



Well Name: W O HUGHES 3; BHD

API #:

Source: BRADENHEAD

Sample Type: GAS

Analysis No: LG20220122

Cust No: 46600-10725

Well/Lease Information

Customer Name: LOGOS OPERATING LLC

Well Name: W O HUGHES 3; BHD

County/State: RIO ARRIBA NM

Location:

Lease/PA/CA:

Formation: PC

Cust. Stn. No.:

CC # 3128923A

AREA 2

Heat Trace: N

Remarks:

Source: BRADENHEAD

Well Flowing: N

Pressure: 43 PSIG

Flow Temp: DEG. F

Ambient Temp: 86 DEG. F

Flow Rate: MCF/D

Sample Method: Purge & Fill

Sample Date: 05/27/2022

Sample Time: 1.20 PM

Sampled By:

Sampled by (CO): LOGOS

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.1587	1.1312	0.1280	0.00	0.0112
CO2	0.0415	0.0405	0.0070	0.00	0.0006
Methane	83.0585	81.0893	14.1240	838.89	0.4601
Ethane	7.7518	7.5680	2.0790	137.18	0.0805
Propane	4.7279	4.6158	1.3060	118.96	0.0720
Iso-Butane	1.0611	1.0359	0.3480	34.51	0.0213
N-Butane	1.1708	1.1430	0.3700	38.20	0.0235
I-Pentane	0.4342	0.4239	0.1590	17.37	0.0108
N-Pentane	0.2592	0.2531	0.0940	10.39	0.0065
Hexane Plus	0.3363	0.3283	0.1500	17.73	0.0111
Total	100.0000	97.6290	18.7650	1213.22	0.6976

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z): 1.0033
 BTU/CU.FT IDEAL: 1216.0
 BTU/CU.FT (DRY) CORRECTED FOR (1/Z): 1220.1
 BTU/CU.FT (WET) CORRECTED FOR (1/Z): 1198.9
 DRY BTU @ 15.025: 1244.5
 REAL SPECIFIC GRAVITY: 0.6996

CYLINDER #: 4187
 CYLINDER PRESSURE: 40 PSIG
 ANALYSIS DATE: 06/01/2022
 ANALYSIS TIME: 11:27:17 AM
 ANALYSIS RUN BY: KERRA GONZALEZ

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: 06/08/2022

GC Method: C6+ Gas



LOGOS OPERATING LLC
WELL ANALYSIS COMPARISON

Lease:	W O HUGHES 3; BHD	BRADENHEAD	06/08/2022
Stn. No.:		PC	46600-10725
Mtr. No.:	CC # 3128923A		

Smpl Date:	05/27/2022	02/11/2020	05/02/2018	10/18/2017	10/18/2017	03/07/2017
Test Date:	06/01/2022	02/17/2020	05/03/2018	10/18/2017	10/18/2017	03/07/2017
Run No:	LG20220122	LG200042	LG180104	LG170178	LG170177	LG170055
Nitrogen:	1.1587	1.1026	1.1443	1.1061	1.1448	0.8400
CO2:	0.0415	0.0279	0.0234	0.0351	0.0313	0.0750
Methane:	83.0585	83.0493	83.5447	83.1511	84.0452	82.5063
Ethane:	7.7518	7.7314	7.5268	7.6610	7.6402	7.9848
Propane:	4.7279	4.7514	4.5553	4.7738	3.9821	4.8799
I-Butane:	1.0611	1.0820	1.0392	1.0875	0.8702	1.1100
N-Butane:	1.1708	1.2084	1.1539	1.1662	1.1557	1.2830
I-Pentane:	0.4342	0.4357	0.4186	0.4166	0.4439	0.4950
N-Pentane:	0.2592	0.2755	0.2635	0.2699	0.2907	0.3340
Hexane+:	0.3363	0.3358	0.3303	0.3327	0.3959	0.4920
BTU:	1220.1	1222.8	1214.5	1220.8	1207.2	1241.6
GPM:	18.7650	18.7830	18.7170	18.7680	18.6670	18.9210
SPG:	0.6996	0.7005	0.6956	0.6994	0.6910	0.7105

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District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 137735

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 137735
	Action Type: [UF-BHT] Bradenhead Test (BRADENHEAD TEST)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	for record only	8/26/2022