Laboratory	Quality Assurance Laboratory, GAIL (India) Limited, LPG Recovery
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Plant, Lakwa, Dist. Sivasagar, Assam

Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing Issue Date 18.09.2014

Certificate Number T-0916 Valid Until 17.09.2016

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. PE	TROLEUM			
1.	Rich Natural Gas	Methane Ethane Propane iso-Butane n-Butane iso-Pentane n-Pentane Hexane+ Carbon dioxide Nitrogen	Gas Chromatography Method in line with ASTM D-1945-3 (Re approved - 10)	(75.0 to 97.0) mole% (0.50 to 9.00) mole% (0.50 to 6.50) mole% (0.10 to 1.50) mole% (0.10 to 2.00) mole% (0.10 to 1.00) mole% (0.10 to 1.00) mole% (0.01 to 0.60) mole% (0.20 to 2.50) mole% (0.10 to 2.00) mole%
		Calorific Value	By Calculation as per ASTM D 3588-98 (Re approved - 03)	(850 to 10500) kcal/Sm <sup>3</sup>
2.	Lean Natural Gas	Methane Ethane Propane iso-Butane n-Butane iso-Pentane n-Pentane Hexane+ Carbon dioxide Nitrogen	Pre calibrated Gas Chromatography Method in line with ASTM D-1945	(75.0 to 97.0) mole% (0.50 to 9.00) mole% (0.50 to 6.50) mole% (0.10 to 1.50) mole% (0.10 to 2.00) mole% (0.10 to 1.00) mole% (0.10 to 1.00) mole% (0.01 to 0.60) mole% (0.20 to 2.50) mole% (0.10 to 2.00) mole%
		Calorific Value	By Calculation as per ASTM D 3588-98 (Re approved – 2011)	(850 to10500) kcal/Sm <sup>3</sup>

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	LPG	Volatility for 95% Vol. Evaporation	IS-1448 [P-72]: 1968	(-) 48.2 °C to 4.4 °C
		Density @15°C	ISO 8973-1997 (By Calculation)	(0.500 to 0.600) g/cc
		Vapour Pressure @40°C	ISO 8973-1997 (By Calculation)	(850 to 1100) kPa
		Mercaptan	IS:1448[P:36]:1960	(15 to 75) mg/kg
		Components Ethane Propane i-Butane n-Butane i-Pentane n-Pentane	Pre calibrated Gas Chromatography Analysis In-house in line with IS:1448 [P:III] (1983)	(0.01 to 9.00) mole% (30.00 to 70.00) mole% (10.00 to 35.00) mole% (10.00 to 35.00)mole% (0.01 to 9.00) mole% (0.01 to 2.00) mole%