



GAS ANALYSIS

Container Identification		Laboratory Number	
V 198		GG63754A	
Operator Name			
PARAMOUNT RESOURCES LTD.			
Unique Well Identifier		Well Name	
NOT AVAILABLE		PARA et al FORT LIARD N-01	
Elevation			
KB m 492.10		GRD m 487.00	
Field or Area		Pool or Zone	
FORT LIARD		MATTSON	
Sampler's Company			
ALPINE			
Test Type	Test No.	Test Recovery	
DST	1	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	
Name of Sampler			
Test Interval or Perfs		Sampling Point	
1682.00-1691.00		PRE-FLOW	
mKB			
		Pressure (kPa)	Separator
		Temperature (°C)	Reservoir
			Source
			Sampled
			Received
			380
			21
Date Sampled		Date Received	
Jan 07, 2001		Jan 12, 2001	
Date Reported		Analyst	
Jan 15, 2001		LQ	
Other Information			

COMP	MOLE FRACTION		PETROLEUM LIQUID mL • m ³
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	
H ₂	TRACE	TRACE	
He	0.0001	0.0001	
N ₂	0.0050	0.0051	
CO ₂	0.0176	0.0000	
H ₂ S	0.0000	0.0000	
C ₁	0.9356	0.9525	
C ₂	0.0271	0.0276	
C ₃	0.0075	0.0076	27.5
IC ₄	0.0015	0.0015	6.5
NC ₄	0.0020	0.0020	8.4
IC ₅	0.0009	0.0009	4.4
NC ₅	0.0007	0.0007	3.4
C ₆	0.0007	0.0007	3.8
C ₇₊	0.0013	0.0013	8.3
Total	1.0000	1.0000	62.3

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
38.93	39.61

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.607	0.591

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4643	198.6	4594	196.7

RELATIVE MOLECULAR MASS

Total Gas	C ₇₊
17.6	104.5

**VAPOUR
PRESSURE**

65.97 kPa

H₂S g/m³

0.00





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GAS ANALYSIS

Container Identification
Z 272

Laboratory Number
GG63754F

Operator Name
PARAMOUNT RESOURCES LTD.

Unique Well Identifier	Well Name	Elevation
NOT AVAILABLE	PARA et al FORT LIARD N-01	KB m 492.10 GRD m 487.00

Field or Area	Pool or Zone	Sampler's Company
FORT LIARD	MATTSON	ALPINE

Test Type	Test No.	Test Recovery	Name of Sampler
DST	4	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	

Test Interval or Perfs	Sampling Point	Separator	Reservoir	Source	Sampled	Received
1717.00-1738.00	PRE-FLOW	Pressure (kPa)				1000
mKB		Temperature (°C)				21

Date Sampled	Date Received	Date Reported	Analyst
Jan 08, 2001	Jan 12, 2001	Jan 15, 2001	LQ

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID mL • m ³
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	
H ₂	TRACE	TRACE	
He	0.0001	0.0001	
N ₂	0.0048	0.0048	
CO ₂	0.0103	0.0000	
H ₂ S	0.0000	0.0000	
C ₁	0.9351	0.9450	
C ₂	0.0314	0.0317	
C ₃	0.0096	0.0097	35.3
IC ₄	0.0018	0.0018	7.9
NC ₄	0.0025	0.0025	10.5
IC ₅	0.0010	0.0010	4.9
NC ₅	0.0009	0.0009	4.4
C ₆	0.0010	0.0010	5.5
C ₇₊	0.0015	0.0015	9.5
Total	1.0000	1.0000	78.0

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.64	40.04

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.607	0.597

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4621	199.1	4593	198.0

RELATIVE MOLECULAR MASS

Total Gas	C ₇₊
17.6	103.9

VAPOUR PRESSURE
(Pentanes +)

64.90 kPa

H₂S g/m³

0.00



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AGAT®

Laboratories



GAS ANALYSIS

Container Identification		Laboratory Number	
V 2009		GG63754C	
Operator Name			
PARAMOUNT RESOURCES LTD.			
Unique Well Identifier		Well Name	
NOT AVAILABLE		PARA et al FORT LIARD N-01	
		Elevation	
		KB m	492.10 GRD m 487.00
Field or Area		Pool or Zone	
FORT LIARD		MATTSON	
		Sampler's Company	
		ALPINE	
Test Type	Test No.	Test Recovery	
DST	2	LATITUDE 60 deg 10' LONGITUDE 123 deg 15'	
Test Interval or Perfs		Sampling Point	
1643.00-1648.00		PRE-FLOW	
mKB			
		Separator	Reservoir
		Source	Sampled
		Received	
		Pressure (kPa)	20
		Temperature (°C)	21
Date Sampled		Date Received	
Jan 08, 2001		Jan 12, 2001	
Date Reported		Analyst	
Jan 15, 2001		LQ	
Other Information			

COMP	MOLE FRACTION		PETROLEUM LIQUID mL • m ³
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	
H2	0.0000	0.0000	
He	0.0001	0.0001	
N2	0.0120	0.0121	
CO2	0.0053	0.0000	
H2S	0.0000	0.0000	
C1	0.9392	0.9443	
C2	0.0272	0.0273	
C3	0.0078	0.0078	28.6
IC4	0.0015	0.0015	6.5
NC4	0.0020	0.0020	8.4
IC5	0.0009	0.0009	4.4
NC5	0.0008	0.0008	3.9
C6	0.0010	0.0010	5.5
C7+	0.0022	0.0022	14.0
Total	1.0000	1.0000	71.3

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free
39.37	39.56

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free
0.602	0.597

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4598	197.3	4583	196.7

RELATIVE MOLECULAR MASS

Total Gas	C7+
17.4	104.7

VAPOUR
PRESSURE

54.35 kPa

H₂S g/m³

0.00

