



Enhancing Oil and Gas Recovery

January 6, 2009

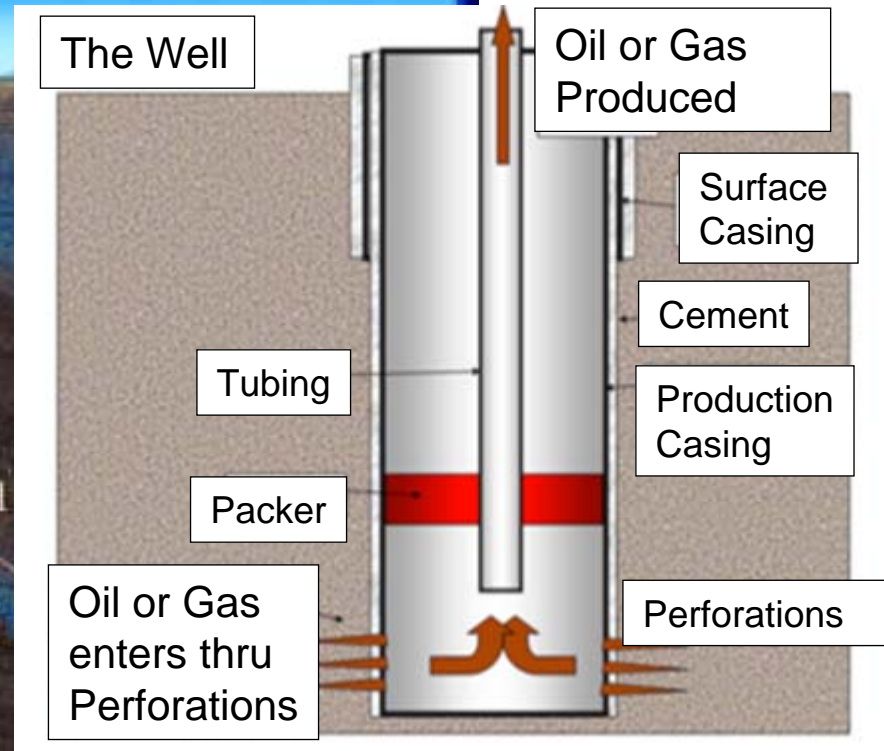
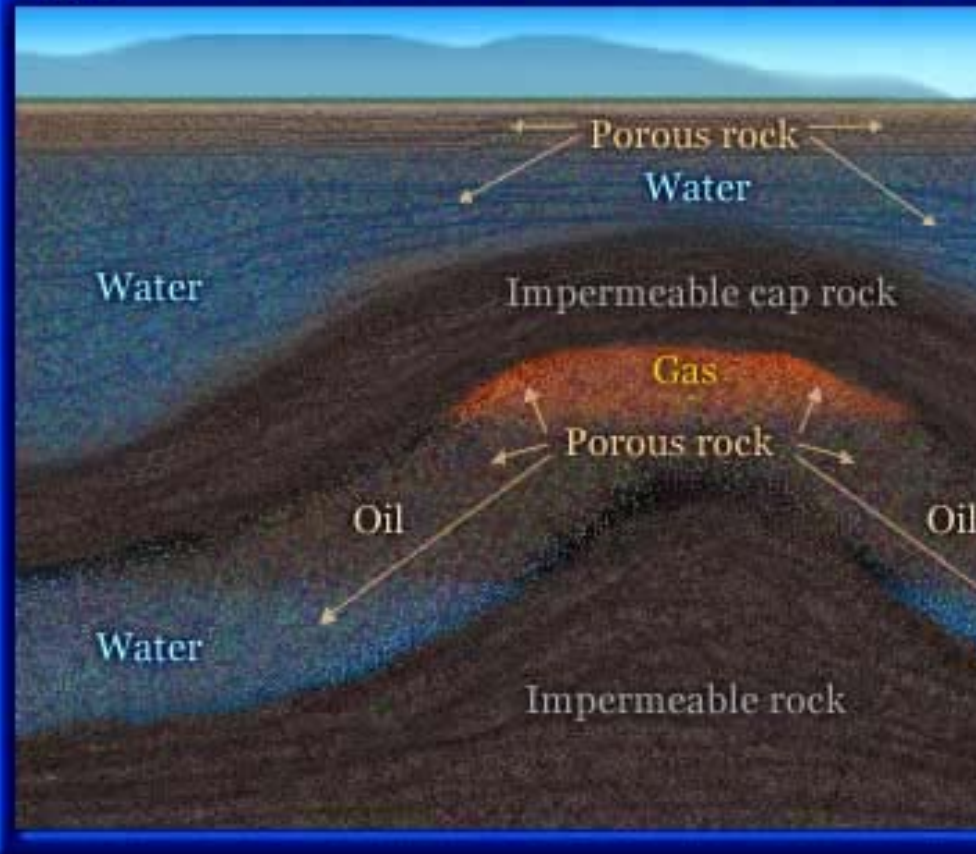
Frank.Paskvan@bp.com

Prudhoe Bay Western Region Resource Manager

Enhancing Oil & Gas Recovery

- Oil and Gas Trapped at Depth and Pressure

Typical Oil and Gas Reservoir



Enhancing Oil & Gas Recovery

- Oil and Gas Trapped at Depth and Pressure
- Primary Recovery via Pressure Depletion
 - Lowering Well Pressure Increases Recovery
 - Artificial Lift: pump, or gas added into well lowers pressure
 - Gas Compression: lowers well surface pressure
- Enhanced Recovery
 - Water Injection
 - Gas Injection (e.g. lean gas, rich gas, carbon dioxide)
 - Chemical Injection
 - Thermal Recovery
- Each Requires Specific Facility Equipment