



TB2A 22GS940681A  
 Container Identification Sample Point Code Meter Code AGAT WDMS Number Previous Number Laboratory Number

TUNDRA OIL & GAS LIMITED WELLHEAD CASING 102/04-18-010-27W1/00  
 Operator Name Sampling Point Unique Well Identifier

TUNDRA DALY SINCLAIR HZNTL 4-18-10-27 11374  
 Well Name Well License Well Status Well Fluid Status LSD

DALY LODGEPOLE AGAT/ESTEVAN CB  
 Field or Area Pool or Zone Sampler's Company Name of Sampler

Test Interval (mKB)		Elevation (m)		Pressure (kPa)		Temperature (°C)	
From :	To:	497.70	493.00	101		25	23
		KB	GRD	Source	Received	Source	Received

Sep 06, 2022 12:02 Sep 08, 2022 Sep 14, 2022 Sep 14, 2022 Calgary - Bernie Diep - Supervisor  
 Date/Time Sampled Date Received Date Analyzed Date Reported Location - Approved By - Title

Other Information : **Sample Point: WELLHEAD CASING #1; FIELD H2S BY TUT = 0.40%**

### COMPOSITION

Component	Mole Fraction		Liquid Volume mL / m <sup>3</sup>	Mole Fraction of Previous Analysis
	Air Free As Received	Air & Acid Gas Free As Received		
H <sub>2</sub>	0.0001	0.0001		
He	0.0002	0.0002		
N <sub>2</sub>	0.2075	0.2110		
CO <sub>2</sub>	0.0128	0.0000		
H <sub>2</sub> S	0.0040	0.0000		
C <sub>1</sub>	0.0579	0.0589		
C <sub>2</sub>	0.2254	0.2293	801.0	
C <sub>3</sub>	0.3207	0.3262	1178.5	
iC <sub>4</sub>	0.0415	0.0422	181.2	
nC <sub>4</sub>	0.0875	0.0890	368.1	
iC <sub>5</sub>	0.0159	0.0162	77.6	
nC <sub>5</sub>	0.0139	0.0141	67.3	
C <sub>6</sub>	0.0073	0.0074	40.1	
C <sub>7+</sub>	0.0053	0.0054	33.7	
<b>TOTAL</b>	<b>1.0000</b>	<b>1.0000</b>	<b>2747.5</b>	

### PROPERTIES

Calculated Heating Value @15 °C & 101.325 kPa (MJ/m <sup>3</sup> )				
Gross			Net	
<b>70.50</b>	<b>71.60</b>	<b>1.13</b>	<b>64.24</b>	<b>65.25</b>
Air Free as Received	Moisture & Acid Gas Free	C <sub>7+</sub> Moisture Free	Air Free as Received	Moisture & Acid Gas Free

Calculated Density				
Relative			Absolute	
<b>1.353</b>	<b>1.352</b>	<b>3.606</b>	<b>694.0</b>	<b>1.657</b>
Moisture Free As Received	Moisture & Acid Gas Free	C <sub>7+</sub> Moisture Free	C <sub>7+</sub> Density (kg/m <sup>3</sup> )	Total Sample Density (kg/m <sup>3</sup> )

Calculated Pseudo Critical Properties			
As Sampled		Acid Gas Free	
<b>4182.5</b>	<b>304.6</b>	<b>4121.5</b>	<b>304.4</b>
pPc (kPa)	pTc (K)	pPc (kPa)	pTc (K)

Hydrogen Sulfide (H <sub>2</sub> S) (ppm)			
Field Value		Laboratory Value	
<b>4000</b>		<b>5.75</b>	
Stain Tube (GPA 2377)	Tutweiler (GPA C1)	Other	GC-SCD (ASTM D5504)

Calculated Molecular Weight (Moisture Free as Received) (g/mol)	
<b>39.2</b>	<b>104.4</b>
Total Sample	C <sub>7+</sub> Fraction

Calculated Vapour Pressure	Gas Compressibility
<b>95.09</b>	<b>0.9837</b>
C <sub>5+</sub> (kPa)	@ 15 °C & 101.325 kPa

WDMS Data Verification Check



**Exceeds normal limits: IC5, NC5, N2**