

**PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701**



Analytical Report

Prepared for:

Johnny Titsworth
Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland, TX 79705

Project: Water Flood
Project Number: [none]
Location: Loco Hills NM
Lab Order Number: 7C09001



NELAP/TCEQ # T104704156-16-6

Report Date: 03/21/17

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP11 0-1.0	7C09001-01	Soil	03/08/17 00:00	03-09-2017 11:48
SP11 1-2.0	7C09001-02	Soil	03/08/17 00:00	03-09-2017 11:48
SP11 2-3.0	7C09001-03	Soil	03/08/17 00:00	03-09-2017 11:48
SP11 3-4.0	7C09001-04	Soil	03/08/17 00:00	03-09-2017 11:48
SP11 4-5.0	7C09001-05	Soil	03/08/17 00:00	03-09-2017 11:48
SP12 0-1.0	7C09001-06	Soil	03/08/17 00:00	03-09-2017 11:48
SP12 1-2.0	7C09001-07	Soil	03/08/17 00:00	03-09-2017 11:48
SP12 2-3.0	7C09001-08	Soil	03/08/17 00:00	03-09-2017 11:48
SP12 3-4.0	7C09001-09	Soil	03/08/17 00:00	03-09-2017 11:48
SP12 4-5.0	7C09001-10	Soil	03/08/17 00:00	03-09-2017 11:48
SP13 0-1.0	7C09001-11	Soil	03/08/17 00:00	03-09-2017 11:48
SP13 1-2.0	7C09001-12	Soil	03/08/17 00:00	03-09-2017 11:48
SP13 2-3.0	7C09001-13	Soil	03/08/17 00:00	03-09-2017 11:48
SP13 3-4.0	7C09001-14	Soil	03/08/17 00:00	03-09-2017 11:48
SP13 4-5.0	7C09001-15	Soil	03/08/17 00:00	03-09-2017 11:48
SP14 0-1.0	7C09001-16	Soil	03/08/17 00:00	03-09-2017 11:48
SP14 1-2.0	7C09001-17	Soil	03/08/17 00:00	03-09-2017 11:48
SP14 2-3.0	7C09001-18	Soil	03/08/17 00:00	03-09-2017 11:48
SP14 3-4.0	7C09001-19	Soil	03/08/17 00:00	03-09-2017 11:48
SP14 4-5.0	7C09001-20	Soil	03/08/17 00:00	03-09-2017 11:48

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP11 0-1.0
7C09001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.04	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	4.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP11 1-2.0
7C09001-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.04	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	4.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP11 2-3.0
7C09001-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.01	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	1.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP11 3-4.0
7C09001-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.02	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	2.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP11 4-5.0
7C09001-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.02	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	2.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP12 0-1.0
7C09001-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.03	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	3.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP12 1-2.0
7C09001-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.04	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	4.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP12 2-3.0
7C09001-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	7.91	1.03	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	3.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP12 3-4.0
7C09001-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	13.3	1.04	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	4.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP12 4-5.0
7C09001-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	21.6	1.04	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	4.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP13 0-1.0
7C09001-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.02	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	2.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP13 1-2.0
7C09001-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	18.2	1.02	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	2.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP13 2-3.0
7C09001-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	338	1.05	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0	
% Moisture	5.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation	

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP13 3-4.0
7C09001-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	1480	10.8	mg/kg dry	10	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	7.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP13 4-5.0
7C09001-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	1610	10.8	mg/kg dry	10	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	7.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP14 0-1.0
7C09001-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	ND	1.02	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	2.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP14 1-2.0
7C09001-17 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	228	1.04	mg/kg dry	1	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	4.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP14 2-3.0
7C09001-18 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	4580	10.9	mg/kg dry	10	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	8.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP14 3-4.0
7C09001-19 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	3220	10.5	mg/kg dry	10	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	5.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

SP14 4-5.0
7C09001-20 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Permian Basin Environmental Lab, L.P.

General Chemistry Parameters by EPA / Standard Methods

Chloride	1690	5.26	mg/kg dry	5	P7C1502	03/15/17	03/16/17	EPA 300.0
% Moisture	5.0	0.1	%	1	P7C1305	03/13/17	03/13/17	% calculation

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P7C1305 - * DEFAULT PREP *****

Blank (P7C1305-BLK1)

Prepared & Analyzed: 03/13/17

% Moisture ND 0.1 %

Duplicate (P7C1305-DUP1)

Source: 7C09001-18

Prepared & Analyzed: 03/13/17

% Moisture 8.0 0.1 % 8.0 0.00 20

Duplicate (P7C1305-DUP2)

Source: 7C09006-03

Prepared & Analyzed: 03/13/17

% Moisture 9.0 0.1 % 9.0 0.00 20

Duplicate (P7C1305-DUP3)

Source: 7C10003-01

Prepared & Analyzed: 03/13/17

% Moisture 3.0 0.1 % 3.0 0.00 20

Duplicate (P7C1305-DUP4)

Source: 7C10017-12

Prepared & Analyzed: 03/13/17

% Moisture 11.0 0.1 % 10.0 9.52 20

Duplicate (P7C1305-DUP5)

Source: 7C10013-03

Prepared & Analyzed: 03/13/17

% Moisture 7.0 0.1 % 7.0 0.00 20

Batch P7C1502 - * DEFAULT PREP *****

Blank (P7C1502-BLK1)

Prepared: 03/15/17 Analyzed: 03/16/17

Chloride ND 1.00 mg/kg wet

LCS (P7C1502-BS1)

Prepared: 03/15/17 Analyzed: 03/16/17

Chloride 372 1.00 mg/kg wet 400 93.1 80-120

LCS Dup (P7C1502-BSD1)

Prepared: 03/15/17 Analyzed: 03/16/17

Chloride 374 1.00 mg/kg wet 400 93.5 80-120 0.448 20

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P7C1502 - * DEFAULT PREP *****

Duplicate (P7C1502-DUP1)		Source: 7C09001-01			Prepared: 03/15/17 Analyzed: 03/16/17					
Chloride	ND	1.04	mg/kg dry		ND				20	
Duplicate (P7C1502-DUP2)		Source: 7C09001-11			Prepared: 03/15/17 Analyzed: 03/16/17					
Chloride	ND	1.02	mg/kg dry		ND				20	
Matrix Spike (P7C1502-MS1)		Source: 7C09001-01			Prepared: 03/15/17 Analyzed: 03/16/17					
Chloride	989	1.04	mg/kg dry	1040	ND	95.0	80-120			

Burnett Oil Company, Inc.
24 Smith Road Suite 100
Midland TX, 79705

Project: Water Flood
Project Number: [none]
Project Manager: Johnny Titsworth

Fax:

Notes and Definitions

BULK Samples received in Bulk soil containers
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:



Date:

3/21/2017

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin Hwy
Midland, Texas 79701

Phone: 432-686-7235

Project Manager: Johnny Tisworth

Project Name: Water Flood

Company Name: Burnett Oil Company

Project #:

Company Address: P.O. Box 188 / 87 Square Lake Road

Project Loc: LOCO HILLS, NM

City/State/Zip: Loco Hills, New Mexico 88255

PO #:

Telephone No: 432-425-2891

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: [Signature]

e-mail:

jtisworth@burnettoil.com
d.holt@aspengrow.us
k.freeman@aspengrow.us
nesq@cox.net

ORDER # 9109001

Preservation & # of Containers

Matrix

Analyze For:

LAB # (lab use only)

FIELD CODE

Beginning Depth

Ending Depth

Date Sampled

Time Sampled

Field Filtered

Total #. of Containers

HNO₃ 250.mL Poly

HCl

H₂SO₄

NaOH

Na₂S₂O₃

None 1L Poly

NaOH/ZnAc

DW=Drinking Water SL=Sludge

GW = Groundwater S=Soil/Solid

NP=Non-Potable Specify Other

TPH by TX 1005 8015B 8015M

Chloride

BTEX by 8021B

Rush 24 48 72 (Please call)

Standard

Special Instructions:

If requested and total TPH exceeds 5,000 mg/kg - run deeper sample.
If requested and total BTEX exceeds 50 mg/kg -run deeper sample
If requested test and total Benzene exceeds 10 mg/kg -run deeper sample

Relinquished by: [Signature] Date 3/9/17 Time 11:48

Relinquished by: [Signature] Date 3/9/17 Time 11:48

Relinquished by: [Signature] Date 3/9/17 Time 11:48

Date 3/9/17 Time 11:48

Date 3/9/17 Time 11:48

Date 3/9/17 Time 11:48

Laboratory Comments:
Sample Containers intact? N
VOCs Free of Headspace? N
Labels on containers? N
Custody seals on containers? N
Custody seals on cooler? N
Sample Hand Delivered N
by Sampler/Client Rep. N
by Counter? N
Temperature Upon Receipt N
Received: 9.4 °C ACEV
Adjusted: 9.4 °C

