



QMW INDUSTRIES

CAPABILITY STATEMENT

CAPABILITY STATEMENT 2020



SAVING LIVES SINCE 1984



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Queensland Mobile Welding was established in 1984 by Managing Director Mr Jeff Samuels.

In the early years this Australian owned and operated family engineering company specialized in on-site fabrication and pipeline work, an era when Mr Samuels gained a reputation for completing jobs that other companies thought were too difficult or even impossible.

In 1986 Mr Samuels incorporated the company to QMW Industries Pty Ltd; and purchased the first parcel of land in Acacia Ridge, Queensland, where a 600 square meter workshop was erected.

As a result of many years hard work and a passion for innovation, QMW now service many market sectors, including the mining, oil and gas, construction, earthmoving, forestry, bulk handling, government and transport industries, and are globally known and respected as the market leader for certified safety solutions.

With over 5000 square meters under roof at their head office in Acacia Ridge, Queensland, and state of the art manufacturing facilities in Perth, Western Australia and Rockhampton, Queensland, QMW now provides employment for over 150 people group wide. The philosophy of continuous improvement and putting the customer at the centre of all business activity is even stronger today than it ever was, and is deeply embedded into the very fabric of the company whose motto is 'Innovate – not imitate'.

Through organic growth and strategic acquisition of industry leading professionals, QMW continues to offer creative and highly competitive products and services in the pursuit for Zero Harm and operational efficiencies, where QMW's key point of difference, full destructive testing of all safety structures, can literally mean the difference between life and death.



CAPABILITY

QMW specialise in certified safety products and services that not only save lives, but also improve operational efficiencies in the mining, oil and gas, construction, earthmoving, forestry, bulk handling, government and transport industries.

QMW differentiate themselves by designing and destructively testing all of their fully certified safety solutions, from truck, mining, construction, earthmoving and forestry equipment Roll Over Protective Structures (ROPS), Falling Object Protective Structures (FOPS) and Operator Protective Guards (OPG), to fully modular 4WD Personnel Carriers with integrated ROPS and Australian Design Rules (ADR) protection.

Additional specialist services offered by QMW to support today's drive for improvement in operational efficiencies include the repair and recertification of OEM ROPS/FOPS Cabins, OEM Crane and OEM Drill Rig masts back to an 'as new' condition and to the relevant national and international legislative requirements. This service can literally halve the cost and lead time of purchasing an OEM replacement part.

In order to value add to the client base, QMW compliment their core ROPS, Personnel Carrier, repair and recertification business with a huge selection of tried and tested attachments for all makes and models of earthmoving, construction and mining equipment, both new and old, and also perform equipment modifications and all steel fabrication work to service specific end user requirements.

In order to provide products and services nationally, QMW have engaged a quality audited and brand aligned distribution network throughout Australia, and now extend this reach with strategic partners to Indonesia, PNG and Africa.



Machinery ROPS and ROPS/FOPS

QMW have designed, destructively tested and manufactured a large range of ROPS and ROPS/FOPS products for a multitude of OEM machinery applications.

To date QMW have over 2000 ROPS and ROPS/FOPS designs and are constantly adding to this list in order to support the specific application requirements and diversity of new and older OEM product.

QMW site crews are available to install ROPS anywhere in the world. In addition, a comprehensive installation procedure manual can be supplied with all ROPS models should the client need to install them on a supply only basis.

QMW's range of Machinery ROPS and ROPS/FOPS include:

- Dumptruck/Tow Haul Configurations
- Dozers
- Rollers
- Graders
- Loaders/ LHD's
- Bidders
- Scrapers
- Tractors
- Drill Rigs
- ATV's













Q~ROPS SERIES

This range has been designed to maximise the clients payload and fuel efficiency, whilst complementing the original OEM aesthetic. Through the use of finite element analysis (FEA) and proven destructive testing, Q~ROPS continues to be a lightweight solution that saves lives and provides full mine compliance on any make and model of truck.

Benefits:

- Full mine compliance
- Maximum truck payload
- Quick installation, for either a factory or onsite fit
- NATA destructively tested and certified to ISO3471
- NATA accredited mechanical ROPS/FOPS Testing Facility (Accreditation No15369)
- Mounting brackets for mine compliant work lamp, beacon and fire extinguisher options
- An optional two pack color scheme to complement company livery



BANTAM	Q-ROPS WEIGHT RANGES	ULTIMA	Q-ROPS WEIGHT RANGES
	BANTAM Cab chassis tare weight: 0kg - 3,600kg (incl ROPS weight - approx 200kg) ISO:3471		ULTIMA Cab chassis tare weight: 0kg - 15,000kg (incl ROPS weight - approx 700kg) ISO:3471
WELTA	Q-ROPS WEIGHT RANGES	TITUS	Q-ROPS WEIGHT RANGES
	WELTA Cab chassis tare weight: 3,601kg - 5,500kg (incl ROPS weight - approx 350kg) ISO:3471		TITUS Cab chassis tare weight: 12,001kg - 19,000kg (incl ROPS weight - approx 800kg) ISO:3471
CRUZA	Q-ROPS WEIGHT RANGES	RAZER	Q-ROPS WEIGHT RANGES
	CRUZA Cab chassis tare weight: 5,501kg - 10,000kg (incl ROPS weight - approx 500kg) ISO:3471		RAZER For tilting cabins Cab chassis tare weight: 0kg - 12,000kg ISO:3471
SUPA CRUZA	Q-ROPS WEIGHT RANGES	CRUMAN	Q-ROPS WEIGHT RANGES
	SUPA CRUZA Cab chassis tare weight: 10,001kg - 12,000kg (incl ROPS weight - approx 600kg) ISO:3471		CRUMAN Fixed crew cabin trucks Cab chassis tare weight: 0kg - 12,000kg ISO:3471



EXCAVATOR ROPS & ROPS/OPG

- Designed, tested, manufactured and certified to accommodate excavators up to 50,000kg
- The four post design is tried, tested, easy to install and has been destructively tested to ISO12117-2 and ISO10262
- QMW's "four pillars of protection" has a fully integrated OPG top guard and optional (removable) OPG gate.
- The four post Excavator ROPS/OPG is fully mine compliant and has been designed to allow for ease of fitment and speed to market.
- It can provide protection over an OEM ROPS cabin and save on expensive repairs and recertification
- Options are available for forestry applications with the addition of limb risers to protect the engine bay and hydraulics



- Designed, tested and certified to accommodate excavators up to 40,000kg
- The Q~Vator design is easy to install and has been destructively tested and certified to ISO12117-2 and ISO10262
- The Q~Vator has a fully integrated OPG structure for optimized visibility and ease of access whilst maintaining aesthetics of the machine geometry
- The Q~Vator ROPS/OPG is fully mine compliant

- The Q~OPG has been specifically designed for overhead protection on excavators
- The Q~OPG is light weight, has been destructively tested and certified to ISO10262
- The Q~OPG has been engineered for optimized visibility and ease of installation





Q-TRANSPORTER WITH INTEGRATED ROPS & ADR

The Q~Transporter series of Man Haulers is a Worlds 1st, integrating ROPS and ADR technology, fully destructively tested - the result - the safest Personnel Carrier of its kind on the planet – another QMW innovation for Zero Harm.

Combine this level of safety with the ability to slash the cost of purchasing and running four traditional 4WD Utility Vehicles and it's easy to see why the Q-Transporter is being adopted throughout many industries globally to help improve operational efficiencies.

To further reduce fatigue levels and so, improve WH & S, two independent Air Conditioning and Heater circuits have been designed in to ensure maximum comfort in all climates and environments, in the unlikely event that one circuit fails, cooling or heating are still provided.



OEM CABINS & CANOPIES - ROPS/ FOPS

All OEM Cabins and Canopies are designed to meet the needs and wants of the operator.

QMW perform 'Customer Clinics' during the concept and design phases, ensuring all legislative, structural, ergonomic, visibility, aesthetic, noise, vibration and harshness (NVH) requirements are met or exceeded - the result - improved operator efficiency and lowered fatigue levels.

FOPS CANOPY

- THREE MAN OPEN CANOPY
- FOPS (ISO 3449) TESTED AND CERTIFIED
- SCREEN GUARDING OPTIONS
- FACTORY INTERIOR (WHERE APPLICABLE)
- OPTIMISED VISIBILITY
- UNDERGROUND MINE COMPLIANT
- DESIGNED TO APPLICATION
- ENCLOSED CABIN OPTIONS AVAILABLE



ROPS/FOPS CANOPY

- THREE MAN OPEN CANOPY
- ROPS/FOPS (ISO: 3471 & ISO:3449) TESTED AND CERTIFIED
- SCREEN GUARDING OPTIONS
- FACTORY INTERIOR (WHERE APPLICABLE)
- OPTIMISED VISIBILITY
- UNDERGROUND MINE COMPLIANT
- DESIGNED TO APPLICATION
- ENSLOSED CABIN OPTIONS AVAILABLE



NHL TRI00 (TEREX) DUMPTRUCK ROPS/FOPS INTEGRATED CABIN



- TWO MAN SEALED CABIN
- ROPS/FOPS (ISO3471 & ISO3449) TESTED AND CERTIFIED
- FULL INTERIOR TRIM
- BEST IN CLASS VISIBILITY
- BEST IN CLASS INTERNAL NOISE
- FULL NVH
- BEST IN CLASS HVAC
- MINE COMPLIANT



VOLVO L120F



SANDVIK DR460



LIFTER BORER



FORK LIFT CABIN



DYNAPAC CP142



BUCYRUS (CAT) 8750 DRAGLINE CABIN



TANKS

QMW's Tank modules are designed to suit each specific client's requirements, for both above and underground applications, water or fuel. Volumes range from 1,000L to 45,000L, and each tank is cleverly designed and analysed so that vehicle structural integrity and stability are maintained.

Water Tank Modules can be fitted with any of the following:

- Pumping Systems
- Fan Sprays and Dribble Bars
- Cannon (manual, remote or radio controlled)
- Hose Reels
- Rear Bumper and rear mounted camera
- Air or hydraulic operated sprays
- External water level gauge, Fast Fill Points and Quick Dump valves
- Inspection Hatches



ATTACHMENTS

QMW understand the need for more efficient utilisation of machinery in order to reduce operational costs, and so, have designed and manufactured a range of purpose built attachments to suit various applications within the mining, oil and gas, construction, earthmoving and forestry industries, including but not limited to:

- Work Platforms/Man Baskets
- Tyre Handlers
- Bucket, Grabs, Fork Frames, Grapples
- Hoists
- Vandal Guards

WORK PLATFORMS



BUCKETS



TYRE HANDLERS



GRABS



DOZER SWEEPS



BOOMS



FORK TYNES



COUPLERS



KIBBLE GRAB



HOISTS



LOG GRAPPLE



VANDAL GUARDS



PIPE GRAPPLE



BUCKET GRAPPLE



Where a machine has been involved in an incident which has resulted in discernible deformation of the roll-over protective structure, the damaged structure shall not be reused. (AS:2294.1 - 7.1).

Repairs to a damaged roll-over protective structure may be carried out provided that the repairs are— (c) certified by a person who is experienced with the design of roll-over protective structures”. (AS:2294.1 – 7.2).

QMW specialise in the repair and recertification of all OEM ROPS FOPS structures, and are one of only a handful of companies globally able to perform this service without compromise to the OEM structure. The lead time of a replacement OEM ROPS FOPS Cabin can be months and very costly. QMW provide a cost effective alternative that minimises operational downtime and delivers an ‘as new’ fully refurbished ROPS FOPS Cabin.

With NATA accreditation for NDT (non-destructive testing), full engineering repair reports, recertification documentation and new serial plate, safety and quality are assured



OEM ROPS/ FOPS CABIN LOWERING AND RECERTIFICATION

Many clients have a requirement to lower OEM ROPS FOPS Cabins in order that they can operate in restricted height conditions without the cost of purchasing additional equipment. OEM's don't offer a production solution for this type of equipment and so, QMW have taken on the challenge and succeeded.

All lowered OEM ROPS FOPS Cabins are redesigned without compromise to operator safety, ergonomics or visibility, and are remanufactured with full recertification.



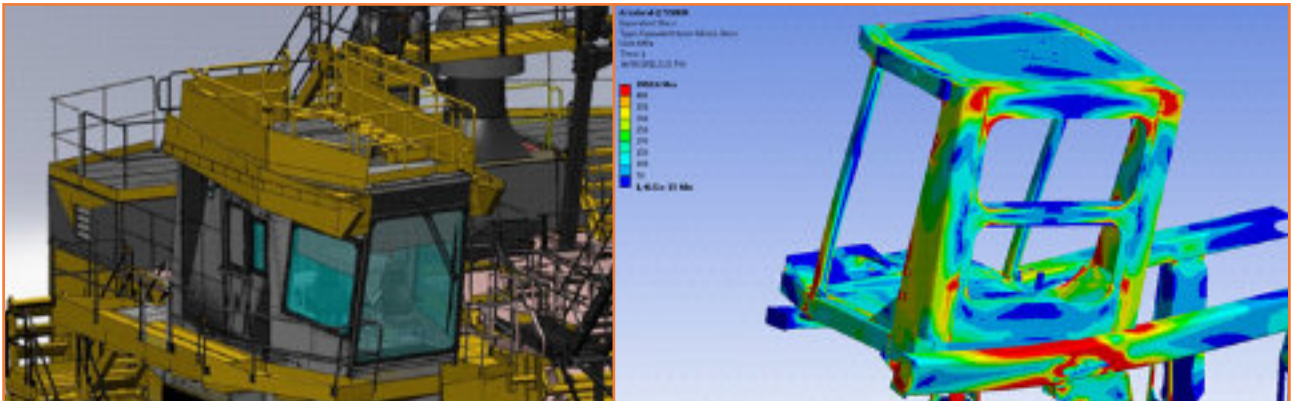
QMW have strategically grown a World class Engineering Department to support current and future industry requirements and to drive innovation, from Cadets to Master's Degree qualified professionals, delivering engineered solutions for both QMW products and outsourced full turnkey projects creatively and competitively.

Cutting edge 3D CAD and FEA software are used, from a blank sheet of paper through to the finished design, manufacture and commissioning phases, and to support 'through life' operational spares requirements and design modifications.

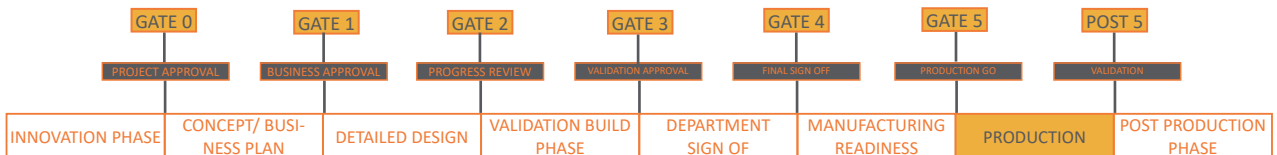
All data and documentation are strictly controlled, with the customer's needs met on time and budget using QMW's unique New Product Introduction Process (NPIP), a project management tool that eliminates financial and brand risk to both the client and QMW.

CAD CAPABILITIES

FEA (STRESS ANALYSIS) CAPABILITES



NEW PRODUCT INTRODUCTION PROCESS - CHART MAP



OEM CRANE MAST MANUFACTURE INSPECTION, REPAIR & RECERTIFICATION

QMW specialise in the manufacture, inspection, repair and recertification of all OEM Crane Mast sections. The lead time of a replacement OEM section can be months and very expensive, QMW provide a cost effective, high quality service for both new and repaired sections that minimise operational downtime.

With NATA accreditation for NDT (non-destructive testing), full engineering repair reports and recertification documentation are supplied with all repairs so safety is assured.



QMW has been supporting Drill Rig manufacturers, owners and operators for over 20 years and have a deep understanding of the harsh environments they operate in and the impact of any downtime to mine owners and contractors alike.

Many standard and 'duty specific' components have been designed and manufactured by QMW including fully trimmed Cabins, Hydraulic Operated Break Out wrench (HOBOW) Assemblies and Carousels, where speed of delivery, quality and cost are a top priority.

QMW also specialise in OEM Drill Rig Mast fabrication, inspection and repair. The lead time of an OEM Mast can be months and the cost high, QMW provide a cost effective and timely solution for new or repaired Masts to minimise any operational downtime.



DESTRUCTIVE STRUCTURAL TESTING

QMW's destructive testing capability and facility is one of the largest in the world and allows ROPS testing for almost any type or size of OEM machine and/or bespoke OEM requirements, from 1.5-150 tonne.

Due to the structural integrity of the facility and the expertise of QMW staff, OEM chassis repairs and straightening can also be completed, significantly reducing operational downtime and repair costs.



QMW's expertise in the design, destructive testing and manufacture of safety critical components has been built on a foundation of highly skilled fabricators, machinists and welders, and a considerable investment into modern workshop facilities and paint plant.

QMW encourage enquiries from all market sectors and have a vast portfolio of diverse and completed projects, from the remanufacture of 49 Rail Containers, to the design and manufacture of a Cat HD776 Tow Hitch.

QUEENSLAND RAIL CONTAINER REMANUFACTURE



CAT HD776 HITCH



CAT 318 REAR BUMPER



CAT 730 TAIL GATES



All ROPS, FOPS, TOPS and OPG products MUST be destructively tested and certified in accordance with the following standards:

- Cabin and canopy ROPS to ISO 3471:2008
- Cabin and canopy FOPS to ISO 3449:2005 (Level 1 or 2)
- Excavator ROPS to ISO12117.2:2008
- Excavator OPG to ISO10262:1998
- Q~Transporter Series to ADR59/00 and ISO3471:2008

Note: AS2294.2, 3 & 4 withdrawn Dec 2008 and replaced by ISO3471, 3449 and 3164

Extract: *International Standard ISO 3471:2008(E) Earth-moving machinery — Roll-over protective structures — Laboratory tests and performance requirements*

1 Scope

This International Standard specifies performance requirements for metallic roll-over protective structures (ROPS) for earth-moving machinery, as well as a consistent and reproducible means of evaluating the compliance with these requirements by laboratory testing using static loading on a representative specimen.

5 Test method and test facilities

5.3 Test facilities

Fixtures shall be adequate to secure the representative specimen to a bedplate and to apply the required lateral, vertical and longitudinal loads as determined by the formulae given in Table 1.

Annex B (informative)

Design changes, physical testing and alterations

B.3 Alternatives to physical testing

Theoretical performance analysis (i.e. FEA) of major new design ROPS is not permitted as an alternative to physical testing.

If in doubt on any aspect of the standards, please call a QMW specialist

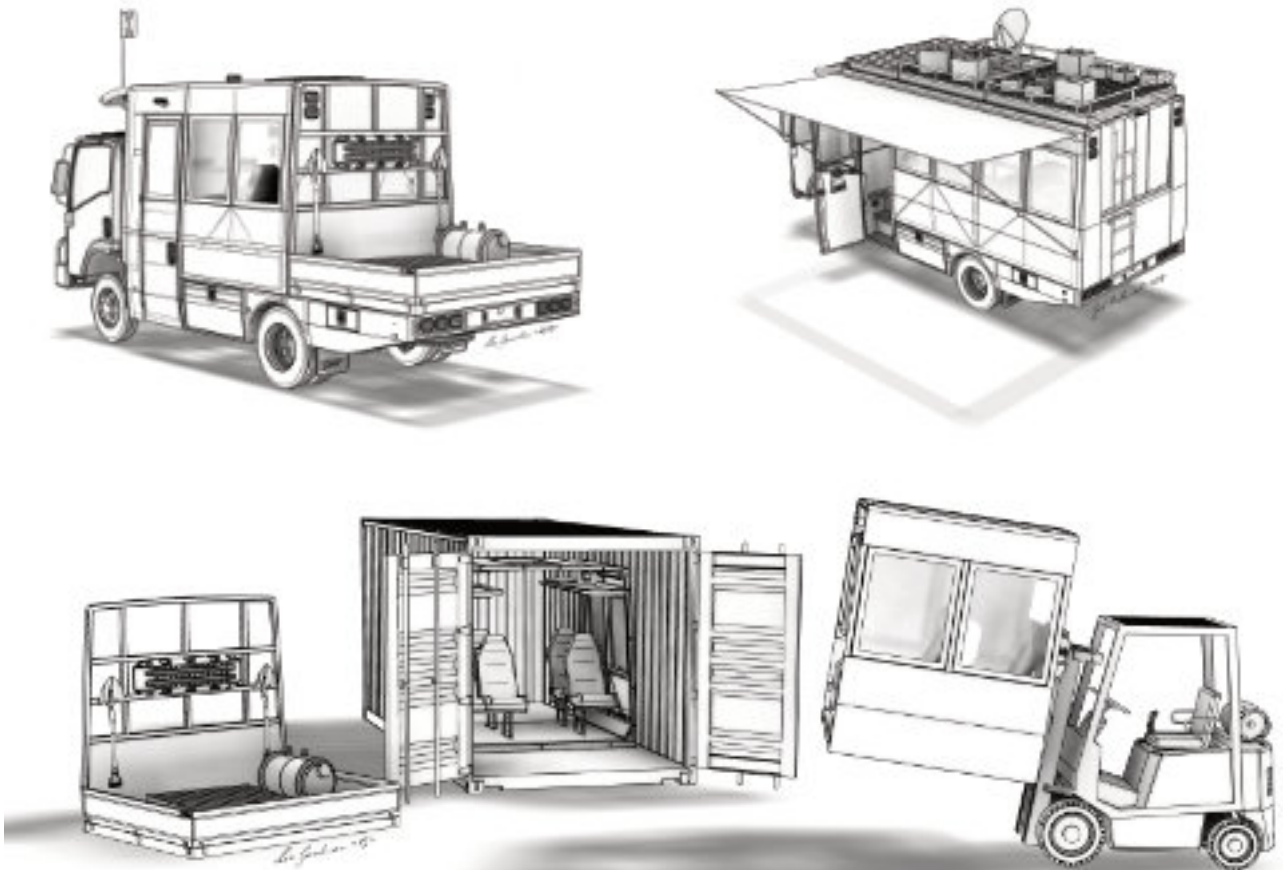


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RESEARCH AND DEVELOPMENT - KEY INNOVATIONS

Innovation is in the very DNA of QMW, the only limitation is imagination.....

The Q~Transporters' modular design philosophy didn't happen by accident, the vision was to create an opportunity for clients to create application specific products that can be shipped by a standard ISO container anywhere in the world.



INDUSTRY ASSOCIATIONS, CERTIFICATION AND ACCREDITATION

QMW's owner and Managing Director, Mr Jeff Samuels, is known globally as the 'go to' expert for all ROPS, FOPS, TOPS and OPG information, supporting the drive for Zero Harm by helping to create many of today's standards, Mr Samuels holds the following positions:

- Chairman of the Committee ME063 on Standards Australia (also representing AIG)
- Australian delegate on the Mirror Committee ISO TC 127 (International Standards Organisation)

To inspire future safety innovations, QMW also holds full membership to the following groups and associations:

- Member of MESCA (Mining & Energy Services Council of Australia)
- Member of CMEIG (Construction Mining Equipment Industry Group)
- Member of AIG (Australian Industry Group)
- Member of CCIWA (Chamber of Commerce and Industry Western Australia)



As a commitment to our clients continued safety and quality expectations, QMW also holds the following Certification and Accreditation:

- BVQI Quality Management System to AS/NZS ISO 9001:2008
- NATA Mechanical Testing Facility Accreditation to ISO/IEC 17025



MAJOR PROJECTS COMPLETED

Company:	BMA
Project:	Bucyrus (CAT) Drag Line Cabin Design and Manufacture
Scope:	Design and build a new operator cabin and crib room for a Bucyrus 8750 Drag Line
Cost:	\$1,000,000.00
Company:	Sandvik Mining and Construction
Project:	Sandvik D55 Drill rig redesign and commission
Scope:	Project manage and complete redesign and refurbishment of D55 Drill rigs x 4
Cost:	\$550,000.00
Company:	NHL - China
Project:	TR100 Rigid Body Dumptruck ROPS/FOPS Cabin
Scope:	ROPS/FOPS Cabin design including structure, ergonomics, visibility and interior trim
Cost:	\$500,000.00
Company:	Anglo Coal
Project:	Lima Crane 25 year structural refurbishment
Scope:	Strip down, rebuild and commission complete crane
Cost:	\$1,300,000.00
Company:	Queensland Rail
Project:	Remanufacture of Floodrock containers
Scope:	Remanufacture 49 IFC Floodrock containers to NSC spoil containers
Cost:	\$1,000,000.00

MAJOR CLIENTS AND DISTRIBUTOR NETWORK

Through constant innovation, destructive testing and a pursuit for Zero Harm, QMW continue to save lives. It's no coincidence that the following companies continue to collaborate with QMW to preserve the life of personnel around the globe:

CLIENTS

- BHP/BMA
- CATERPILLAR
- SHERRIN
- HASTINGS DEERING
- SANDVIK
- DOWNER
- DYNAPAC
- ATLAS COPCO
- KOMATSU
- RIO TINTO
- WIRTGEN
- XSTRATA
- TEREX
- WESTRAC
- CJD
- CHESTERFIELD
- THIESS
- LEIGHTONS
- JJ RICHARDS
- ISUZU
- PACCAR
- HITACHI
- QUEENSLAND RAIL
- WAGNERS
- VOLVO COMMERCIAL TRUCKS
- DAIMLER TRUCKS



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CAPABILITY STATEMENT
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