

**Gas Analysis**

Lot Number: **739726**  
Report Number: 1323489  
Reference Sample ID: 3340536

Well License No. 12-04-016-27 Operator Prairie Petro-Chem Ltd. Container Identity Tedlar/NWL33103  
Location 12-04-016-27 Well Name Tundra Oil and Gas 12-4-16-27 KB Elev, m \_\_\_\_\_ GR Elev, m \_\_\_\_\_  
Field/Area \_\_\_\_\_ Pool/Zone RW Sampler \_\_\_\_\_ Company Prairie Petro-Chem

Test Recovery: \_\_\_\_\_  
Test Type No \_\_\_\_\_  
Multiple Recovery n/a

Test Interval, m \_\_\_\_\_ **2" Annulus** Meter # / Sample ID \_\_\_\_\_  
Sample Point \_\_\_\_\_  
Type of Production: Pumping \_\_\_\_\_ Flowing \_\_\_\_\_ Gas Lift \_\_\_\_\_ Swab \_\_\_\_\_  
Production Rates: Water \_\_\_\_\_ m<sup>3</sup>/d Oil \_\_\_\_\_ m<sup>3</sup>/d Gas \_\_\_\_\_ 10<sup>3</sup> m<sup>3</sup>/d  
Perforations, m \_\_\_\_\_  
Gauge Pressure, kPa 19  
Temperature, °C 20  
Source \_\_\_\_\_ Sampled \_\_\_\_\_ Received \_\_\_\_\_  
Date On \_\_\_\_\_ Date Off \_\_\_\_\_

Date Sampled (Y-M-D) 2010-04-30 Time Sampled \_\_\_\_\_ Date Received (Y-M-D) 2010-05-04 Date Reported (Y-M-D) 2010-05-11 Well \_\_\_\_\_ Other Information \_\_\_\_\_

Comp.	Mole Fraction (Air Free)		Petroleum Liquid Content mL/m <sup>3</sup>
	As Received	Acid Gas Free	
H2	0.0417	0.0417	
He	0.0695	0.0695	
N2	0.8852	0.8856	
CO2	0.0004	0.0000	
H2S	0.0000	0.0000	
C1	0.0006	0.0006	
C2	0.0002	0.0002	0.7
C3	0.0004	0.0004	1.5
iC4	0.0002	0.0002	0.9
nC4	0.0002	0.0002	0.8
iC5	0.0003	0.0003	1.5
nC5	0.0002	0.0002	1.0
C6	0.0001	0.0001	0.5
C7	Trace	Trace	0.0
C8	Trace	Trace	0.0
C9	0.0003	0.0003	2.2
C10+	0.0007	0.0007	5.7
Total	1.000	1.000	14.9

Gross Heating Value - Moisture Free MJ/m <sup>3</sup> @ 15°C, 101.325 kPa			Pseudocritical Properties	
AGA #5	AGA #5	GPA 2172	Pressure, kPa	Temperature, K
As Received	Acid Gas Free	As Received		
1.00	1.00	1.00	3090	115.0
Density - Moisture Free, As Sampled				
Ideal Gas (AGA #5)		Real Gas (GPA 2172)		
Absolute, kg/m <sup>3</sup>	Relative	Absolute, kg/m <sup>3</sup>	Relative	
1.073	0.876	1.073	0.876	
Relative Molecular Mass		Hydrogen Sulfide	Vapour Pressure	
Total Gas	C7+	g/m <sup>3</sup>	Pentanes Plus, kPa	
25.37	138.07	0.00	33	

• H2S was determined by GC/SCD: <0.1 ppm (mol/mol)

Approved by: *S Montgomery*  
Sara Montgomery, B.Sc.  
Quality Officer  
Note: Physical constants used in calculations from GPA Standard 2145-09

## Methodology and Notes

Bill To: Prairie Petro-Chem Ltd.	Project:	Lot ID: <b>739726</b>
Report To: Prairie Petro-Chem Ltd.	ID:	Control Number:
738 - 6 Street	Name: Tundra Oil and Gas 12-4-16-27	Date Received: May 4, 2010
Estevan, SK, Canada	Location:	Date Reported: May 11, 2010
S4A 1A4	LSD: 12-04-016-27	Report Number: 1323489
Attn: Brent Frehlick	P.O.:	
Sampled By: RW	Acct code:	
Company: Prairie Petro-Chem		

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## Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Natural Gas - C7/10 Composition	GPA	* Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography, GPA 2261-00	10-May-10	Exova Edmonton
Total Reduced Sulfur Analysis of Natural Gas	ASTM	* Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, D 5504-08	05-May-10	Exova Edmonton

*\* Reference Method Modified*

## References

ASTM	Annual Book of ASTM Standards
GPA	Gas Processors Association

## Comments:

- Sample 739726-1; 3340536 H<sub>2</sub>S was determined by GC/SCD: <0.1 ppm (mol/mol)

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

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Attn: Brent Frehlick	P.O.:	
Sampled By: RW	Acct code:	
Company: Prairie Petro-Chem		

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Contact & Affiliation	Address	Delivery Commitments
Brent Frehlick Prairie Petro-Chem Ltd.	738 - 6 Street Estevan, Saskatchewan S4A 1A4 Phone: (306) 634-5808 Fax: (306) 634-6694 Email: brent.frehlick@petrochem.ca	On [Lot Verification] send (COA) by Email - Single Report On [Report Approval] send (Test Report) by Email - Merge Reports
Jocelyn Griffin Prairie Petro-Chem Ltd.	738 - 6 Street Estevan, Saskatchewan S4A 1A4 Phone: (306) 634-5808 Fax: (306) 634-6694 Email: labservices@petrochem.ca	On [Report Approval] send (Test Report) by Email - Merge Reports On [Lot Approval and Final Test Report Approval] send (Test Report, Invoice) by Email - Merge Reports

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### Notes To Clients:

- Sample 739726-1; 3340536 H2S was determined by GC/SCD: <0.1 ppm (mol/mol)