

PRODUCTION LOGGING: PL



Description: Production logs show what is happening downhole as opposed to what one thinks is happening! Production logging programs are run throughout the life of a well to evaluate reservoir behaviour, quantify zonal production or injection, understand unexpected results, and to identify and assess mechanical processes or problems.

The industry has used production logs in the past to quantify zonal production over time for reservoir evaluation, evaluate contribution in CBM wells, evaluate horizontal well production, locate points of water entry, identify thief zones, identify leaking plugs and other mechanical problems. Additional applications for production logging surveys are continually coming to light.

Application:

- Identify water, oil, and gas entries
- Evaluate per zone in producing/injection wells
- Locate and evaluate mechanical issues
- Identify thief zones
- Frac port evaluation
- Horizontal well production analysis
- Evaluate the flow behind the pipe
- Low-flow environments like CBM
- Regulatory required monitoring
- Other applications identified continually

Benefits:

- Identify zones requiring stimulation, thus increasing hydrocarbon production
- Testing reservoir models
- Evaluate stimulation program
- Locate water-producing zones requiring remedial action
- Evaluate completion techniques
- Data is used to create an understanding of the well's completion and stimulation to minimize costs

| | PL-Hunter | PL-Lee/DataCan | PL-Spartek |
|--|---|---|--|
| Sondes | Spin, Temp, Press, GR-CCL | Spin, Temp, Press, Gradio, GR-CCL | Spin, Temp, Press, Cap, GR-CCL |
| Flowmeter Options | <ul style="list-style-type: none"> • Collapsible Fullbore • Continuous • In-line | <ul style="list-style-type: none"> • Collapsible Fullbore • Continuous • LOWFlow Helical (35 & 54 mm) • In-line (43 mm- 1 11/16") | <ul style="list-style-type: none"> • LOWFlow with basket diverter |
| Tool OD | 43 mm (1 11/16") | 35 mm (1 3/8") | 35 mm (1 3/8") |
| Temperature | 177°C (350°F) | 177°C (350°F) | 177°C (350°F) |
| Pressure | 103 MPA (15,000 psi) | 103 MPA (15,000 psi) | 103 MPA (15,000 psi) |
| H₂S / CO₂ | yes / yes | yes / yes | yes / yes |
| Memory | yes | yes | yes |
| Deployment | Eline, Slickline, Coil Tubing, Tractor, etc. | Eline, Slickline, Coil Tubing, Tractor, etc. | Eline, Slickline, Coil Tubing, Tractor, etc. |