



Container Identification
007001347F

Operator Name	Previous Number	Laboratory Number
MURPHY OIL COMPANY LTD.	16GG110886A	17GG256802F

Unique Well Identifier	Well Name
a-F063-A/093-P-09	MURPHY Hz SWAN a-F63-A/93-P-9

Field or Area	Pool or Zone	Sampler's Company
REGIONAL HERITAGE	LOWER MONTNEY	MURPHY OIL COMPANY LTD.

Well License	Elevation		Test Type	Test No.	Name of Sampler
28968	KB m 756.70	GRD m 750.90			MN

Test Interval or Perfs mKB	Sampling Point	Separator	Reservoir	Source	Sampled	Received
2766.01-4241.44	TEST SEPARATOR			2565	2565	2800
mKB		Pressure (kPa)		16	16	21
		Temperature				

Date Sampled	Date Received	Date Analyzed	Date Reported	Location - Approved By - Title
Jul 30, 2017	Sep 07, 2017	Sep 13, 2017	Sep 13, 2017	Calgary - Gerry Ecker - Reporter

Other Information
BHL: 200/a-051-A/093-P-09/00

* Results relate only to the items tested

COMP	MOLE FRACTION		PETROLEUM LIQUID mL / m ³
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	
H2	TRACE	TRACE	
He	TRACE	TRACE	
N2	0.0023	0.0023	
CO2	0.0096	0.0000	
H2S	0.0000	0.0000	
C1	0.8830	0.8916	
C2	0.0676	0.0683	
C3	0.0217	0.0219	79.7
IC4	0.0047	0.0047	20.5
NC4	0.0056	0.0057	23.6
IC5	0.0017	0.0017	8.3
NC5	0.0016	0.0016	7.7
C6	0.0013	0.0013	7.1
C7+	0.0009	0.0009	5.8
Total	1.0000	1.0000	152.7

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

Air Free As Received	Moisture & Acid Gas Free	C7+, Air Free As Received
42.09	42.49	0.19

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

Air Free As Received	Moisture & Acid Gas Free
37.94	38.31

RELATIVE DENSITY (CALCULATED)

Moisture Free	Moisture & Acid Gas Free	C7+, Moisture Free	C7+, Portion Whole Density	C7+ Density (kg/m ³)	Total Sample Density(kg/m ³)
0.645	0.637	3.621	0.003	694.7	0.790

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPc (abs) kPa	pTc K	pPc (abs) kPa	pTc K
4616.9	207.1	4590.3	206.2

RELATIVE MOLECULAR MASS

Total Gas	C7+
18.7	104.9

VAPOUR PRESSURE (Pentanes +)

84.31 kPa

COMPRESSIBILITY Z-FACTOR (101.3250 kPa abs., 15°C)

0.9965

H2S g/m³

0.00

This analysis and calculations are based on GPA 2261, GPA 2145, and AGA#5

