

Map of Average H₂S Percentage by Field

BC Oil & Gas COMMISSION

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1:800,000

051020304050

Kilometers

Source: PROJECTS/P167
Date: 2018-07-18

Legend

Averaged H₂S Content by Regional Field

Less than 0.01%

0.01% to 4.99%

Averaged H₂S Content by Field

Less than 0.01%

0.01% to 4.99%

5.0% to 9.99 %

10.0% to 29.99%

Greater than 30.0%

Purpose of Map

This map is intended to provide an initial awareness of H₂S level in subsurface formations and produced in area infrastructure. The value posted and used for color coding is the average value of all gas analysis reported as sampled from production meters, within the field area. Many fields include multiple formations, each at different depth and H₂S content. The maximum H₂S value at a particular location may be higher, as indicated in the table “H₂S Concentration by Geological Period”.

Where operations may result in contact with natural gas, a detailed H₂S review in the specific location is required.

Data based on all gas analysis available as of December 2017.

Concentration in parts per million (ppm)	Observations and Health Effects
Less than 1	Most people smell "rotten eggs"
3 to 5	Odour is strong
20 to 150	Nose and throat feel dry and irritated. Eyes sting itch, or water, and "gas eye" symptoms may occur. Prolonged exposure may cause coughing, hoarseness, shortness of breath and runny nose.
150 to 200	Sense of smell is blocked(olfactory fatigue)
200 to 250	Major irritation of the nose, throat, and lungs occurs, along with headache, nausea, vomiting and dizziness. Prolonged exposure can cause fluid buildup in the lungs(pulmonary edema), which can be fatal.
300 to 500	Symptoms are the same as above, but more severe. Death can occur within 1 to 4 hours of exposure.
Above 500	Immediate loss of consciousness. Death is rapid, sometimes immediate.

Source: Work Safe BC

H₂S Concentration by Geological Period

Geological Period	Min	Average H ₂ S	Max
UPPER CRETACEOUS	0.090%	4.510%	
LOWER CRETACEOUS	0.121%	19.710%	
UPPER JURASSIC	3.587%	55.000%	
MIDDLE TRIASSIC	3.097%	35.000%	
LOWER TRIASSIC	0.045%	27.720%	
PERMIAN/PENNSYLVANIAN	0.547%	21.430%	
MISSISSIPPIAN	0.769%	38.000%	
DEVONIAN	0.417%	15.110%	

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