



SULFUR IN NATURAL GAS ANALYSIS

SN/PRIMARY DB KEY
LEASE #/ PROJECT #:
FIELD/AREA:

NAME/DESCRIP : **HAWKINS RANCH 10-6A**
SALES GAS

PROJECT NO. : **202305036**
COMPANY NAME : **LARAMIE ENERGY, LLC**
OFFICE / BRANCH: **GRAND JUNCTION, CO**
CUSTOMER REF:
PRODUCER : **LARAMIE ENERGY, LLC**

ANALYSIS NO. : **09**
ANALYSIS DATE: **MAY 09, 2023 10:44**
SAMPLE DATE : **MAY 5, 2023 11:40**
TO:
EFFECTIVE DATE:

FIELD DATA

SAMPLE CYCLE:
SAMPLE PRES. : **psig**
FLOW PRES. : **psig**
LAB PRES: **psig**
SAMPLE TEMP. : **°f**
AMBIENT TEMP.: **°f**
H2O BY STAIN TUBE: **-** **#/mmcf**
FIELD COMMENTS: **Primary sample**
LAB COMMENTS:

SAMPLE TYPE: **SPOT**
PROBE : **YES**
CYLINDER NO. : **1L TEDLAR**
SAMPLED BY : **GALE MCENDREE**
SAMPLING COMPANY: **EMPACT**
H2S BY STAIN TUBE: **2.5** **ppm mol**
CO2 BY STAIN TUBE: **-** **Mol %**

COMPONENT	SULFUR ppm mole (ul/L)
Hydrogen Sulfide (H2S)	4.6
Carbonyl Sulfide (COS)/Sulfur Dioxide (SO2)	BDL
Methanethiol (MeSH)	0.1
Ethanethiol (EtSH)	0.1
Dimethylsulfide (DMS)	BDL
Carbon Disulfide (CS2)	BDL
i-Propanethiol (i-PrSH)	BDL
t-Butanethiol (t-BuSH)	BDL
n-Propanethiol (n-PrSH)	BDL
Methylethylsulfide (MES)	BDL
s-Butanethiol (s-BuSH)	BDL
i-Butanethiol (i-BuSH)	BDL
Thiophene (TP)	BDL
Diethylsulfide (DES)	BDL
n-Butanethiol (n-BuSH)	BDL
Dimethyldisulfide (DMDS)	BDL
Unidentified Sulfurs - Light Ends	BDL
Methylthiophenes (MTP)	BDL
2-Ethylthiophene (2-ETP)	BDL
Methylethylsulfide (MEDS)	BDL
Dimethylthiophenes (DMTP)	BDL
Diethyldisulfide (DEDS)	BDL
Benzothiophene (BzTP)	BDL
Unidentified Sulfurs - Mid Range	BDL
Methylbenzothiophenes (MBzTP)	BDL
Dimethylbenzothiophenes (DMBzTP)	BDL
Trimethylbenzothiophenes (TMBzTP)	BDL
Dibenzothiophenes (DBzTP)	BDL
Methyldibenzothiophenes (MDBzTP)	BDL
<u>Unidentified Sulfurs - Heavy Ends</u>	<u>BDL</u>
TOTAL SULFUR	4.8

* ASTM D5504 ** DETECTION LIMIT DETERMINED TO BE 0.1 ppm (ul/L) Sulfur - BDL (BELOW DETECTION LIMIT)
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