



UGV's strategic oilfield services projects in 2019

Yevgeniy Stashenko
March, 2019
Houston

■ UGV's key strategic objectives for service projects

Strategic objective

Corresponding strategic projects

■ **Maximize P/R ratio at mature brownfields with low remaining pressures, but high remaining reserves**

- 1 Water shutoff
- 2 Production optimization through Artificial lift solutions
- 3 Underbalanced sidetrack drilling with coiled tubing
- 9 Underbalanced drilling (UBD)

■ **Increase resource base through exploring & appraising greenfields**

- 6 Measured pressure drilling (MPD)
- 8 IPM for drill & complete tight gas well

■ **Increase operational efficiency of own fleets and equipment**

- 4 Collaboration model with UGV's own frack fleet

■ **Maximize economical return (ROIC) from outsource contracts**

- 2 Production optimization through Artificial lift solutions
- 7 Performance drilling contracts (PDC)

■ **Get access to the latest technological expertise and "know-how"**

- 5 External frack fleet for customized fracking operations at exploration & appraisal wells
- 3 Underbalanced sidetrack drilling with coiled tubing

Water shutoff

Strategic context

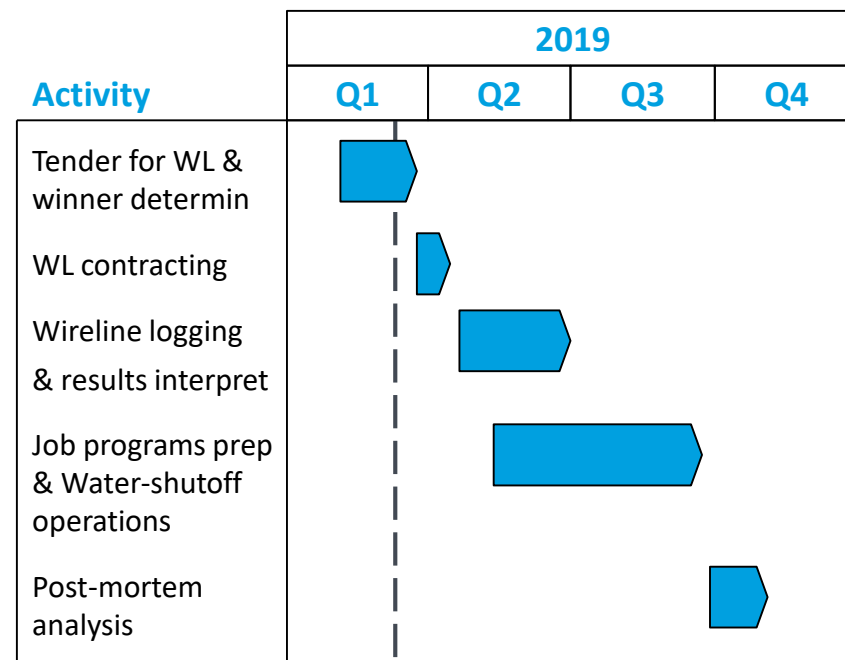
- UGV lost **over 300 mln m3** of gas in 2018 due to water-breakthrough (80%+ of gas was lost at 2 fields)
- **No reliable logging information** is available to understand the reason of water breakthrough and prescribe an appropriate treatment
- Best-in-class **wireline logging technologies & tools**, as well as **chemicals & engineering solutions** are needed to understand the problem and find solution

Scope of work

- **Collect logging information** (cased-hole WL) from existing wells & interpret it – world-class technologies & WL tools are required
- **Analyze well and logging info** and understand problem
- **Write job program & perform water-shutoff operations** using UGV's CTU or WO rigs – special patented chemicals & engineering knowledge required
- Scope – **30+ wells in 2019**



Project timeline



7 Mar 19 - Proposals received

Production optimization through Artificial lift solutions

Strategic context

- UGV has many **fields with depletion rate of 80%+** and 2 500+ working wells, 90% of which cumulatively contribute only 30% of total production
- Most of the **wells produce below its potential** due to constant water-breakthrough
- **Artificial lift could be an efficient solution** to increase production from these wells, and it has many advantages over other techniques (autonomous, economical, resultative)

Scope of work

- **Identify 150-200 well-candidates** for application of Artificial lift technologies
- Agree on **baseline production** from identified well-candidates
- Develop **job programs** for each well and identify customized **Artificial lift solutions** (plunger lift, capillary string, gas lift etc.)
- Apply identified technologies and **increase production** from the wells above the baseline



Objectives & requirements to OFSC

- **Highly-experienced** in Artificial lift technologies (proven track-record) with **immediately available equipment & tools** to Ukraine
- **Available engineering resources** to perform the analysis and make recommendations for customized technologies
- **Willing and able to put capital at risk**
- **Willing to get paid out of incremental production** – take responsibility for the final production results (production risk)

Underbalanced sidetrack drilling with coiled tubing

Strategic context

- UGV has many **fields with depletion rate of 80%+** and **very low remaining pressures**
- UGV has ~2 000 idle wells (due to lost tubing etc.) or wells with low production rates due to **damaged formation**
- During conventional sidetrack on such wells, we experienced drill **mud losses and formation damage (high skin)**
- UGV considers possibility to perform **underbalanced sidetrack drilling** of such wells with coiled tubing



Scope of work

- Identify at least **20-30 well-candidates** with high-enough post-sidetrack production rates
- Wells with TD of **1000-2500 meters**
- Perform **turnkey sidetracking** (CTU + all the required services) of the identified wells with **underbalanced drilling technology**
- Perform **testing** while drilling

Objectives & requirements to OFSC

- **Avoid formation damage** (keep skin within 0-2 range)
- **Minimize mud losses damage**
- **Maximize** post-sidetrack **production** from a well
- **Decrease footprint**
- Make project economical through **lowering cost** of turnkey sidetrack operation (below \$1.5 bln)

■ Collaboration model with UGV's own frack fleet

Strategic context

- UGV has its **own 2000 HP frack fleet** purchased 15+ years ago, and modernized in 2016-2018
- The fleet has performed **80 fracks** in 2004-2014 and then **7 fracks** in 2016
- The fleet is **currently idle** due to **lacking equipment** (2 pumps), **key personnel** and **technological expertise**
- UGV wants to **collaborate with an experienced service company**, which can take **operational control** over UGV's frack fleet and **technological control** over frack design and operations



Scope of work under collaboration model

- **What's needed from contractor: (i) Equipment:** 2 frack pumps (12 500+ PSI) and high-pressure part of manifolds; **(ii) Key personnel;** (iii) Wide-range of **chemicals and materials**, patented **technologies, maintenance experience & culture**
- Contractor will have **turn-key operational control over fleet** and **technological process** (incl. logistics, 3rd parties, job planning and implementation)
- **60+ frack operations** per year

Objectives & requirements to OFSC

- Make UGV fleet **operational and efficient**
- **Minimize NPT** and **maximize number of operations** performed with own fleet in 2019-2020 through operational & planning efficiency, and minimization of repairs
- Learn **"know-how"** technologies
- Keep **cost of frack operation below outsourced one** (\$140-\$150k)

External frack fleet for customized fracking operations at exploration & appraisal wells

Strategic context

- UGV is drilling over **50+ exploration & appraisal wells each year**, many of them require fracking to be producers
- UGV **currently has 60+ exploration & appraisal wells**, which could be finished **with frack**
- Each such well **requires customized approach** to frack design, chemicals selections and frack implementation
- Some of the wells target tight-gas reservoirs, and conventional **reservoirs with high pressures**

Scope of work

- **60+ well-candidates for frack in 2019-2020**
- What's needed from contractor: **(i) High pressure frack fleet with the crew; (ii) Significant engineering & implementation experience; (iii) Wide-range of chemicals, materials, and patented frack technologies**
- Contractor will have **turn-key operational control over fleet and technological process** (incl. logistics, 3rd parties, job planning and implementation)
- **Customized frack design and implementation**



Objectives & requirements to OFSC

- **Attract frack fleet & services from an experienced frack service company** with wide range of frack chemicals, technologies, engineering capabilities, and access to data centers to study collected data
- **Open new fields & increase resource base** through successful application of new frack technologies
- **Lower the risk** of frack operations at greenfields

Key projects in drilling

6 Measured pressure drilling (MPD)

- Drilling and completion with frack of **ultra-deep** well of 6100 meters TD under **IPM** (lumpsum turnkey) model using **MPD technology** (high pressures and temperature)
- **Scope:** Contractor shall provide all drill services, casing, wellhead & X-mas tree, completion, fracking, coiled tubing, testing, and project management (UGV will provide the rig, wellsite, road access, drill tubing)
- **Goal:** drill & complete the well according to the best standards and within pre-approved budget
- **Timing:** RFQs – March, Rig up – end of Q2

7 Performance drilling contract (PDC)

- **IPM** drilling of several wells at well-known brownfields with **well-established benchmarks** for drill time, with **bonus/malus** compensation mechanism tied to drill time
- **Scope:** Contractor shall provide all the drill services, casing, wellhead & X-mas tree, and project management (UGV will provide the rig)
- **Goal:** lower drill time
- **Timing:** RFQs – April, Rig up – beginning of Q3

8 IPM for drill & complete tight gas well

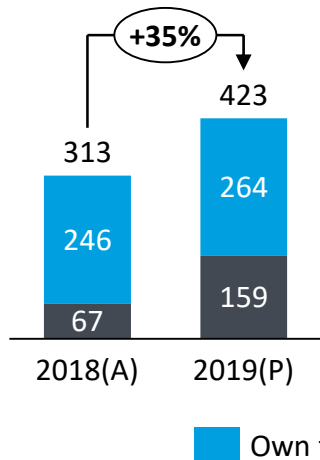
- As part of its **tight gas pilot project**, UGV needs to **drill & complete an appraisal well** to collect information & test the reservoir. The work will be performed under **IPM model**
- **Scope:** Contractor shall provide all drill services, casing, wellhead & X-mas tree, completion, fracking, coring, logging, coiled tubing, testing, and project management (UGV will provide the rig, wellsite, road access, drill tubing)
- **Goal:** Collect the information about formation and reservoir, drill & complete the well according to the best standards
- **Timing:** RFQs – Q3, Rig up – Q4

9 Underbalanced drilling (UBD)

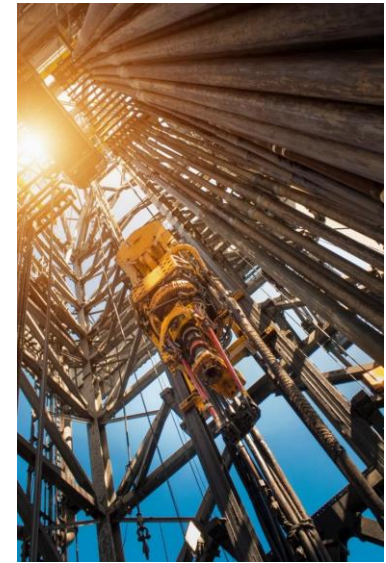
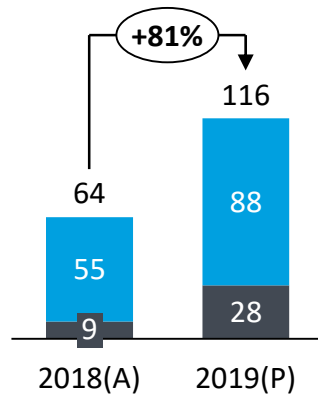
- Drilling of wells at brownfields will **low remaining pressures** under **IPM** (lumpsum turnkey) model using **UBD technology**
- **Scope:** Contractor shall provide all the drill services, casing, wellhead & X-mas tree, and project management (UGV will provide the rig)
- **Goal:** lower skin and increase production rates
- **Timing:** RFQs – Q2, Rig up – Q3

Drilling services scope for 2019

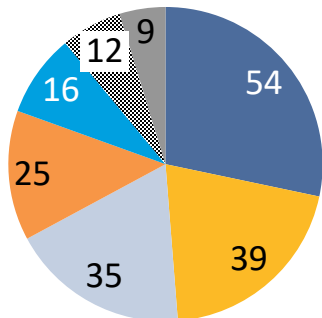
Drilling meterage,
'000 meters



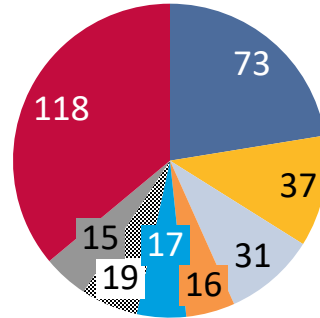
New wells put into
production, #



2019 Procurement plan
(key services), \$ mm



2019 CAPEX program
(key services), \$ mm



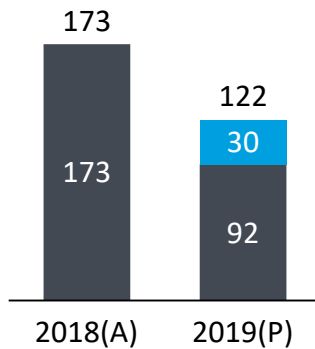
- In 2019 UGV is planning to set a new company all-time record both for **drilling meterage (423k meters)** and **new wells put into production (116 wells)**
- This ambitious program is based on 2 factors: (i) **own fleet modernization program** which was held over the last 3 years and is still ongoing, and (ii) successful implementation of **outsource drill rig contracting model** (14 external rigs are fully operational)
- This drilling program will require significant investments and **contracting of different services & goods** from the market. Key service/product lines for procurement in 2019 are: casing, mud, cementing, JARs & PDMs, Drill bits and MWD



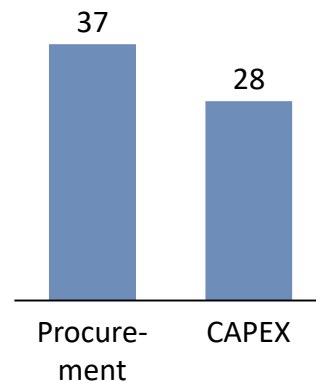
Scope of other key oilfield services (OFS) in 2019

Hydraulic fracturing

Number of HF operations, #

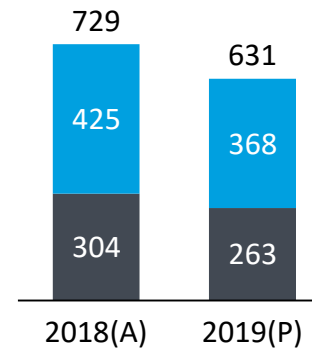


2019 Procurement plan and CAPEX program, \$ mm

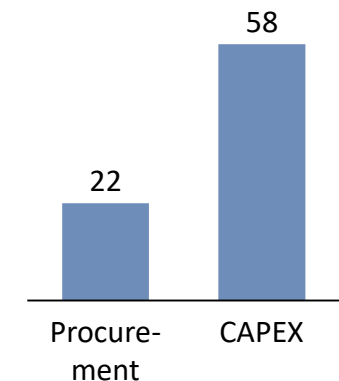


Coiled tubing

Number of CT operations, #

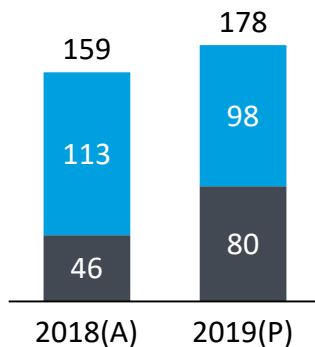


2019 Procurement plan and CAPEX program, \$ mm

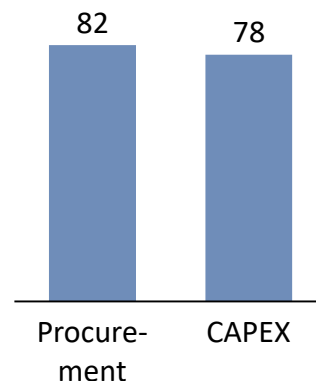


Workover

Number of WO operations, #



2019 Procurement plan and CAPEX program, \$ mm



Summary

- UGV is planning to perform **~1 000 production intensification operations** in 2019
- Although number of HF and CT operations is going to decrease in comparison to 2018, **number of WO operations is going to go up** due to introduction of a sidetrack project
- **Outsourcing contributes a crucial portion** of UGV OFS in terms of **number of operations** performed
- Overall in 2019 **UGV is going to procure HF, WO and CT services for over \$140 mm (VAT net)** and pay over \$160 mm for the services provided




■ Ways to become UGV's supplier

■ Public procurement

- Participate in **public procurement** tenders
- Through **public procurement platform** “Prozorro” or through **public price-reduction** tenders with pre-qualification mechanism
- **Types of suppliers:** perfect for small- and mid-size companies
- **Types of goods/services:** standardized goods, services and equipment
- **95%+** of all UGV's procurement procedures
- **Key criteria for success:** compliance with technical specification and lowest price

■ Direct procurement

- Prove your **track-record and quality** of your goods/services, and become UGV's pre-qualified supplier
 - Through **tenders with limited** (pre-selected) **list of participants**
 - **Types of suppliers:** with proven track-record (companies with world names)
 - **Types of goods/services:** unique or very rare services, goods or technologies
 - **Less than 5%** of all UGV's procurement procedures
 - **Key criteria for success:** apply and become pre-qualified, comply with tech specification, win competition against other pre-qualified bidders
- 

Contacts for further information

Procurement policies and issues



Anton Taranenko

UGV

Head of Procurement Department

anton.taranenko@ugv.com.ua

Technological and service partnerships



Yevgeniy Stashenko

UGV

Head of strategic OFS projects

yevgeniy.stashenko@ugv.com.ua