GAS ANALYSIS SERVICE

Well Name: UTE MOUNTAIN UTE 51;
API #: API # 3004529547
Source: BRADENHEAD
Sample Type: GAS

Analysis No: HS2021068
Cust No: 35825-11730

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	BRADENHEAD
Well Name:	UTE MOUNTAIN UTE 51; BHD	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	49 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	I-22-IND-2772	Ambient Temp:	DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3004529547	Sample Method:	Purge & Fill
		Sample Date:	04/27/2021
		Sample Time:	12.20 PM
	AREA 2 / RUN 0200	Sampled By:	KEVIN A.
Heat Trace:		Sampled by (CO):	HILCORP
Remarks:	H2S		

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.4169	1.3867	0.1560	0.00	0.0137
CO2	0.0131	0.0128	0.0020	0.00	0.0002
Methane	83.9541	82.1667	14.2720	847.94	0.4650
Ethane	8.8949	8.7055	2.3850	157.41	0.0923
Propane	3.5945	3.5180	0.9930	90.44	0.0547
Iso-Butane	0.5485	0.5368	0.1800	17.84	0.0110
N-Butane	0.8853	0.8665	0.2800	28.88	0.0178
I-Pentane	0.2688	0.2631	0.0990	10.75	0.0067
N-Pentane	0.2016	0.1973	0.0730	8.08	0.0050
Hexane Plus	0.2223	0.2176	0.0990	11.72	0.0074
Total	100.0000	97.8710	18.5390	1173.06	0.6738

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.003	CYLINDER #:	6204
BTU/CU.FT IDEAL:	1175.8	CYLINDER PRESSURE:	19 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1179.3	ANALYIS DATE:	05/04/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1158.8	ANALYIS TIME:	03:26:27 PM
DRY BTU @ 15.025:	1202.9	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.6756		

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: 05/05/2021**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	UTE MOUNTAIN UTE 51; BHD	BRADENHEAD	05/05/2021
Stn. No.:	API # 3004529547		35825-11730
Mtr. No.:			

Smpl Date:	04/27/2021	08/01/2019
Test Date:	05/04/2021	08/05/2019
Run No:	HS2021068	HS190198
Nitrogen:	1.4169	17.3207
CO2:	0.0131	0.0160
Methane:	83.9541	71.3339
Ethane:	8.8949	6.9389
Propane:	3.5945	2.7596
I-Butane:	0.5485	0.4214
N-Butane:	0.8853	0.6445
I-Pentane:	0.2688	0.1980
N-Pentane:	0.2016	0.1483
Hexane+:	0.2223	0.2187
BTU:	1179.3	977.3
GPM:	18.5390	17.2190
SPG:	0.6756	0.7156

Well Name: UTE MOUNTAIN UTE 51;
API #: API # 3004529547
Source: CASING
Sample Type: GAS

Analysis No: HS2021069
Cust No: 35825-11735

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	CASING
Well Name:	UTE MOUNTAIN UTE 51; CSG	Well Flowing:	
County/State:	SAN JUAN NM	Pressure:	631 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	I-22-IND-2772	Ambient Temp:	DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3004529547	Sample Method:	Purge & Fill
		Sample Date:	04/27/2021
		Sample Time:	12.14 PM
	AREA 2 / RUN 0200	Sampled By:	KEVIN A.
Heat Trace:		Sampled by (CO):	HILCORP
Remarks:	H2S		

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.0131	0.9995	0.1120	0.00	0.0098
CO2	0.4253	0.4196	0.0730	0.00	0.0065
Methane	94.5725	93.3059	16.0660	955.18	0.5238
Ethane	2.2700	2.2396	0.6080	40.17	0.0236
Propane	0.7078	0.6983	0.1950	17.81	0.0108
Iso-Butane	0.1946	0.1920	0.0640	6.33	0.0039
N-Butane	0.2718	0.2682	0.0860	8.87	0.0055
I-Pentane	0.1257	0.1240	0.0460	5.03	0.0031
N-Pentane	0.1054	0.1040	0.0380	4.23	0.0026
Hexane Plus	0.3138	0.3096	0.1400	16.54	0.0104
Total	100.0000	98.6607	17.4280	1054.15	0.5999

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0023	CYLINDER #:	6084
BTU/CU.FT IDEAL:	1056.6	CYLINDER PRESSURE:	631 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1059.0	ANALYIS DATE:	05/04/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1040.6	ANALYIS TIME:	01:22:17 PM
DRY BTU @ 15.025:	1080.2	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.6011		

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: 05/05/2021**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	UTE MOUNTAIN UTE 51; CSG	CASING	05/05/2021
Stn. No.:	API # 3004529547		35825-11735
Mtr. No.:			

Smpl Date:	04/27/2021	08/01/2019
Test Date:	05/04/2021	08/02/2019
Run No:	HS2021069	HS190199
Nitrogen:	1.0131	1.0048
CO2:	0.4253	0.9518
Methane:	94.5725	94.0476
Ethane:	2.2700	2.2751
Propane:	0.7078	0.7132
I-Butane:	0.1946	0.1995
N-Butane:	0.2718	0.2720
I-Pentane:	0.1257	0.1209
N-Pentane:	0.1054	0.1008
Hexane+:	0.3138	0.3143
BTU:	1059.0	1053.7
GPM:	17.4280	17.4300
SPG:	0.6011	0.6061

Well Name: UTE MOUNTAIN UTE 51;
API #: API # 3004529547
Source: TUBING
Sample Type: GAS

Analysis No: HS2021070
Cust No: 35825-11740

Well/Lease Information

Customer Name:	HILCORP (BHD PROJECT)	Source:	TUBING
Well Name:	UTE MOUNTAIN UTE 51; TBG	Well Flowing:	N
County/State:	SAN JUAN NM	Pressure:	628 PSIG
Location:		Flow Temp:	DEG. F
Lease/PA/CA:	I-22-IND-2772	Ambient Temp:	DEG. F
Formation:		Flow Rate:	MCF/D
Cust. Stn. No.:	API # 3004529547	Sample Method:	Purge & Fill
		Sample Date:	04/27/2021
		Sample Time:	12.10 PM
	AREA 2 / RUN 0200	Sampled By:	KEVIN A.
Heat Trace:	N	Sampled by (CO):	HILCORP
Remarks:	H2S		

Analysis

Component::	Mole%:	Unormalized %:	**GPM:	*BTU:	*SP Gravity:
Nitrogen	1.0122	1.0019	0.1120	0.00	0.0098
CO2	0.4172	0.4130	0.0710	0.00	0.0063
Methane	94.5421	93.5812	16.0610	954.88	0.5237
Ethane	2.2610	2.2380	0.6060	40.01	0.0235
Propane	0.7259	0.7185	0.2000	18.26	0.0111
Iso-Butane	0.2042	0.2021	0.0670	6.64	0.0041
N-Butane	0.2860	0.2831	0.0900	9.33	0.0057
I-Pentane	0.1364	0.1350	0.0500	5.46	0.0034
N-Pentane	0.1144	0.1132	0.0420	4.59	0.0028
Hexane Plus	0.3006	0.2975	0.1340	15.84	0.0099
Total	100.0000	98.9835	17.4330	1055.01	0.6004

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY
**@ 14.730 PSIA & 60 DEG. F.

COMPRESSIBLITY FACTOR (1/Z):	1.0023	CYLINDER #:	6023
BTU/CU.FT IDEAL:	1057.5	CYLINDER PRESSURE:	660 PSIG
BTU/CU.FT (DRY) CORRECTED FOR (1/Z):	1059.9	ANALYIS DATE:	05/04/2021
BTU/CU.FT (WET) CORRECTED FOR (1/Z):	1041.5	ANALYIS TIME:	11:50:11 AM
DRY BTU @ 15.025:	1081.1	ANALYSIS RUN BY:	RICHARD WILSON
REAL SPECIFIC GRAVITY:	0.6015		

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: 05/05/2021**
GC Method: C6+ Gas

HILCORP (BHD PROJECT)

WELL ANALYSIS COMPARISON

Lease:	UTE MOUNTAIN UTE 51; TBG	TUBING	05/05/2021
Stn. No.:	API # 3004529547		35825-11740
Mtr. No.:			

Smpl Date:	04/27/2021	08/01/2019
Test Date:	05/04/2021	08/02/2019
Run No:	HS2021070	HS190200
Nitrogen:	1.0122	2.8656
CO2:	0.4172	5.1151
Methane:	94.5421	88.0626
Ethane:	2.2610	2.2283
Propane:	0.7259	0.6649
I-Butane:	0.2042	0.1651
N-Butane:	0.2860	0.2496
I-Pentane:	0.1364	0.1166
N-Pentane:	0.1144	0.0953
Hexane+:	0.3006	0.4369
BTU:	1059.9	995.3
GPM:	17.4330	17.3390
SPG:	0.6015	0.6558

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

CONDITIONS

Action 28057

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
HILCORP ENERGY COMPANY	1111 Travis Street	Houston, TX77002	372171	28057	GAS ANALYSIS

OCD Reviewer	Condition
mkuehling	None