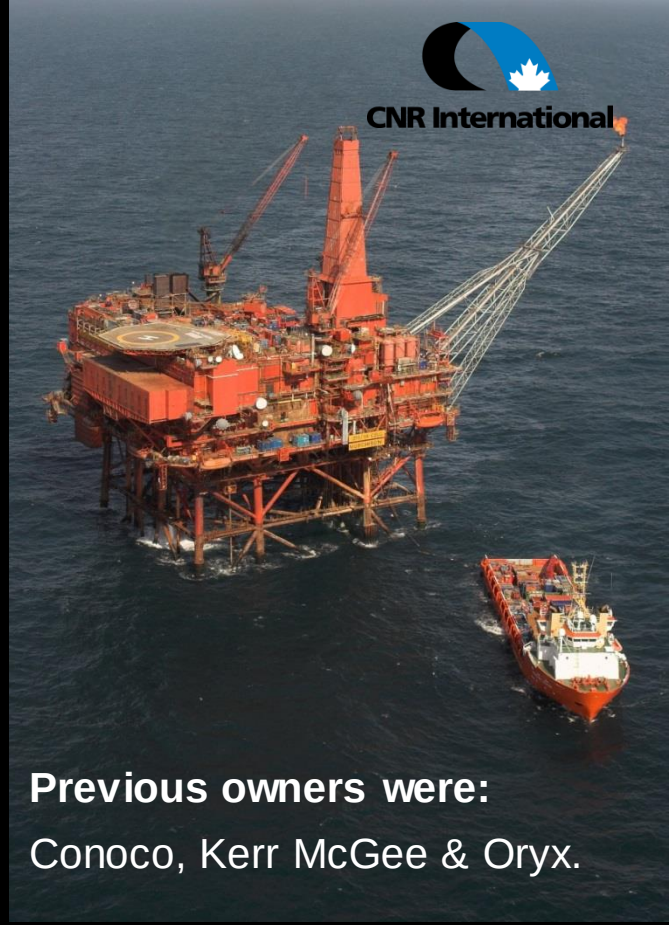

CNR International
MURCHISON
DECOMMISSIONING
2016 - 2017

Discovered in 1975 and operational since 1980, Murchison was one of the largest of North Sea platforms and was one of the UK's largest oil fields.

Murchison had cross-border ownership:

77.8%	CNR International (UK)
22.2%	Wintershall (Norway)

CNR International (CNRI) owned and operated Murchison since 2002.



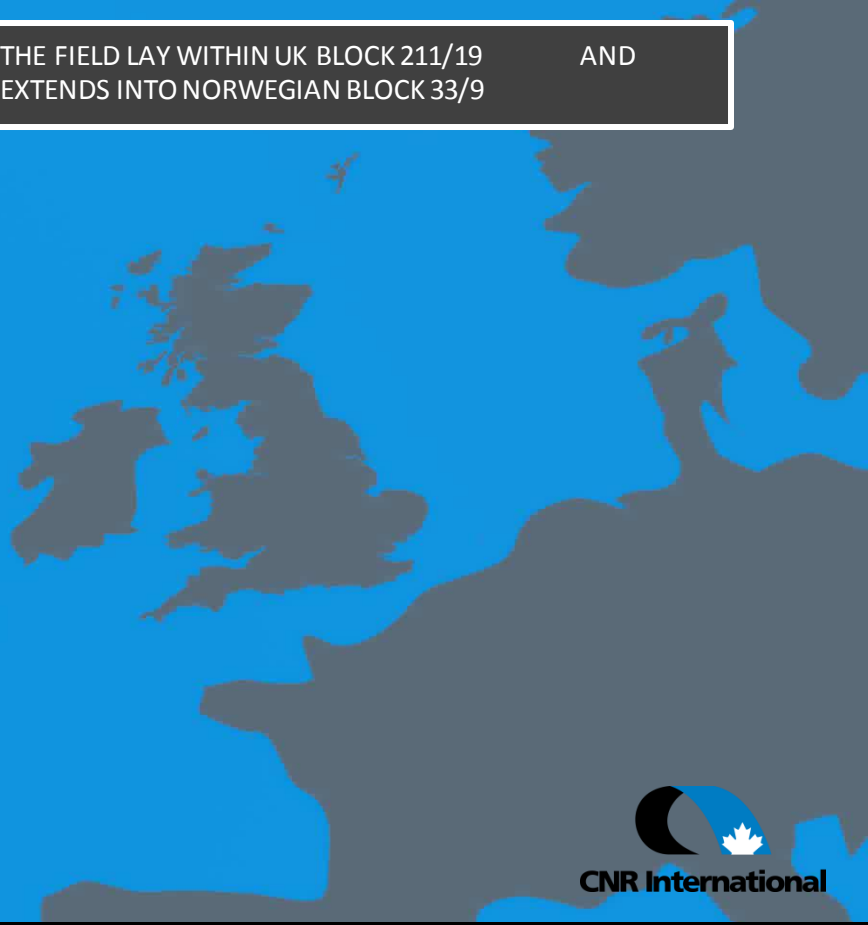
Previous owners were:

Conoco, Kerr McGee & Oryx.

THE FIELD LAY WITHIN UK BLOCK 211/19 AND EXTENDS INTO NORWEGIAN BLOCK 33/9

OIL WAS SENT TO SULLOM VOE OIL TERMINAL VIA THE DUNLIN AND CORMORANT PLATFORMS.

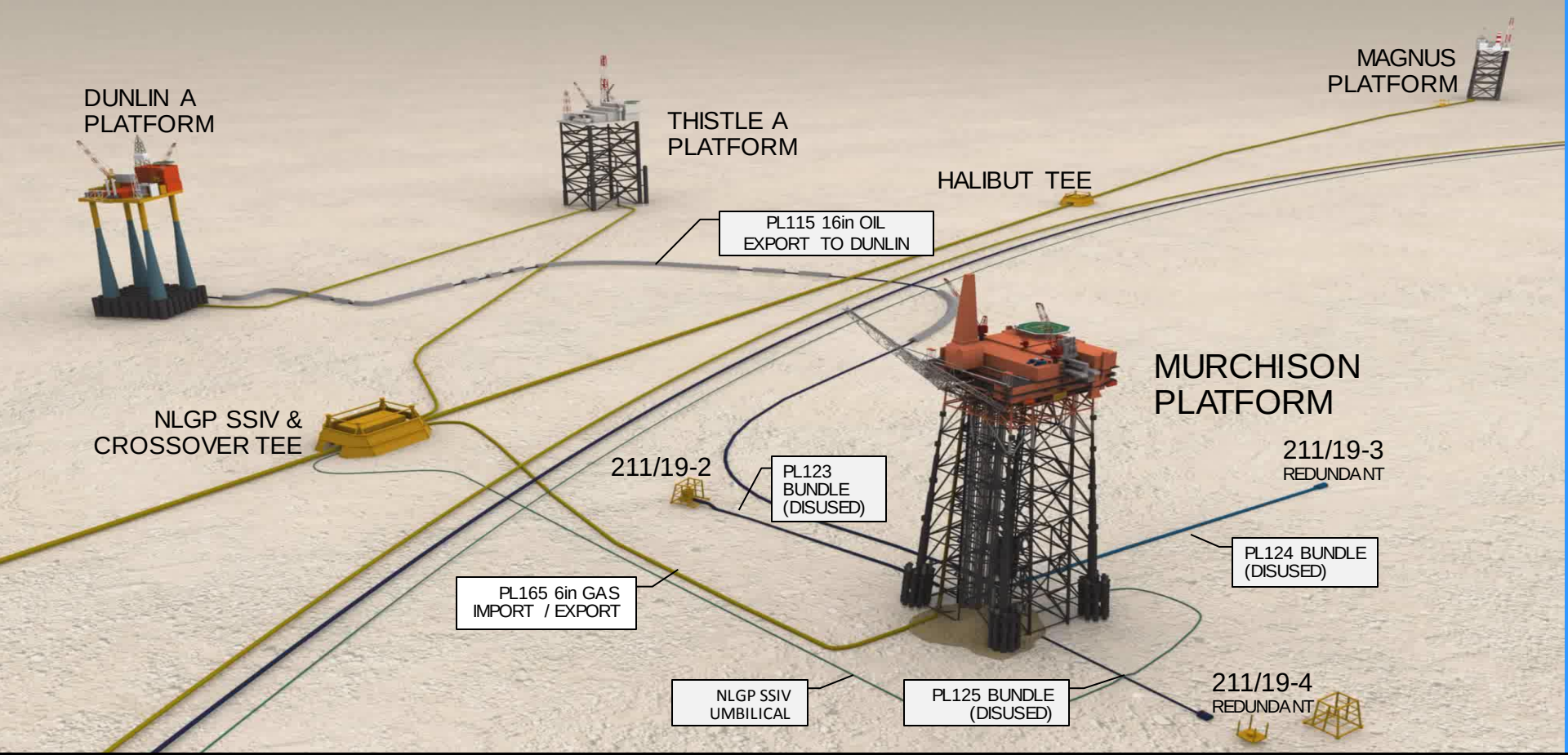
FUEL GAS WAS IMPORTED VIA THE NORTHERN LEG GAS PIPELINE (NLGP).



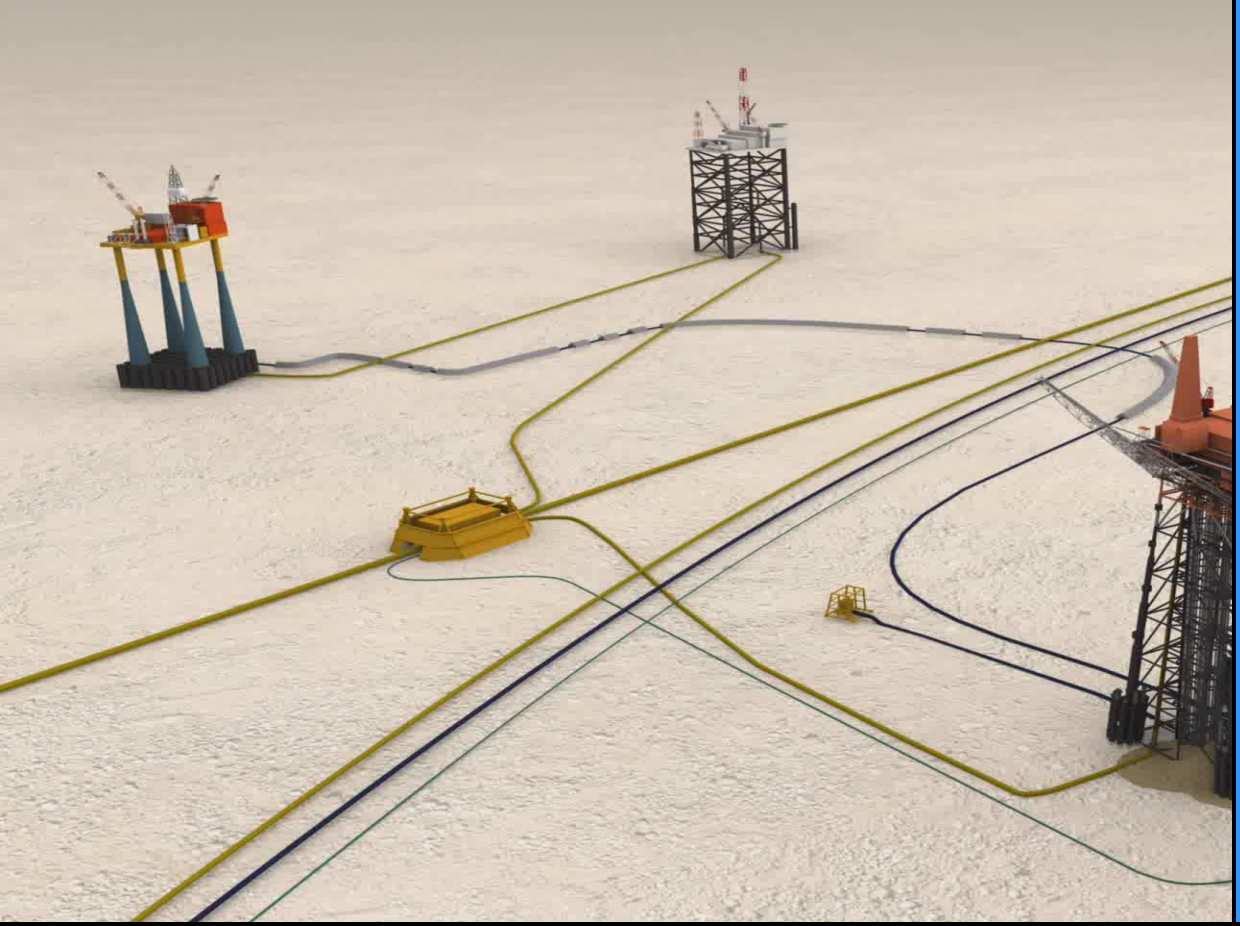
The platform was located approximately 240km north east of the Shetland Islands in 156m water depth.

CNR International

The Murchison Field – Background Information



The Murchison Field – Background Information

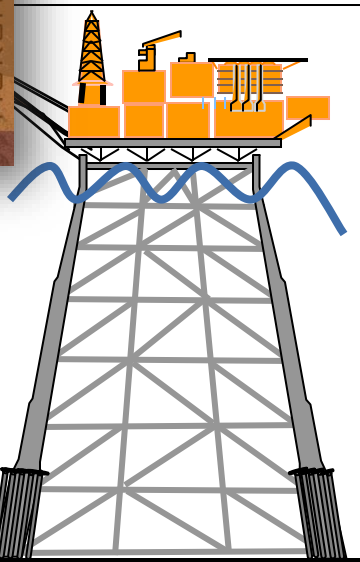


The decommissioning programme consisted of several distinct phases:

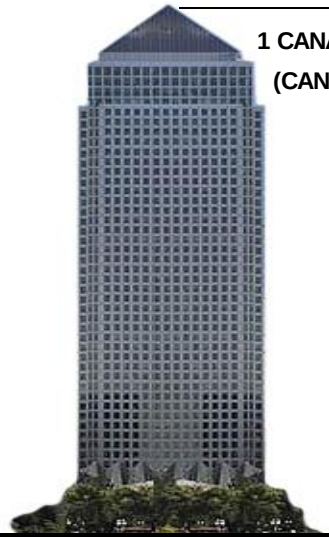
- 2014 - Well Plug & Abandonment
- 2015 - Engineer Down & Clean
- 2016 - Topsides Removal & Disposal
- 2017 - Jacket Removal & Disposal
- 2017 - Subsea Removal, Cleaning & Disposal
- Post-Decommissioning Surveys.

Murchison Decommissioning Programme

EQUITY % : CNR (77.8%) Wintershall (22.2%)
WATER DEPTH : 156m
JACKET WEIGHT : 20,300 tonnes
TOPSIDES WEIGHT : 24,000 tonnes



1 CANADA SQUARE
(CANARY WHARF)
244m



LONDON EYE 135m

BIG BEN
96m

The Murchison Field – Background Information

Preparing to leave the Fjord

2016

Week 01

Arrival at Murchison

2016

Week

02

First major items reach the beach / fjord

Week 07

2016

Waiting for a heavy lift barge, then two come along at once !

2016

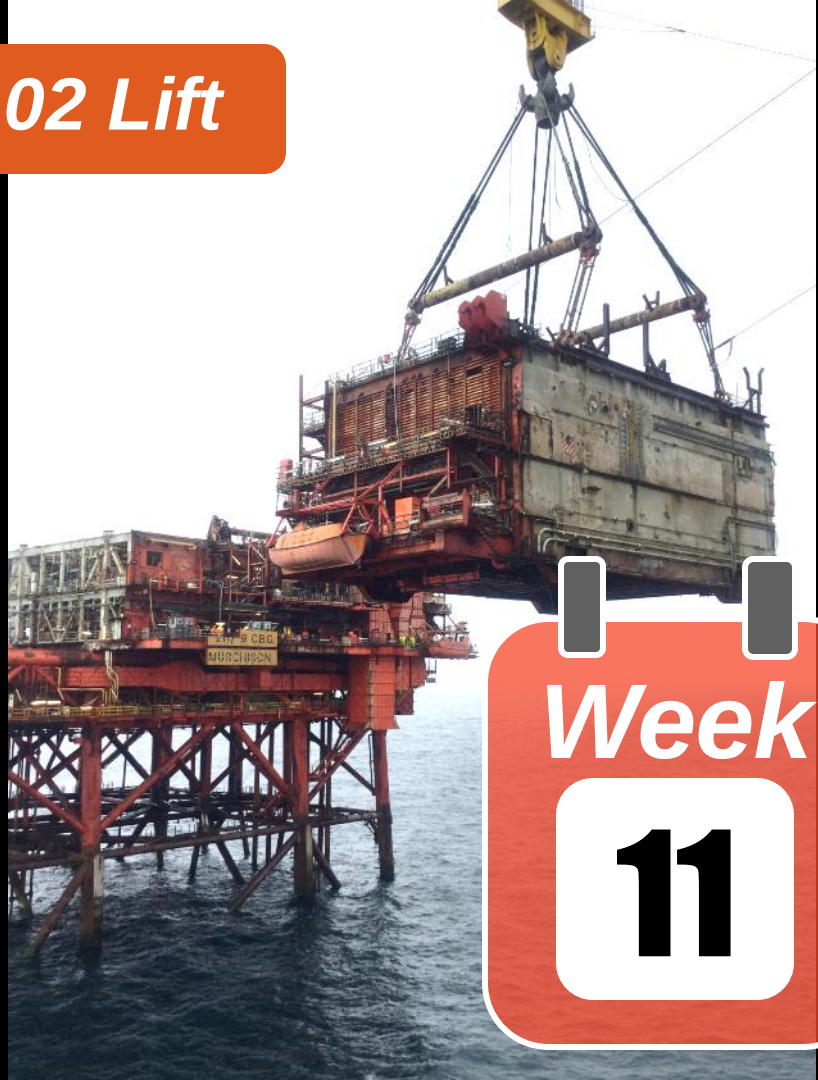
Hermod

Thialf

Week 07


Drone Cam
2016

Module 02 Lift

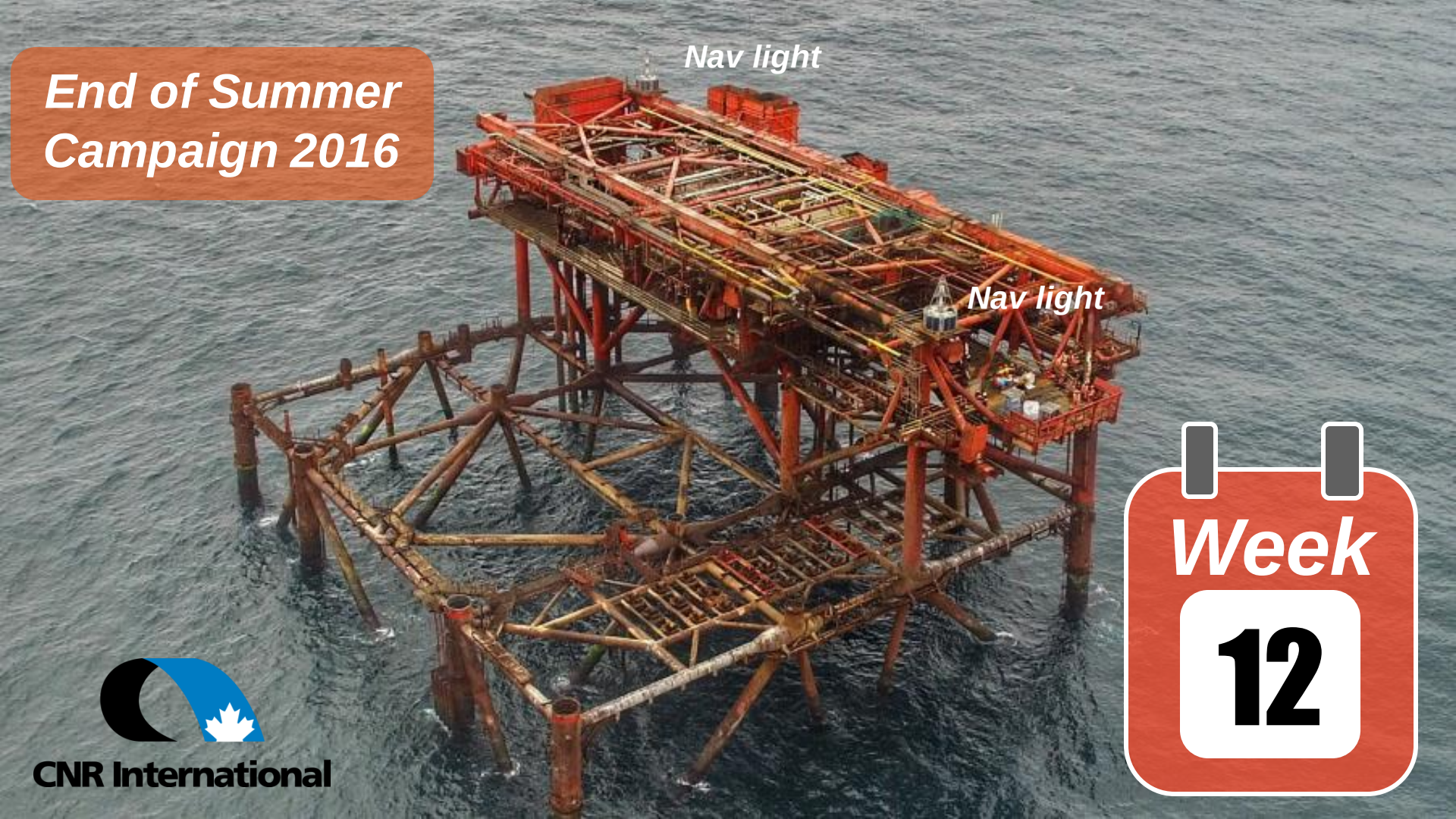


Sunset on Murchison

Only Module Support Frame to go !

Week 11

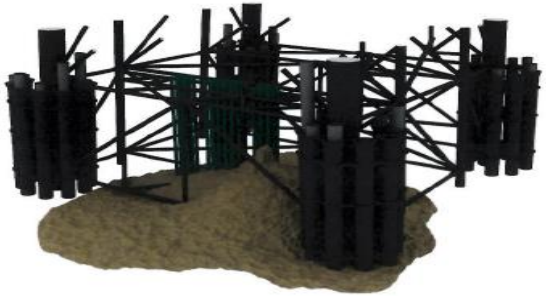
2016

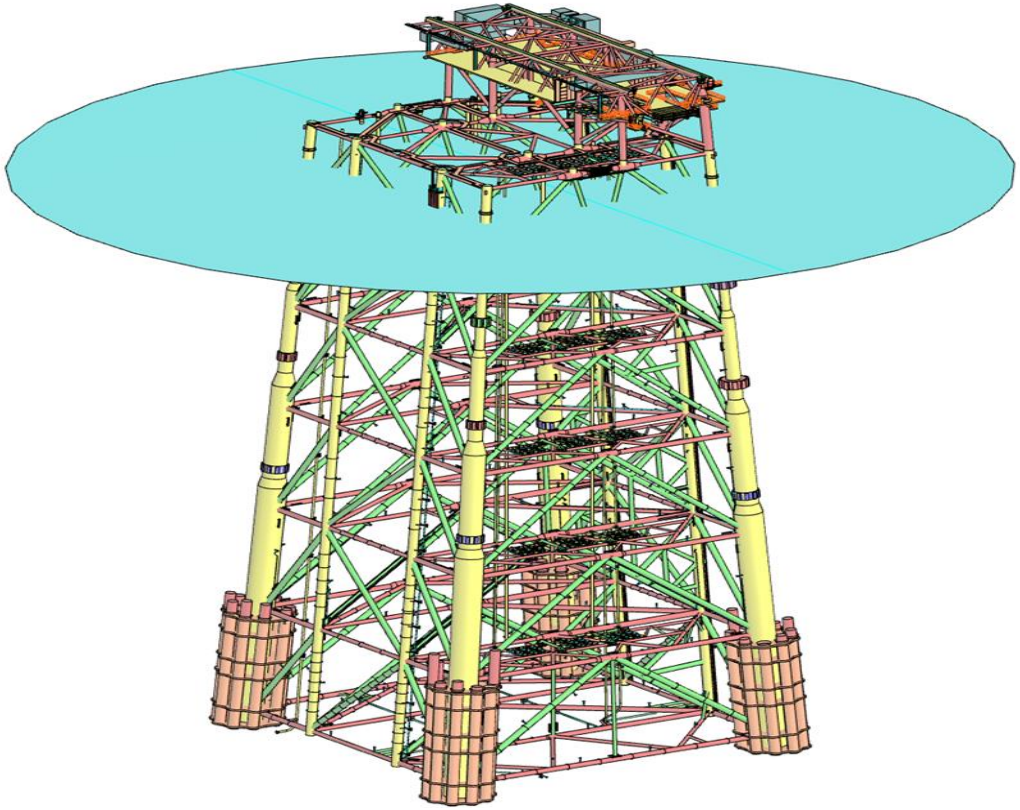

End of Summer Campaign 2016
Nav light
Nav light
Week
12
CNR International


CNR International
HEEREMA
2017

Overview

- Removal remaining ½ MSF section (MSF East)
  - 2,350mT
- Jacket removal
  - 27,600mT total weight
  - 12,100mT to be removed
- Jacket footings to remain at 108m derogation height

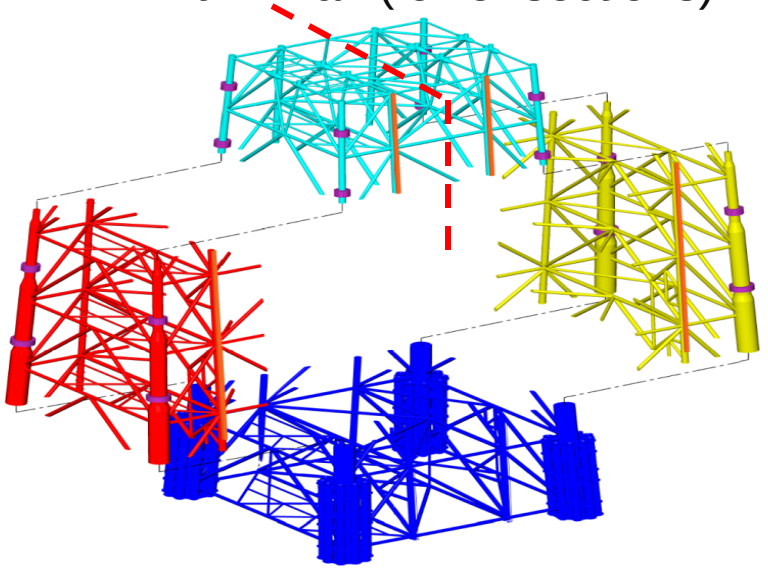




Offshore Campaign

- Offshore activities to commence early April 2017 to June 2017
  - Hermod (60 day campaign)
  - Thialf (30 day campaign)
- 2 x heavy lifts for MSF (Hermod)

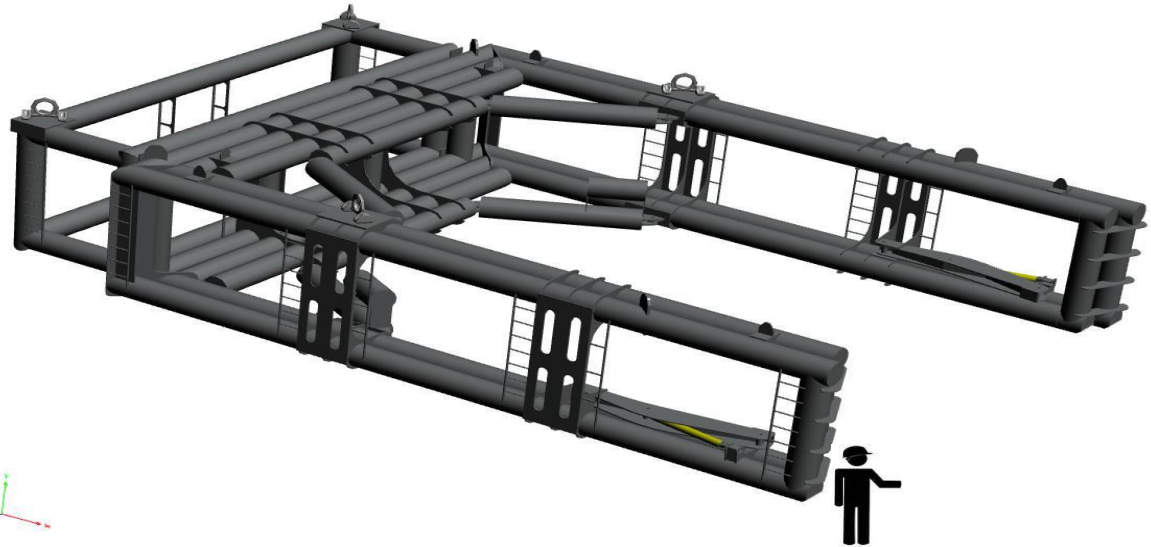
- 4 x heavy lifts of the jacket
  - 2 with Hermod (upper sections)
  - 2 with Thialf (lower sections)

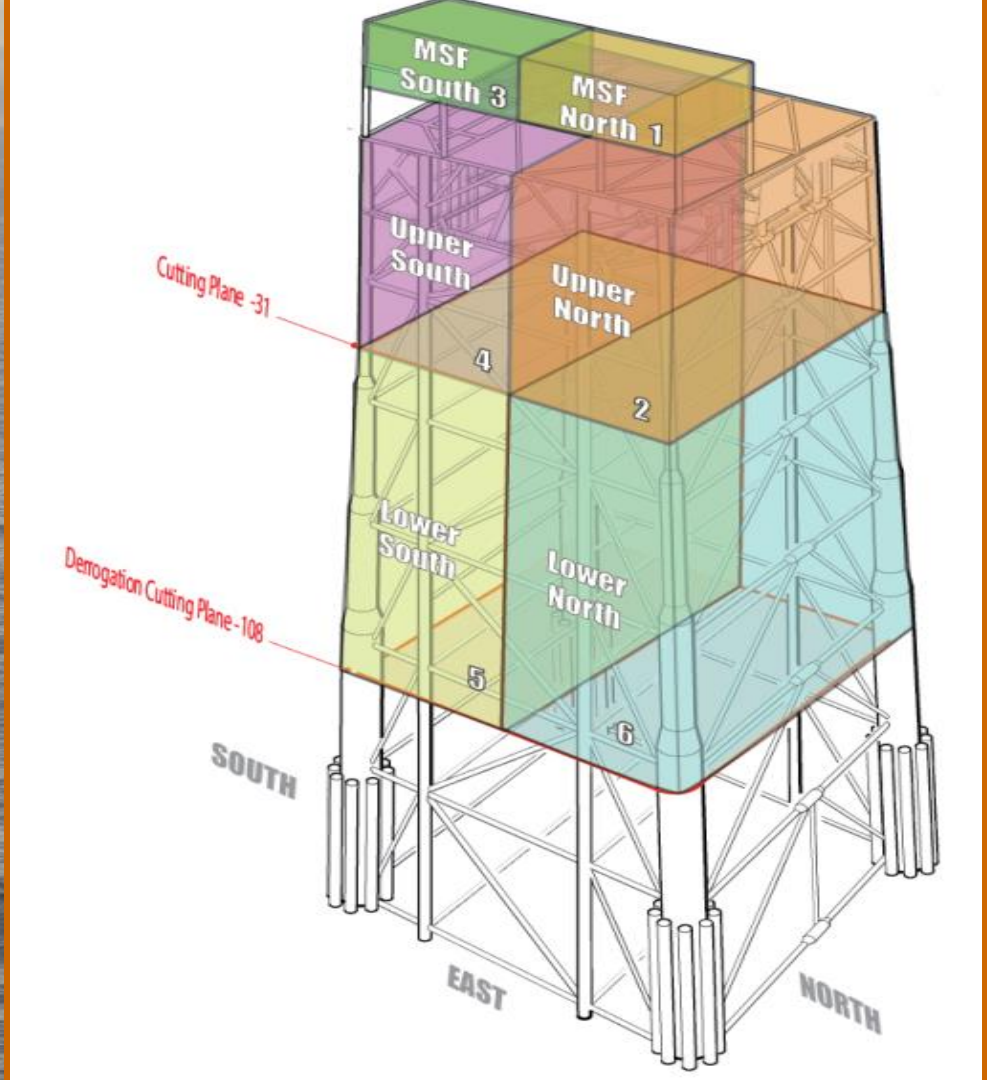


Cutting Tools

- Diamond Wire Cutting Tools (cutting bracings and jacket legs)
  - 50”, 58” & 64” DWCTs – positioned by ROV and docked onto structure
  - 120” (2m dia. legs incl. launch runner) – positioned by crane onto cutting tool support frame (CTSF)
  - 240” (6m dia. legs) – positioned by crane onto cutting tool support frame (CTSF)
- Shear cutter
  - 4 x Flowline risers at EL-108m

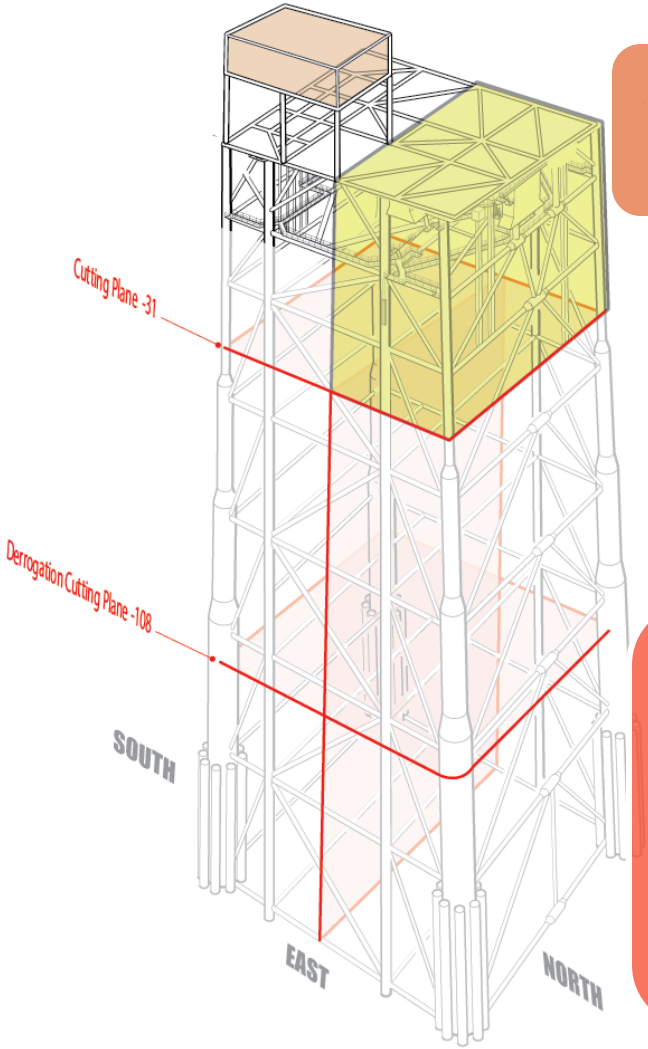
- 6m cutting tool
- Developed by Cut UK in Aberdeen
- 2x identical tools




MSF South 3
MSF North 1
Upper South
Upper North
Cutting Plane -31
4
2
Lower South
Lower North
Derrogation Cutting Plane -108
5
6
SOUTH
EAST
NORTH


Week
01

Jacket Top North



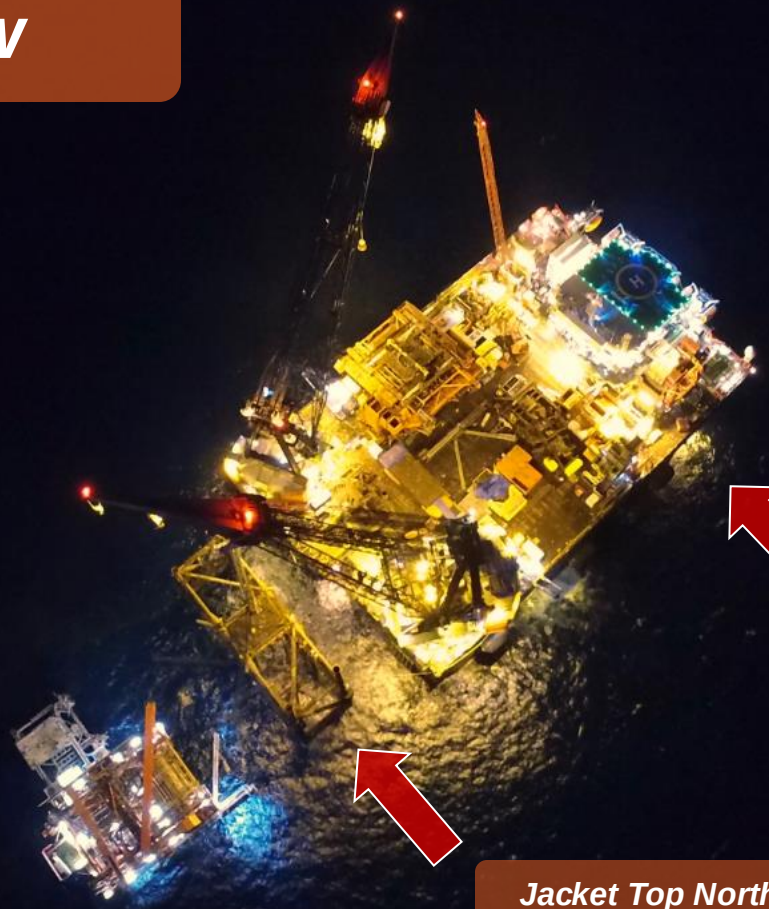
Week 03


44m
69m
117°
0.1
-0.1
2°
165
175
185
195
205
170
180
190
200
210
3°
188°
27m
18m
2017
Week
03
North Top Section cuts
Millennium 216
1.8.35 DVI Hole Drilling location V2302-DH1
MURCHISON
-4.00m
DIVE NUMBER: 8
OCEANEERING

Top Section North Removal

Drone View

2017



Platform

Jacket Top North Section

Week

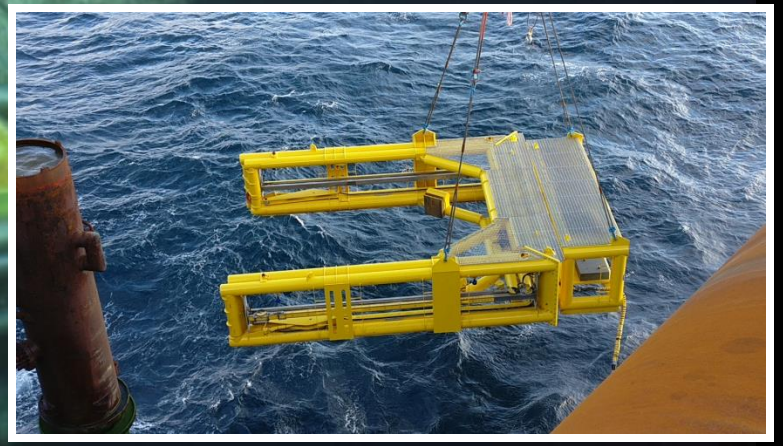
03


MSF M30
2017
Week
06
Last remaining Topsides module


2017
Diamond Cutting Saw

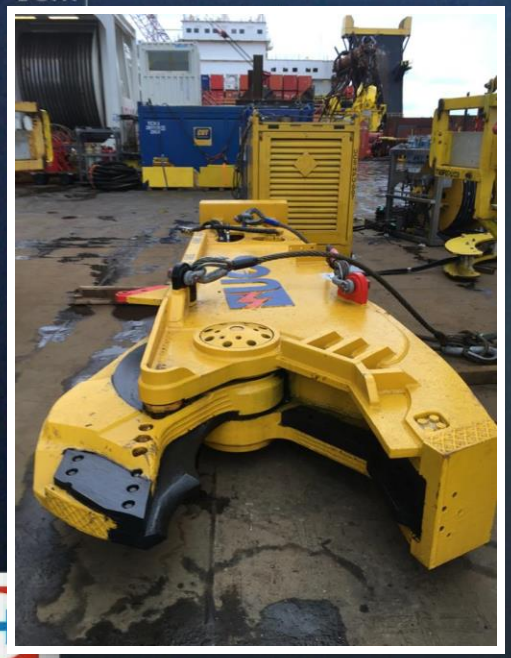

Tools in operation
2017

Last Cuts



2017

Shear Tool in Action



TMS DEPTH 121m
NORTHING 47°26'48.1968"N
TMS TURNS 0.3
TMS HEADING 307°
-0.50m
TMS PAYOUT 58m
245 255 250 260
PITCH 4°

MARINE CONTRACTORS
CNR International
OCEANEERING

DIVE NUMBER: 3

MURCHISON DECOMMISSIONING PROJECT
Activity 3.1 Assist Deployment of Shear Tool

MILL 214
Port ROV
04:11:14
07 JUN 17

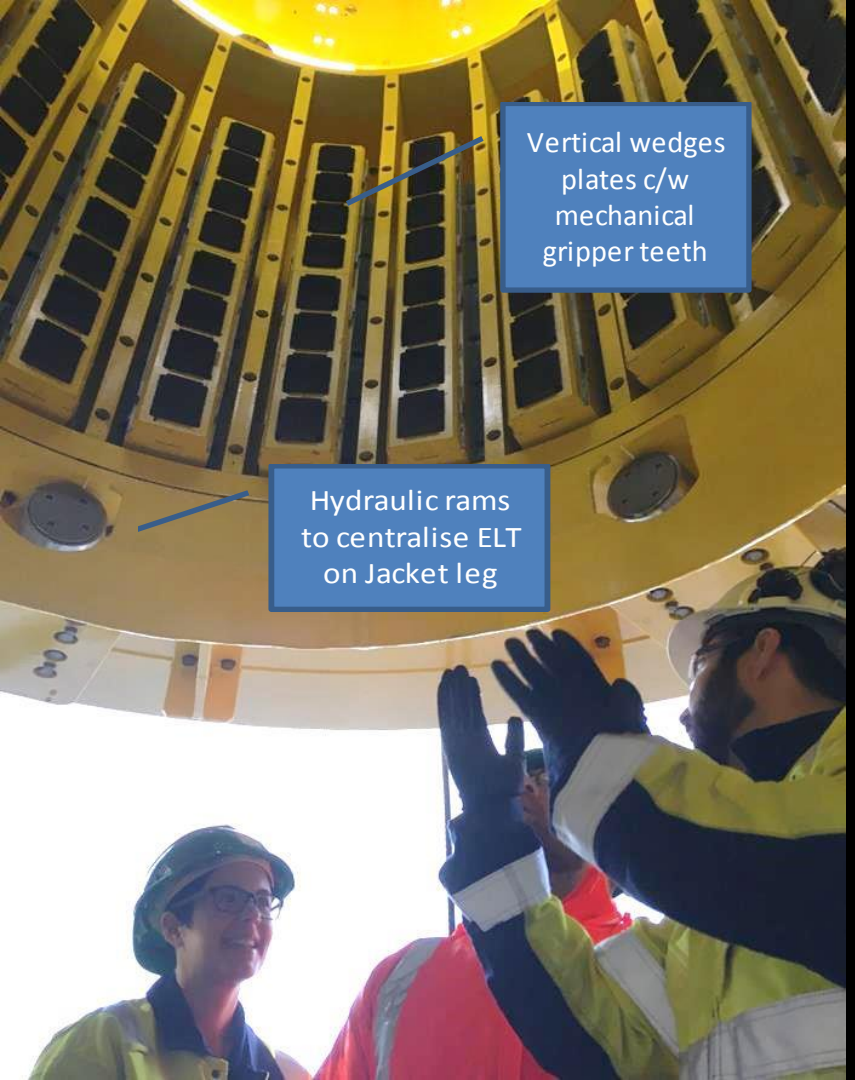
Righini Lifting Tool

Each of these tools have been certified to lift up to 2045mT.

Each of the tools shall lock onto the main Jacket legs at -31m.

Hydraulic rams with gripper teeth

6m high by 4.5m diameter



The circular hydraulic rams seen at the bottom of the tool will be used to centralise the device round the jacket leg to a tolerance of 25mm.

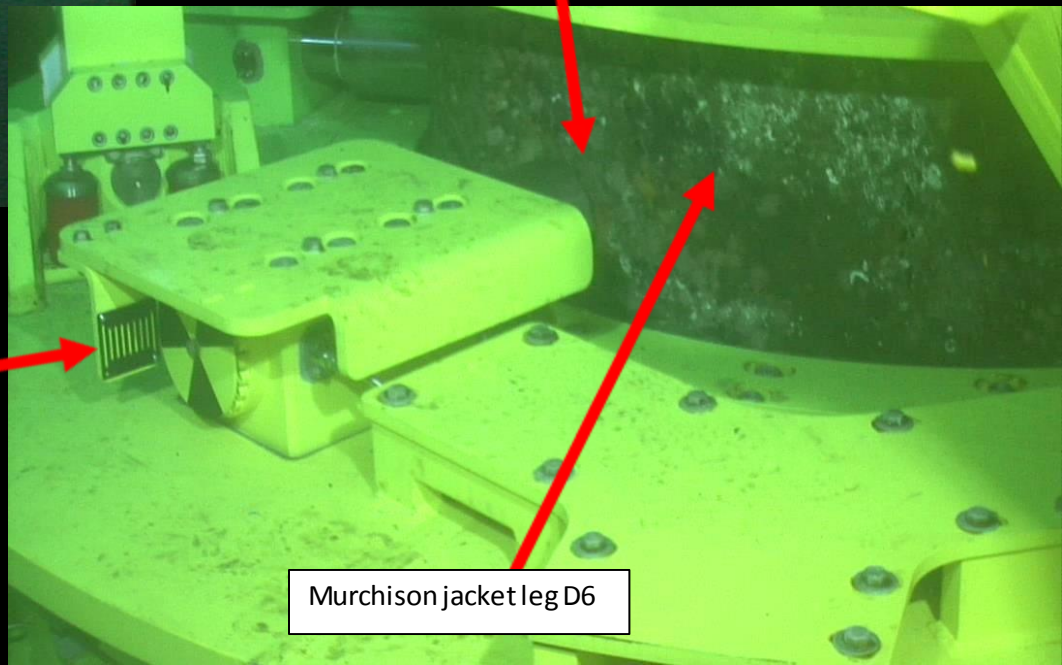
Once positioned the vertical wedge plates complete with the dark coloured mechanical gripping teeth plates will be activated, engaging inwards and locking onto the external surface of the main jacket members.

Righini Lifting Tool

Latching-on

Centralisers

Stroke indicator confirming centralisers have been fully stroked



Murchison jacket leg D6

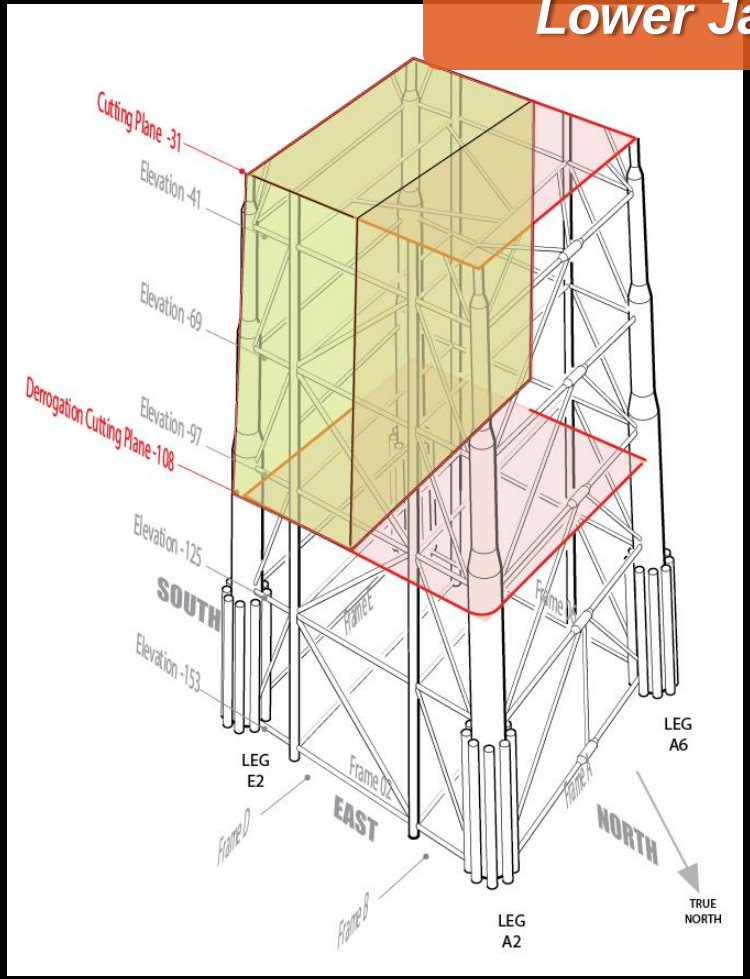
Up she comes

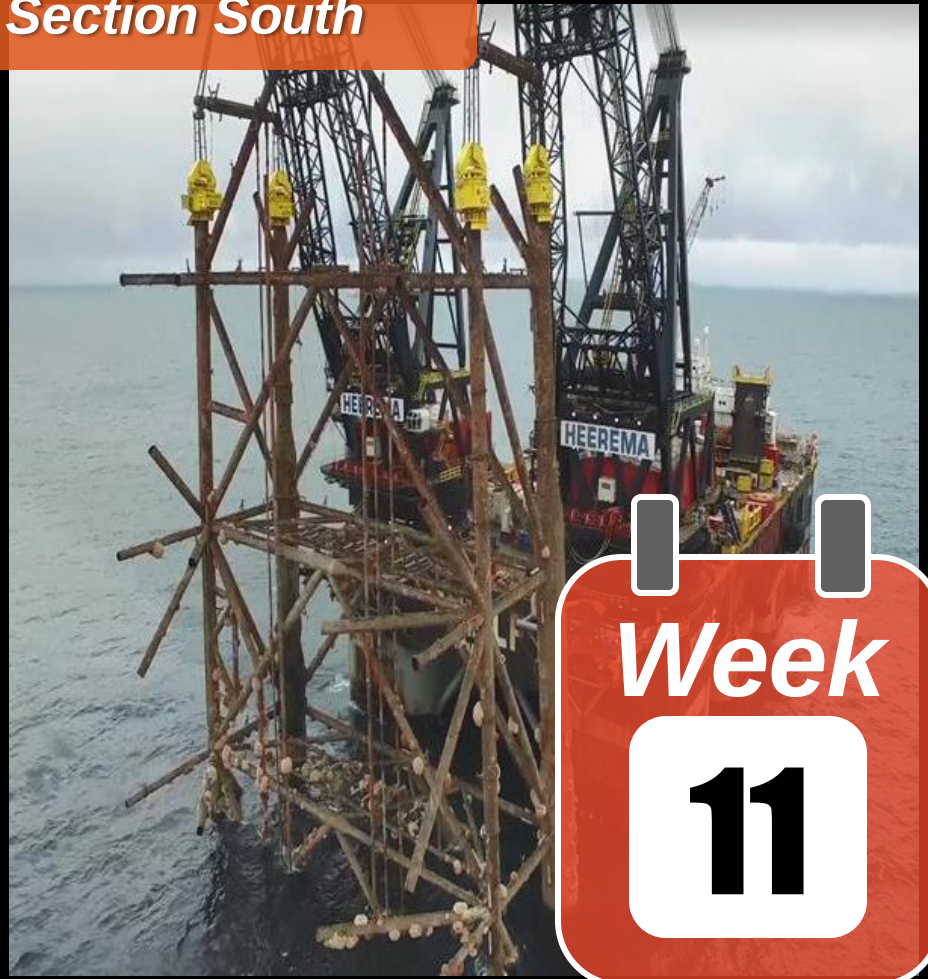
Week 11

2017

02.28 hrs, Saturday 17/06/2017

Lower Jacket Section South





Week 11

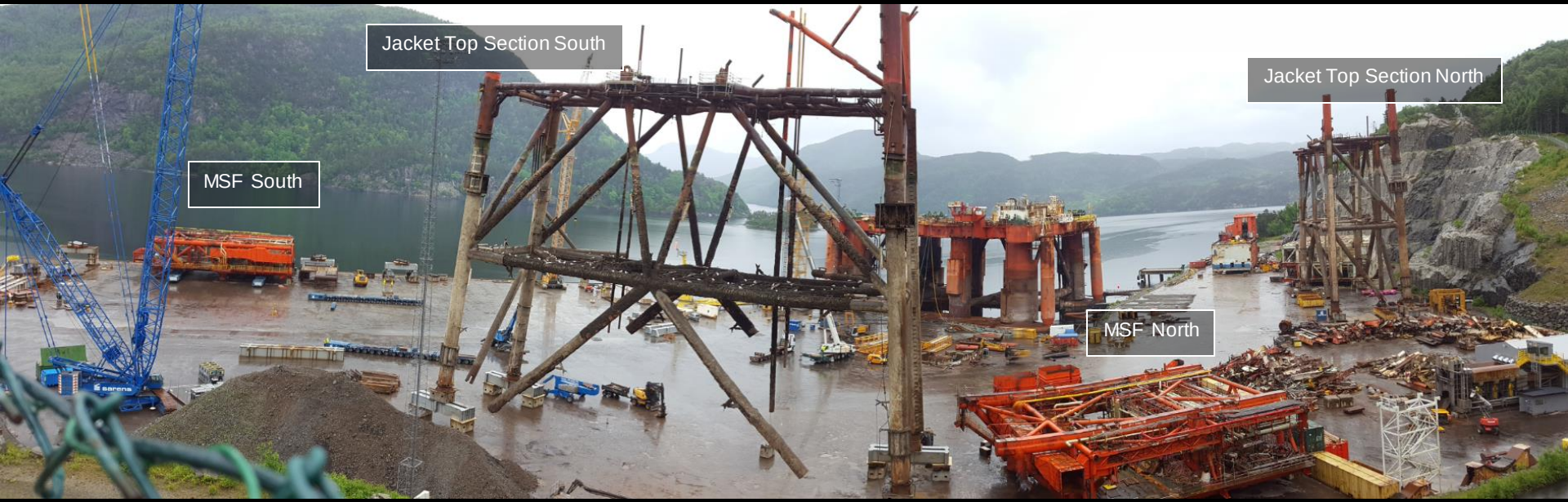
Week 12

Thar she blows !

Drain holes allow thousands of tonnes of water to escape and lighten the load


Week
12

Meanwhile… back at VATS



Marine Samples

Samples of marine life growing on the jacket are being collected for University researchers.

The end of an era…

Remaining footings.