



OCD Received
5/20/2020

Well Name: ROSA 16; CSG
API #: CC# 62051432
Source: CASING
Sample Type: GAS
Analysis No: LG200098
Cust No: 46600-11695

Well/Lease Information

Customer Name: LOGOS OPERATING LLC
Well Name: ROSA 16; CSG
County/State: RIO ARRIBA NM
Location:
Lease/PA/CA:
Formation: MV/DK
Cust. Stn. No.: CC# 62051432

Source: CASING
Well Flowing: Y
Pressure: 110 PSIG
Flow Temp: DEG. F
Ambient Temp: 75 DEG. F
Flow Rate: 30 MCF/D
Sample Method: Purge & Fill
Sample Date: 05/07/2020
Sample Time: 3.35 PM
Sampled By: ROBERT JORDAN
Sampled by (CO): LOGOS

Heat Trace: AREA 1 CENTRAL
N

Remarks: SAMPLE CONTAINED A SMALL AMOUNT OF CONDENSATE.

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.0901	0.0894	0.0100	0.00	0.0009
CO2	1.8929	1.8791	0.3240	0.00	0.0288
Methane	94.6426	93.9518	16.0760	955.89	0.5242
Ethane	2.8118	2.7913	0.7530	49.76	0.0292
Propane	0.3866	0.3838	0.1070	9.73	0.0059
Iso-Butane	0.0762	0.0756	0.0250	2.48	0.0015
N-Butane	0.0405	0.0402	0.0130	1.32	0.0008
I-Pentane	0.0190	0.0189	0.0070	0.76	0.0005
N-Pentane	0.0074	0.0073	0.0030	0.30	0.0002
Hexane Plus	0.0329	0.0327	0.0150	1.73	0.0011
Total	100.0000	99.2701	17.3330	1021.97	0.5930

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0022
BTU/CU.FT IDEAL: 1024.3
BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1026.6
BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1008.7
DRY BTU @ 15.025: 1047.2
REAL SPECIFIC GRAVITY: 0.5941

CYLINDER #: 4155
CYLINDER PRESSURE: 109 PSIG
ANALYSIS DATE: 05/11/2020
ANALYSIS TIME: 07:47:36 AM
ANALYSIS RUN BY: RICHARD WILSON

GPM, BTU, and SPG calculations as shown above are based on current GPA constants.

GPA Standard: GPA-2261

GC: Danalyzer Model 500 Last Cal/Verify: 05/12/2020

GC Method: C6+ Gas



LOGOS OPERATING LLC
WELL ANALYSIS COMPARISON

Lease:	ROSA 16; CSG	CASING	05/12/2020
Stn. No.:	CC# 62051432	MV/DK	46600-11695
Mtr. No.:			

Smpl Date:	05/07/2020
Test Date:	05/11/2020
Run No:	LG200098
Nitrogen:	0.0901
CO2:	1.8929
Methane:	94.6426
Ethane:	2.8118
Propane:	0.3866
I-Butane:	0.0762
N-Butane:	0.0405
I-Pentane:	0.0190
N-Pentane:	0.0074
Hexane+:	0.0329
BTU:	1026.6
GPM:	17.3330
SPG:	0.5941