

UNDERGROUND DRILL RIG EVALUATION REPORT

Sales company: Marketing

Customer: NT Mining Operations

Worksite: Cosmo

Issued By: Mathew Bosanac

Report Type: Sale Audit

Report Date: 8/07/2020

Visit Date: 7/07/2020

Eng. Hours: 319
Rockdrill Hours: 213
Power pack Hours: 1198

Product Type: CableTec M

Ser. No. 8999 3269 00
TMG 18URE 0602

Summary of Check List:

Machine has been working onsite before being parked up due to site closure. Machine is in great working order with low hrs. All components are in good operating condition with no faults to report.

Gripper arms and hose tree have been upgraded to MT stronger robust style Machine comes with 2 new spare tires on rims Spare cassette with 500m bulbed cable Brand new cement silo





$\label{thm:condition:condition:} \textbf{General judgement of the rig condition:}$

☐ As new

Good

Need preventive maint.

Need minor overhaul

Need complete overhaul

Junk

Signature: Mathew Bosanac Customer: NT mining Operations

	PART A/L ROCKDRILL COP: 1838mux		SER. NO.:
Α	CHECK POINT	JUDGEMENT	COMMENTS
1	Front head/bushing Lubrication/wear	☑ OK	
	Lubrication, wear	□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
2	Gear Housing Greasing	☑ OK	
		□ Not OK	
		☐ Corrected	
		Not Corrected	
3	Side bolt nuts Tightening	☑ OK	
		□ Not OK	
		☐ Corrected	
		Not Corrected	
4	Attachment screws Tightening	☑ OK	
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
5	Rotation Motor Attachment nuts tightening	☑ OK	
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
6	Accumulators Abnormal vibration of impact hoses	☑ OK	
	·	□ Not OK	
		☐ Corrected	
		Not Corrected	
7	Hoses and nipples Damage/leakage	☑ OK	All new hoses
		□ Not OK	
		Corrected	
		Not Corrected	
8	Hose accumulator Attachment/leakage	☑ OK	
		Not OK	
		Corrected	
	Physician into	Not Corrected	
9	Flushing inlet Attachment screws tightening	☑ OK	
		Not OK	
		Corrected	
10	Elushing hose connection	Not Corrected	
10	Flushing hose connection Tightening/wear	▼ OK	
		Not OK	
		Corrected	
		Not Corrected	

Rockdrill in in good condition with low hrs, Front head has been serviced

	PART B/L FEED, BMH:		SER. NO.:
A	CHECK POINT	JUDGEMENT	COMMENTS
1	Feed Beam	▼ OK	Good condition
	Damage/wear/adj	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
2	Sliding bars	▼ OK	Good
	Damage/wear	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
3	Sliding rails Damage/wear/adj	▼ OK	Good
	Damage/wear/auj	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
4	Pulley wheel, bearing rear	☑ OK	New bearing and shaft
	Damage/wear	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
5	Traction and return ropes Damage/wear/adj	☑ OK	New ropes fitted
	Damage/wear/auj	□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
6	Hose reel/bearing Damage/wear	☑ OK	
	Damage, wear	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
7	Cradle Damage/clearance	☑ OK	
	Damage/ clearance	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
8	Feed cyl Damage/leakage	☑ OK	
	Damage/realage	■ Not OK	
		□ Corrected	
		■ Not Corrected	
9	Hoses and nipples Damage/wear/leakage	☑ OK	All replaced
		□ Not OK	
		☐ Corrected	
		Not Corrected	
10	Threaded unions Torque	☑ OK	
		☐ Not OK	
		☐ Corrected	
		□ Not Corrected	

11	Drill steel bushings and dowel Wear	☑ OK	Rebuilt BSH
	Wedi	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
12	Guards and plates Damage/wear	☑ OK	
	Daniage, wear	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
13	Limit switch Damage/function	▼ OK	
	Daniage/Tunction	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
14	Grease nipples Damage/grease	☑ OK	
	Duniage, grease	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	

Feed is in good condition

	PART- RHS		SER. NO.:
Α	CHECK POINT	JUDGEMENT	COMMENTS
1	Gripper arms	☑ OK	Good new condition. MT upgraded
	Damage/wear/adj	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
2	Hose tree	☑ OK	Good new condition. MT upgraded
	Damage/wear	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
3	BSH cylinders	⋈ OK	Rebuilt recently
	Damage/wear/adj	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
4	BSH jaws	✓ OK	Good condition
	Damage/wear	□ Not OK	
		☐ Corrected	
		Not Corrected	
5	Segments	✓ OK	good
	Damage/wear/adj	Not OK	
		Corrected	
		Not Corrected	
6	Shaft	✓ OK	good
	Damage/wear	Not OK	
		Corrected	
		Not Corrected	
7	Sensors/cables	✓ OK	good
	Damage/clearance	□ Not OK	
		Corrected	
		☐ Not Corrected	
8	Turning device/sensor	✓ OK	Replaced recently
	Damage/leakage	□ Not OK	,
		Corrected	
		☐ Not Corrected	
9	Hoses and nipples		All new hoses and fittings
	Damage/wear/leakage	✓ OK	
		Not OK	
		Corrected	
10	Threaded unions	Not Corrected	
	Torque	✓ OK	
		Not OK	
ı		☐ Corrected	
ı		Not Corrected	

11	Drill steel bushings and dowel Wear	☑ OK
		□ Not OK
		☐ Corrected
		□ Not Corrected
12	Guards and plates Damage/wear	□ OK
	Damage, wear	▼ Not OK
		□ Corrected
		▼ Not Corrected
13	Linear sensor Damage/function	▽ OK
	Dumage/runction	□ Not OK
		☐ Corrected
		□ Not Corrected
14	Grease nipples Damage/grease	▽ OK
	bumage, grease	□ Not OK
		□ Corrected
		□ Not Corrected

RHS is in good working order, New MT gripper arms and hose tree have been fitted, Carousel has had drive motor replaced string of rods in carousel



	PART C/L BOOM/BUT:		SER. NO.:
Α	CHECK POINT	JUDGEMENT	COMMENTS
1	Boom Body Damage/attachment	☑ OK	
	Damage/accacimient	☐ Not OK	
		☐ Corrected	
		■ Not Corrected	
2	Guards Damage/attachment	☑ OK	
	Damage/accaciment	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
3	Threaded unions Torque	☑ OK	
	Torque	■ Not OK	
		□ Corrected	
		■ Not Corrected	
4	Extension/bearing/scraper	☑ OK	
	Damage/wear	☐ Not OK	
		☐ Corrected	
		■ Not Corrected	
5	Links and shafts	▽ OK	
	Wear/adj/lub	☐ Not OK	
		☐ Corrected	
		■ Not Corrected	
6	Cylinders	▽ OK	Good no leaks
	Damage/leakage	☐ Not OK	
		☐ Corrected	
		■ Not Corrected	
7	Rotation Unit	☑ OK	
	Damage/play/grease	☐ Not OK	
		☐ Corrected	
		■ Not Corrected	
8	Valve block	▽ OK	Good condition
	Leakage/function	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
9	Hoses and nipples	☑ OK	Good condition
	Damage/wear/leakage	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
	Lub nipples	✓ OK	
.0	Damage/grease	□ Not OK	
		☐ Corrected	

		☐ Not Corrected	
11	Hyd check valves Damage/leakage	☑ OK	
	Daniage/leakage	□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
12	Sensors Function	▽ OK	All sensors and angle reading sensors operating correctly
	Tunction	☐ Not OK	operating correctly
		☐ Corrected	
		☐ Not Corrected	
13	Cables Damage/wear	▽ OK	Good condition
	Daniage, wear	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	

All boom components are in good operating condition,

	PART - Grout boom/head		SER. NO.:
A	CHECK POINT	JUDGEMENT	COMMENTS
1	Boom Body Damage/attachment	☑ OK	Good condition no wear
	Damage/attachment	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
2	Turning devices Damage/attachment	Г ОК	No leaks
	Damage/attachment	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
3	Grout head Damage/attachment	☑ OK	Some cement build up on grout head but all
	Damage/attachment	■ Not OK	working
		☐ Corrected	
		□ Not Corrected	
4	Grout hose	☑ OK	Good
	Damage/wear	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
5	Cable cutters	☑ OK	
	Wear/damage	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
6	Cylinders	☑ OK	
	Damage/leakage	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
7	Drive motors cable/grout hose	☑ OK	Good
	Damage/play/wear	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
8	Valve block	Г ОК	Small various leeks as expected
	Leakage/function	□ Not OK	
		☐ Corrected	
		■ Not Corrected	
9	Cement pump	☑ OK	Good working order
	Damage/wear/leakage	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
10	Cement bowl	✓ OK	Clean and good condition
	Damage/clean	□ Not OK	
		☐ Corrected	

		☐ Not Corrected	
11	Hyd check valves Damage/leakage	▽ OK	
	Daniage/leakage	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
12	Cement hopper Function	▽ OK	Empty and clean
	Tunction	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
13	Cables/sensors Damage/wear	☑ OK	
	Daniage, wear	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	



 ${\color{red} \textbf{Comments:}} \ \, \textbf{Crout boom is in good working condition rig has 3/4} \\ \text{bulbed cable still fitted and grout hose is in good condition, Cable cutters} \\ \text{and drive motors have no leaks}$

A CHECK POINT JUDGEMENT COMMENTS 1 Pumps Function/condition/leakage Function/condition/leakage Function/condition/leakage 2 Valves Damage/leakage/function 3 Hoses and nipples Damage/wear/leakage Function 4 Water System Damage/leakage function Function/Corrected Function/Function Function/Function Function/Function Function/Function Function/Function Function/Function Function/Function Function/Function Fu		PART- DRILLING SYSTEMS:		SER. NO.:
Function/condition/leakage Not OK	Α	CHECK POINT	JUDGEMENT	COMMENTS
Not OK Corrected Not Corrected	1		☑ OK	Checked pressures all good no leaks
Not Corrected		Turiction/condition/leakage	■ Not OK	
Valves Damage/leakage/function V OK Not OK Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not Cor			☐ Corrected	
Damage/leakage/function Not OK			■ Not Corrected	
Not OK	2		☑ OK	
Not Corrected		Daniage/leakage/Turiction	□ Not OK	
Hoses and nipples			☐ Corrected	
Damage/wear/leakage Not OK Corrected Not Corrected Not Corrected Not Corrected Not OK Corrected Not OK Corrected Not Corrected			■ Not Corrected	
Not OK	3	Hoses and nipples	☑ OK	
Not Corrected		Damage/wear/reakage	■ Not OK	
## Water System Damage/leakage function V OK			□ Corrected	
Damage/leakage function Not OK			■ Not Corrected	
Not OK	4	Water System	☑ OK	
Not Corrected		Daniage/leakage function	□ Not OK	
Signature Sign			☐ Corrected	
Damage/wear/function Not OK Corrected Not Corrected Not Corrected Not OK Corrected Not OK Corrected Not Corrected Not Corrected Not Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not Corrected Not Corrected Not Corrected Not Corrected Not Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not Corrected Not OK Not			■ Not Corrected	
Not OK Corrected Not Corrected	5		☑ OK	
Not Corrected		Daniage/wear/function	□ Not OK	
Control panels Corrected Control panels Corrected Corr			☐ Corrected	
Damage/function Not OK Corrected Not Corrected Not Corrected Not OK Not OK Corrected Not OK Not OK Corrected Not Corrected Not Corrected Not Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not Corrected Not Corrected Not Corrected Not Corrected Not OK Corrected Not Corrected Not OK Corrected Not OK Silight cracks in RCS screen			■ Not Corrected	
Not OK Corrected Not Corrected Not Corrected Not OK Not OK Not OK Not OK Corrected Not Corrected Not Corrected Not Corrected Not OK Corrected Not Corrected Not Corrected Not Corrected Not OK Corrected Not OK Silight cracks in RCS screen	6	Lamps/bulbs	☑ OK	
Not Corrected		Daniage/function	□ Not OK	
7 Lub system Oil level/leakage/function Not OK Corrected Not Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not Corrected Not Corrected Not Corrected Not Corrected Not OK Condition/clogged Not OK Slight cracks in RCS screen			☐ Corrected	
Oil level/leakage/function Not OK Corrected Not Corrected Not OK Not OK Not OK Corrected Not OK Corrected Not OK Corrected Not OK Corrected Not Corrected Not Corrected Not OK Slight cracks in RCS screen			□ Not Corrected	
Not OK Corrected Not Corrected Not Corrected Not OK OK Not OK Corrected Not OK Corrected Not Corrected Not Corrected Not Corrected Not OK Condition/clogged Not OK Corrected Not OK Corrected Not Corrected Not Corrected Not Corrected Not Corrected Not Corrected Slight cracks in RCS screen	7		☑ OK	
Not Corrected		Oil level/leakage/fullction	□ Not OK	
8 Gauges Damage/function V OK Not OK Corrected Not Corrected Not Corrected Not OK Not OK Condition/clogged Not OK Slight cracks in RCS screen			☐ Corrected	
Damage/function Not OK Corrected Not Corrected Not Corrected Not OK Not OK Not OK Not OK Not OK Sometimes of the series of the serie			□ Not Corrected	
Not OK Corrected Not Corrected Hydraulic filters Condition/clogged Not OK Not OK Corrected Not Corrected Slight cracks in RCS screen	8	Gauges	☑ OK	
Phydraulic filters Condition/clogged Not Corrected Not OK Not OK Corrected Not Corrected Not Corrected Slight cracks in RCS screen		Damage/function	□ Not OK	
9 Hydraulic filters Condition/clogged Not OK Corrected Not Corrected Slight cracks in RCS screen			☐ Corrected	
Condition/clogged Not OK Corrected Not Corrected Slight cracks in RCS screen			■ Not Corrected	
Not OK Corrected Not Corrected Slight cracks in RCS screen	9	Hydraulic filters	☑ OK	
Corrected Not Corrected Control panels Slight cracks in RCS screen		Condition/clogged		
Not Corrected 10 Control panels Control panels Slight cracks in RCS screen				
10 Control panels Slight cracks in RCS screen				
I Function/gamage	10			Slight cracks in RCS screen
Not OK		Function/damage		

☐ Corrected	
✓ Not Corrected	







	PART E CARRIER:		SER. NO.:
E	CHECK POINT	JUDGEMENT	COMMENTS
1	Wheels and tyres Damage/pressure	☑ OK	good condition 80% all round
	Daniage, pressure	□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
2	Wheel nuts Tightness/damage	☑ OK	
	rigitaless/damage	□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
3	Valves Damage/leakage/function	☑ OK	
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
4	Hoses and nipples Damage/wear/leakage	☑ OK	
	Jamage, wear, realinge	□ Not OK	
		☐ Corrected	
		Not Corrected	
5	Compressor brakes Oil level	☑ OK	
		□ Not OK	
		☐ Corrected	
		Not Corrected	
6	Water system engine Damage/leakage/function	☑ OK	
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
7	EI system and wires Damage/wear/function	☑ OK	
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
8	Lub system Oil level/leakage/ function	☑ OK	
		□ Not OK	
		☐ Corrected	
		Not Corrected	
9	Manometers Damage/function	☑ OK	
		□ Not OK	
		Corrected	
		Not Corrected	
10	Air tank Drain Water	☑ OK	
		Not OK	
		Corrected	
		Not Corrected	

11	Hydraulic filter cleanness	☑ OK	
	Cleariness	□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
12	Reels Oil level	☑ OK	
	Oil level	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
13	Brakes Accar. Function/leakage	☑ OK	
	T unction, leakage	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
14	Diesel engine oil/fuel/air filters Level/leakages/condition	☑ OK	
	Levely learninges/ containon	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
15	Transmission oil/filter/solenoids Level/condition/function	▼ OK	
	Zevely condition y run culon	☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
16	Boom console Cracks/damage	▼ OK	
	orders, damage	☐ Not OK	
		☐ Corrected	
		□ Not Corrected	
17	Compressor Oil level/filter/condition	☑ OK	
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
18	Hydrailic tank Level/cleanness/water	☑ OK	
		☐ Not OK	
		☐ Corrected	
		☐ Not Corrected	
19	Lamps/bulbs Function/damage	☑ OK	
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
20	Prot. Roof/controls Function/damage	☑ OK	
	, ,	☐ Not OK	
		☐ Corrected	
		□ Not Corrected	
1			

21	Hyd. Jacks Function/leakage/damage	✓ OK Not OK	
		Corrected	
		Not Corrected	

Carrier has been cleaned to a respectable level, Engine and complete carrier service was carried out weeks prior to parking up. All components working as standard



	PART F CABIN:		SER. NO.:
E	CHECK POINT	JUDGEMENT	COMMENTS
1	Windows/wipers Damage/condition	☑ OK	replaced
		□ Not OK	
		☐ Corrected	
		□ Not Corrected	
2	Air condition Function/filters/leakage	☑ OK	A/C cool and all filters replaced
		☐ Not OK	
		☐ Corrected	
		■ Not Corrected	
3	Lighting Function	☑ OK	
	Tanoton	□ Not OK	
		□ Corrected	
		■ Not Corrected	
4	Operator Seat Damage/wear	☑ OK	
		☐ Not OK	
		☐ Corrected	
		□ Not Corrected	
5	Warming plates Legibility	☑ OK	
	Legionity	☐ Not OK	
		□ Corrected	
		■ Not Corrected	
6	Attachment/dampers Damage/wear	☑ OK	
	Daniage, real	☐ Not OK	
		☐ Corrected	
		□ Not Corrected	
7	Emergancy stop Function	▼ OK	
	T directori	☐ Not OK	
		☐ Corrected	
		□ Not Corrected	
8	Driving panel/controls Function/damage	▽ OK	
	. scaon admaga	☐ Not OK	
		☐ Corrected	
		■ Not Corrected	

	TEST DRILLING/L:		SER.NO.:
E	CHECK POINT	JUDGEMENT	COMMENTS
1	Pump Pressure	₩ OK	230bar
		□ Not OK	
		☐ Corrected	
		□ Not Corrected	
2	Pos pump pressure	▼ OK	230Bar
		□ Not OK	
		☐ Corrected	
		□ Not Corrected	
3	Imp pressure high	▽ OK	180Bar
		□ Not OK	
		☐ Corrected	
		□ Not Corrected	
4	Imp pressure low	▽ OK	130Bar
	Damage/leakage function	□ Not OK	
		☐ Corrected	
		□ Not Corrected	
5	Feed pressure high	▽ OK	120Bar
		□ Not OK	
		☐ Corrected	
		□ Not Corrected	
6	Feed pressure low	▼ OK	45Bar
		□ Not OK	
		☐ Corrected	
		■ Not Corrected	
7	Rot pressure idling	☑ OK	40Bar
		☐ Not OK	
		☐ Corrected	
		■ Not Corrected	
8	Rot pressure drilling	☑ OK	60Bar
		□ Not OK	
		□ Corrected	
		■ Not Corrected	
9	Rot RPM	☑ OK	160RPM
		□ Not OK	
		☐ Corrected	
L		Not Corrected	
10	Damper pressure	☑ OK	40bar
		☐ Not OK	
		☐ Corrected	
L		Not Corrected	

11	RPCF Setting	☑ OK	70Bar
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
12	Anti-jamming setting	☑ OK	95Bar
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
13	Max feed pressure setting	☑ OK	120bar
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
14	Water pressure	☑ OK	14bar
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
15	Lub air pressure	☑ OK	3bar
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
16	Amp check	☑ OK	42bar
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
17	Stroke setting	□ ок	N/A
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
18	Flushing seals	☑ OK	Replaced
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	
19	Feed pressure return	☑ OK	150Bar
		□ Not OK	
		☐ Corrected	
		☐ Not Corrected	

Summary

Overall the CableTec M is in excellent condition with low hours, this rig was working and performing well before being parked up. Regular service and maintenance with Epiroc site support personal and experienced operators using the machine. The rig is fairly clean inside and out and has very few oil leaks, Hosing is neat and tidy and all moving components are tight.

Recommend a recommission at next site to set up drilling parameters to suit site conditions but other than that the rig is ready to go straight to work

Auditor Mathew Bosanac Epiroc TME product specialist 0437057061