



Athens, TX (903) 677-0700 . Beeville, TX (361) 354-5200 . Midland, TX (432) 704-5351

**GAS EXTENDED ANALYSIS REPORT**

LAB REPORT NUMBER: 210505-9999-05-050521-21

PHYSICAL CONSTANTS PER GPA 2145-09 &amp; TP-17 (1998)

CUSTOMER :	NOVO OIL AND GAS	DATE ON:	05/03/2021
STATION:	RANA SALADA PAD A VRU	DATE ANALYZED:	05/05/2021
PRODUCER:	NOVO OIL AND GAS	EFFECTIVE DATE:	05/01/2021
LEASE:	RANA SALADA PAD A VRU	DATE OFF:	

<u>COMPONENT</u>	<u>MOLE %</u>	<u>GPM</u>	<u>WT. %</u>
H2S	0.000		0.000
OXYGEN	0.000		0.000
NITROGEN	0.103		0.077
CARBON DIOXIDE	0.434		0.507
METHANE	31.774		13.532
ETHANE	21.646	5.863	17.278
PROPANE	20.748	5.789	24.285
I-BUTANE	4.832	1.601	7.455
N-BUTANE	10.780	3.442	16.633
I-PENTANE	3.115	1.154	5.966
N-PENTANE	3.324	1.220	6.366
HEXANES (C6's)	2.117	0.881	4.842
HEPTANES (C7+)	0.938	0.417	2.475
OCTANES (C8+)	0.158	0.078	0.477
NONANES (C9+)	0.018	0.008	0.059
DECANES (C10+)	0.013	0.006	0.048
TOTAL	100.000	20.459	100.000

REAL SP. GRAVITY	1.3171	REAL BTU DRY	2187.148
MOL. WT.	37.670	REAL BTU SAT	2149.069
Z FACTOR	0.9871	PRESS BASE	14.730
C2+ GPM	20.459	C4+ GPM	8.807
C3+ GPM	14.596	C5+ GPM	3.764
C6-C10+ MOL WT	100.425	C6-C10+ GRAVITY	3.458

SAMPLED BY	MH	SAMPLE PRESS:	149
SAMPLE TYPE:	SPOT	SAMPLE TEMP:	168
CYLINDER NO.:	2009	COUNTY / STATE:	14.73
COMMENT:	SPOT	ANALYST	MIKE HOBGOOD

\* SEE NEXT PAGE FOR C6+ COMPOSITIONAL BREAKDOWN  
PAGE 1 OF 3 05-17-2021



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STATION: RANA SALADA PAD A VR LEASE: RANA SALADA PAD A VRU

**C6+ FRACTION COMPOSITION**

<b>HEXANE ISOMERS (C6'S)</b>		<b>MOLE %</b>	<b>GPM</b>	<b>WT. %</b>
2,2-Dimethylbutane	P	0.100	0.042	0.228
2,3-Dimethylbutane	PN	0.000	0.000	0.000
2-Methylpentane	P	0.266	0.112	0.608
3-Methylpentane	P	0.552	0.228	1.262
Methylcyclopentane	N	0.000	0.000	0.000
Benzene	A	0.000	0.000	0.000
Cyclohexane	N	0.011	0.004	0.025
n-Hexane	P	1.188	0.495	2.719
<b>HEPTANE ISOMERS (C7'S)</b>				
3,3-Dimethylpentane	P	0.001	0.000	0.002
2,2-Dimethylpentane	P	0.000	0.000	0.000
2,4-Dimethylpentane	P	0.118	0.056	0.313
2 & 3-Methylhexane	P	0.249	0.116	0.662
2,3-Dimethylpentane	P	0.030	0.014	0.080
1,t-3-Dimethylcyclopentane	N	0.000	0.000	0.000
1,c-3-Dimethylcyclopentane	N	0.000	0.000	0.000
3-Ethylpentane	N	0.000	0.000	0.000
1,t-2-Dimethylcyclopentane	N	0.000	0.000	0.000
Toluene	A	0.013	0.004	0.032
Methylcyclohexane	N	0.315	0.128	0.820
Ethylcyclopentane	N	0.000	0.000	0.000
n-Heptane	P	0.213	0.099	0.566
<b>OCTANE ISOMERS (C8'S)</b>				
2,4 & 2,5-Dimethylhexane	P	0.006	0.003	0.019
2,2,4-Trimethylpentane	N	0.000	0.000	0.000
1,t-2,c-4-Trimethylcyclopentane	N	0.000	0.000	0.000
1,t-2,c-3-Trimethylcyclopentane	N	0.000	0.000	0.000
2-Methylheptane	P	0.030	0.016	0.092
1,c-2,t-4-Trimethylcyclopentane	N	0.000	0.000	0.000
3-Methylheptane	P	0.019	0.010	0.058
1,c-3-Dimethylcyclohexane	N	0.007	0.003	0.020
1,t-4-Dimethylcyclohexane	N	0.000	0.000	0.000
methyl-ethylcyclopentanes	N	0.000	0.000	0.000
1,t-3 & 1,c-4 Dimethylcyclohexane	N	0.000	0.000	0.001
1,c-2-Dimethylcyclohexane	N	0.004	0.002	0.000
Ethylcyclohexane	N	0.019	0.009	0.058
Ethylbenzene	A	0.001	0.000	0.002
m & p-Xylene	A	0.004	0.002	0.013
o-Xylene	A	0.004	0.001	0.011
Cyclooctane	P	0.003	0.001	0.010
n-Octane	P	0.060	0.031	0.181



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STATION: RANA SALADA PAD A VR LEASE: RANA SALADA PAD A VRU

**C6+ FRACTION COMPOSITION**

<b><u>NONANE ISOMERS (C9'S)</u></b>		<b><u>MOLE %</u></b>	<b><u>GPM</u></b>	<b><u>WT. %</u></b>
Trimethylhexanes	P	0.000	0.000	0.000
Dimethylpentanes	P	0.000	0.000	0.000
Isopropylcyclopentane	N	0.000	0.000	0.000
n-Propylcyclopentane	N	0.000	0.000	0.000
3-Methyloctane	P	0.000	0.000	0.000
Trimethylcyclohexanes	N	0.000	0.000	0.000
Isopropylbenzene	A	0.004	0.002	0.013
Isopropylcyclohexane	N	0.000	0.000	0.000
n-Propylcyclohexane	N	0.002	0.001	0.007
n-Propylbenzene	A	0.003	0.001	0.009
m-Ethyltoluene	A	0.000	0.000	0.000
p-Ethyltoluene	A	0.000	0.000	0.000
1,3,5-Trimethylbenzene	A	0.002	0.001	0.006
4 & 5-Methylnonane	P	0.000	0.000	0.000
o-Ethyltoluene & 3-Methylnonane	AP	0.000	0.000	0.000
1,2,3-Trimethylbenzene	A	0.000	0.000	0.000
1,2,4-Trimethylbenzene	A	0.005	0.002	0.016
n-Nonane	P	0.002	0.001	0.008
<b><u>DECANE ISOMERS (C10'S)</u></b>				
2-Methylnonane	P	0.000	0.000	0.000
tert-Butylbenzene	A	0.012	0.006	0.042
Isobutylcyclohexane & tert-Butylcyclohexane		0.000	0.000	0.000
Isobutylbenzene	A	0.000	0.000	0.000
sec-Butylbenzene	A	0.000	0.000	0.001
n-Butylcyclohexane	N	0.001	0.000	0.003
1,3-Diethylbenzene	A	0.000	0.000	0.000
1,2-Diethylbenzene & n-Butylbenzene	A	0.001	0.000	0.002
1,4-Diethylbenzene	A	0.000	0.000	0.000
n-Decane	P	0.000	0.000	0.000
<b><u>UNDECANE ISOMERS (C11'S)</u></b>				
n-Undecane	P	0.000	0.000	0.000
<b><u>DODECANE ISOMERS (C12'S)</u></b>				
n-Dodecane +	P	0.000	0.000	0.000

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X *Michael Holson*

ANALYST

Production Date	Site Name	Sum of Volume	Notes
7/6/2021	Rana Salada Pad A CTB	234	
7/5/2021	Rana Salada Pad A CTB	538	vru down 24 hrs
7/4/2021	Rana Salada Pad A CTB	539	vru down 24 hrs
7/3/2021	Rana Salada Pad A CTB	541	vru down 24 hrs
7/2/2021	Rana Salada Pad A CTB	539	vru down 24 hrs
7/1/2021	Rana Salada Pad A CTB	555	vru down 24 hrs
6/30/2021	Rana Salada Pad A CTB	533	vru down 24 hrs
6/29/2021	Rana Salada Pad A CTB	522	vru down 24 hrs
6/28/2021	Rana Salada Pad A CTB	509	vru down 24 hrs
6/27/2021	Rana Salada Pad A CTB	534	vru down 24 hrs
6/26/2021	Rana Salada Pad A CTB	548	vru down 24 hrs
6/25/2021	Rana Salada Pad A CTB	523	vru down 24 hrs
6/24/2021	Rana Salada Pad A CTB	495	vru down 22 hrs
6/23/2021	Rana Salada Pad A CTB	137	vru down 2 hrs
6/22/2021	Rana Salada Pad A CTB	503	vru down until repaired. down 24 hrs
6/21/2021	Rana Salada Pad A CTB	506	vru down until repaired. down 24 hrs
6/20/2021	Rana Salada Pad A CTB	503	vru down until repaired. down 24 hrs
6/19/2021	Rana Salada Pad A CTB	240	flare due to vru going going on compressor fail. reset this morning. went down again and when resetting while breaker, breaker did not want to turn back on.
6/18/2021	Rana Salada Pad A CTB	92	flare due to vru going down on compressor fail a few times a day on compressor fail.. est-8 times
6/17/2021	Rana Salada Pad A CTB	50	found VRU down on compressor fail upon arrival
6/17/2021	Rana Salada Pad E CTB	50	
6/14/2021	Rana Salada Pad A CTB	74	LP Flare due to VRU mechanic turning off unit to replace a seal on VRU Pump
6/11/2021	Rana Salada Pad A CTB	273	flare due to unit 2 going down on hi air intake temp
6/10/2021	Rana Salada Pad E CTB	51	
6/7/2021	Rana Salada Pad A CTB	94	
6/6/2021	Rana Salada Pad A CTB	51	
6/6/2021	Rana Salada Pad E CTB	197	
6/5/2021	Rana Salada Pad A CTB	581	
6/5/2021	Rana Salada Pad E CTB	660	
6/4/2021	Rana Salada Pad A CTB	476	vru not running due to high line psi
6/4/2021	Rana Salada Pad E CTB	646	vru down due to high line psi
6/2/2021	Rana Salada Pad A CTB	622	compressors were down for repairs
6/2/2021	Rana Salada Pad E CTB	1,476	compressors were alternated down time to remove witch hats
6/1/2021	Rana Salada Pad E CTB	64	
5/30/2021	Rana Salada Pad E CTB	57	
5/28/2021	Rana Salada Pad E CTB	69	
5/26/2021	Rana Salada Pad A CTB	130	vru was down on compreaaor fail
5/25/2021	Rana Salada Pad A CTB	116	

**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 37766

**QUESTIONS**

Operator: NOVO OIL & GAS NORTHERN DELAWARE, LLC 1001 West Wilshire Blvd Oklahoma City, OK 73116	OGRID: 372920
	Action Number: 37766
	Action Type: [C-129] Venting and/or Flaring (C-129)

**QUESTIONS**

<b>Determination of Reporting Requirements</b>	
<i>Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.</i>	
Was or is this venting or flaring caused by an emergency or malfunction	No
Did or will this venting or flaring last eight hours or more cumulatively within any 24-hour period from a single event	No
Is this considered a submission for a notification of a major venting or flaring	Yes, minor venting or flaring of natural gas.
<b>The operator shall file a form C-141 instead of a form C-129 for a release that includes liquid during venting or flaring that is or may be a major or minor release under 19-13-29 NMAC.</b>	
Was there or will there be at least 50 MCF of natural gas vented or flared during this event	Yes
Did this venting or flaring 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

<b>Unregistered Facility Site</b>	
<i>Please provide the facility details, if the venting or flaring occurred or is occurring at a facility that does not have an Facility ID (F#) yet.</i>	
Facility or Site Name	Rana Salada 0605 Pad A
Facility Type	Tank Battery - (TB)

<b>Equipment Involved</b>	
Primary Equipment Involved	Not answered.
Additional details for Equipment Involved. Please specify	Not answered.

<b>Representative Compositional Analysis of Vented or Flared Natural Gas</b>	
<i>Please provide the mole percent for the percentage questions in this group.</i>	
Methane (CH4) percentage	33
Nitrogen (N2) percentage, if greater than one percent	0
Hydrogen Sulfide (H2S) PPM, rounded up	0
Carbon Dioxide (CO2) percentage, if greater than one percent	0
Oxygen (O2) percentage, if greater than one percent	0
<b>If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.</b>	
Methane (CH4) percentage quality requirement	Not answered.
Nitrogen (N2) percentage quality requirement	Not answered.
Hydrogen Sulfide (H2S) PPM quality requirement	Not answered.
Carbon Dioxide (CO2) percentage quality requirement	Not answered.
Oxygen (O2) percentage quality requirement	Not answered.

<b>Date(s) and Time(s)</b>	
Date venting or flaring was discovered or commenced	06/17/2021
Time venting or flaring was discovered or commenced	08:00 AM
Is the venting or flaring event complete	No
Date venting or flaring was terminated	06/17/2021
Time venting or flaring was terminated	12:00 PM
Total duration of venting or flaring in hours, if venting or flaring has terminated	4
Longest duration of cumulative hours within any 24-hour period during this event	4

<b>Measured or Estimated Volume of Vented or Flared Natural Gas</b>	
Natural Gas Vented (Mcf) Details	Cause: High Line Pressure   Tank ( Any )   Natural Gas Vented   Spilled: 50 Mcf   Recovered: 0 Mcf   Lost: 50 Mcf ]
Natural Gas Flared (Mcf) Details	Cause: High Line Pressure   Tank ( Any )   Natural Gas Flared   Spilled: 50 Mcf   Recovered: 0 Mcf   Lost: 50 Mcf ]
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	Measured by LP flare meter
Is this a gas only submission (i.e. only Mcf values reported)	Yes, according to supplied volumes this appears to be a "gas only" report.

<b>Venting or Flaring Resulting from Downstream Activity</b>	
Was or is this venting or flaring a result of downstream activity	No
Date notified of downstream activity requiring this venting or flaring	06/17/2021
Time notified of downstream activity requiring this venting or flaring	08:00 AM

<b>Steps and Actions to Prevent Waste</b>	
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For this event, the operator could not have reasonably anticipated the current event and it was beyond the operator's control.	True
Please explain reason for why this event was beyond your operator's control	Found VRU down on compressor fail upon arrival
Steps taken to limit the duration and magnitude of venting or flaring	Monitored flaring until pressure returned to normal
Corrective actions taken to eliminate the cause and reoccurrence of venting or flaring	Planning to upsize VRU

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CONDITIONS  
 Action 37766

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Operator: NOVO OIL & GAS NORTHERN DELAWARE, LLC 1001 West Wilshire Blvd Oklahoma City, OK 73116	OGRID: 372920
	Action Number: 37766
	Action Type: [C-129] Venting and/or Flaring (C-129)

**CONDITIONS**

Created By	Condition	Condition Date
system	If the information provided in this report requires an amendment, submit a [C-129] Request to Amend Venting and/or Flaring Incident, utilizing your incident number from this event.	7/23/2021