



# SULFUR IN NATURAL GAS ANALYSIS

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

NAME/DESCRIP : HAWKINS RANCH  
HAWKINS RANCH 10-7B  
SEPARATOR

PROJECT NO. : 202003118  
COMPANY NAME : LARAMIE ENERGY, LLC  
OFFICE / BRANCH: GRAND JUNCTION, CO  
CUSTOMER REF:  
PRODUCER :

ANALYSIS NO. : 03  
ANALYSIS DATE: MARCH 28, 2020 09:10  
SAMPLE DATE : MARCH 23, 2020 11:50  
TO:  
EFFECTIVE DATE:

## \*\*\*FIELD DATA\*\*\*

SAMPLE CYCLE:  
SAMPLE PRES. : psig  
FLOW PRES. : psig  
LAB PRES: psig  
SAMPLE TEMP. : 68 °f  
AMBIENT TEMP.: °f  
H2O BY STAIN TUBE: #/mmcf  
FIELD COMMENTS:  
LAB COMMENTS:

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

## COMPONENT

SULFUR  
ppm mole  
(ul/L)

Hydrogen Sulfide (H2S)	3.8
Carbonyl Sulfide (COS)/Sulfur Dioxide (SO2)	BDL
Methanethiol (MeSH)	0.1
Ethanethiol (EtSH)	BDL
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
Methylethyldisulfide (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	3.9

\* ASTM D5504

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

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