



**Saybolt**

A CORE LABORATORIES COMPANY

H2S KO-Grand Junction  
Leonard Tillman  
475-28 1/2 Road  
Grand Junction, CO 81501

## Saybolt Petroleum Services A Core Laboratories Company

201 Deerwood Glen Dr  
Deer Park, TX 77536  
281-478-1300

Report Number : 13071- 13727  
Date Reported: 6/1/2018  
Date Received: 5/22/2018

### Analytical Report

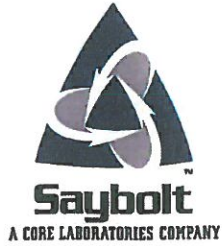
Sample No.: 13709

Sample ID Crude Oil W/High H2S

Date Sampled

Test	Result	Units	Method	Date	Analyst
<b>Sulfur Speciation</b>					
Hydrogen Sulfide	14000	ppm v / v	ASTM D-1945	5/22/2018	KTN
Carbonyl Sulfide	2.2	ppm v / v	ASTM D-5504	5/22/2018	JB
Methyl Mercaptan	14	ppm v / v			
Ethyl Mercaptan	12	ppm v / v			
Dimethyl Sulfide	1.5	ppm v / v			
Carbon Disulfide	0.2	ppm v / v			
Isopropyl Mercaptan	7.3	ppm v / v			
Hydrogen Sulfide	14000	ppm v / v	ASTM D-1945	5/22/2018	KTN
Carbonyl Sulfide	1.6	ppm v / v	ASTM D-5504	5/22/2018	JB
Methyl Mercaptan	12	ppm v / v			
Ethyl Mercaptan	10	ppm v / v			
Dimethyl Sulfide	1.3	ppm v / v			
Carbon Disulfide	0.2	ppm v / v			
Isopropyl Mercaptan	6.5	ppm v / v			
Hydrogen Sulfide	1.8	ppm v / v	ASTM D-5504	5/22/2018	JB
Carbonyl Sulfide	1.2	ppm v / v			
Methyl Mercaptan	1.2	ppm v / v			
Ethyl Mercaptan	1.2	ppm v / v			
Dimethyl Sulfide	1.5	ppm v / v			
Carbon Disulfide	0.2	ppm v / v			
Isopropyl Mercaptan	1.1	ppm v / v			
Hydrogen Sulfide	2.9	ppm v / v	ASTM D-5504	5/22/2018	JB
Carbonyl Sulfide	0.4	ppm v / v			
Methyl Mercaptan	< 0.2	ppm v / v			
Ethyl Mercaptan	< 0.2	ppm v / v			
Dimethyl Sulfide	1.7	ppm v / v			

The analytical results, opinions, or interpretations contained in this report are based upon information and material supplied by the client for whose exclusive and confidential use this report has been made. The analytical results, opinions, or interpretations expressed represent the best judgement of Saybolt Petroleum Services. Saybolt Petroleum Services, however, makes no warrant or representation, express or implied, of any type, and expressly disclaims same with which such report is used or relied upon for any reason whatsoever. Any person relying upon this report should be aware that issuer's activities are carried out under their general terms and conditions.



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Sample ID Crude Oil W/High H2S

Date Sampled

Test	Result	Units	Method	Date	Analyst
Carbon Disulfide	0.2	ppm v / v			
Isopropyl Mercaptan	< 0.2	ppm v / v			

Note : Four data sets. Data sets 1 & 2 : No treater , 2 grams sample , 1 gram toluene in 40 ml VOA. Data sets 3 & 4 : Same as 1 and 2 but treated at 6 % weight level.



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### Analytical Report

Sample No.: 31984

Sample ID LCN 31984 0.49% H2S in gas

Date Sampled

Test	Result	Units	Method	Date	Analyst
<b>Sulfur Speciation</b>					
Hydrogen Sulfide	4800	ppm v / v	ASTM D-1945	5/22/2018	KTN
Carbonyl Sulfide	5.0	ppm v / v	ASTM D-5504	5/22/2018	JB
Methyl Mercaptan	< 0.2	ppm v / v			
Ethyl Mercaptan	< 0.2	ppm v / v			
Dimethyl Sulfide	< 0.2	ppm v / v			
Carbon Disulfide	< 0.2	ppm v / v			
Isopropyl Mercaptan	< 0.2	ppm v / v			
Hydrogen Sulfide	< 0.2	ppm v / v	ASTM D-5504	5/22/2018	JB
Carbonyl Sulfide	1.7	ppm v / v			
Methyl Mercaptan	< 0.2	ppm v / v			
Ethyl Mercaptan	< 0.2	ppm v / v			
Dimethyl Sulfide	< 0.2	ppm v / v			
Carbon Disulfide	< 0.2	ppm v / v			
Isopropyl Mercaptan	< 0.2	ppm v / v			

Note : Two data sets. Data set 1 : Certified gas standard shot through dry gas filter. Data set 2 : Certified gas standard shot through gas filter saturated with treater.



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### Analytical Report


Sample No.: 6665656

Sample ID H2S KO

Date Sampled

Test	Result	Units	Method	Date	Analyst
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Results

Approved By:   
Jennifer Titterington-James  
Laboratory Manager