



Certificate of Analysis

Number: 2030-2012120009-001A

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COGCC

LAFAYETTE AREA LABORATORY  
4790 N.E. EVANGELINE THORWAY  
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: Federal 7F Pad  
Station Number:  
Project / Station Location: Federal 7-22C  
Project Number:  
Project Name:  
Sampled by: KP-Flow Data

Report Date: 12/04/2012  
Sample Of: Gas  
Sample Date: 11/28/2012 @ 10:20  
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	221.1	Methyl	1.6	Carbon	<1.0
Carbonyl	N/D	Ethyl	<1.0	DiMethyl	N/D
DiMethyl	N/D	Isopropyl	<1.0	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	115.5 ppm(wt.)				
	0.01155 weight %				
	4.924 grains/100 cu.ft.				

REMARKS:

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

*Brian Hayward*  
SPL-Data Reviewer



Certificate of Analysis

LAFAYETTE AREA LABORATORY

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

Number: 2030-2012120090-002A

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

Sample ID:  
Station Name: Federal 7F Pad  
Station Number:  
Project / Station Location: Federal 7-22C  
Project Number:  
Project Name:  
Sampled by: SD-Noble

Report Date: 12/11/2012  
Sample Of: Gas  
Sample Date: 12/05/2012 @ 12:30  
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	272.8	Methyl	1.8	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	257.9 ppm(wt.)				
	0.02579 weight %				
	9.628 grains/100 cu.ft.				

REMARKS:

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

*Brian Hassel*  
SPL Data Reviewer