



# Certificate of Analysis

Number: 2030-2012120009-003A

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COGCC

## LAFAYETTE AREA LABORATORY

4790 N.E. EVANGELINE THRUWAY  
CARENCRO, LA 70520  
PHONE (337) 896-3055  
FAX (337) 896-3077

For: Taani Martinez  
Noble Energy, Inc.  
800 Airport Road  
Rifle, Colorado 81650

Sample ID:  
Station Name: SGV 7-G Pad  
Station Number:  
Project / Station Location: Federal 7-31A  
Project Number:  
Project Name:  
Sampled by: KP-Flow Data

Report Date: 12/04/2012  
Sample Of: Gas  
Sample Date: 11/28/2012 @ 10:10  
Sample Pres (psig): N.G. psi  
Sample Temp (D.F.): N.G. °F  
Sample Point:  
PO / Ref. No:  
Cylinder No: Tedlar

### SULFUR ANALYSIS

Method: GPA-2199

SULFIDES		MERCAPTANS		DISULFIDES	
	ppm (wt.)		ppm (wt.)		ppm (wt.)
Hydrogen	77.9	Methyl	<1.0	Carbon	<1.0
Carbonyl	N/D	Ethyl	<1.0	DiMethyl	N/D
DiMethyl	N/D	Isopropyl	N/D	Methyl Ethyl	N/D
Methyl Ethyl	N/D	n-Propyl	N/D	DiEthyl	N/D
DiEthyl	N/D	Isobutyl	N/D	Di-iso-propyl	N/D
Di-iso-propyl	N/D	sec-Butyl	N/D	Di-n-Propyl	N/D
Di-n-Propyl	N/D	tert-Butyl	N/D	Di-iso-butyl	N/D
Di-iso-butyl	N/D	n-Butyl	N/D	Di-sec-Butyl	N/D
Di-sec-Butyl	N/D	Isoamyl	N/D	Di-tert-Butyl	N/D
Di-tert-Butyl	N/D	pri-Amyl	N/D	Di-n-Butyl	N/D
Di-n-Butyl	N/D	n-Amyl	N/D	Unknown Disulfides	N/D
Unknown Sulfides	N/D				
OTHER					
Thiophene	1.1 ppm(wt.)				
Thiophane	N/D ppm(wt.)				
TOTAL SULFUR	73.8 ppm(wt.)				
	0.00738 weight %				
	3.254 grains/100 cu.ft.				

#### REMARKS:

Note: N/D = None Detected  
<1.0 = Detected @ unquantifiable level below 1.0 ppm.

*Brian Haggard*  
SPL Data Reviewer

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4790 N.E. EVANGELINE THRUWAY  
CARENCRO, LA 70520  
PHONE (337) 896-3055  
FAX (337) 896-3077

Number: 2030-2012120090-004A

For: Taani Martinez  
Noble Energy, Inc.  
800 Airport Road  
Rifle, Colorado 81650Sample ID:  
Station Name: SGV 7-G Pad  
Station Number:  
Project / Station Location: Federal 7-31A  
Project Number:  
Project Name:  
Sampled by: JR-NobleReport Date: 12/11/2012  
Sample Of: Gas  
Sample Date: 12/05/2012 @ 11:40  
Sample Pres (psig): N.G. psi  
Sample Temp (D.F.): N.G. °F  
Sample Point:  
PO / Ref. No:  
Cylinder No: Bag

## SULFUR ANALYSIS

Method: GPA-2199

SULFIDES		MERCAPTANS		DISULFIDES	
	ppm (wt.)		ppm (wt.)		ppm (wt.)
Hydrogen	502.4	Methyl	1.7	Carbon	<1.0
Carbonyl	N/D	Ethyl	<1.0	DiMethyl	N/D
DiMethyl	N/D	Isopropyl	N/D	Methyl Ethyl	N/D
Methyl Ethyl	N/D	n-Propyl	N/D	DiEthyl	N/D
DiEthyl	N/D	Isobutyl	N/D	Di-iso-propyl	N/D
Di-iso-propyl	N/D	sec-Butyl	N/D	Di-n-Propyl	N/D
Di-n-Propyl	N/D	tert-Butyl	N/D	Di-iso-butyl	N/D
Di-iso-butyl	N/D	n-Butyl	N/D	Di-sec-Butyl	N/D
Di-sec-Butyl	N/D	Isoamyl	N/D	Di-tert-Butyl	N/D
Di-tert-Butyl	N/D	pri-Amyl	N/D	Di-n-Butyl	N/D
Di-n-Butyl	N/D	n-Amyl	N/D	Unknown Disulfides	N/D
Unknown Sulfides	N/D				
OTHER					
Thiophene	N/D ppm(wt.)				
Thiophane	N/D ppm(wt.)				
TOTAL SULFUR	473.7 ppm(wt.)				
	0.04737 weight %				
	16.928 grains/100 cu.ft.				

## REMARKS:

Note: N/D = None Detected  
<1.0 = Detected @ unquantifiable level below 1.0 ppm.  
SPL Data Reviewer



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Number: 2030-2012110335-001A

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## LAFAYETTE AREA LABORATORY

4790 N.E. EVANGELINE THRUWAY  
CARENCRO, LA 70520  
PHONE (337) 896-3055  
FAX (337) 896-3077

For: Taani Martinez  
Noble Energy, Inc.  
800 Airport Road  
Rifle, Colorado 81650

Sample ID:  
Station Name: SGV 7-G  
Station Number:  
Project / Station Location: Federal 7-31A  
Project Number:  
Project Name:  
Sampled by: SD - Flow Data

Report Date: 11/30/2012  
Sample Of: Gas Spot  
Sample Date: 11/24/2012 @ 11:10  
Sample Pres (psig): N.G. psi  
Sample Temp (D.F.): N.G. °F  
Sample Point:  
PO / Ref. No:  
Cylinder No: Bag


### SULFUR ANALYSIS

Method: GPA-2199

SULFIDES		MERCAPTANS		DISULFIDES	
	ppm (wt.)		ppm (wt.)		ppm (wt.)
Hydrogen	11.3	Methyl	N/D	Carbon	N/D
Carbonyl	N/D	Ethyl	N/D	DiMethyl	N/D
DiMethyl	N/D	Isopropyl	N/D	Methyl Ethyl	N/D
Methyl Ethyl	N/D	n-Propyl	N/D	DiEthyl	N/D
DiEthyl	N/D	Isobutyl	N/D	Di-iso-propyl	N/D
Di-iso-propyl	N/D	sec-Butyl	N/D	Di-n-Propyl	N/D
Di-n-Propyl	N/D	tert-Butyl	N/D	Di-iso-butyl	N/D
Di-iso-butyl	N/D	n-Butyl	N/D	Di-sec-Butyl	N/D
Di-sec-Butyl	N/D	Isoamyl	N/D	Di-tert-Butyl	N/D
Di-tert-Butyl	N/D	pri-Amyl	N/D	Di-n-Butyl	N/D
Di-n-Butyl	N/D	n-Amyl	N/D	Unknown Disulfides	N/D
Unknown Sulfides	N/D				
OTHER					
Thiophene	N/D ppm(wt.)				
Thiophane	N/D ppm(wt.)				
TOTAL SULFUR	10.6 ppm(wt.)				
	0.00106 weight %				
	0.4 grains/100 cu.ft.				

#### REMARKS:

Note: N/D = None Detected  
<1.0 = Detected @ unquantifiable level below 1.0 ppm.

  
SPL Data Reviewer