



NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410

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[http://emnr.state.nm.us/ocd/District III/3district.htm](http://emnr.state.nm.us/ocd/District%20III/3district.htm)

OIL CONS. DIV DIST. 3

AUG 04 2015

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 11-AUG-2015 Operator M J G API #30-0 45-13038

Property Name GRAHAM Well No. 53 Location: Unit L Section 10 Township 27 Range 8

Well Status (Shut-In or Producing) Initial PSI: Tubing 105 Intermediate N/A Casing 179 Bradenhead 78

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

Testing	PRESSURE			INTERM	
	BH	Bradenhead Int	Csg	Int	Csg
TIME					
5 min			186		
10 min			187		
15 min			186		
20 min			184		
25 min			181		
30 min			179		

	FLOW CHARACTERISTICS	
	BRADENHEAD	INTERMEDIATE
Steady Flow	X	
Surges		
Down to Nothing		
Nothing		
Gas		
Gas & Water		
Water	X	

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR X FRESH _____ SALTY _____ SULFUR X BLACK _____

5 MINUTE SHUT-IN PRESSURE

BRADENHEAD 74 INTERMEDIATE N/A

REMARKS:

OPENED THE BRADENHEAD AND WATER FLOWED
FROM IT MAKING 5 GALLONS EVERY 45 SECONDS AND
FLOWED FOR THE ENTIRE TEST. REQUESTED A WATER ANALYSIS.

By Dain Hinson

Witness John Durdam

Field Foreman

(Position)

E-mail address _____

KB: 6003'
GL: 5991'
12'

10-3/4" 36# csg @ 210' w/200 sx cmt.
Circ to surf.

7-1/2" 24# Intermediate csg @ 2,300' w/200 sx
cmt.

4-1/2" 11.6# csg @ 6,650 w/350 sx cmt.

Packer: @ 4,028' – 4,034'

9 jts 2-3/8" tbg below packer

2-3/8" Tbg @ 4,333'

Mesaverde from 4,330' – 4,430' with 1 JSPF

Tops:
PC: 2,050"
Cliffhouse: 3,800'
Point Lookout: 4,320'
Gallup: 5,505'
Greenhorn: 6,290
Dakota: 6,475'

PBTD: 4,370'
TD: 6,650'



Analytical Report

Report Summary

Client: M & G Drilling

Chain Of Custody Number:

Samples Received: 6/23/2015 5:05:00PM

Job Number: 04033-0002

Work Order: P506081

Project Name/Location: Water Testing

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read "Tim Cain", is written over a horizontal line.

Date: 7/1/15

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



M & G Drilling
PO Box 5940
Farmington NM, 87499

Project Name: Water Testing
Project Number: 04033-0002
Project Manager: David Hinson

Reported:
01-Jul-15 15:00

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Graham 32	P506081-01A	Aqueous	06/23/15	06/23/15	Poly 500mL
Graham 53	P506081-02A	Aqueous	06/23/15	06/23/15	Poly 500mL

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

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M & G Drilling	Project Name:	Water Testing	Reported: 01-Jul-15 15:00
PO Box 5940	Project Number:	04033-0002	
Farmington NM, 87499	Project Manager:	David Hinson	

Graham 53
P506081-02 (Water)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cation/Anion Analysis									
pH @25°C	9.40		pH Units	1	1527006	06/30/15 11:43	06/30/15 11:54	150.1/4500H	H1
Electrical Conductivity	8770		umhos/cm	1	1527006	06/30/15 11:43	06/30/15 11:54	EPA 120.1	H1
Total Dissolved Solids	8560	10.0	mg/L	1	1527007	06/30/15	06/30/15	160.1/2540C	
Sodium Absorption Ratio	36.6		N/A	1	1526018	06/25/15	06/25/15	[CALC]	
Total Alkalinity as CaCO3	300	10.0	mg/L	1	1527005	06/30/15	06/30/15	Hach Method 8203	
Total Hardness as CaCO3	924	0.07	mg/L		[CALC]	06/24/15	06/24/15	[CALC]	
Bicarbonate as CaCO3	300	10.0	mg/L	1	1527005	06/30/15	06/30/15	Hach Method 8203	
Carbonate as CaCO3	ND	10.0	mg/L	1	1527005	06/30/15	06/30/15	Hach Method 8203	
Hydroxide as CaCO3	ND	10.0	mg/L	1	1527005	06/30/15	06/30/15	Hach Method 8203	
Nitrate-N	ND	0.20	mg/L	2	1526025	06/29/15 10:33	06/29/15 14:04	EPA 300.0	H2
Nitrite-N	ND	0.20	mg/L	2	1526025	06/29/15 10:33	06/29/15 14:04	EPA 300.0	H2
Chloride	17.8	2.00	mg/L	2	1526025	06/29/15	06/29/15	EPA 300.0	
Fluoride	1.36	0.20	mg/L	2	1526025	06/29/15	06/29/15	EPA 300.0	
o-Phosphate	2.09	1.00	mg/L	2	1526025	06/29/15 10:33	06/29/15 14:04	EPA 300.0	H2
Sulfate	5090	2.00	mg/L	2	1526025	06/29/15	06/29/15	EPA 300.0	
Iron	0.02	0.01	mg/L	1	1526015	06/24/15	06/24/15	EPA 6010C	
Calcium	364	0.01	mg/L	1	1526015	06/24/15	06/24/15	EPA 6010C	
Magnesium	3.69	0.01	mg/L	1	1526015	06/24/15	06/24/15	EPA 6010C	
Potassium	7.43	0.01	mg/L	1	1526015	06/24/15	06/24/15	EPA 6010C	
Sodium	2560	0.10	mg/L	10	1526015	06/24/15	06/24/15	EPA 6010C	

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M & G Drilling
PO Box 5940
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Project Name: Water Testing
Project Number: 04033-0002
Project Manager: David Hinson

Reported:
01-Jul-15 15:00

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1526025 - Anion Extraction EPA 300.0

Blank (1526025-BLK1)

Prepared & Analyzed: 29-Jun-15

Nitrate-N	ND	0.10	mg/L
Nitrite-N	ND	0.10	"
Chloride	ND	1.00	"
Fluoride	ND	0.10	"
o-Phosphate	ND	0.50	"
Sulfate	ND	1.00	"

LCS (1526025-BS1)

Prepared & Analyzed: 29-Jun-15

Nitrate-N	5.46	0.10	mg/L	5.00	109	90-110	
Nitrite-N	5.46	0.10	"	5.00	109	90-110	
Chloride	51.9	1.00	"	50.0	104	90-110	
Fluoride	5.48	0.10	"	5.00	110	90-110	
o-Phosphate	28.5	0.50	"	25.0	114	90-110	SPK1
Sulfate	52.7	1.00	"	50.0	105	90-110	

Matrix Spike (1526025-MS1)

Source: P506081-01

Prepared & Analyzed: 29-Jun-15

Nitrate-N	11.2	0.20	mg/L	10.0	ND	112	80-120	
Nitrite-N	11.0	0.20	"	10.0	ND	110	80-120	
Chloride	117	2.00	"	100	12.4	105	80-120	
Fluoride	12.2	0.20	"	10.0	1.19	110	80-120	
o-Phosphate	1.36	1.00	"	50.0	3.15	NR	80-120	SPK1
Sulfate	3050	2.00	"	100	3010	32.1	80-120	SPK1

Matrix Spike Dup (1526025-MSD1)

Source: P506081-01

Prepared & Analyzed: 29-Jun-15

Nitrate-N	11.2	0.20	mg/L	10.0	ND	112	80-120	0.536	20	
Nitrite-N	11.1	0.20	"	10.0	ND	111	80-120	0.834	20	
Chloride	118	2.00	"	100	12.4	105	80-120	0.325	20	
Fluoride	12.2	0.20	"	10.0	1.19	110	80-120	0.361	20	
o-Phosphate	1.25	1.00	"	50.0	3.15	NR	80-120	8.72	20	SPK1
Sulfate	3020	2.00	"	100	3010	10.9	80-120	0.699	20	SPK1

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M & G Drilling
PO Box 5940
Farmington NM, 87499

Project Name: Water Testing
Project Number: 04033-0002
Project Manager: David Hinson

Reported:
01-Jul-15 15:00

Notes and Definitions

SPK1 The spike recovery is outside of quality control limits.

H2 Sample was analyzed after regulatory hold-time exceeded for target analyte.

H1 Sample was received after regulatory hold-time exceeded for target analyte.

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

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Client: M&G Drilling
 Project: Water Testing
 Sampler: Terry Hinson
 Phone: David 505-330-7107
 Email(s): dhinson@qwestoffice.net
 Project Manager: David Hinson

RUSH?

☐ 1d
☐ 3d

Lab Use Only		Analysis and Method								Lab Only		
Lab WO# P506081		GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Cation/Anion					Lab Number	Correct Cont/Prsrv (s) Y/N
Job Number 04033-0002												
Page 1 of 1												

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Cation/Anion							Lab Number	Correct Cont/Prsrv (s) Y/N
Graham 32	6/23/15	1530	A	1-500 Poly cool					X							1	Y
Graham 53	6/23/15	1500	A	1-500 Poly cool					X							2	Y

Relinquished by: (Signature) <u>Terry Hinson</u>	Date <u>6/23/15</u>	Time <u>1705</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>6/23/15</u>	Time <u>1705</u>	Lab Use Only	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	**Received on Ice <u>Y</u> / N T1 <u>3.2</u> T2 <u>2.3</u> T3 _____ AVG Temp °C <u>2.8</u>	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent days.

☐ Sample(s) dropped off after hours to a secure drop off area.	Chain of Custody	Notes/Billing info:
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