



Well Name: JULANDER FEDERAL #1E;
 API #: 3004525000
 Source: BRADENHEAD
 Sample Type: GAS
 Analysis No: LG20230244
 Cust No: 46600-11705

Well/Lease Information

Customer Name:	LOGOS OPERATING LLC	Source:	BRADENHEAD
Well Name:	JULANDER FEDERAL #1E; BHD	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	92 PSIG
Location:		Flow Temp:	28 DEG. F
Lease/PA/CA:		Ambient Temp:	28 DEG. F
Formation:	DK	Flow Rate:	0 MCF/D
Cust. Stn. No.:	3004525000	Sample Method:	Purge & Fill
	3931530	Sample Date:	11/09/2023
	CC# 3132366A	Sample Time:	8.30 AM
	AREA 4	Sampled By:	JASON CAMPBELL
Heat Trace:	N	Sampled by (CO):	LOGOS
Remarks:			

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.2731	0.2676	0.0300	0.00	0.0026
CO2	0.0083	0.0081	0.0010	0.00	0.0001
Methane	88.6762	86.9020	15.0720	895.63	0.4912
Ethane	6.7945	6.6586	1.8220	120.24	0.0705
Propane	2.6665	2.6132	0.7360	67.09	0.0406
Iso-Butane	0.4449	0.4360	0.1460	14.47	0.0089
N-Butane	0.6075	0.5953	0.1920	19.82	0.0122
I-Pentane	0.2047	0.2006	0.0750	8.19	0.0051
N-Pentane	0.1323	0.1297	0.0480	5.30	0.0033
Hexane Plus	0.1920	0.1882	0.0860	10.12	0.0064
Total	100.0000	97.9993	18.2080	1140.86	0.6410

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.0028	CYLINDER #:	4200
BTU/CU.FT IDEAL:	1143.5	CYLINDER PRESSURE:	146 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1146.7	ANALYSIS DATE:	11/13/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1126.7	ANALYSIS TIME:	03:02:57 AM
DRY BTU @ 15.025:	1169.7	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.6425		

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: 11/14/2023

GC Method: C6+ Gas



LOGOS OPERATING LLC
WELL ANALYSIS COMPARISON

Lease:	JULANDER FEDERAL #1E; BHD	BRADENHEAD	11/14/2023
Stn. No.:	3004525000	DK	46600-11705
Mtr. No.:	3931530		

Smpl Date:	11/09/2023	04/27/2023	05/12/2020
Test Date:	11/13/2023	04/24/2023	05/14/2020
Run No:	LG20230244	LG20230067	LG200110
Nitrogen:	0.2731	0.2987	0.2923
CO2:	0.0083	0.0018	0.0036
Methane:	88.6762	88.5051	90.6059
Ethane:	6.7945	6.7736	5.9909
Propane:	2.6665	2.7121	2.0423
I-Butane:	0.4449	0.4722	0.3323
N-Butane:	0.6075	0.6570	0.3898
I-Pentane:	0.2047	0.2237	0.1240
N-Pentane:	0.1323	0.1438	0.0764
Hexane+:	0.1920	0.2120	0.1425
BTU:	1146.7	1150.6	1117.1
GPM:	18.2080	18.2320	17.9680
SPG:	0.6425	0.6451	0.6236



Well Name: JULANDER FEDERAL 1E;
 API #: 30-045-25000
 Source: CASING
 Sample Type: GAS
 Analysis No: LG20230245
 Cust No: 46600-11720

Well/Lease Information

Customer Name:	LOGOS OPERATING LLC	Source:	CASING
Well Name:	JULANDER FEDERAL 1E; CSG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	92 PSIG
Location:		Flow Temp:	28 DEG. F
Lease/PA/CA:	NMNM019407	Ambient Temp:	28 DEG. F
Formation:	BASIN DAKOTA	Flow Rate:	0 MCF/D
Cust. Stn. No.:	30-045-25000	Sample Method:	Purge & Fill
	3931530	Sample Date:	11/09/2023
	CC# 3132366A	Sample Time:	8.30 AM
	AREA 4	Sampled By:	JASON CAMPBELL
Heat Trace:	N	Sampled by (CO):	LOGOS
Remarks:			

Analysis

Component::	Mole%:	Unnormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	0.5335	0.5293	0.0590	0.00	0.0052
CO2	1.2267	1.2171	0.2100	0.00	0.0186
Methane	75.4860	74.8972	12.8450	762.41	0.4181
Ethane	11.5552	11.4650	3.1020	204.49	0.1200
Propane	6.9013	6.8474	1.9080	173.64	0.1051
Iso-Butane	1.0209	1.0129	0.3350	33.20	0.0205
N-Butane	1.9478	1.9326	0.6160	63.54	0.0391
I-Pentane	0.5043	0.5004	0.1850	20.18	0.0126
N-Pentane	0.4181	0.4148	0.1520	16.76	0.0104
Hexane Plus	0.4062	0.4030	0.1820	21.41	0.0134
Total	100.0000	99.2197	19.5940	1295.63	0.7630

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBILITY FACTOR (1/Z):	1.004	CYLINDER #:	6205
BTU/CU.FT IDEAL:	1298.6	CYLINDER PRESSURE:	179 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1303.8	ANALYSIS DATE:	11/13/2023
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1281.1	ANALYSIS TIME:	03:10:39 PM
DRY BTU @ 15.025:	1329.9	ANALYSIS RUN BY:	ALEXIS MITCHELL
REAL SPECIFIC GRAVITY:	0.7657		

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: 11/14/2023

GC Method: C6+ Gas



LOGOS OPERATING LLC
WELL ANALYSIS COMPARISON

Lease:	JULANDER FEDERAL 1E; CSG	CASING	11/14/2023
Stn. No.:	30-045-25000	BASIN DAKOTA	46600-11720
Mtr. No.:	3931530		

Smpl Date:	11/09/2023	10/25/2023	04/14/2023	06/01/2020
Test Date:	11/13/2023	10/27/2023	04/24/2023	06/08/2020
Run No:	LG20230245	LG20230241	LG20230066	LG200113
Nitrogen:	0.5335	0.3459	0.4611	0.3462
CO2:	1.2267	1.2271	1.3034	1.1778
Methane:	75.4860	70.3585	74.9226	69.3122
Ethane:	11.5552	13.9527	12.3561	13.5116
Propane:	6.9013	8.4437	6.6990	8.8510
I-Butane:	1.0209	1.1843	0.9477	1.3489
N-Butane:	1.9478	2.6111	1.8369	3.0713
I-Pentane:	0.5043	0.7055	0.5314	0.9165
N-Pentane:	0.4181	0.6993	0.4466	0.8678
Hexane+:	0.4062	0.4719	0.4952	0.5967
BTU:	1303.8	1384.4	1308.2	1419.0
GPM:	19.5940	20.2530	19.6630	20.4610
SPG:	0.7657	0.8153	0.7689	0.8369

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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 323641

CONDITIONS

Operator: LOGOS OPERATING, LLC 2010 Afton Place Farmington, NM 87401	OGRID: 289408
	Action Number: 323641
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	None	3/15/2024