# **OILTOOLS SERVICES**





## About Us

**OilTools Services LLP** based in Aktobe, Kazakhstan, providing directional drilling services to the Oil & Gas industry.

We currently serve the Kazakhstan market but have the capability to serve customers within CIS market.

Our key field team members have been exposed for some years of horizontal and directional drilling experience and have drilled all over the world while working for big 4 worldwide service players.

We take great pride in being able to optimize our client's drilling strategy, our experience in all kinds of conditions and formations.

## **Our Company History**



2008

OilTools Services LLP MSA signed with formed foreign partners

2010

The 1st directional job performed

with turbine tools

2011

2012

Completed construction and opened "Base 1" for **Drilling Equipment** 

2013 Workshop increased

with numbers of drilling tools and

**BHA** components

2016

Completed construction and

opened "Base 2"

2019

Drilled more

wells

2020

Increased fleet of tools

than 75 deep



### Base #1 Location

Dedicated Office Building – 1,000 m2

Covered Workshop Area – 1,000m2



Open Storage Area – 2,500m2 Integrated Workshop Office – 500 **m2** 



Total Area – 4,000 m2



Integrated Workshop Office – 1000 m2



Covered Workshop Area – 1500 m2

### Base #2 Location

Total Area – 6,000 m2



Open Storage Area – 3,500m2

Repair and Maintenance Facility

All motors, turbines assembly by local technicians







# Our Services





### Well Engineering and Planning

Drill Bits

Coring Services

Turbine Drilling

Performance and Directional Drilling



## **Downhole Motors**

DYNOMAX

4-3/4 in (121 mm) 7-8 Lobe 3.8 Stage HR SERIES 2



Possible damage may occur when motor

Hole Size	SLICK				STABILIZED				
5120	5-7/8 (149 mm)	6 (152 mm)	6-1/8 (156 mm)	6-1/4 (159 mm)	5-7/8 (149 mm)	6 (152 mm)	6-1/8 (156 mm)	6-1/4 (159 mm)	
BEND ANGLE Degrees per 10			00 Feet (30 m)		Degrees per 100 Feet (30 m)				
0.39	3.04	2.56	2.08	1.59	3.04	2.56	2.08	1.59	
0.78	6.42	5.94	5.46	4.98	6.42	5.94	5.46	4.98	
1.15	9.64	9.15	8.67	8.19	9.64	9.15	8.67	8.19	
1.50	12.67	12.19	11.71	11.23	12.67	12.19	11.71	11.23	
1.83	15.54	15.06	14.58	14.1	15.54	15.06	14.58	14.1	
2.12	18.06	17.57	17.09	16.61	18.06	17.57	17.09	16.61	
2.38	20.31	19.83	19.35	18.87	20.31	19.83	19.35	18.87	
2.60	22.22	21.74	21.26	20.78	22.22	21.74	21.26	20.78	
2.77	23.7	23.22	22.74	22.25	23.7	23.22	22.74	22.25	
2.90	24.83	24.34	23.86	23.38	24.83	24.34	23.86	23.38	
2.97	25.43	24.95	24.47	23.99	25.43	24.95	24.47	23.99	
3.00	25.69	25.21	24.73	24.25	25.69	25.21	24.73	24.25	

FBH BUILD RATE: 4-3/4 in (121 mm) 7-8 Lobe 3.8					3.8 Stac	e HR SEF	RIES 2	
Hole	SLICK				STABILIZED			
Size	5-7/8 (149 mm)	6 (152 mm)	6-1/8 (156 mm)	6-1/4 (159 mm)	5-7/8 (149 mm)	6 (152 mm)	6-1/8 (156 mm)	6-1/4 (159 mi
BEND	De	Degrees per 100 Feet (30 m)		Degrees per 100 Feet (30 m)				
1.25	10.32	9.74	9.17	8.59	10.32	9.74	9.17	8.59
1.50	12.49	11.91	11.34	10.76	12.49	11.91	11.34	10.7
1.75	14.66	14.08	13.51	12.93	14.66	14.08	13.51	12.9
2.00	16.83	16.25	15.68	15.1	16.83	16.25	15.68	15.1
2.25	19	18.42	17.85	17.27	19	18.42	17.85	17.2

using three-point geometry and new motor builds. Actual rate predictions will depend on formation characteristics, bit profiles, and WOB. For custom motor configurations and build rates, please contact your DYNOMAX office.

July 10, 2019

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www.DYNOMAXDrillingTools.com sales@DYNOMAXDrillingTools.com Downhole Motor Fleet

- Pathfinder G2 Downhole Motors
  - Available sizes  $6\frac{3}{4}$  and  $4\frac{3}{4}$
- DynoMax Downhole Motors
  - Available Sizes  $8^{\circ}$ ,  $6^{3}/4^{\circ}$  and  $4^{3}/4^{\circ}$
- Cavare Down-hole Motors
  - Available Size 8"

Size	Type of Bearing	Configuration	Manufacturer
8"	Mud Lubricated	6:7, 4.0	Dynomax
8"	Oil Sealed	6:7, 4.0	Cavare
6 3/4''	Mud Lubricated	7:8, 5.0	Dynomax
6 3/4''	Mud Lubricated	7:8, 5.0	Pathfinder G2
4 <sup>3</sup> / <sub>4</sub> "	Oil Sealed	7:8 3.8	Dynomax
4 <sup>3</sup> / <sub>4</sub> "	Mud Lubricated	7:8 3.8	Pathfinder G2

### **Downhole Motors**

Our motors were designed specifically to improve drilling ROP, steering capabilities, and increase reliability. The motors use the highest performance elastomers and materials









### DOWNHOLE MOTOR FEATURES

#### DYNOMAX

- Custom designed thrust bearing maximizes load while optimizing space.
- Splined drive shaft to distribute an even load over the splines; with reduced vibration.
- Adjustable bent housing (0° to 3° in 13 increments) or a fixed bent housing.
- Flow restrictor that reduces pressure in the bearing assembly to a near balanced condition and extending seal life.
- Employs the patented Kalsi Rotary Seal a seal that has been successfully run in down hole drilling applications for over 20 years.
- Includes increased internal drive line dimensions to accommodate more torque required in today's drilling operations (e.g. Extended and Even Wall power sections).



### Turbine



Turbine drilling motors spin the bit at a high RPM, helping you maximize asset value in hostile drilling environments by reducing well time and lowering your cost per foot. Turbine Fleet Available sizes 9 5/8",  $6^{3/4}$ " and  $4^{3/4}$ "

Applications

- Vertical and directional drilling applications
- Formations drillable with PDC and diamond impregnated bits
- Whipstock, cement plugs, and open hole sidetracks
- HPHT wells
- Hostile mud conditions
- Thru-tubing remedial and underbalanced operations in gasified fluids, acidized systems, and high temperatures

#### Benefits

- Less rig time with enhanced ROP, even through very hard formations and during sliding
- More efficient directional drilling because of greater responsiveness and toolface control
- Fewer trips because of high reliability and extended drive train life
- Reduced BHA failures and bit wear because of superior vibration characteristics
- Enhanced wellbore quality and minimal tortuosity over conventional drive systems

# Coring

OilTools Services LLP also provides coring services:

- Core recovery in vertical and directional oil and gas wells applying one-or two-unit core barrels using fiberglass, steal and aluminum inner core tubes.
- Study of geological conditions and selection of the best core recovery technique
- Supply of various types and sizes of PDC and Impregnated core heads
- Engineering support and guidance of coring procedure on drilling site







- High LCM Tolerance
- High Efficiency and Power Consumption Optimized Pulser
- Retrievable Latch down Muleshoe
- Rated to 350°F (175°C)
- Independent Module Memory
- Capable of 49 downlinking options
- 7 data sequences
- 7 pulse widths
- Wireless connection

### MWD

#### MEASUREMENT WHILE DRILLING

With a maximum operating temperature of 175°C (347°F), the MWD kit offers a rugged design built to withstand the most extreme drilling conditions. Three times faster data transmission ensures operators see added value compared to conventional mud pulse.

A patent pending, printed circuit board rail mount along with a proprietary snubber design, dampens shock and vibration, reducing the stress on the internal electronics which leads to longer life and dramatically reduces problems from occurring.

An innovative latching muleshoe design provides downhole reliability while remaining retrievable and re-seatable. Integrated rubber fin centralizers along with custom rotary connectors, allow for quick connections in the field. With a unique pulser bottom end, the MWD Kit offers the highest LCM tolerance in its class. Low operating costs and simple fast serviceability, along with a platform designed around adding in new features.

> MTBF: ~6700 Based on data supplied from Operators

### WINC+

WINC+ (Wireless Inclination with Azimuth) has the ability to provide inclination, azimuth and toolface, so you can keep hole straight and on target, avoiding costly doglegging and potential hole conditions as a result of not circulating while surveying at any point by simply stopping the pumps and restarting them. A survey is reported back to surface while you are drilling ahead, there is no need to wait for the survey to be pumped up; it's done! When used with a steerable assembly, the WINC+ can get you back on target without Having to slow down ROP and waiting for gravity to get your hole back vertical.

- High LCM Tolerance
- High Efficiency and Power Consumption Optimized Pulser
- Retrievable Latch down Muleshoe
- Rated to 350°F (175°C)
- Independent Module Memory
- Capable of 49 downlinking options
- 7 data sequences
- 7 pulse widths
- Wireless connection



### Case History

#### Well Data

- Location: Kenkiyak
- Well: 8077
- Date: 25-08-2019
- Hole Size: 8 <sup>1</sup>/<sub>2</sub>" (Vertical section)
- Well Type: Vertical

#### **Objectives:**

Drilling 8.5" section and maintain wellbore verticality through hard and abrasive interbedded formations with 6 3/4" OTS Turbine and Impregnated bit

#### **Results:**

- Inclination dropped from 5.4deg to 0.1 deg
- Drilled record daily footage: 50m, ROP 2.29m/h
- 5 times faster than PDM drilling
- Drilled 582m with one bit within 13days
- Saved 53 days of drilling time for customer

#### **New Drilling Record was set**



**Irbine Section** 

by OilTools Services Turbine and impregnated bit and save for Great Wall 53 Days

*Objectives:* Drilling 8.5" section and maintain wellbore verticality through hard and abrasive interbedded formations with 6 3/4" OTS T172 Turbine and Impregnated bit in the field Kenkiyak, well 8077.

#### Results:

- $\checkmark$  Inclination dropped from 5.4 deg to 0.1 deg.
- ✓ Target to keep wellbore verticality is reached
- ✓ Drilled record daily footage: 50 m (4043 4093m, daily ROP 2.29 m/h)
- ✓ Drilled 582 m with one bit within 319.5 hrs (13 days)
- ✓ Cost optimization
- ✓ Saved 53 days of drilling time for customer

Depth in: 3708 m (08.08.2019)	Depth in: 3858 m (13.08.2019)
Depth out: 3858 m (13.08.2019)	Depth out: 4290 m (25.08.2019)
Days: 5	Days: 13
Interval: 150 m	Interval: 432 m
ROP: 1.5 m/h (include slide)	ROP: 1.97 m/h



Kenkiyak – Well 8077 Oil Tools Services, 2019

www.oiltools.kz

## Case History

Well Data Location: Chinarevskoye Well: 51\_1 Date: 04-08-2019 Hole Size: 6" (Directional) Well Type: Sidetrack

#### **Objectives:**

Drill sidetrack on the Turnaisian horizon with PDM (Turbine in hard formations) DLS 4.4°/30m and 4.9°/30m and hit the target (radius-25m).

Results:

Target successfully hit Created max. DLS 9.7°/30m



## WINC+

#### Objectives for Well ST 51\_1:

- Perform cased hole sidetrack
- Follow planned well path
- Provide formation evaluation data

#### Tool settings:

- Data rate set to 0.6bps (available up to 4 bps) for required data quality
- Force GTF at 1 degree to perform sidetrack in casing
- Included continuous INC and AZI for directional control
- RT Shock & Vib data available for drilling parameters optimization

As a result well was drilled in 16 days. After performing sidetrack, INC was built from 0 deg to 30 deg, overall drilling 355 m. Timely decisions were made based upon RT GR data.

#### MWD Performance well ST 51\_1



Batteries

**70% 100%** 

360



#### LLP Oil Tools Services, Aktobe 2019

## Customer list



## **Drilling Contractors**





## Health, Safety and Environment

Our field engineers are our most important asset and their safety and well-being is our most important consideration. Safety and environmental protection is an integral part of efficient operations and demands a commitment by all staff at OilTools Services.

In working with our oil and gas customers, management expects that all activities performed on our customer's behalf be accomplished without accident, injury, occupational illness or damage to the environment. We provide a safe, healthy work site for our staff.

Our goal is to maintain the highest safety and environmental standards possible and, as such, all of our engineers and employees are expected to actively participate comply with our safety and environmental programs.









### HSE

- Zero HSE accident on rig site and workshop.
- Holding internal training on weekly basis.
- Arranging external training
- Safety meetings weekly and after each job.
- Toolbox meeting every morning to discuss the operation and plan for the rest of the day.
- Achieving and Implementing, OHSAS 18001
- Routine medical check up for employees
- OTS employers every year take courses:
- Industrial safety of workers at hazardous production facilities
- ✓ Occupational safety and Health
- ✓ H2S
- ✓ Fire Safety Minimum





## Quality Management System

- ISO 9001: 2015 Certified
- Vendors are qualified by an initial joint audit with Engineering Quality
- Vendors are ranked yearly based on performance metrics and given corrective actions to improve quality.
- Approved vendors are periodically audited to ensure ongoing quality and improvement



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## Thanks for Watching