EXTENDED GAS ANALYSIS

CONTAINER IDENTITY	METER ID	WELL LICENSE NUMBER	LABORATORY FILE NUMBER
V0003414 - 5		28082	52136-2014-9012

OPERATOR	PAGE
Black Swan Energy	6

LOCATION (UWI)	WELL NAME	KB ELEV (m)	GR ELEV (m)
202 b-58-G/94-G-1/00	Black Swan HZ Beg b-B79-G/94-G-1		

FIELD OR AREA	POOL OR ZONE	SAMPLER
Beg	Montney B	Core Lab - FSJ

TEST TYPE AND NO.	TEST RECOVERY

Meter Run

POINT OF SAMPLE | SAMPLE POINT ID

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

TEST INTERVAL or PERFS (meters)

Pressures, kPa (gauge) at 12:00 hrs

SEPARATOR	RESERVOIR	OTHER	CONTAINER WHEN SAMPLED	CONTAINER WHEN RECEIVED
			760 @ 15 °C	757 @ 22 °C

Temperatures, °C

SEPARATOR	OTHER

DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYZED (Y/M/D)	ANALYST	AMT. AND TYPE CUSHION	MUD RESISTIVITY
2014 01 13	2014 01 15	2014 01 16	GL		@ °C

COMPONENT	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	mL/m³ AIR FREE AS RECEIVED
H_2	Trace	Trace	
He	0.0001	0.0001	
N_2	0.0026	0.0026	
CO_2	0.0037	0.0000	
H_2S	Trace	0.0000	
C_1	0.8159	0.8189	
C_2	0.0965	0.0969	342.9
C_3	0.0373	0.0375	137.1
iC_4	0.0073	0.0073	31.9
C_4	0.0114	0.0115	48.0
iC_5	0.0041	0.0041	20.0
C_5	0.0045	0.0045	21.8
C_6	0.0060	0.0060	32.3
C_7	0.0057	0.0057	32.7
C_8	0.0036	0.0036	24.2
C_9	0.0010	0.0010	6.6
C_{10+}	0.0003	0.0003	2.4
Total	1.0000	1.0000	699.9

CALCULATED GROSS HEATING VALUE MJ/m³ @ 15°C & 101.325 kPa (abs.)		CALCULATED VAPOR PRESSURE kPa (abs.) @ 40 °C
47.70	47.87	59.2
MOISTURE FREE	MOISTURE & ACID GAS FREE	PENTANES PLUS

CALCULATED TOTAL SAMPLE PROPERTIES (AIR=1) @ 15°C & 101.325 kPa MOISTURE FREE AS SAMPLED

DENSITY	RELATIVE DENSITY	RELATIVE MOLECULAR MASS
0.897 kg/m³	0.732	21.2

CALCULATED PSEUDOCRITICAL PROPERTIES

AS SAMPLED pPc	AS SAMPLED pTc	ACID GAS FREE pPc	ACID GAS FREE pTc
4564.7 kPa (abs)	221.0 K	4554.4 kPa (abs)	220.7 K

C_{7+} PROPERTIES @ 15°C & 101.325 kPa DENSITY	C_{7+} PROPERTIES @ 15°C & 101.325 kPa MOLECULAR WEIGHT	MOLE FRACTION	LOCATION	METHOD
719.8 kg/m³	105.4	0.0000020	Field	Gastec
		HYDROGEN SULPHIDE		

REMARKS:

H2S determined in the field by Gastec = 2 ppm

NOTE: THE GROSS HEATING VALUE HAS BEEN CALCULATED IN ACCORDANCE TO AGA REPORT #5 AND ALL PROPERTIES HAVE BEEN CALCULATED UTILIZING PHYSICAL CONSTANTS AND BOILING POINT GROUPING.