WA: 29092

MaxxLINK

EXTENDED GAS ANALYSIS

TODOA22GE (MaxxID)	Client ID	N/A (Meter Number)	B3A7311:ID1502 (Laboratory Number)
TOURMALINE OIL CORP (Operator Name)		D05-05-080-15-W6M (LSD)	102/12-06-080-15W6/00 (Well ID)
TOURMALINE HZ DOE D5-5-80-15W6 (Well Name)		N/A (Initials of Sampler)	GRANT PETROLEUM (Sampling Company)
DOE (Field or Area)	MONTNEY (Pool or Zone)	METER RUN (Sample Point)	16790, 18541 (Container Identity) / Percent Full
Test Recovery			Other(Miscellaneous (Sample Gathering Point) / Solution Gas
Test Type / No. / Multiple Recovery	Interval From: 2115 To: 3815	Elevations (m) 808.01 KB, 801.76 GRD	Gas (Well Fluid Status) / Well Status Mode
Production Rates: 156.96 Water m3/d, 211.370 Oil m3/d, Gas 1000m3/d	Gauge Pressures kPa: 5100 Source, 4654 As Received	Temperature °C: 39 Source, 21 As Received	Well Status Type / Well Type 29093
			Gas or Condensate Project / Licence No.
2013/11/14 (Date Sampled Start)	Date Sampled End	2013/11/19 (Date Received)	2013/11/25 (Date Reported) / Date Reissued / ML9, YZ (Analyst)

COMPOSITION

Component	Mole Fraction Air Free As Rec'd	Mole Fraction Air Free Acid Gas Free	Liquid Volume mL/m3 Air Free As Rec'd	Historical Average Mole Fraction (0 data points)	Tolerance Score
H_2	TRACE	TRACE			
He	TRACE	TRACE			
N_2	0.0018	0.0018			
CO_2	0.0020				
H_2S	TRACE				
C_1	0.8243	0.8259			
C_2	0.0957	0.0959	339.91		
C_3	0.0424	0.0425	155.81		
iC_4	0.0080	0.0080	35.04		
nC_4	0.0133	0.0134	56.13		
iC_5	0.0038	0.0038	18.60		
nC_5	0.0038	0.0038	18.52		
C_6	0.0029	0.0029	16.13		
C_7	0.0009	0.0009	4.77		
C_8	0.0010	0.0010	5.83		
C_9	0.0001	0.0001	0.70		
C_{10}+	TRACE	TRACE	0.34		
TOTAL	1.0000	1.0000	651.78		
C_7+	0.0020	0.0020	11.64		
C_{12}+	0.0000	0.0000	0.00		
C_{15}+	0.0000	0.0000	0.00		

No historical data available for calculating statistical information

The H_2 content may be effected due to the degradation of H_2S.

PROPERTIES

Calculated Molar Mass (Moisture Free as Sampled): Total 20.4; C_7+ 97.7

Calculated Relative Densities: Moisture Free as Sampled 0.705; Moisture & Acid Gas Free 0.703; C_7+ Moisture Free

Calculated Pseudo Critical Properties: As Sampled — pPc (kPa) 4578.5, pTc (Kelvin) 217.9; Acid Gas Free — pPc (kPa) 4572.8, pTc (Kelvin) 217.7

Calculated Vapour Pressure: C_3+ (kPa) 93.9

Calculated Gross Heating Value (MJ/m3) @ 101.325 kPa & 15°C: GPA 2172 46.20; GPA 2172 Acid Gas Free 46.29; C_7+ as Received 195.96

Gas Compressibility @ 101.325 kPa & 15°C: 0.9966

Hydrogen Sulphide

On Site		In Lab		
Gastec (ppm v/v)	Tutweiler (mole%)	Gastec (ppm v/v)	Tutweiler (mole%)	H2S from GC (mole%)
20	0.002	not found	not found	<0.01

C_7+ pseudo-component properties of Molar Mass, Relative Density and Gross Heating Value, as per stipulated in ERCB Directive 017.
InLab GC H_2S number was used in calculations.
H_2S degrades variably in all sample containers and is also matrix dependant.

QC Check Std # 7585/5226 Date 2013/11/25 QC Passed Yes

** Information not supplied by client -- data derived from LSD information

Results relate only to items tested

Remarks:

The gas and condensate analyses do not match theoretical separation coefficients for the reported temperature and pressure.