# 2021 Gas Lift Workshop - Virtual Course

June 7-8, 2021, Unconventional Gas Lift

#### Virtual Class – June 7-8th 8AM -4PM Course Outline

### Day 1

l <b>.</b>	Intro	duction

- 2. Well Design
- 2.1. Life of well production profiles
- 2.2. Flowback strategies
- 2.2.1. First lift unloading issues
- 2.2.2. Lift revisions over time
- 2.2.3. Late life production options (IGL, PAGL/GAPL, plunger lift, SRP)
- 2.3. Well geometry issues
- 2.4 Frack hit strategies and reservoir considerations including water cut, draw down, and parent child-effect.
- 2.5. Questions to ask Vendors/internal support staff.
- 3. Tubular and Trajectory design considerations
- 3.1 Single well, group or pad designs
- 3.2. Gas injection rate requirements
- 3.3. Production rate potential
- 3.4. Questions to ask Vendors/internal support staff.
- 4. Downhole equipment design concepts
- 4.1. Well design options using side-pocket mandrel (SPM), conventional gas lift equipment or HP/SPGL
- 4.2. Annular verses tubing production options
- 4.3. Operational environmental effects on downhole equipment including gas quality.
- 4.4. Questions to ask Vendors/internal support staff.
- 4.4. Equipment standards and reliability
- 4.6. Equipment throughput testing and how this affects operations
- 4.7. Equipment testing to system design parameters and how this affects operations VPC API throughput testing
- 4.8. Questions to ask Vendors/internal support staff.

### For more information or to nominate papers, exhibits, etc., contact:

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### Day 2

5. Injection	gas	requirements
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- **5.1.** Surface injection pressure options
- 5.2. Gas quality impact
- 5.3. Injection rate requirements
- 5.4. Questions to ask Vendors/internal support staff.
- 6. Surface facilities design concepts
- 6.1. Closed rotative gas lift gas distribution system
- 6.2. Pad, comingled, or single well compressor systems
- 6.3. Gas quality impact on surface facilities
- 6.4. Effects of zero tolerance for venting or flaring of natural gas
- 6.5. Equipment reliability
- **6.6.** System backpressure Blow cases
- 6.7. Well testing / flow measurement
- 6.8. Questions to ask Vendors/internal support staff.
- 7. Flow assurance issues
- 7.1. Hydrates
- **7.2.** Sand
- 7.3. Paraffin/Wax
- 7.4. Scale
- 7.5. Terrain-induced slugging
- 7.7 Questions to ask Vendors/internal support staff.
- 8. Optimization and trouble shooting
- 8.1. Surveillance techniques
- 8.2. Trouble shoot gas lift valve inefficiencies using trend data, pressure gradient profile, CO2 tracer, fluid level (Echometer), among other tests
- 8.3. Questions to ask Vendors/internal support staff.

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