

Salt production in the UK meeting the challenges of today and in the future

Philip Burgess, Executive Director
Salt Association



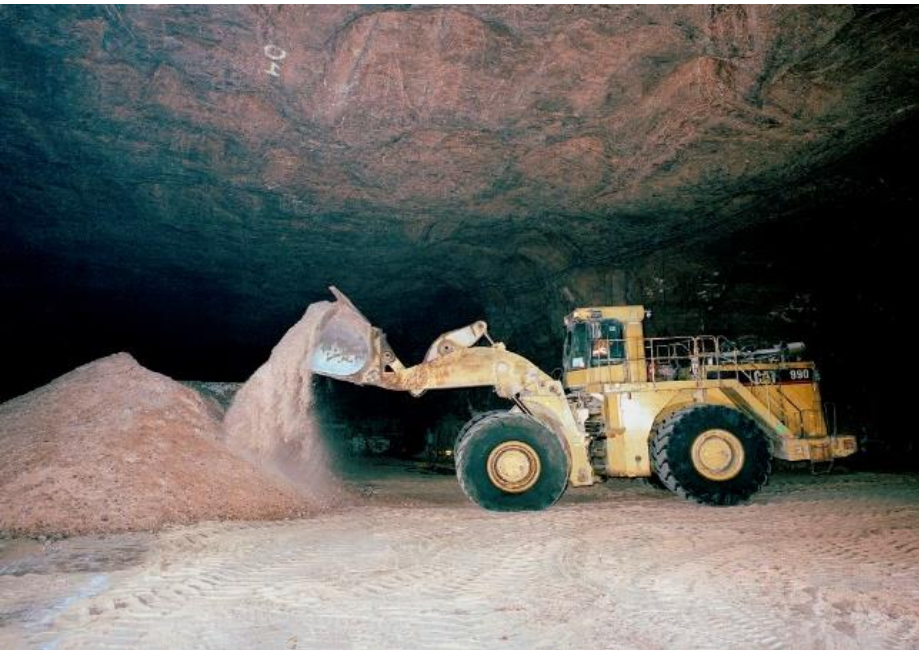
Order of presentation

- The Salt Association and its member companies
- Production methods – key similarities and differences
- Demonstrating improvements and efficiencies through investment
- Other challenges faced requiring continued planning and investment
- Purpose of rock salt as a strategic resource

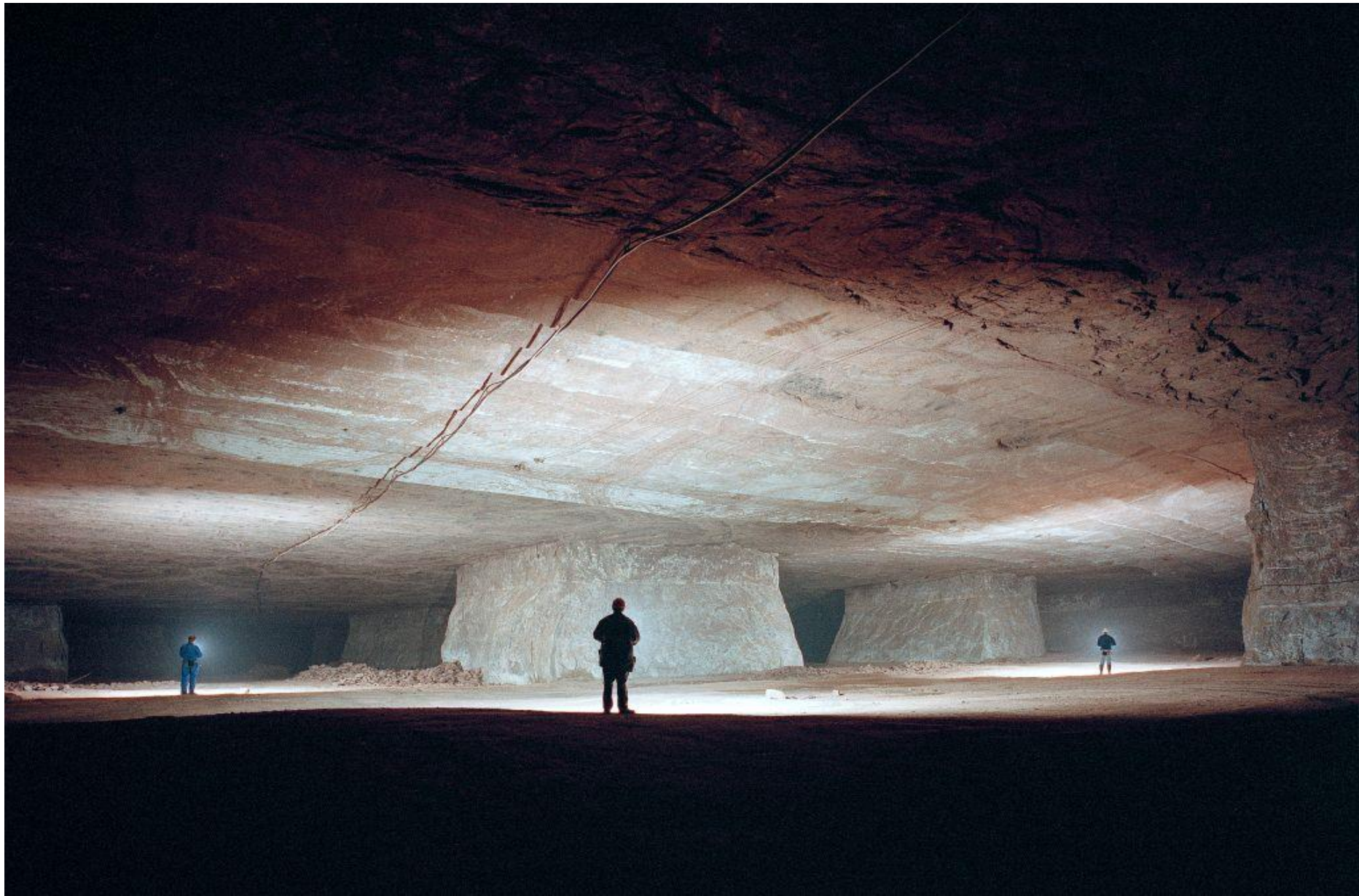
Rock salt producing members of the Salt Association

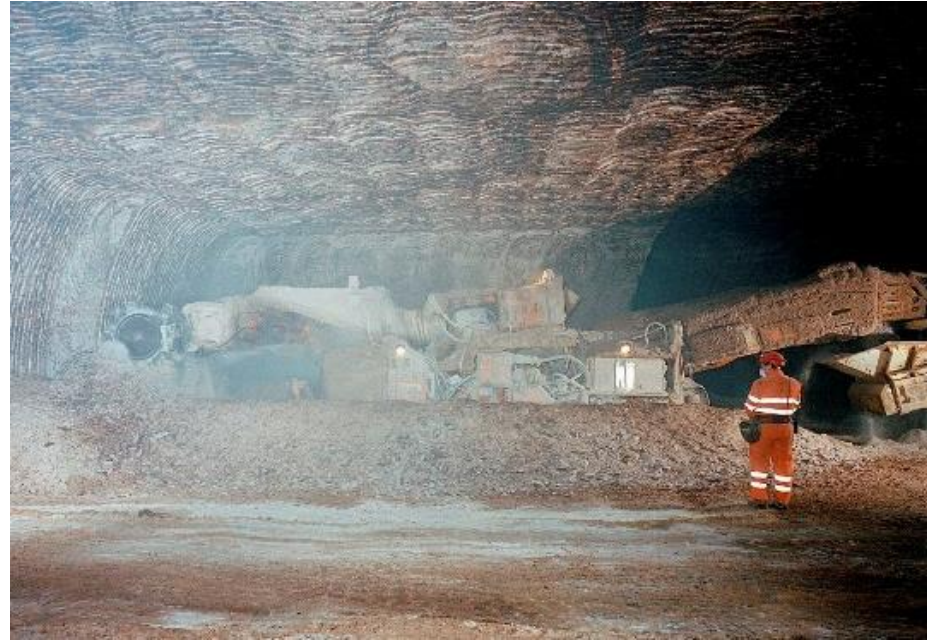
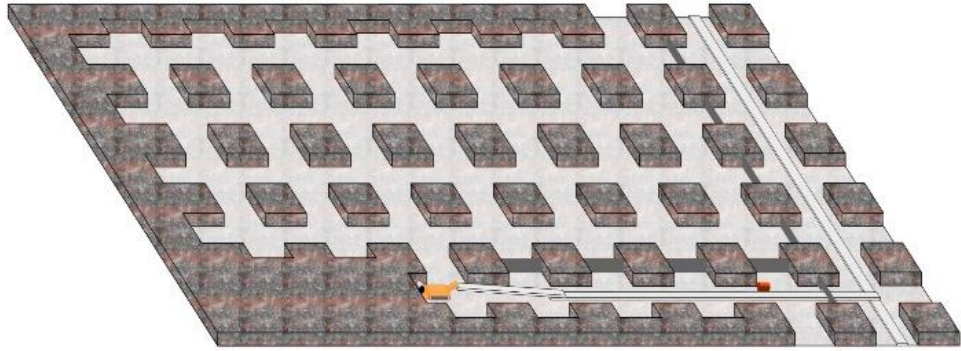






















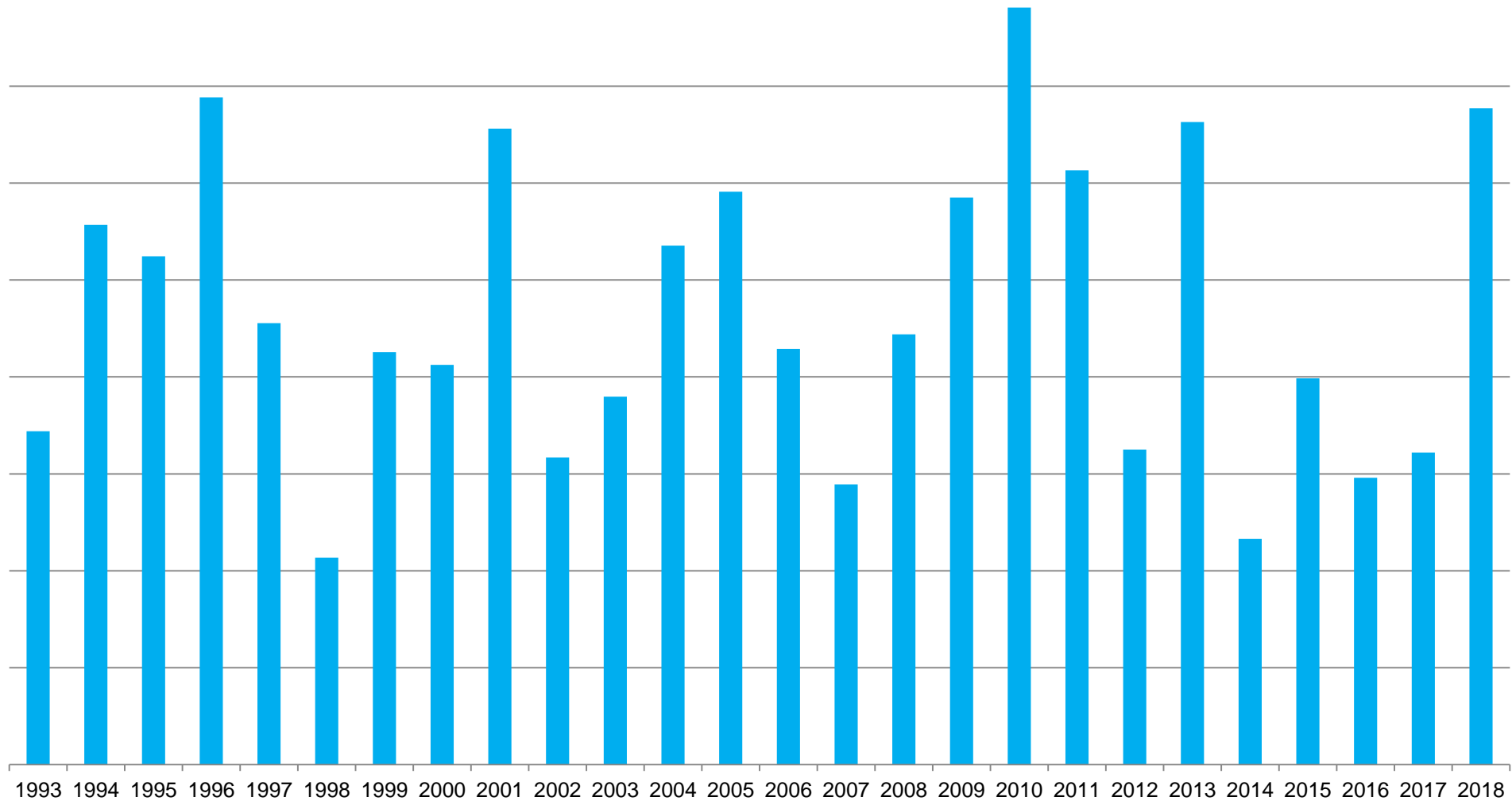






UK Salt usage over the past 25 years

Source: Roskill







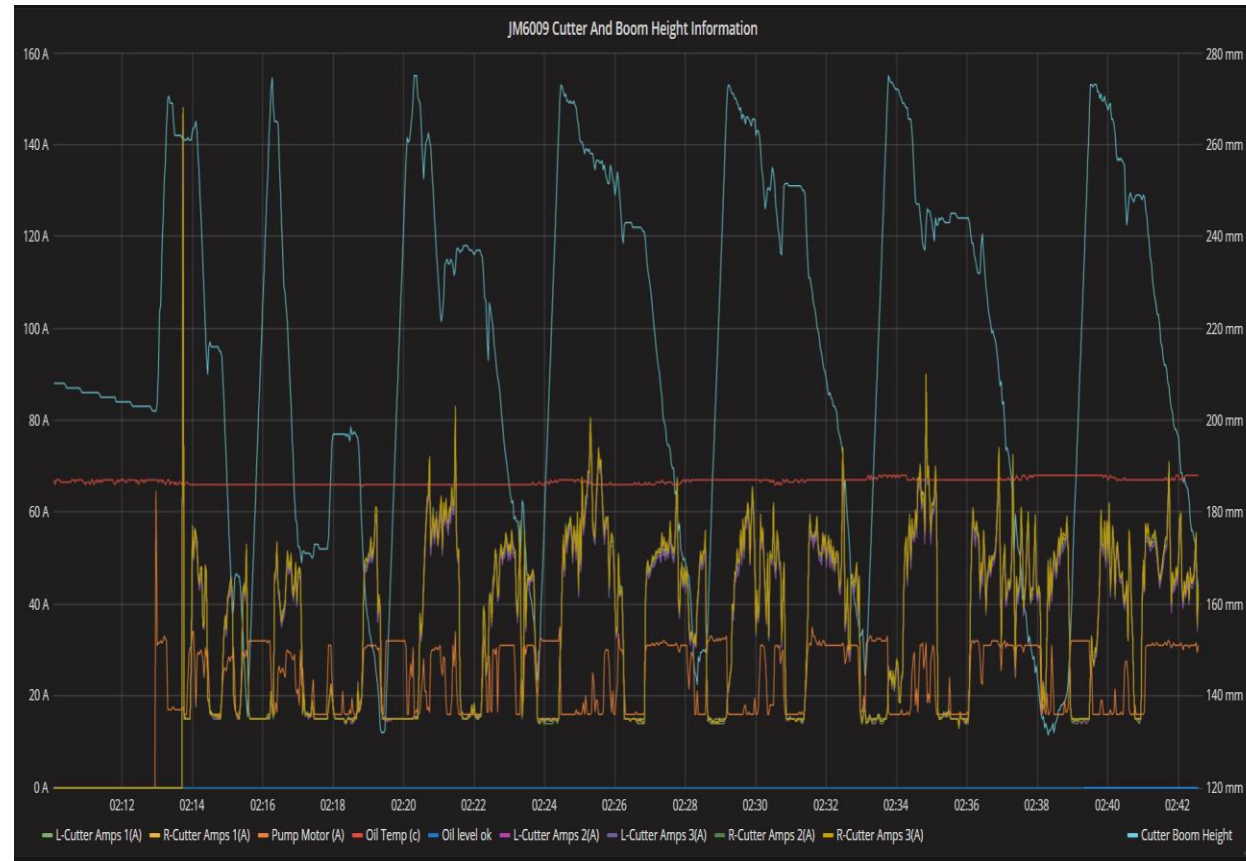
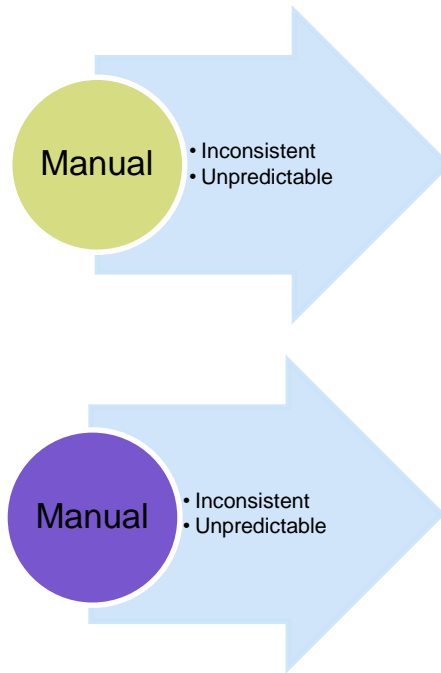




Continuous miner: Time-based automation

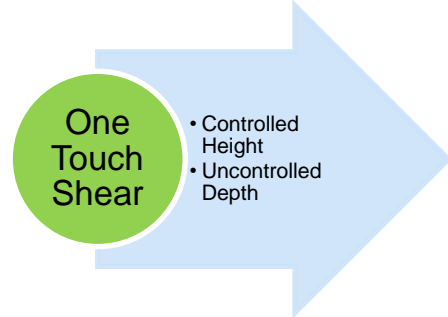
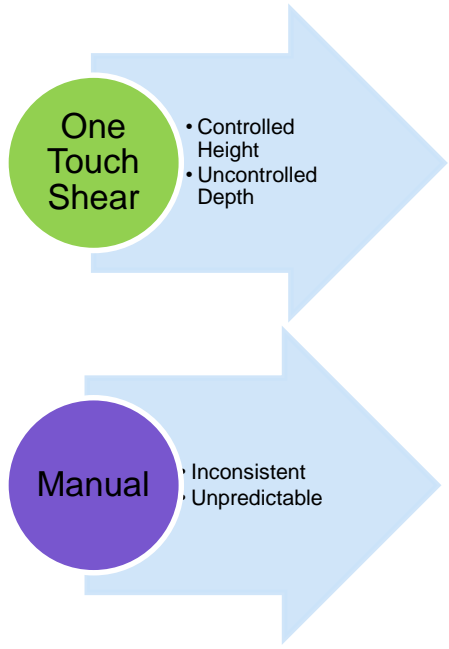


CONTINUOUS MINER CUTTING SEQUENCES



- Inconsistent Roof & Floor Control
- Unpredictable Cycle Times (six in 30 mins)
- Inefficient loading of motors/haulage
- Different Operators /Performance
- Unpredictable Wear /Fatigue

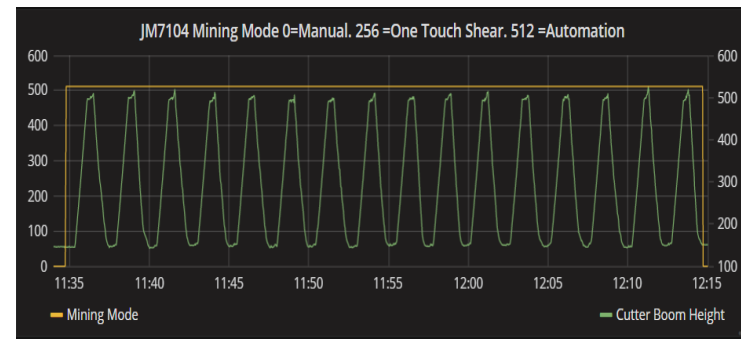
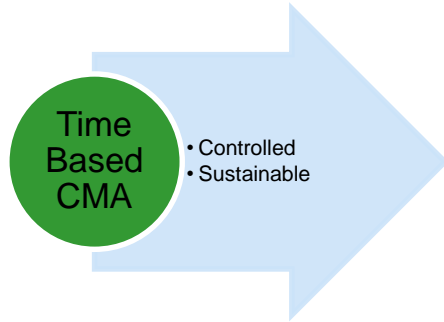
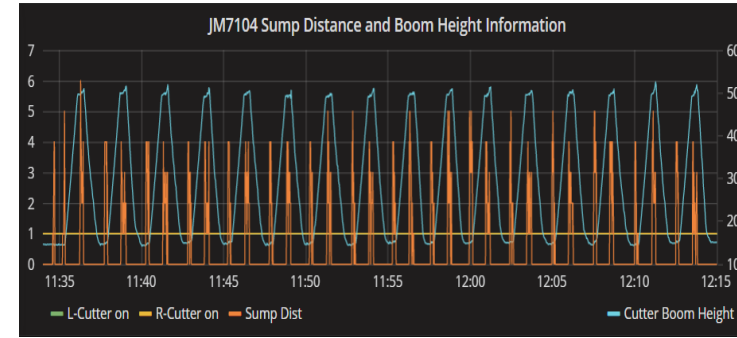
CONTINUOUS MINER CUTTING SEQUENCES



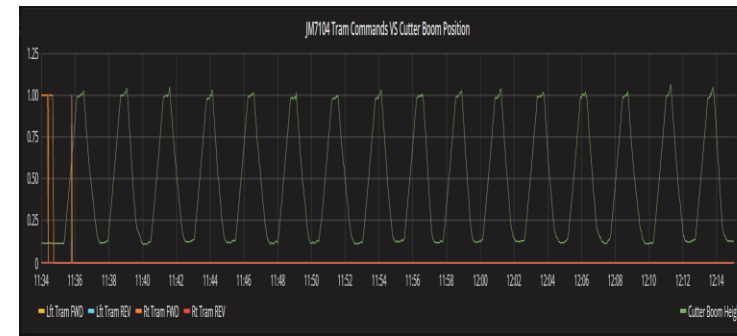
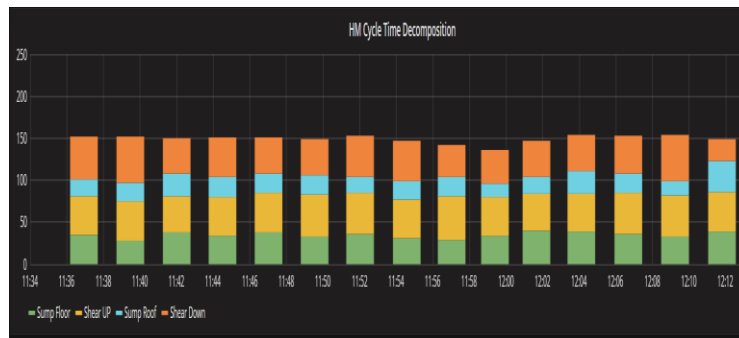
- Improved Roof & Floor Control
- Inconsistent Sump Depths
- Unpredictable Cycle Times (12 in 44mins)

CONTINUOUS MINER CUTTING SEQUENCES

- Controlled performance
 - Roof Control
 - Floor Control
 - Sump depth



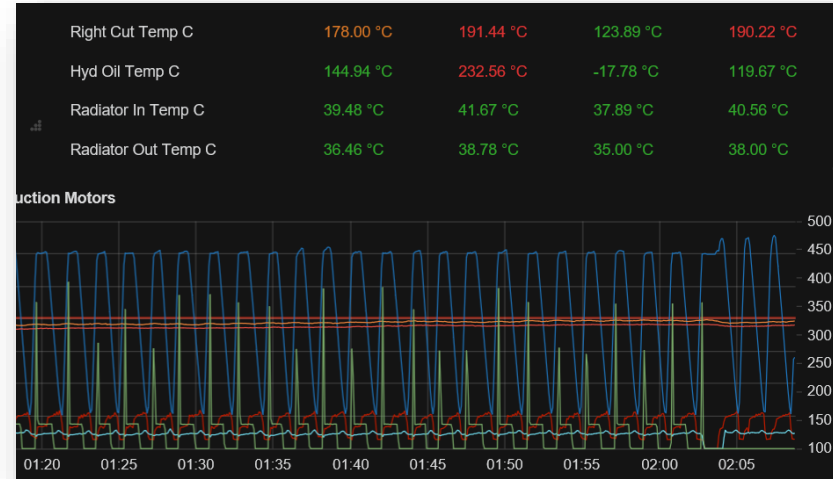
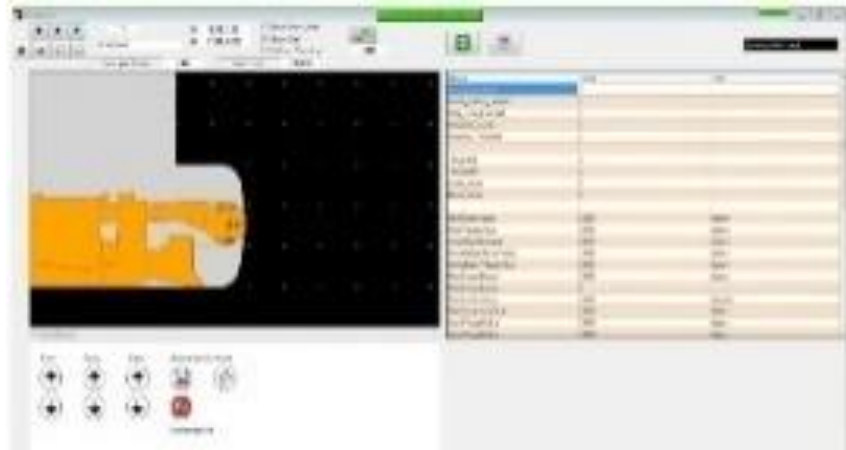
- Sustainable performance
 - Full 10m Block in Automation
 - No stoppages or trips
 - Consistent Cycle times
 - Minimal Operator Input







THE ROAD FORWARD



Automated Cut for Set Distance

Machine Spatial Awareness


Single Operator FCT/CM


Remote Operation








AERIAL INSPECTION & MAPPING SURVEYS


Compass
Minerals

Meadow Island Strategic Reserve
Surveyed: 28th June 2015



Reported accidents in England with snowy or icy road conditions, 2018

Source: Department for Transport

Year	Accidents (snow/ice)	Total accidents	%
2018	2,110	112,016	1.88
2017	2,350	118,315	1.99
2016	1,865	123,353	1.51
2015	1,550	126,049	1.23
2014	1,593	131,657	1.21
2013	3,650	123,786	2.95

Average value of prevention per reported casualty and per reported accident in Great Britain, 2018

Source: Department for Transport

Accident/casualty type	Cost per casualty £ (2018 prices)	Cost per accident £ (2018 prices)
Fatal	1,958,303	2,196,534
Serious	220,058	251,458
Slight	16,964	26,087
Average for all services	70,791	98,232
Damage only	--	2,344

Salt is the answer

- Provides opportunity for highways authorities to meet their statutory duties to keep roads safe in winter
- Railways & Transport Safety Act 2003 Section 111
- Highways Act 1980
 - Section 41 (1A) – “a highways authority is under a duty to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice”
 - Section 130 – gives highways authorities a general duty to protect the right of the public to use and enjoy the highway
 - Section 150 – puts a responsibility on highways authorities to clear snow from the highway if it is causing an obstruction
- Without adequate salting there are unacceptable risks of:
 - road fatalities and an estimated welfare cost of up to £280 million a day in England
 - direct economic costs of £130 million a day to the economy through traffic delays



Salt for de-icing

- Can be used for 100% of UK's de-icing conditions
- Tried – used in UK since 1960s with advent of motorways
- Tested – British Standard salt with decades of evidence of safe and effective results. UK road salt producers are all accredited through SaltAS
- Low risk – supported by many years of successful de-icing results
- Cost effective – produced in UK; relatively low-cost distribution; long 'shelf life'; low infrastructure investment needs or specialist handling; easy to transport and store
- Relatively local supply chains providing a readily available strategic resource all year with summer re-stocking and winter top-ups available
- **S**afe **A**vailable **L**ong lasting **T**ried and tested



Timely re-stocking is key

- All highways authorities are urged to re-stock their salt supplies early...during the summer months...to avoid being victim to potential logistical problems in the autumn and winter seasons
- Stocks should aim to achieve a winter resilience benchmark of 12 days/48 runs at 20g/m² quantity of salt in good time ahead of the gritting season (i.e. by September) and should be maintained throughout the season

Thank you

