	0.4	ratio		
Total Alkalinity as CaCO3	27.2	mg/L		
Total Hardness as CaCO3	40.1	mg/L		
Bicarbonate as HCO3	27.2	mg/L	0.45	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	2.12	mg/L	0.03	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	16.0	mg/L	0.45	meq/L
Fluoride	0.32	mg/L	0.02	meq/L
Phosphate	0.48	mg/L	0.02	meq/L
Sulfate	9.79	mg/L	0.20	meq/L
Iron	0.256	mg/L	0.01	meq/L
Calcium	1.79	mg/L	0.09	meq/L
Magnesium	8.70	mg/L	0.72	meq/L
Potassium	4.19	mg/L	0.11	meq/L
Sodium	5.60	mg/L	0.24	meq/L
Cations			1.17	meq/L
Anions			1.17	meq/L
Cation/Anion Difference			0.17%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Salty Dog #2

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

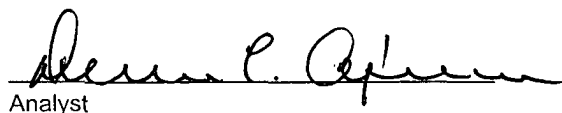
Client: XTO Energy  
Sample ID: SD #2B  
Laboratory Number: 42350  
Chain of Custody: 2966  
Sample Matrix: Soil Extract  
Preservative: Cool  
Condition: Cool & Intact

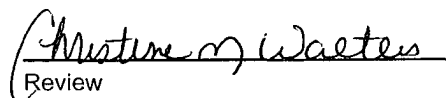
Project #: 98031-121  
Date Reported: 07-10-07  
Date Sampled: 07-09-07  
Date Received: 07-09-07  
Date Extracted: 07-09-07  
Date Analyzed: 07-10-07

Parameter	Analytical Result	Units		
pH	7.85	s.u.		
Conductivity @ 25° C	10,640	umhos/cm		
Total Dissolved Solids @ 180C	5,420	mg/L		
Total Dissolved Solids (Calc)	5,440	mg/L		
SAR	34.9	ratio		
Total Alkalinity as CaCO3	130	mg/L		
Total Hardness as CaCO3	515	mg/L		
Bicarbonate as HCO3	130	mg/L	2.13	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	3.60	mg/L	0.06	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	2,500	mg/L	70.53	meq/L
Fluoride	<0.01	mg/L	0.00	meq/L
Phosphate	2.50	mg/L	0.08	meq/L
Sulfate	821	mg/L	17.09	meq/L
Iron	0.011	mg/L	0.00	meq/L
Calcium	170	mg/L	8.48	meq/L
Magnesium	21.9	mg/L	1.80	meq/L
Potassium	18.3	mg/L	0.47	meq/L
Sodium	1,820	mg/L	79.17	meq/L
Cations			89.92	meq/L
Anions			89.89	meq/L
Cation/Anion Difference			0.04%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Salty Dog #2**

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

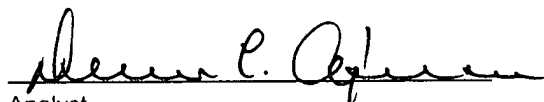
Client:	XTO Energy	Project #:	98031-121
Sample ID:	SD #2M	Date Reported:	07-10-07
Laboratory Number:	42349	Date Sampled:	07-09-07
Chain of Custody:	2966	Date Received:	07-09-07
Sample Matrix:	Soil Extract	Date Extracted:	07-09-07
Preservative:	Cool	Date Analyzed:	07-10-07
Condition:	Cool & Intact		

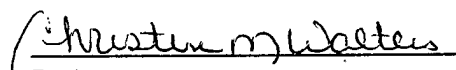
Parameter	Analytical Result	Units		
pH	8.38	s.u.		
Conductivity @ 25° C	6,880	umhos/cm		
Total Dissolved Solids @ 180C	3,310	mg/L		
Total Dissolved Solids (Calc)	3,370	mg/L		
SAR	19.7	ratio		
Total Alkalinity as CaCO3	45.6	mg/L		
Total Hardness as CaCO3	534	mg/L		
Bicarbonate as HCO3	45.6	mg/L	0.75	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	1.10	mg/L	0.02	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	1,650	mg/L	46.55	meq/L
Fluoride	<0.01	mg/L	0.00	meq/L
Phosphate	1.90	mg/L	0.06	meq/L
Sulfate	454	mg/L	9.45	meq/L
Iron	0.001	mg/L	0.00	meq/L
Calcium	77.2	mg/L	3.85	meq/L
Magnesium	83.3	mg/L	6.85	meq/L
Potassium	20.4	mg/L	0.52	meq/L
Sodium	1,050	mg/L	45.68	meq/L
Cations			56.90	meq/L
Anions			56.82	meq/L
Cation/Anion Difference			0.14%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.

Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Salty Dog #2

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

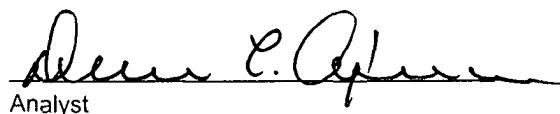
Client: XTO Energy  
Sample ID: SD #2T  
Laboratory Number: 42351  
Chain of Custody: 2966  
Sample Matrix: Soil Extract  
Preservative: Cool  
Condition: Cool & Intact

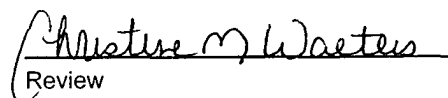
Project #: 98031-121  
Date Reported: 07-10-07  
Date Sampled: 07-09-07  
Date Received: 07-09-07  
Date Extracted: 07-09-07  
Date Analyzed: 07-10-07

Parameter	Analytical Result	Units		
pH	7.46	s.u.		
Conductivity @ 25° C	6,710	umhos/cm		
Total Dissolved Solids @ 180C	3,280	mg/L		
Total Dissolved Solids (Calc)	3,290	mg/L		
SAR	9.5	ratio		
Total Alkalinity as CaCO3	37.4	mg/L		
Total Hardness as CaCO3	1,210	mg/L		
Bicarbonate as HCO3	37.4	mg/L	0.61	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	1.59	mg/L	0.03	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	1,910	mg/L	53.88	meq/L
Fluoride	<0.01	mg/L	0.00	meq/L
Phosphate	27.4	mg/L	0.87	meq/L
Sulfate	157	mg/L	3.27	meq/L
Iron	0.008	mg/L	0.00	meq/L
Calcium	173	mg/L	8.63	meq/L
Magnesium	191	mg/L	15.72	meq/L
Potassium	45.9	mg/L	1.17	meq/L
Sodium	762	mg/L	33.15	meq/L
Cations			58.67	meq/L
Anions			58.65	meq/L
Cation/Anion Difference			0.03%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Salty Dog #2

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

Client: XTO Energy  
Sample ID: SD #2 B RS  
Laboratory Number: 45336  
Chain of Custody: 4342  
Sample Matrix: Soil Extract  
Preservative:  
Condition: Intact

Project #: 98031-0121  
Date Reported: 05-12-08  
Date Sampled: 05-06-08  
Date Received: 05-06-08  
Date Extracted: 05-07-08  
Date Analyzed: 05-08-08

Parameter	Analytical Result	Units		
pH	8.38	s.u.		
Conductivity @ 25° C	432	umhos/cm		
Total Dissolved Solids @ 180C	328	mg/L		
Total Dissolved Solids (Calc)	268	mg/L		
SAR	3.4	ratio		
Total Alkalinity as CaCO3	34.0	mg/L		
Total Hardness as CaCO3	68.7	mg/L		
Bicarbonate as HCO3	34.0	mg/L	0.56	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	1.2	mg/L	0.02	meq/L
Nitrite Nitrogen	0.003	mg/L	0.00	meq/L
Chloride	88.0	mg/L	2.48	meq/L
Fluoride	0.41	mg/L	0.02	meq/L
Phosphate	5.0	mg/L	0.16	meq/L
Sulfate	56.0	mg/L	1.17	meq/L
Iron	1.71	mg/L	0.06	meq/L
Calcium	24.5	mg/L	1.22	meq/L
Magnesium	1.84	mg/L	0.15	meq/L
Potassium	4.45	mg/L	0.11	meq/L
Sodium	65.7	mg/L	2.86	meq/L
Cations			4.41	meq/L
Anions			4.40	meq/L
Cation/Anion Difference			0.02%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: SD #2.

Analyst

Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

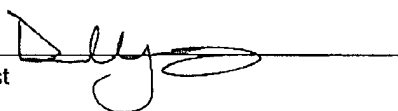
Client: XTO Energy  
Sample ID: SD #2 M RS  
Laboratory Number: 45337  
Chain of Custody: 4342  
Sample Matrix: Soil Extract  
Preservative:  
Condition: Intact

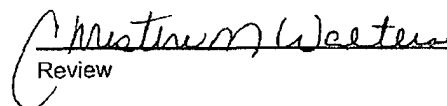
Project #: 98031-0121  
Date Reported: 05-14-08  
Date Sampled: 05-06-08  
Date Received: 05-06-08  
Date Extracted: 05-11-08  
Date Analyzed: 05-12-08

Parameter	Analytical Result	Units		
pH	8.58	s.u.		
Conductivity @ 25° C	82.6	umhos/cm		
Total Dissolved Solids @ 180C	64.0	mg/L		
Total Dissolved Solids (Calc)	62.5	mg/L		
SAR	2.4	ratio		
Total Alkalinity as CaCO3	12.0	mg/L		
Total Hardness as CaCO3	9.6	mg/L		
Bicarbonate as HCO3	12.0	mg/L	0.20	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	1.3	mg/L	0.02	meq/L
Nitrite Nitrogen	0.008	mg/L	0.00	meq/L
Chloride	11.0	mg/L	0.31	meq/L
Fluoride	0.37	mg/L	0.02	meq/L
Phosphate	6.1	mg/L	0.19	meq/L
Sulfate	14.7	mg/L	0.31	meq/L
Iron	2.95	mg/L	0.11	meq/L
Calcium	2.56	mg/L	0.13	meq/L
Magnesium	0.79	mg/L	0.07	meq/L
Potassium	1.52	mg/L	0.04	meq/L
Sodium	16.9	mg/L	0.74	meq/L
Cations			1.07	meq/L
Anions			1.05	meq/L
Cation/Anion Difference			2.47%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: SD #2.

Analyst 

Review 



# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## CATION / ANION ANALYSIS

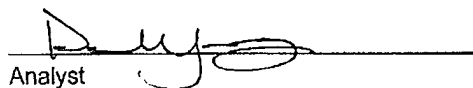
Client: XTO Energy  
Sample ID: SD #2 T RS  
Laboratory Number: 45338  
Chain of Custody: 4342  
Sample Matrix: Soil Extract  
Preservative:  
Condition: Intact

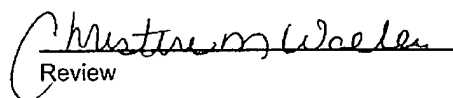
Project #: 98031-0121  
Date Reported: 05-14-08  
Date Sampled: 05-06-08  
Date Received: 05-06-08  
Date Extracted: 05-11-08  
Date Analyzed: 05-12-08

Parameter	Analytical Result	Units		
pH	8.49	S.U.		
Conductivity @ 25° C	98.1	umhos/cm		
Total Dissolved Solids @ 180C	54.0	mg/L		
Total Dissolved Solids (Calc)	53.4	mg/L		
SAR	2.6	ratio		
Total Alkalinity as CaCO3	9.2	mg/L		
Total Hardness as CaCO3	7.6	mg/L		
Bicarbonate as HCO3	9.2	mg/L	0.15	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	0.9	mg/L	0.01	meq/L
Nitrite Nitrogen	<0.01	mg/L	0.00	meq/L
Chloride	12.0	mg/L	0.34	meq/L
Fluoride	0.37	mg/L	0.02	meq/L
Phosphate	3.2	mg/L	0.10	meq/L
Sulfate	11.0	mg/L	0.23	meq/L
Iron	1.86	mg/L	0.07	meq/L
Calcium	2.12	mg/L	0.11	meq/L
Magnesium	0.56	mg/L	0.05	meq/L
Potassium	1.24	mg/L	0.03	meq/L
Sodium	16.4	mg/L	0.71	meq/L
Cations			0.96	meq/L
Anions			0.85	meq/L
Cation/Anion Difference			12.88%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: SD #2.

  
Analyst

  
Review