Glossary

Proven reserves

According to China National Standards, proven reserves are estimated quantities of mineral deposits. They can be recovered from reservoirs proved by appraisal drilling during the period of reservoir evaluation, with a reasonable certainty or a relative difference of no more than 20%.

Oil equivalent

Oil equivalent is the conversion coefficient by which the output of natural gas is converted to that of crude oil by calorific value. In this report, the coefficient is 1,255, i.e. 1,255 cubic meters of natural gas is equivalent to one metric ton of crude oil.

Recovery rate

The percentage of oil/gas in place that is recoverable from underground.

Decline rate

A decline in production occurs in an oil or gas field that has been producing for a certain period of time. The natural decline rate is defined as the negative relative change of production over a period of time, without taking into account an increase in production resulting from EOR (enhanced oil recovery) techniques. The general decline rate is defined as the rate of decline in the actual production of such an oil or gas field, taking into account an increase in production from the new wells and EOR techniques.

Water injection

The pressure of the reservoirs continues to drop after the oilfield has been producing for a certain period of time. Water injection refers to the method where water is injected back into the reservoir through the water injection wells to raise and maintain the pressure, increase oil recovery, and thereby stimulate production.

Tertiary recovery

Tertiary recovery is also called enhanced oil recovery and is abbreviated as EOR. It is a method to increase the recovery of crude oil by injecting fluid or heat to physically or chemically alter the oil viscosity or the interfacial tension between the oil and another medium in the formation, in order to displace any discontinuous or hard-to-tap oil in reservoirs. EOR methods mainly include thermal recovery, chemical flooding and miscible flooding.

ASP flooding

A flooding system is prepared with alkali, surfactant and polymer. It not only has a high viscosity but also can create ultra-low water-oil interfacial tension to improve the oil-washing capability.

LNG

Liquid Natural Gas is produced by dewatering, deacidifying, dehydrating and fractionating the natural gas produced from a gas field and then turning it into liquid under low temperatures and high pressure.

Horizontal well

A class of directional wells where the wellbore axis is near horizontal, or more or less 90 degrees deviation. A horizontal well may produce at rates several times greater than a vertical well, enhance recovery efficiency and prolong the production cycle, due to the increased wellbore surface area within the producing interval. Meanwhile, the environmental costs or land use problems that may pertain in some situations, such as the aggregate surface "footprint" of an oil or gas recovery operation, can be reduced by the use of horizontal wells.

HSE management system

The HSE management system provides a framework for managing all aspects of health, safety and the environment. It is defined as the company structure, responsibilities, practices, procedures, processes and resources for implementing health, safety and environmental management.

Occupational diseases

A disease or ailment caused due to excessive exposure to noxious fumes or substances in a working environment.

Internet +

China's "Internet +"action plan refers to the application of the internet and other information technology in conventional industries. It is an incomplete equation where various internets (mobile Internet, cloud computing, big data or Internet of Things) can be added to other fields, fostering new industries and business development in China.

VOCs

Volatile organic compounds (VOCs) refer to organic compounds with saturated vapor pressure over 70Pa under room temperature, and boiling point below 260°C under atmospheric pressure. VOCs also refer to all organic compounds that easily evaporate at temperature of 20°C and vapor pressure of 10Pa or higher.

Carbon capture, utilization and storage (CCUS)

CCUS is a process of separating carbon dioxide (CO_2) from emission sources of industry or related energy industries and having it sequestrated in geological structures or utilized to prevent CO_2 from being released into the atmosphere. It is a technical system aimed at reducing man-made carbon dioxide emissions.

Carbon neutrality

A state in which the net amount of man-made carbon dioxide emissions is reduced to zero because it is balanced by actions to offset these emissions.