

Oil field units

So far there is no industry-wide standardisation for the oil and gas industry.

The dominance of the American oil and gas industry exported their units all over the world.

Local traditions still uses some old “practical oil field units”.

Today we have a dangerous mixture of metric, SI and practical oil field units.

It is of utmost importance to always check which reference conditions the client talks about.

API standard condition is at: 60°F at 14.65 psia

Abbreviation

Stb	Stock tank barrel	42 gallons	0.1589873 m ³
scf	Standard cubic feet	0.1781 barrel	0.02831 m ³
gallon	(US)	0.0238 barrel	3.783 ltr
gallon	(UK)	1.2 US gallon	4.539 ltr
psi	pounds per square inch		0.06894 bar
bar		14.503 77 psi	
Btu	British thermal units		1.055,05 kJ
°F	DegF, Fahrenheit		$C=(°F-32)/1.8$
ton long	2240 pounds		1,016.047 kg
ton short	2000 pounds		907.1847 kg
ton metric			1,000.000 kg
M or m	thousand		1,000
MM or mm	million		1,000,000
T or t	trillion		1,000,000,000



The American Petroleum Institute is the primary trade association representing the oil and natural gas industry in the United States. Membership includes more than 400 corporations involved in all aspects of the oil and gas industry including:

- Exploration and production
- Marine transportation
- Pipeline transportation
- Refining and marketing
- Service and supply companies of the oil and gas industry

API provides a forum for all segments of the oil and natural gas industry to pursue public policy objectives and advance the interests of the industry. As a major research institute, API supports these public policy positions with scientific, technical and economic research.

API is headquartered in Washington, D.C. and has offices in 27 state capitals and provides its members with representation on state issues in 33 states east of the Rocky Mountains.

API as such is an independent and non official organisation and provides references and recommendations to the oil industry which are officially regarded as consensus industry standards. [WWW. API.ORG](http://WWW.API.ORG)

NACE



Mission:

NACE International provides education and communicates information to protect people, assets, and the environment from the effects of corrosion.

History:

The **National Association of Corrosion Engineers** was established in 1943 and NACE International has become the largest organisation in the world committed to the study of corrosion.

NACE raises the awareness of corrosion control and prevention technology among government agencies and legislators, businesses, professional societies, and the general public.

NACE's Technical Co-ordination Committee oversees more than 300 technical committees that research, study, and recommend state-of-the-art corrosion technologies to both the public and private sectors. These committees produce consensus industry standards in the form of test methods, recommended practices, and material requirements.

Industries and governments across the globe rely on NACE standards for materials preservation and corrosion control information.

www.nace.org

AGA



American Gas Association

The American Gas Association (AGA) represents 189 local natural gas utilities that deliver gas to 54 million homes and businesses in all 50 states. Additionally, AGA provides services to member natural gas pipelines, marketers, gatherers, international gas companies and a variety of industry associates.

AGA acts as a clearinghouse for gas energy information, as a catalyst in technical and energy policy matters, and as a powerful voice for its members.

AGA's vision is to be the most effective and influential energy trade association in the United States while providing clear value to its membership.

The American Gas Association advocates the interests of its energy utility members and their customers, and provides information and services promoting demand and supply growth and operational excellence in the safe, reliable and cost-competitive delivery of natural gas.

AGA provides accepted industry standard equations for gas flow calculations.

No second chance

H₂S: Hydrogen Sulphur

Around 0.13ppm H₂S is the minimum perceptible odour.

4.6 ppm is an easily detectable "rotten eggs" odour.

10 ppm causes eye irritation.

100 ppm causes coughing.

500 - 700 ppm results in loss of consciousness and possibly death in 30 minutes - 1 hour.

700 - 1000 ppm means rapid unconsciousness and certain death.

Remember:

Hydrogen sulphide is heavier than air, colourless / invisible and your sense of smell will be neutralised after the first few whiffs of gas enter your nostrils!!

Some wells have a concentration of over 10,000 ppm!!

That makes one 1 sniff only!



Internet support

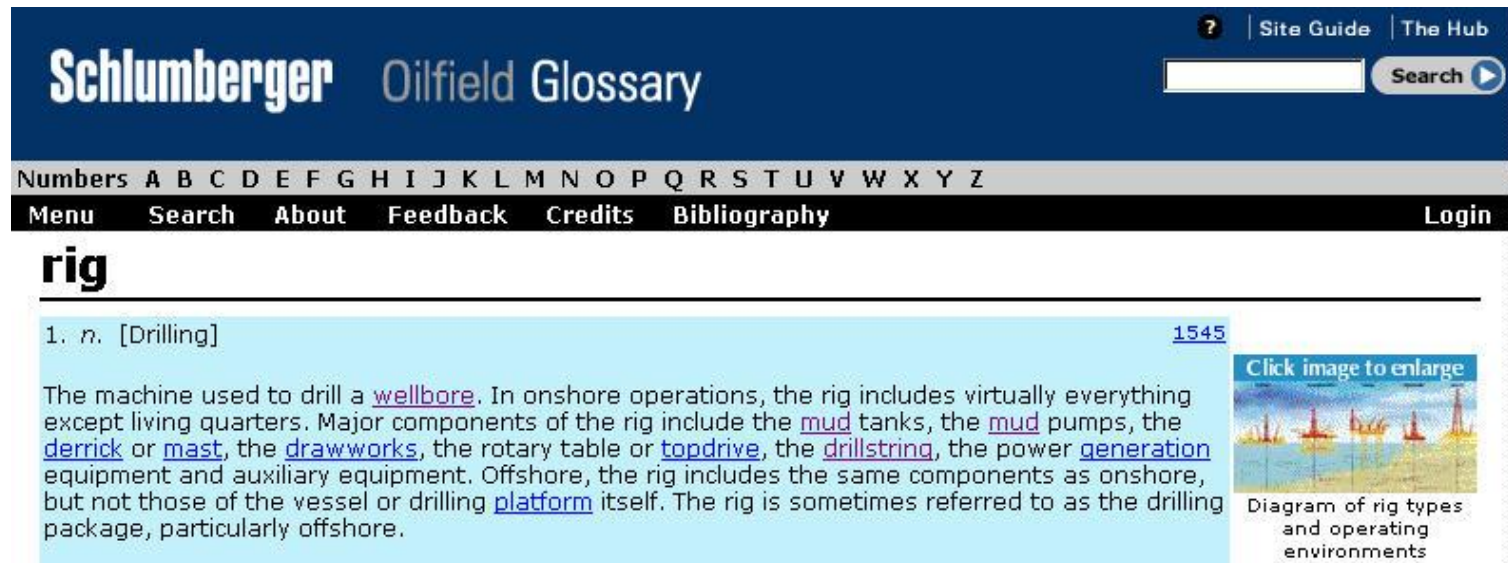
The internet provides unlimited info about all kind of topics.

I found it useful to search under WWW.GOOGLE.COM with the preference on images.

Most oil companies provide glossaries to search for oil field topics.

Specially for exploration Schlumberger provides an excellent glossary under

WWW.SLB.COM - connect to Oil & Gas:



The screenshot shows the Schlumberger Oilfield Glossary website. The header includes the Schlumberger logo, the title "Oilfield Glossary", a search bar, and navigation links for "Site Guide" and "The Hub". Below the header is a navigation menu with letters A through Z, and a secondary menu with "Menu", "Search", "About", "Feedback", "Credits", "Bibliography", and "Login". The main content area displays the definition for "rig", which is a noun related to drilling. The definition includes a list of components like mud tanks, pumps, derricks, and drawworks, and distinguishes between onshore and offshore operations. A small diagram of rig types and operating environments is shown on the right side of the definition.

Schlumberger Oilfield Glossary

Numbers A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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rig

1. *n.* [Drilling] 1545

The machine used to drill a [wellbore](#). In onshore operations, the rig includes virtually everything except living quarters. Major components of the rig include the [mud](#) tanks, the [mud](#) pumps, the [derrick](#) or [mast](#), the [drawworks](#), the rotary table or [topdrive](#), the [drillstring](#), the power [generation](#) equipment and auxiliary equipment. Offshore, the rig includes the same components as onshore, but not those of the vessel or drilling [platform](#) itself. The rig is sometimes referred to as the drilling package, particularly offshore.

Click image to enlarge




Diagram of rig types and operating environments



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