



Gas Analysis

Lot Number: **1040644**
Report Number: 1970660
Reference Sample ID: 4937681

28211G Painted Pony Petroleum LTD EX11892/EX13051
Meter # / Sample ID Operator Container Identity

200/c-025-F/094-B-16/00 Painted Pony HZ Town b-C014-F/094-B-16 28211 939.30
Location Well Name Well License No. KB Elev, m GR Elev, m

Montney b-C014-F/094-B-16
Field/Area Formation Pool Surface Location

J. Short Exova Evacuate and Fill
Test Type No Sampler Company Sampling Method

n/a Gas line 5-way manifold
Multiple Recovery Sample Point Other Information

Test Interval, m	Test Recovery:					
Perforations, m	Type of Production:	Pumping	Flowing	Gas Lift	Swab	
	Production Rates:	Water	m ³ /d	Oil	m ³ /d	Gas 10 ³ m ³ /d
Gauge Pressure, kPa	2600	2550	2300	Other ID		
	Temperature, °C	15	22	Schematic ID		
	Source	Sampled	Received	Other		

2014-11-20 10:20 2014-11-21 2014-11-21
Date Sampled (Y-M-D) Time Sampled Date Received (Y-M-D) Date Reported (Y-M-D) Date On Date Off

Comp.	Mole Fraction		Petroleum Liquid Content mL/m ³	Gross Heating Value, MJ/m ³			Pseudocritical Properties	
	As Received	Acid Gas Free		AGA #5 As Received	AGA #5 Acid Gas Free	GPA 2172 As Received	Pressure, kPa	Temperature, K
H2	0.0001	0.0001		40.00	40.10	40.00	4610	199.2
He	0.0001	0.0001		Density Ideal Gas (AGA #5)			Density Real Gas (GPA 2172)	
N2	0.0011	0.0011		Absolute, kg/m ³		Relative	Absolute, kg/m ³	Relative
CO2	0.0026	0.0000		0.731	0.597		0.733	0.598
H2S	0.0000	0.0000		Relative Molecular Mass			Mole Fraction C7+	Vapour Pressure Pentanes Plus, kPa
C1	0.9326	0.9351		Total Gas	C7+		0.0001	104
C2	0.0499	0.0500	177.3	C7+ Fraction As Gas			C7+ Density Liquid	
C3	0.0089	0.0089	32.7	Relative Density	GHV (MJ/m ³)		Relative	kg/m ³
iC4	0.0023	0.0023	10.0	3.461	211.92		0.689	688
nC4	0.0014	0.0014	5.9	Hydrogen Sulfide			Compressibility Z	
iC5	0.0005	0.0005	2.4	g/m ³			AGA #5	GPA #2172
nC5	0.0002	0.0002	1.0	0.00			0.99769	0.99766
C6	0.0002	0.0002	1.1	Hydrogen Sulfide				
C7	0.0001	0.0001	0.6	ppm (mol/mol)	Method	Field Value (ppm)	Field Method	
C8	Trace	Trace	0.0	<100	Chromatography TCD	0.0	Litmus	
C9	Trace	Trace	0.0					
C10+	0.0000	0.0000	0.0					
Total	1.0000	1.0000	231.0					

Approved by: *S Montgomery*

Sara Montgomery, B.Sc
Quality Officer

Data have been validated by Analytical Quality Control and Exova's Integrated Data Validation System (IDVS).
Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.

Note: Physical constants used in calculations from GPA Standard 2145-09. Gas properties calculated on air and moisture free basis with reference conditions 101.325 kPa and 15 °C.



Extended C15+ Gas Analysis

Lot Number: **1040644**
 Report Number: 1970660
 Reference Sample ID: 4937681

28211G Painted Pony Petroleum LTD EX11892/EX13051
 Meter # / Sample ID Operator Container Identity

200/c-025-F/094-B-16/00 Painted Pony HZ Town b-C014-F/094-B-16 28211 939.30
 Location Well Name Well License No. KB Elev, m GR Elev, m

Montney b-C014-F/094-B-16
 Field/Area Formation Pool Surface Location

J. Short Exova Evacuate and Fill
 Test Type No Sampler Company Sampling Method

n/a Gas line 5-way manifold
 Multiple Recovery Sample Point Other Information

Test Interval, m	Test Recovery:					
	Type of Production:	Pumping	Flowing	Gas Lift	Swab	
Perforations, m	Production Rates:	Water	m ³ /d	Oil	m ³ /d	Gas 10 ³ m ³ /d
	Gauge Pressure, kPa	2600	2550	2300	Other ID	Schematic ID
	Temperature, °C	15	22		Other	
	Source	Sampled	Received			

2014-11-20 10:20 2014-11-21 2014-11-21
 Date Sampled (Y-M-D) Time Sampled Date Received (Y-M-D) Date Reported (Y-M-D) Date On Date Off

Methodology: Gas Chromatography

C6+ components by GPA 2286, remainder of components by GPA 2261

	Mole %	Mole ppm		Mole ppm
Hydrogen	0.011	110	3-Methylhexane	14
Helium	0.011	110	2,2,4-Trimethylpentane	1
Nitrogen	0.118	1182	other Heptanes	7
Carbon Dioxide	0.261	2608	n-Heptane	11
Methane	93.246	932460	Methylcyclohexane	11
Ethane	4.990	49901	Toluene	9
Propane	0.8914	8914	2-Methylheptane	4
Iso-Butane	0.2335	2335	3-Methylheptane	3
n-Butane	0.1378	1378	other Octanes	<1
Neopentane	0.0048	48	n-Octane	3
Iso-Pentane	0.0456	456	Ethylbenzene	<1
n-Pentane	0.0183	183	p & m Xylene	3
2,2-Dimethylbutane		42	o-Xylene	<1
Cyclopentane		17	1,2,4-Trimethylbenzene	<1
2-Methylpentane		64	Other Nonanes	<1
3-Methylpentane		36	n-Nonane	1
other Hexanes		<1	Decanes (C10)	<1
n-Hexane		41	Undecanes (C11)	<1
Methylcyclopentane		4	Dodecanes (C12)	<1
Benzene		12	Tridecanes (C13)	<1
Cyclohexane		10	Tetradecanes (C14)	<1
2-Methylhexane		18	Pentadecane Plus (C15)	<1

Approved by:

S Montgomery

Sara Montgomery, B.Sc
 Quality Officer

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Methodology and Notes

Bill To: Painted Pony Petroleum LTD	Project:	Lot ID: 1040644
Report To: Painted Pony Petroleum LTD	ID:	Control Number:
Suite 1800, 736 6th Avenue SW	Name: Painted Pony HZ Town	Date Received: Nov 21, 2014
Calgary, AB, Canada	Location: b-C014-F/094-B-16	Date Reported: Nov 21, 2014
T2P 3T7	LSD: 200/c-025-F/094-B-16/00	Report Number: 1970660
Attn: Tim Michaelis	P.O.:	
Sampled By: J. Short	Acct code: 20373	
Company: Exova		

Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Extended C15+ Compositional Gas	GPA	* Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography, 2261-00	21-Nov-14	Exova Edmonton
Extended C15+ Compositional Gas	GPA	* Tentative Method of Extended Analysis for Natural Gas and Similar Gaseous Mixtures by Temperature Programmed Gas Chromatography, 2286-95	21-Nov-14	Exova Edmonton
Natural Gas - C7/10 Composition	GPA	* Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography, 2261-00	21-Nov-14	Exova Edmonton
Natural Gas - C7/10 Composition	GPA	Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis, 2172-09	21-Nov-14	Exova Edmonton

** Reference Method Modified*

References

GPA Gas Processors Association

Comments:

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

Report Transmission Cover Page

Bill To:	Painted Pony Petroleum LTD	Project:		Lot ID:	1040644
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	T2P 3T7	LSD:	200/c-025-F/094-B-16/00	Report Number:	1970660
Attn:	Tim Michaelis	P.O.:			
Sampled By:	J. Short	Acct code:	20373		
Company:	Exova				

Contact & Affiliation	Address	Delivery Commitments
Tim Michaelis Painted Pony Petroleum LTD	Suite 1800, 736 6th Avenue SW Calgary, Alberta T2P 3T7 Phone: (403) 441-2045 Fax: (000) 000-0000 Email: tim.michaelis@paintedpony.ca	On [Report Approval] send (Test Report) by Email - Single Report On [Report Approval] send (Test Report) by Email - Single Report On [Lot Approval and Final Test Report Approval] send (Invoice) by Email - Single Report

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