



FUNDAMENTAL BASIS OF INNOVATIVE TECHNOLOGIES IN GAS INDUSTRY

Anatoly Dmitrievsky (OGRI RAS), Dmitry Lyugai,
Vitaly Markelov (JSC GAZPROM)



Introduction

The global gas industry achieved impressive results in its development.

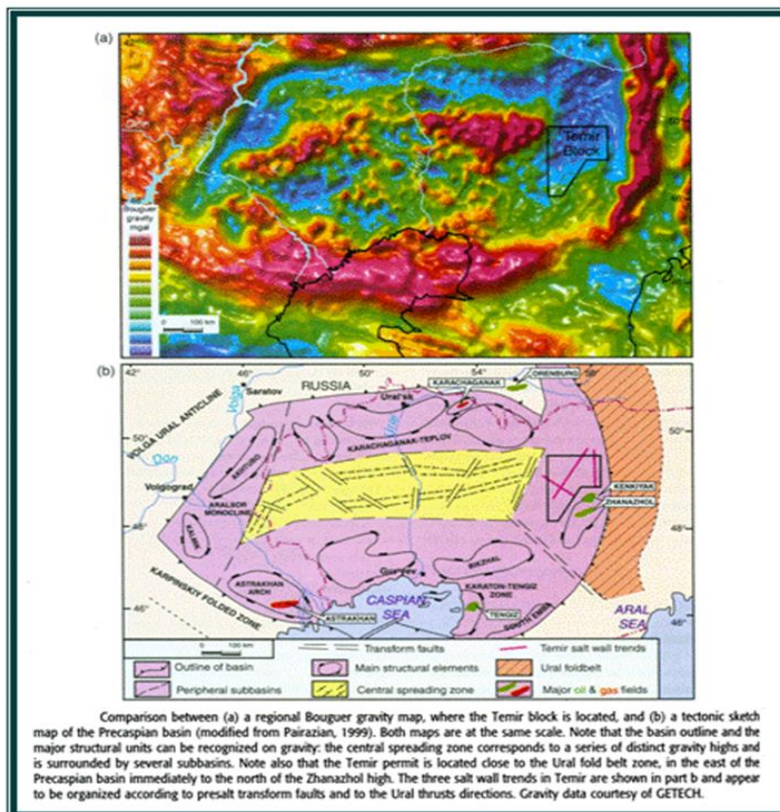
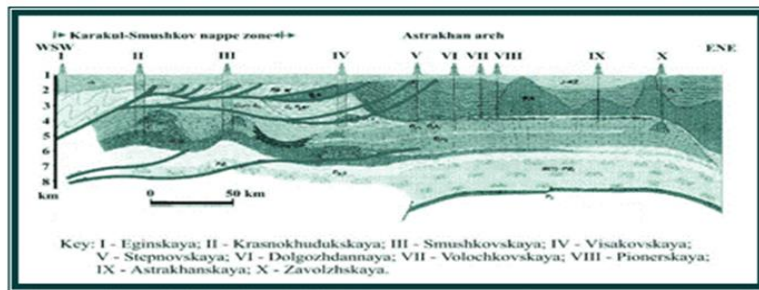
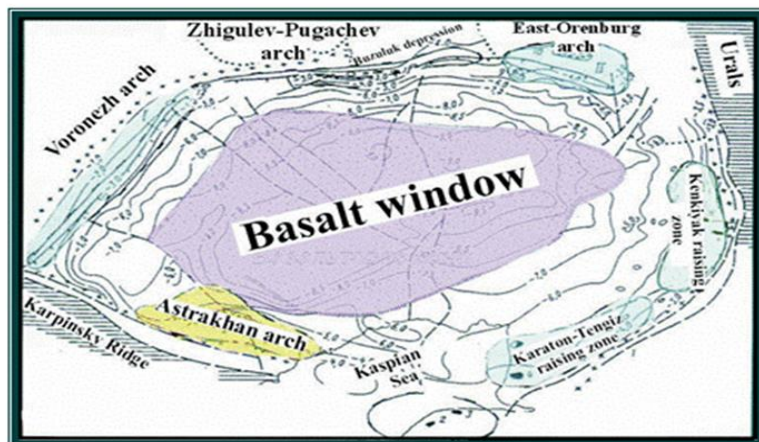
The next step forward in the global gas industry largely depends on the development of new innovative technologies.

It is impossible to resolve the assigned tasks without advance integrated fundamental and exploratory studies of key challenges in the gas science and practice.



INFLUENCE OF FRACTURE ZONES ON THE DEFORMATION OF THE ASTRAKHAN CARBONATE MASSIF AND ON FORMATION OF THE GIANT HYDROCARBON DEPOSIT

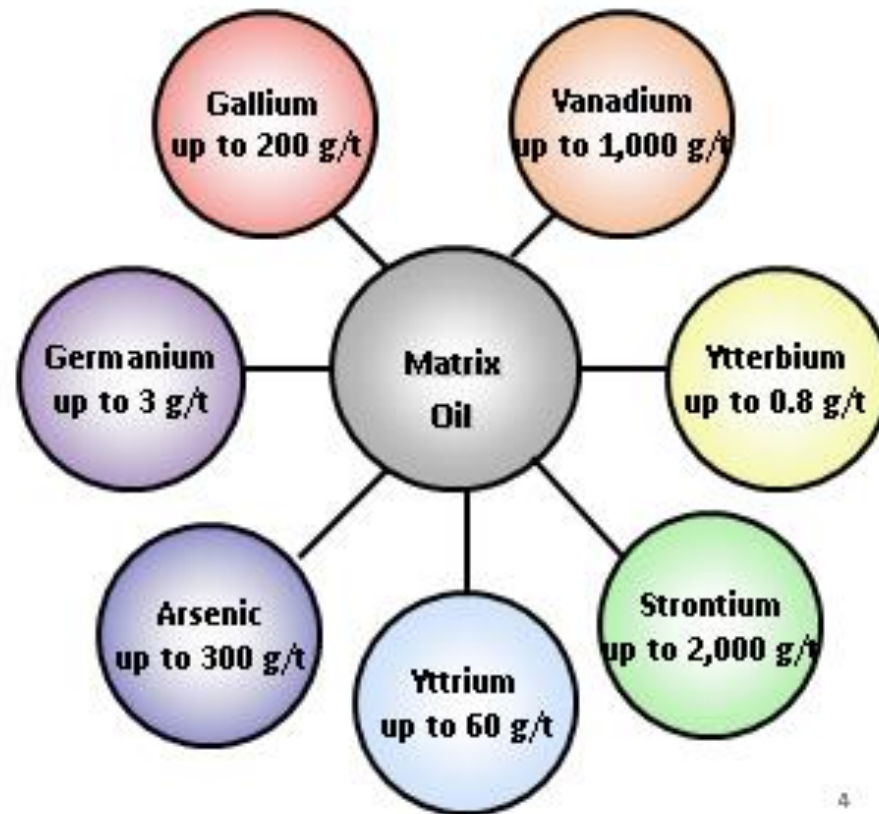
Location of the Astrakhan Deposit (yellow) in the general structure of the Caspian Basin





CONCENTRATIONS OF RARE AND RARE-EARTH METALS

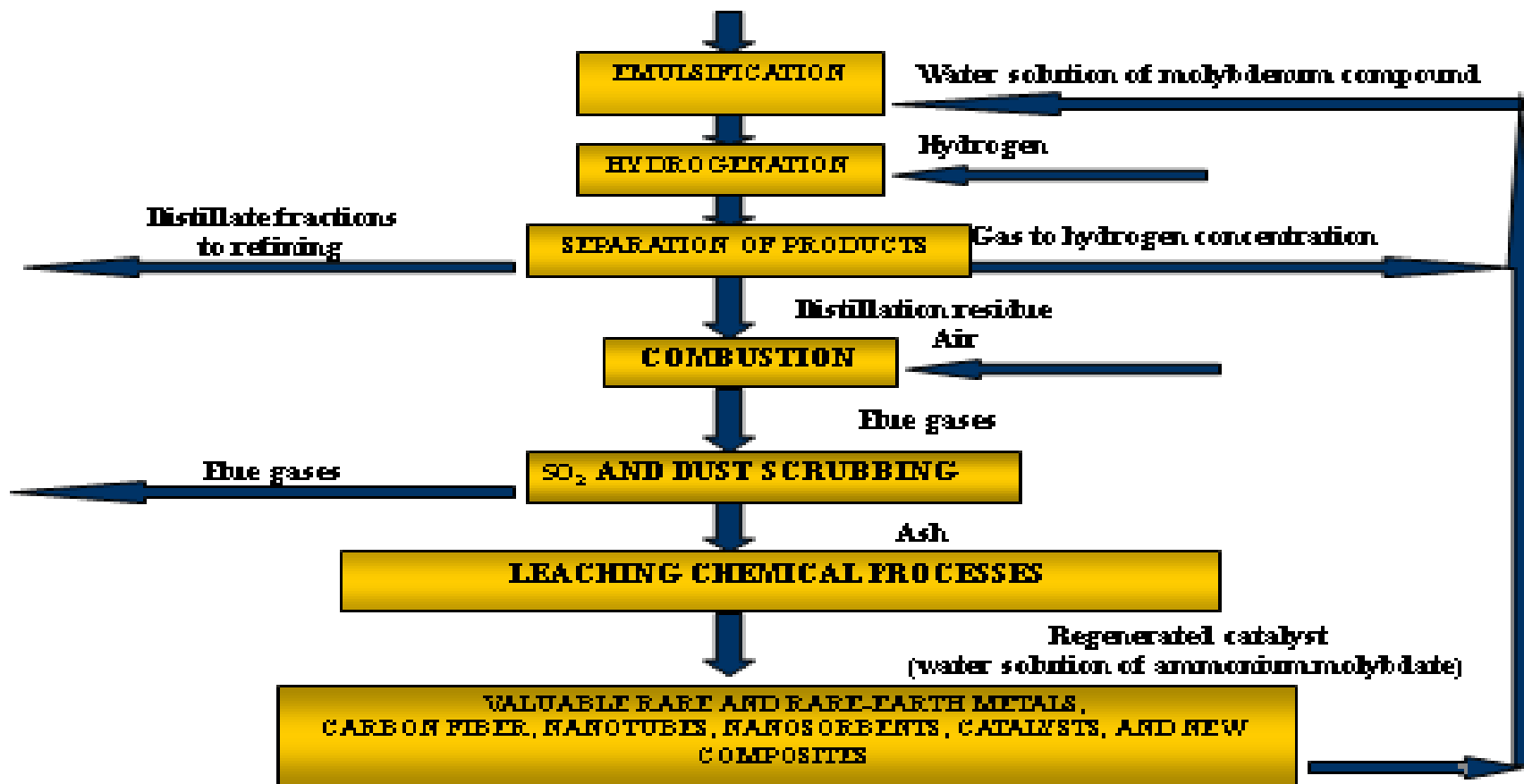
(In high-molecular components from asphalt, resin, and paraffin deposits of surface separation equipment)





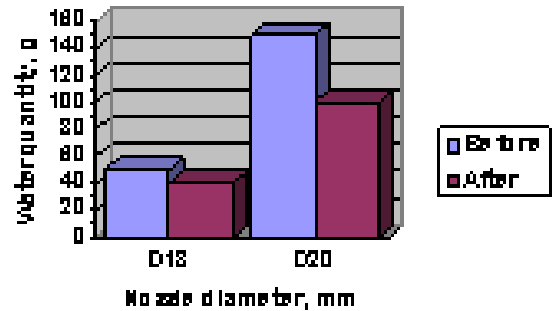
SCHEMATIC DIAGRAM: HYDROGENATION PROCESS OF MATRIX OIL HIGH-MOLECULAR COMPONENTS

HIGH-MOLECULAR COMPONENTS

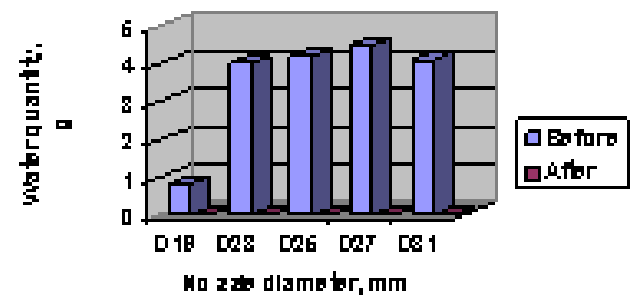


Technology of sand ingress mitigation in gas wells

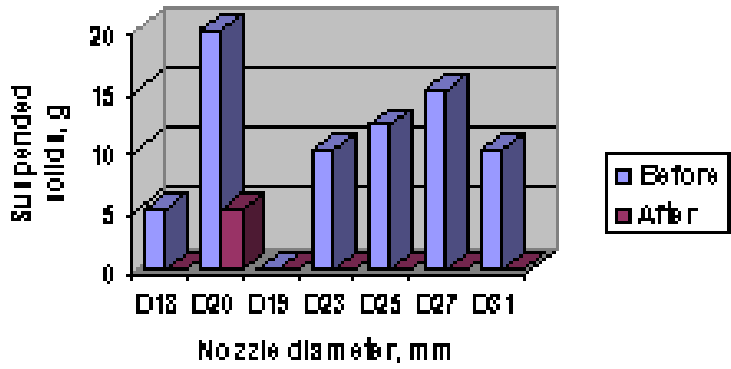
Results (water), Well 1



Results (water), Well 2



Results (sand)

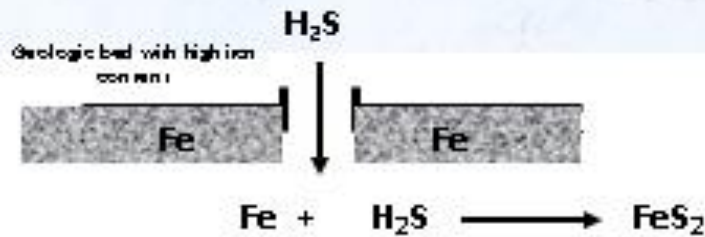
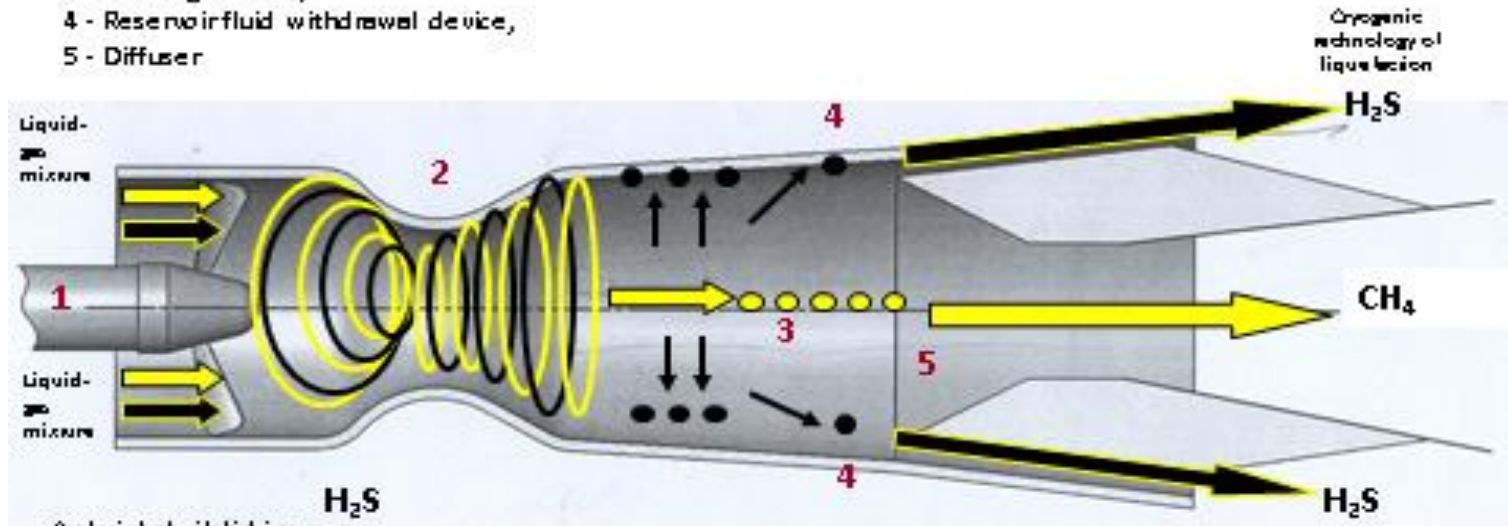


Efficiency of using rock-forming filter



SCHEMATIC DIAGRAM OF 3S UNIT

- 1 - Torsional device,
- 2 - Subsonic/supersonic nozzle,
- 3 - Working section,
- 4 - Reservoir fluid withdrawal device,
- 5 - Diffuser



(Pyrite)

Cryogenic technology of liquefaction



Conclusion

An innovative program of the gas industry development shall be based on the maximized use of fundamental and applied science achievements. Scientific research should be aimed at developing the feedstock base, creating new technologies that increase the degree of hydrocarbon recovery from subsurface, and developing new research-and-engineering and process solutions improving the efficiency of gas chemical production and the reliability of gas transportation system operation.



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Gas Innovations Inspiring Clean Energy



THANK YOU FOR YOUR ATTENTION !