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ABOUT US

Black Lake is an oilfield services provider that is headquartered in Erbil, Kurdistan Region of Iraq, where it is registered with the Ministry of Natural Resources of the Kurdistan Regional Government (KRG). In 2015 the company expanded its operations to Basra, Iraq and Abu Dhabi, UAE and Kuwait.

The company’s technical and engineering services include inspection, instrumentation, precision machining, pressure testing and pressure equipment repair (including BOP and wellhead equipment), thermal coating (HVOF), electro-mechanical repair and welding & fabrication services. Additionally, Black Lake manages 400,000 m² of industrial land located south of Erbil, which is leased out to various tenants from the oil and gas industry. Black Lake’s competitive advantage lies in the quality and price balance achieved through efficient value chain management and responsive customer service.

Our main customers are international service providers and IOC’s operating in the Kurdistan Region of Iraq. Our client base includes organizations such as Halliburton, OilServ, Schlumberger, Baker Hughes, Ensigh, KCA Deutag, EDC Romfor, Parker Drilling, Precision Drilling, Weatherford, Nabors Drilling, Chevron, ExxonMobil, DNO, OMV, Repsol, TAQA, Genel Energy, Perenco and Hunt Oil, Strata, FMC, Rotary, Posco, Halliburton, GE Oil & Gas, SAKSON EGYPT, GW Drilling, Oil Search (Iraq) Ltd, DNO, DQE, Erbil Pioneer, ERBIL REFINERY, Erbil Steel Company, Erbil Water Directorate, Gazprom Neft Middle, Genel Energy, German Oil Tools, Goptapa-Bazian Water Supply Project, Grey Wolf Oilfield, Gulf Keystone Petroleum, GYP, Hilal Bricks, HKN, HUNTA OIL, IOT, Iraqi Cement - Kirkuk Cement Plant, Kar Group, KS Drilling, Koya water directorate, LAFARGE CEMENT, Marathon Oil KDV B.V, MASS Group Holding, NABORS DRILLING, Power Men Company, RASAN PHARMACUTICAL, Sulaymaniah Directorate of Water and Sewerage, TAQ TAQ OPERATING CO. LTD, Tehnotop Group, Trevi spa, VIKING, Wazapetroleum, Weir Oil & Gas-Iraq, Westren Zagros Ltd, Zarya Construction Co.
COMPANY INFORMATION

COMPANY NAME
Black Lake

REGISTRATION DETAILS
Black Lake is registered as Black Lake Company in the Kurdistan Region of Iraq under Kurdistan Regional Government / Ministry of Natural Resources with registration no. 00354 and General Directorate of Companies Registration in Erbil with registration no. 41.

Black Lake is registered as Black Lake Energy Services DMCC in United Arab Emirates under DMCC Authority with registration no. DMCC4657 and Trade License no. DMCC33664.

CONTACT DETAILS
Office tel1 (Erbil): +964 (0) 771 444 8952
Office tel2 (Erbil): +964 (0) 771 575 6433
Email: sales@blacklake.co
Web: www.blacklake.co

ADDRESSES
Head Office:

Office and Facility in the Kurdistan Region:
Black Lake Facility
Black Lake Yard, Mortka
New Kirkuk Road
7 km Past Old Erbil Checkpoint
Erbil, Kurdistan Region, Iraq
Our Quality Management System has been developed under the guidance of the various governing bodies by Black Lake’s Divisional Managers and is substantiated by the following certifications and licences:

- API Monogram 7-1, 5CT, 6A and 16A
- API Q1
- ISO/TS 29001
- ISO 9001:2008
- LEEA
- ARNCO
- DURABAND®NC/TUFFBAND®NC
- NOV Grant Prideco for the full range of eXtreme™ torque (XT), HI-TORQUE®, TurboTorque® and GPDS™ connections
- Benoit for BTS-6 & BTS-8
- TMK Premium Connection PF
- TPCO TP-CQ and TP-G2 Series
OUR QUALITY STANDARDS

GENERAL BUSINESS STANDARDS

MACHINING SERVICES
API Spec 5CT Specification for Casing and Tubing; API spec 7-1 Specification for Rotary Drill Stem Elements; API spec 6A Wellhead and Christmas Tree equipment; API spec 16A Manufacture of drill-through equipment; NOV Grant Prideco eXtreme™ torque (XT®), HI-TORQUE®, TurboTorque® and GPDS™ connections; Benoit License for the manufacture and/or reconstruction of BTS-6 and BTS-8 box and pin connections; TP-CQ and TP-G2 series licences for threaded and coupled connections; ARNCO certified applicator for ARNCO 100XT, 150XT, 300XT and 350XT hard banding products; DURABAND*NC/TUFFBAND*NC Level 1 Applicator for hard banding products.

INSPECTION SERVICES
NDT services (MPI, LPT, UT, and VT) as per API RP 7G-2 and DS-1; Lifting gear inspection and load testing certification as per LEEA (Black Lake is a developmental member of LEEA with licence number 3209).

ELECTRO-MECHANICAL CERTIFICATIONS
Electrical Apparatus Services Association (EASA).

CALIBRATION AND INSTRUMENTATION SERVICES
Pressure gauges, chart recorders, gas detection systems as per ISO 17025.

WELDING AND FABRICATION SERVICES
ASME Section IX.
“Quality is the cornerstone of everything we do. Continuous technical intelligence, innovation and front edge engineering - these are the areas we are investing in.”
INSPECTION

Black Lake specialises in the combination of inspection of casing, drill pipe, hoisting & handling tools, Bottom Hole Assemblies (BHA) and load testing. All inspection services are provided following international standards (API, DS-1, NS-2, ASNT) and can be integrated in a package with other services to ensure smooth delivery of technical support and elimination of quality nonconformities.

Our NDT inspection covers the following:

- Inspection of drill pipes - 5 1/2, 5", 4 1/2, 4", 3 1/2", 2 7/8, 2 3/8
- Inspection of drill collars
- Inspection of HWDP
- Inspection of subs, crossovers, bit subs, saver subs etc.
- Inspection of tongs, slips, elevators, lifting caps (handling tools)

INSPECTORS

All our inspectors have more than 5 years of field experience and are certified in various inspection methods, such as:

- Magnetic Particle Inspection
- Liquid penetrant testing
- Ultrasonic testing
- Visual inspection
- Training Syllabus covering Drill Stem Inspection in accordance with DS-1 and API RP 7G-2

DRILL PIPES

For drill pipe inspection Black Lake uses New Tech Systems electromagnetic inspection units (EMI) with wall loss monitor. These units are capable of inspecting OD drill pipe ranging from 2 3/8" up to 5 1/2". In addition to tubular body inspection, thread inspection is carried out both visually and dimensionally for API and premium connections.
INSPECTION AND INSTRUMENTATION

BOTTOM HOLE ASSEMBLIES
Bottom Hole Assembly ("BHA") inspection consists of inspection of drill collars, heavy weight drill pipe, cross over subs, stabilisers, reamers and bit subs. The inspection of Bottom Hole Assemblies includes wet, fluorescent, magnetic particle inspection of threads and upset areas, and visual inspection of threads for mechanical damage and over torque. BHA inspections will conform to API RP 7G-2, T.H.Hill DS-1, or any other standards nominated by the customer.

MAGNETIC PARTICLE INSPECTION
We also offer the Magnetic Particle Inspection (MPI) of drilling rig mast, sub base, pipe elevators, slips, tongs, sheaves, welded areas of high-pressure lines and other hoisting and drilling equipment. Most of the above items are inspected, utilising A.C. Yoke magnetic flow technique.

EDDY CURRENT INSPECTION
Eddy current flaw detection is an NDT technique that can provide important time and cost savings as the rig structure does not require sandblasting prior to inspection.

The eddy current tool can be applied for various purposes, such as:
- Crack detection
- Material thickness measurement
- Coating thickness measurement
- Conductivity measurement for heat damage detection

Some of the advantages of eddy current inspection include:
- Sensitivity to small cracks
- Identification of surface and near surface defects
- Ability to inspect complex shapes and sizes of conductive materials
- Minimum requirement for equipment preparation
LOAD TESTING
Black Lake is a member of Lifting Equipment Engineers Association (LEEA UK). Our LEEA certified inspectors are cross-trained at ASNT Level II in all the inspection methods mentioned earlier.

INSPECTION TRACKING SYSTEM
The Black Lake Soft Tracking System analyses data about every piece of equipment on a client’s location that requires inspection and automatically provides recommendation for re-inspection dates. A customer receives an alert with suggested inspection dates and schedules the service date with Black Lake representatives. Black Lake team will monitor the client’s assets inspection expiry dates to ensure all the equipment on site remains inspected as per quality standards.

In addition, all the inspection reports are uploaded into secure online reporting system, which allows access to inspection reports at all times through the Black Lake website.

INSTRUMENTATION SERVICES
Instrumentation is a specialised oilfield service section for systems used on inland and offshore drilling and servicing rigs. We offer a tightly integrated package of services including installation, commissioning, on-site trouble shooting, remote support and both in-house and mobile calibration.
PRECISION MACHINING

Being an API-licensed facility, Black Lake provides precision machining services, manufacturing and repair of downhole drilling tools, surface equipment and general machining services for the oil and gas industry following the API specifications.

Black Lake is capable of servicing and manufacturing drill pipe, drill collars, pony collars, HWDP, pup joints, crossover subs, lift subs, stabilisers and more. Our services include the repair and machining of relief grooves, bore backs, fish necks, float bores and zip grooves.

Our machining division also offers:
- General precision machining services
- Drill pipe straightening
- Zinc phosphating
- Slot milling and stenciling services
- Heat treatment in 156KW top hat furnace
- Manufacturing and repair of downhole drilling tools
MAKE-UP AND BREAK-OUT

BUCKING UNIT
Our bucking unit is designed for fast and accurate make-up and break-out of pipe threads and connections of casing, tubing, drilling tools and down hole tools up to a maximum torque of 150,000 ft/lbs.

The unit has enhanced torque control precision to meet the requirement of premium connections. Our six-cylinder machine is hydraulically powered, fully rotational, and is capable of handling sizes ranging from 2 3/8” to 23”.
WELDING AND FABRICATION

Black Lake specialises in providing fabricated steel and pipe works for various industries with a specific focus on upstream Oil and Gas technical requirements. Black Lake offers a full-circle fabrication service including engineering, welding, installation and maintenance.

From design planning to installation - we have the solution to all your steel-related needs. Black Lake’s fully qualified 6G welders cater to both in-house and on-site projects along with providing all necessary equipment. We operate within ASME, section IX quality standard.
ELECTRO-MECHANICAL

ELECTRO-MECHANICAL REPAIR
Black Lake employs leading specialists for rewinding of electrical motors, both AC and DC. All equipment is remanufactured and repaired to the original equipment manufacturers’ specifications (following EASA Technical Manual), serving industries such as Oil and Gas, Chemical, Power Generation, Manufacturing, Smelting, Refining, and Cement.

Black Lake’s repair team can repair AC and DC motors up to 20,000HP, generators, transformers, and switch gears. Our repair service includes vibration analysis and also electrical testing, balancing and machining.

MOTOR VIBRATION ANALYSIS
Motor vibration analysis is an effective safeguard against total loss. It reduces the risk of unexpected downtime, while timely ordering of replacement parts reduces costs. Advance planning also shortens repair and inspection times.

Some of the specific types of vibration-related problems that can be detected in the analysis are:

- Bearing defects or wear
- Damaged or worn teeth
- Internal or external misalignment
- Rotating looseness or imbalance
- Resonance, loose components
- Bending or eccentricity
- Unequal thermal effects
- Bad belt drive
PRESSURE EQUIPMENT

Black Lake offers inspection, repair, remanufacturing and hydro testing of blowout preventers (BOPs) and wellhead equipment.

PRESSURE EQUIPMENT REPAIR
The Pressure Equipment division specialises in inspection and repair of high pressure equipment. Black Lake is licensed for API 16A and API 6A specs support services. We can also manufacture spools, flanges crossovers and other high pressure tools within the API specifications.

BOP REPAIR AND CERTIFICATION
We undertake recertification of Shaffer, Cameron and GE Hydril pressure control equipment. All equipment is remanufactured in accordance with and certified to API Spec 16A standards and can be restored to ‘as new’ condition.

The key benefits of our BOP repair and certification service include:
• High quality and reliability
• Remanufacture to latest industry standards and specifications
• Reduced downtime and cost savings

PRESSURE TESTING
Black Lake offers testing services for BOPs and Wellhead equipment. Using hydro testing technology ranging up to 30,000 psi for BOPs, we are the first company in the region to offer specialised testing for wellhead equipment with nitrogen gas immersion.

Black Lake’s team maintains schedules of all conducted inspections and will notify clients when the next inspection is due, minimising time loss and mitigating risk of equipment failure.
HVOF COATING
Black Lake has partnered with Castolin Eutectic, a worldwide leader of repair and wear protection, to offer the only thermal spray high-velocity oxy-fuel (HVOF) coating services in Iraq. We are now able to provide HVOF spraying, using the most sophisticated plant and equipment, advanced robotic work handling and specialist diamond grind finishing techniques. HVOF coatings solve many severe surface attack problems caused by the effects of abrasion, erosion, corrosion, wear and high temperature environments and improve the lifetime of the equipment.

HVOF coating is a thermal spray coating process in which the desired material in powder form is injected into the stream from a controlled feeder, where it gets heated and accelerated onto the surface by means of the high temperature, high velocity gas stream, producing a dense spray coating. The advantages of HVOF coatings include:

- Coatings are tenaciously bonded to the substrate with a high degree of bond strength
- HVOF coatings have low compressive stress, which results in very thick coatings
- HVOF coatings are used to improve or restore a component’s surface properties or dimensions, thus extending equipment life

REPLACEMENT OF CHROME PLATING
HVOF Carbide Coatings have now become a permanent replacement for hazardous Hard Chrome Plating. A few advantages of HVOF coatings over Hard Chrome plating are as follows:

- They are more abrasive resistant than Hard Chrome Plating
- They give better fatigue strength to the component
- They provide equally good corrosion protection
“Efficient value chain management allows the company to offer the highest value services to its clients without compromising on quality and reliability.”
LAND LEASING AND CONSTRUCTION

WORKSHOPS AND WAREHOUSES
Black Lake builds and provides customised workshops and covered warehousing facilities for its clients. The constructions are based upon a cinder block rendered steel frame ready for overhead hoist installation. You can choose options of ventilated iron roofing, security fencing, lockable emergency exists, concrete floor adjusted to heavy loads, the entrance gates permitting the movement of oversize loads or any other additional feature from our portfolio. We offer 24/7 security with dedicated security teams. In addition, Black Lake is able to provide all support, maintenance and HSSE services for the facilities.

STACKING, STORAGE, CASING AND PIPE YARDS
Black Lake manages several plots of land totalling over 400,000m² that it has leased to clients. The facilities are equipped for stacking and storing of industrial and tubular equipment, heavy and oversize loads, and construction elements. Yards, specifically designed for stacking, allow you to raise the mast of a rig. Black Lake also offers plots of land equipped for casing and tubular storage. We have the technology, certifications, physical resources, and experience to provide all the necessary support for tubular equipment. Our service package includes maintenance and management of materials within HSSE standards, casing management, full warehousing operations and control, stock location and storage management. We provide all-in-one invoice solutions, facilitating paper protocols. We can offer land on short and long-term leases as a pipe/laydown storage yard with full management and maintenance support.
“At Black Lake, we aim to develop at fast pace but with attention to the local environment.”
DEDICATED MANAGEMENT TEAM
Our team of technicians will take care of your materials. With regular inspections, HSSE compliance and testing, you get peace of mind. Black Lake will make sure that all your materials are ready to be utilised at any given moment and fully comply with HSSE regulations. All required maintenance and inspection reports will be carefully prepared and filed by our team, allowing our clients to focus on the core areas of their business.

TRANSPORTATION MANAGEMENT
Together with our logistics partner Amirco, Black Lake provides transportation and heavy lift solutions. Amirco has been a trusted logistics provider for the energy industry in Kurdistan for over 10 years, providing services such as crane rental, trucking, heavy load transportation, rig move and construction. We can build a unified service package based on your requirements and offer a one invoice option to reduce time and cost of administration. Black Lake and Amirco facilities are conveniently located in close proximity to each other allowing hassle-free service in no time.
OUR FACILITIES

BLACK LAKE FACILITY IN ERBIL
Black Lake’s main facility is located on New Kirkuk Road, south of Erbil, 7 km past the Old Erbil Checkpoint.

Our facility now consists of:
- 1,600m² workshop
- 800m² workshop with an overhead crane
- Pressure equipment hydro test bay
- Test pool bay
- Wash bay
- Sand blasting area
- Coating plant
- Storage yard

BLACK LAKE FACILITY IN BASRA
Black Lake’s facility in Basra is located in Energy Distribution Centre on Safwan - Basra Highway.

Our facility consists of:
- 1,000m² of storage land
- Dedicated pipe yard with racks
- Office
OUR EQUIPMENT

PRECISION MACHINING

Markin CNC Lathe
- Max 42” OD
- 30” OD Swing over Bed
- 63” Length With Centre Support
- 21” Hollow Spindle
- Fanuc Controls
- Hydraulic Pipe Handling System

Hankook CNC Lathe
- Max 36” OD
- 24” OD Swing Over Bed
- 140” Length With Centre Support
- 10” Hollow Spindle
- Fanuc Controls
- Hydraulic Pipe Handling System

Megabore Manual Lathe
- Max 36” OD
- 28” OD Swing Over Bed
- 124” Length With Centre Support
- 12” Hollow Spindle

Tarnow Manual Lathe
- Max 32” OD
- 14” OD Swing Over Bed
- 96” Length With Centre Support
- 3” Hollow Spindle

Ajax Manual Milling Machine
- Cross Slide 18”
- Height Travel 2”
- Longitudinal 72”

Sorluc Radial Drill
- 36” OD
- Height 48”
- Max 3” Hole
- MTS Sleeve

Sterling BMSY 800 Band Saw
- Max 30” OD
- Tank capacity 2001
- Design pressure 12bar
- Capacity 25 - 3/8”/3” pipe
- 150,000 lbs/ft torque
- 5-0 RPM
- Hydraulic pipe handling system

Bucking Unit
- GAB 208 bar
- 10001 tank
- 15.5 bar max working pressure
- 400l Zinc coating

WELDING AND FABRICATION

Weldman Hard
- Banding Unit
- Max 9 1/2” OD

SMAW Esab 400
- Rectifier Welding Plants
- 400 Amp DC (8x)

SMAW Esab 600
- Diesel Welding Plants
- 600 Amp DC (3x)

Miller XMT1125 MIG Plant
- 235 Amp

SAW Lincoln
- Welding System
- SAW DC1000 with Lincoln NAS Head
- Camera viewing system
- Max height under boom - 3m
- Boom vertical travel - 2.3m
- Automatic flux hopper

Esab Dry Storage Oven
- Model PKI 0-150°C

Esab Dry Storage Containers
- Model DSS 0-150°C

Series 4000
- Heat Treatment Furnace
- 0 - 1000°C furnace
- 12 PT. Chino chart recorder
- FGH auto programmer P256

PRESSURE EQUIPMENT

Kearns & Richards
- Horizontal Borer
- Table size 59” x 59”
- Longitudinal travel 60”
- Cross travel 90”
- Height travel 48”
- Spindle travel 36”

Schiess Vertical Borer
- Table diameter 72”
- Height under rail 64”

Hydrostatic Pressure Testing
- 30,000 psi windlass pump
- 30,000 psi Tech Cal chart recorder
- 6m x 6m x 6m Test Bay fitted with CCTV

Nitrogen Pressure Testing
- 30,000 psi Proserv Pump
- 30,000 psi Rototherm Chart Recorder
- 5m x 5m x 5m Test Pool fitted with CCTV (2x) 12-bottle Nitrogen Bottle Bank

Hydraulic Torque Wrenches
- Hi-Force Hydraulic Torque wrenches for Flange Rating ranging from API 6A 2000 psi up to 20,000 psi
ELECTRO-MECHANICAL

**Cimat RT505 Balancing Machine**
- 3 Ton Capacity
- 2.5 metre Length Capacity
- 1 metre OD Capacity
- NEMA-3-R 380v

**Hamond Power Solutions Testing Transformer**

**Variac RRTSEN7 Transformer**

**Romer SLP360 Baking Oven**

**SW36 Burning Oven**

**Vacuum Pressure Impregnation Tank**

**Winding Machine**

**Testing Transformer**
- NEMA3-R 380v
- Variac RRTSEN7 Transformer 0-380V
- 0-380V
- 0-200°-OC
- 0-350°C
- 16,500 kg
- 0-1500 HP

**Romer SLP360 Baking Oven**
- 0-200°-OC
- 1 meter OD Capacity

**SW36 Burning Oven**
- 0-350°C
- 2.5 meter Length Capacity

**Winding Machine**
- 1 meter OD Capacity

THERMAL COATING

**TPK90 Poreba Manual Lathe**
- 5m between centres
- 930mm Swing Over Bed
- 95mm Hollow Spindle
- 635mm Swing
- 5.5m between centres
- 10m² Booth
- Working pressure 110 psi
- 160CFM, 40HP 1000psi

**Churchill Cylindrical Grinder**
- 635mm Swing
- 5.5m between centres
- 10m² Booth
- Working pressure 110 psi
- 160CFM, 40HP 1000psi

**Grit Blasting**
- Max 450mm Internal Diameter
- Stroke 1000mm

**Elgi Air Compressor**
- ABB Robotics PS90/6-131-P-131-P-Lss-4505 Control Unit IRB 4400
- Castolin Castojet Kerosene CJK5

**Honing machine**
- ABB Robotics PS90/6-131-P-131-P-Lss-4505 Control Unit IRB 4400
- Eutronic Arc Spray 4

**ABB Robot & Console**
- ABB Robotics PS90/6-131-P-131-P-Lss-4505 Control Unit IRB 4400
- Eutronic Arc Spray 4

INSPECTION AND INSTRUMENTATION

**Fluke Calibrator 715**
- 0 - 24 mA current loop
- DC voltage 0-2-/25 V
- O-15,000 psi

**Dead Weight Testers**
- 0-10,000 psi

**Hydraulic Pressure Calibrator**
- 1000 VDC, 700 VAC, 400 MA AC/DC, 20ADC/AC, 250V DC/AC

**Vibration Digital Meter**
- Budenberg 0-10,000 psi

**Gauge Comparator**
- Model Microcal I
- 0-1000°C

**Thermocouple Simulator**
- (12x) Newtech BHA Kit
- Sinew Model E2W II
- Newtech

**BHA KIT**
- Newtech BHA kit

**Drill Pipe with Wall Loss**
- Newtech Model E2W II

**Drill Pipe without Wall Loss**
- Newtech Model E2W II

**UTEA**
- Olympus EPOCH LTC 1000 Scope (hand held)
- NDT Systems TG 110
- Newtech
- Straight Point 25t
- Straight Point 50t
- Duteist 25t

**UT Wall Thickness**
- Olympus Nortec 600D Eddy Current Flaw detection unit
- Checkline Digital Torque Tool Testers for torque ranges from 0.07 N-m to 1300 N-m

**Re-Facing Unit (All Sizes)**
- Newtech

**Load Cell**
- Straight Point 25t
- Straight Point 50t
- Duteist 25t

**Pad Eye Tester With Hydraulic Pump**
- Olympus Nortec 600D Eddy Current Flaw detection unit
- Checkline Digital Torque Tool Testers for torque ranges from 0.07 N-m to 1300 N-m

**Torque Tool Testers**
SUPPORTING DOCUMENTS

UPON YOUR REQUEST WE CAN PROVIDE YOU WITH:
Certificates of Conformity
Quality Manual
Relevant technical licences and quality certificates
Employees qualifications
Portfolio of completed projects
Photographs of the facility
Location map

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