



# SULFUR IN NATURAL GAS ANALYSIS

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

NAME/DESCRIP : **HAWKINS RANCH 10-7B**  
**SALES GAS**

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

ANALYSIS NO. : **01**  
ANALYSIS DATE: **MAY 09, 2023 08:33**  
SAMPLE DATE : **MAY 5, 2023 11:25**  
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: **>10** **ppm mol**  
CO2 BY STAIN TUBE: **-** **Mol %**

COMPONENT	SULFUR ppm mole (ul/L)
Hydrogen Sulfide (H2S)	18.5
Carbonyl Sulfide (COS)/Sulfur Dioxide (SO2)	BDL
Methanethiol (MeSH)	0.2
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
Unidentified Sulfurs - Heavy Ends	BDL
TOTAL SULFUR	18.8

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