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There is a very large number of wells worldwide that leak or have sustained casing pressure (SCP). In Central Europe and the Middle East there are hundreds of wells with reports of trapped pressure that cannot be bled off. In the US and Canada there are thousands of wells leaking to the surface, which may or may not be discharged to the atmosphere. Furthermore, 25% of all wells in the Gulf of Mexico have measurable SCP...

Abandoned wells that leak gas to surface are of great concern to the Global Oil Industry.

Please read the <u>NeoFlex</u> product bulletin before proceeding further.

NeoFlex-Bentonite Impermeable Barrier

NeoFlex has unique physical properties; ultra-low permeability, sustained long-term elasticity, high strength flexible shear bonds with casings and formations, high fracture toughness, flexible solid state expansion, low elastic moduli, and unique Poisson's effect.

NeoFlex & Bentonite Plugging Attributes

- Thru-tubing in-casing plug-back jobs NeoFlex plugs block gas migration in-casing, therein eliminating the occurrence of SCP in casing above NeoFlex plugs.
- Bentonite plugs are <u>everlasting self-healing</u> extremely low-permeability sealing barriers.
- Shapes and dimensions of abandoned boreholes can change over time, Bentonite plugs will constantly conform to borehole shape changes and preserve its everlasting self-healing seal integrity.
- Strategic placement of a self-healing impermeable barrier in an open-hole interval during P&A jobs can block gas migration into <u>all casing annuli</u> above the barrier and block gas migration to the surface.
- There are numerous P&A field operations that remove casing and cement sheath intervals out to earthen formation, e.g., out to open-hole conditions.
- Strategic placement of a Bentonite plug atop a NeoFlex plug in an open-hole interval during P&A jobs will block the feeding of SCP and permanently block gas migration to the surface.

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> > See <u>New Leading Edge</u> Well Intervention Technologies