

Specification of downhole gauge permanent monitoring

Location – Plavecký Štvrtok, Slovakia

Wells are without shelter and power supply, the permanent monitoring must be equipped with a solar panel.

Requirement on communication of a surface unit with Nafta’s process systems – Modbus/SCADA RS-485

Upper flange of X-Mass tree is 3 1/8“, with internal thread 3“ LP (Line Pipe).



The smallest ID in the tubings is 51mm (2 3/8“ OD).

Geological parameters of the wells.

Well	Fluid level [m]	Gauge depth [m]	Wellhead P [MPa _r]	Formation P [MPa _r]	Formation T [°C]
Láb-36	168	213,0	1,739	2,451	17,8
Láb Z-25	151	166,0	1,695	1,791	15,1
Láb Z-35	66	65,0	0,441	0,672	12,0

In the wells there is no sour gas, neither any source of corrosion. Salinity of formation water is up to 6000 mg/l.



Requirement on the range/accuracy of the permanent downhole gauge:

- pressure 10 MPa/0.05% FS,
- temperature 0-80 °C/0.5°C

Installation, Testing and Acceptance

- The installed system shall be tested by the supplier together with the end-user to demonstrate that the performance meets the manufacturer's performance specifications and the minimum requirements specified herein
- The results of the testing of the system shall be documented by the supplier in an acceptance protocol that shall be signed by the end-user.
- The supplier shall provide a training for a part of staff of the end-user in the operation and maintenance of the system at the location
- The supplier shall provide at least one complete sets of operation and servicing manuals and drawings in the English language, together with a certificate of conformity of the installed system according to EU directives about an explosion proof, electromagnetic compatibility, RoHS etc.
- Documents for detailed engineering (electrical diagrams etc.)

Date: 06.08.2020

Place: Plavecký Štvrtok