



Certificate of Analysis

Number: 5030-22090051-001A

Midland Laboratory

2200 East I-20

Midland, TX 79706

Phone 432-689-7252

Samanntha Avarello
MorningStar Partners LLC/Cross Timbers Energy LLC
400 W 7th St
Fort Worth, TX 76102

Sep. 15, 2022

Station Name: NORTH VACUUM ABO WEST UNIT
Method: GPA 2286
Cylinder No: 5030-04310
Analyzed: 09/06/2022 19:39:57 by DMA

Sampled By: RONNIE RICHARD
Sample Of: Gas Spot
Sample Date: 08/31/2022 13:58
Sample Conditions: 34.4 psig, @ 73 °F

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.696 psia	
Hydrogen Sulfide	0.010	0.014		GPM TOTAL C2+ 9.391
Carbon Dioxide	0.393	0.700		
Nitrogen	2.883	3.269		
Methane	63.590	41.289		
Ethane	17.663	21.496	4.735	
Propane	9.395	16.768	2.594	
Iso-Butane	1.069	2.515	0.351	
n-Butane	2.575	6.058	0.814	
Iso-Pentane	0.641	1.872	0.235	
n-Pentane	0.623	1.819	0.226	
Cyclopentane	0.036	0.103	0.011	
n-Hexane	0.122	0.424	0.050	
Cyclohexane	0.114	0.390	0.039	
Other Hexanes	0.225	0.775	0.093	
Heptanes	0.203	0.769	0.083	
Methylcyclohexane	0.053	0.210	0.021	
2,2,4-Trimethylpentane	0.001	0.006	0.001	
Benzene	0.216	0.672	0.060	
Toluene	0.091	0.341	0.031	
Ethylbenzene	0.015	0.063	0.006	
Xylenes	0.009	0.044	0.004	
Octanes Plus	0.073	0.403	0.037	
	100.000	100.000	9.391	

Calculated Physical Properties	Total	C8+
Relative Density Real Gas	0.8565	3.5109
Calculated Molecular Weight	24.71	101.68
Compressibility Factor	0.9951	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.696 psia & 60°F

Real Gas Dry BTU	1421.4	5231.3
Water Sat. Gas Base BTU	1396.6	5114.6

Comments: H2S Field Content 100 ppm

Data reviewed by: Marco Barrientos

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.



Certificate of Analysis

Number: 5030-22090051-001A

Midland Laboratory

2200 East I-20

Midland, TX 79706

Phone 432-689-7252

Samantha Avarello

MorningStar Partners LLC/Cross Timbers Energy LLC

400 W 7th St

Fort Worth, TX 76102

Sep. 15, 2022

Station Name: NORTH VACUUM ABO WEST UNIT

Sample Conditions: 34.4 psig, @ 73 °F

Cylinder No: 5030-04310

Sampled By: RONNIE RICHARD

Sample Of: Gas Spot

Sample Date: 08/31/2022 13:58

Analytical Data

Test	Method	Result	Units	Detection Limit	Lab Tech.	Analysis Date
Hydrogen Sulfide	ASTM D-4810	100	ppm		RJR	08/31/2022

Data reviewed by: Marco Barrientos

Quality Assurance:

The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

Powered By SURECHEM™

SPL, Inc.
Analysis Request Chain of Custody Record

		SPL Work Order No.: <u>220910051</u>		Acct. Mate Code:		Dept. Code:		Page 1		Pages 1				
Report To: (Company Name):		Cross Timbers Energy		Project/Station Name:		Project/Station Number:		Project/Station Location:		Requested TAT				
Address:		PO Box 300		Special Instructions:		put each sample on a separate work order		7 business days						
City/State/Zip:		Whiteface TX 79379		Indicate Billing Type: (Place "X", where appropriate)		Net 30 day Acct.		Check #		* Surcharges May Apply (See quote for details)				
Contact:		Samantha Avarelo savarelo@mspartners.com		Credit Card		<<<Contact SPL, Inc for CC payment arrangements.								
Phone:		817-334-7747 Fax:												
Invoice To: (Company Name):		Cross Timbers Energy		Requested Analysis (Place an "X" next to Sample ID below)										
Address:		PO Box 300		† Terms: Cylinders will be rented for \$10/cyl. All cylinders checked out are to be returned within 21 days, whether they contain sample or not. Cylinders not returned after 30 days will be considered lost and will be billed at current replacement cost.										
City/State/Zip:		Whiteface Tx 79376												
Contact:		Samantha Avarelo savarelo@mspartners.com												
Phone:		817-334-7747												
Client PO# or Ref. No.:		N/A												
Contract/Proposal #: (i.e. SPLQ###)														
Sample ID (used to log/track sample)		Sample Date	Sample Time	Sample Type (Gas/Liq./Solid)	Duplicate	Composite	Spot	Cylinder Tracking Info†			Sample Pressure (PSIG / PSIA)	Sample Temp	Comments	
								Cylinder #	Date Out	Date In				
Vacuum Drinkard Consolidated Tank Battery		08/31/22	11:07	LIQ			x	35			x	17.8	75	
Vacuum Drinkard Consolidated Tank Battery		08/31/22	10:50	GAS			x	3545			x	17.8	75	
Central Vacuum Unit Battery		08/31/22		LIQ			x				x			WATER IN OIL NO SAMPLE
Central Vacuum Unit Battery		08/31/22	12:35	GAS			x	2288			x	132.2	97.4	
VGWU PRODUCTION AND INJECTION SYSTEM BATTERY		08/31/22	1:11	LIQ			x	2057			x	35	90.2	
VGWU PRODUCTION AND INJECTION SYSTEM BATTERY		08/31/22	1:05	GAS			x	5508			x	40	90.2	
N O Q BA Central Tank Battery		08/31/22		LIQ			x				x			SHUT IN
N O Q BA Central Tank Battery		08/31/22		GAS			x				x			SHUT IN
North Vacuum ABO West Unit		08/31/22	1:55	LIQ			x	33780			x	38	72	
North Vacuum ABO West Unit		08/31/22	1:52	GAS			x	4310			x	34.4	73	
State D E		08/31/22	11:58	LIQ			x	340			x	30	73	
State D E		08/31/22	11:55	GAS			x	8453			x	35	73	
Sampled By-Print Name:		RONNIE RICHARD/ BOBBY PENA				Received By-Company:								
Signature:														
Relinquished By-Print Name:		RONNIE RICHARD		8/31/2022	7:45 PM	Received By-Print Name:		[Signature]				Date:	Time:	
Signature:						Signature:						8/31	19:45	
Relinquished By-Print Name:				Date:	Time:	Received By-Print Name:						Date:	Time:	
Signature:						Signature:								
Relinquished By-Print Name:				Date:	Time:	Received By-Print Name:						Date:	Time:	
Signature:						Signature:								
Choose SPL Facility>>>		Ship to Address:				2200 East I-20, Midland TX 79706				Phone: 432-689-7252				

Note - As a convenience to our clients, this form is available in an electronic format. Please contact one of our offices above for the form to be e-mailed to you.



Certificate of Analysis

Number: 5030-22090051-002A

Midland Laboratory

2200 East I-20

Midland, TX 79706

Phone 432-689-7252

Samanntha Avarello
MorningStar Partners LLC/Cross Timbers Energy LLC
400 W 7th St
Fort Worth, TX 76102

Sep. 15, 2022

Station Name: NORTH VACUUM ABO WEST UNIT

Method: GPA 2103M

Cylinder No: 5030-33780

Analyzed: 09/06/2022 10:34:13 by JAS

Sampled By: RONNIE RICHARD

Sample Of: Oil Spot

Sample Date: 08/31/2022 13:55

Sample Conditions: 38 psig, @ 72 °F

Analytical Data

Components	Mol. %	MW	Wt. %	Sp. Gravity	L.V. %
Carbon Dioxide	0.029	44.010	0.007	0.8172	0.007
Nitrogen	0.026	28.013	0.004	0.8069	0.004
Methane	1.053	16.043	0.092	0.3000	0.263
Ethane	1.069	30.069	0.175	0.3563	0.421
Propane	2.157	44.096	0.518	0.5072	0.875
Iso-Butane	0.667	58.122	0.211	0.5628	0.321
n-Butane	2.654	58.122	0.840	0.5842	1.232
Iso-Pentane	1.850	72.149	0.727	0.6251	0.997
n-Pentane	2.456	72.149	0.965	0.6307	1.311
Other Hexanes	2.193	86.175	1.029	0.6641	1.328
Heptanes	11.551	100.202	6.303	0.6882	7.848
Octanes	10.930	114.229	6.799	0.7066	8.246
Nonanes	8.665	128.255	6.052	0.7222	7.181
Decanes Plus	35.935	344.220	67.355	0.9463	60.994
Benzene	6.623	78.112	2.817	0.8844	2.729
Toluene	9.730	92.138	4.882	0.8719	4.798
Ethylbenzene	0.016	106.165	0.009	0.8716	0.009
Xylenes	0.714	106.167	0.413	0.8761	0.404
n-Hexane	1.598	86.175	0.750	0.6641	0.968
2,2,4-Trimethylpentane	0.084	114.229	0.052	0.6964	0.064
	100.000		100.000		100.000

Calculated Physical Properties

	Total	C10+
Specific Gravity at 60°F	0.8569	0.9463
API Gravity at 60°F	33.621	18.024
Molecular Weight	183.639	344.220
Pounds per Gallon (in Vacuum)	7.145	7.890
Pounds per Gallon (in Air)	7.137	7.881
Cu. Ft. Vapor per Gallon @ 14.696 psia	14.764	8.698

Data reviewed by: Marco Barrientos

Quality Assurance:

The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

ABO REEF CENTRAL BTY

MTD Avg Gas – Prod Gas =

Vented Gas/ Day

05/11/24 = 90

Pressure Base Conversion

14.65/15.025 = .9750415

142 *.9750415 = **88 mcf Vented**

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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

DEFINITIONS

Action 352207

DEFINITIONS

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID: 330132
	Action Number: 352207
	Action Type: [C-129] Venting and/or Flaring (C-129)

DEFINITIONS

For the sake of brevity and completeness, please allow for the following in all groups of questions and for the rest of this application: • this application's operator, hereinafter "this operator"; • venting and/or flaring, hereinafter "vent or flare"; • any notification or report(s) of the C-129 form family, hereinafter "any C-129 forms"; • the statements in (and/or attached to) this, hereinafter "the statements in this"; • and the past tense will be used in lieu of mixed past/present tense questions and statements.
--

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

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

QUESTIONS

Action 352207

QUESTIONS

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID: 330132
	Action Number: 352207
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Prerequisites Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.	
Incident Well	Unavailable.
Incident Facility	[fAPP2133450537] ABO Reef Central Tank Battery

Determination of Reporting Requirements Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.	
Was this vent or flare caused by an emergency or malfunction	No
Did this vent or flare last eight hours or more cumulatively within any 24-hour period from a single event	Yes
Is this considered a submission for a vent or flare event	Yes, minor venting and/or flaring of natural gas.
An operator shall file a form C-141 instead of a form C-129 for a release that, includes liquid during venting and/or flaring that is or may be a major or minor release under 19.15.29.7 NMAC.	
Was there at least 50 MCF of natural gas vented and/or flared during this event	Yes
Did this vent or flare result in the release of ANY liquids (not fully and/or completely flared) that reached (or has a chance of reaching) the ground, a surface, a watercourse, or otherwise, with reasonable probability, endanger public health, the environment or fresh water	No
Was the vent or flare within an incorporated municipal boundary or withing 300 feet from an occupied permanent residence, school, hospital, institution or church in existence	No

Equipment Involved	
Primary Equipment Involved	Other (Specify)
Additional details for Equipment Involved. Please specify	FLARE

Representative Compositional Analysis of Vented or Flared Natural Gas Please provide the mole percent for the percentage questions in this group.	
Methane (CH4) percentage	64
Nitrogen (N2) percentage, if greater than one percent	3
Hydrogen Sulfide (H2S) PPM, rounded up	0
Carbon Dioxide (C02) percentage, if greater than one percent	0
Oxygen (O2) percentage, if greater than one percent	0
If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.	
Methane (CH4) percentage quality requirement	Not answered.
Nitrogen (N2) percentage quality requirement	Not answered.
Hydrogen Sufide (H2S) PPM quality requirement	Not answered.
Carbon Dioxide (C02) percentage quality requirement	Not answered.
Oxygen (O2) percentage quality requirement	Not answered.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

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

QUESTIONS, Page 2

Action 352207

QUESTIONS (continued)

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID: 330132
	Action Number: 352207
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	05/11/2024
Time vent or flare was discovered or commenced	12:00 AM
Time vent or flare was terminated	11:59 PM
Cumulative hours during this event	24

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Cause: Midstream Scheduled Maintenance Other (Specify) Natural Gas Vented Released: 88 Mcf Recovered: 0 Mcf Lost: 88 Mcf.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	FLARE
Is this a gas only submission (i.e. only significant Mcf values reported)	Yes, according to supplied volumes this appears to be a "gas only" report.

Venting or Flaring Resulting from Downstream Activity	
Was this vent or flare a result of downstream activity	Yes
Was notification of downstream activity received by this operator	Yes
Downstream OGRID that should have notified this operator	[24650] TARGA MIDSTREAM SERVICES LLC
Date notified of downstream activity requiring this vent or flare	05/07/2024
Time notified of downstream activity requiring this vent or flare	07:02 AM

Steps and Actions to Prevent Waste	
For this event, this operator could not have reasonably anticipated the current event and it was beyond this operator's control.	True
Please explain reason for why this event was beyond this operator's control	Event is due to Monument Plant Turn Around
Steps taken to limit the duration and magnitude of vent or flare	SI where possible
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Cause out of our control

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

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

ACKNOWLEDGMENTS

Action 352207

ACKNOWLEDGMENTS

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID:
	330132
	Action Number:
	352207
Action Type:	
[C-129] Venting and/or Flaring (C-129)	

ACKNOWLEDGMENTS

☒	I acknowledge that I am authorized to submit a <i>Venting and/or Flaring</i> (C-129) report on behalf of this operator and understand that this report can be a complete C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
☒	I acknowledge that upon submitting this application, I will be creating a new incident file (assigned to this operator) to track any C-129 forms, pursuant to 19.15.27.7 and 19.15.28.8 NMAC and understand that this submission meets the notification requirements of Paragraph (1) of Subsection G and F respectively.
☒	I hereby certify the statements in this report are true and correct to the best of my knowledge and acknowledge that any false statement may be subject to civil and criminal penalties under the Oil and Gas Act.
☒	I acknowledge that the acceptance of any C-129 forms by the OCD does not relieve this operator of liability should their operations have failed to adequately investigate, report, and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment.
☒	I acknowledge that OCD acceptance of any C-129 forms does not relieve this operator of responsibility for compliance with any other applicable federal, state, or local laws and/or regulations.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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 352207

CONDITIONS

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID: 330132
	Action Number: 352207
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
savarello	If the information provided in this report requires an amendment, submit a [C-129] Amend Venting and/or Flaring Incident (C-129A), utilizing your incident number from this event.	6/7/2024