

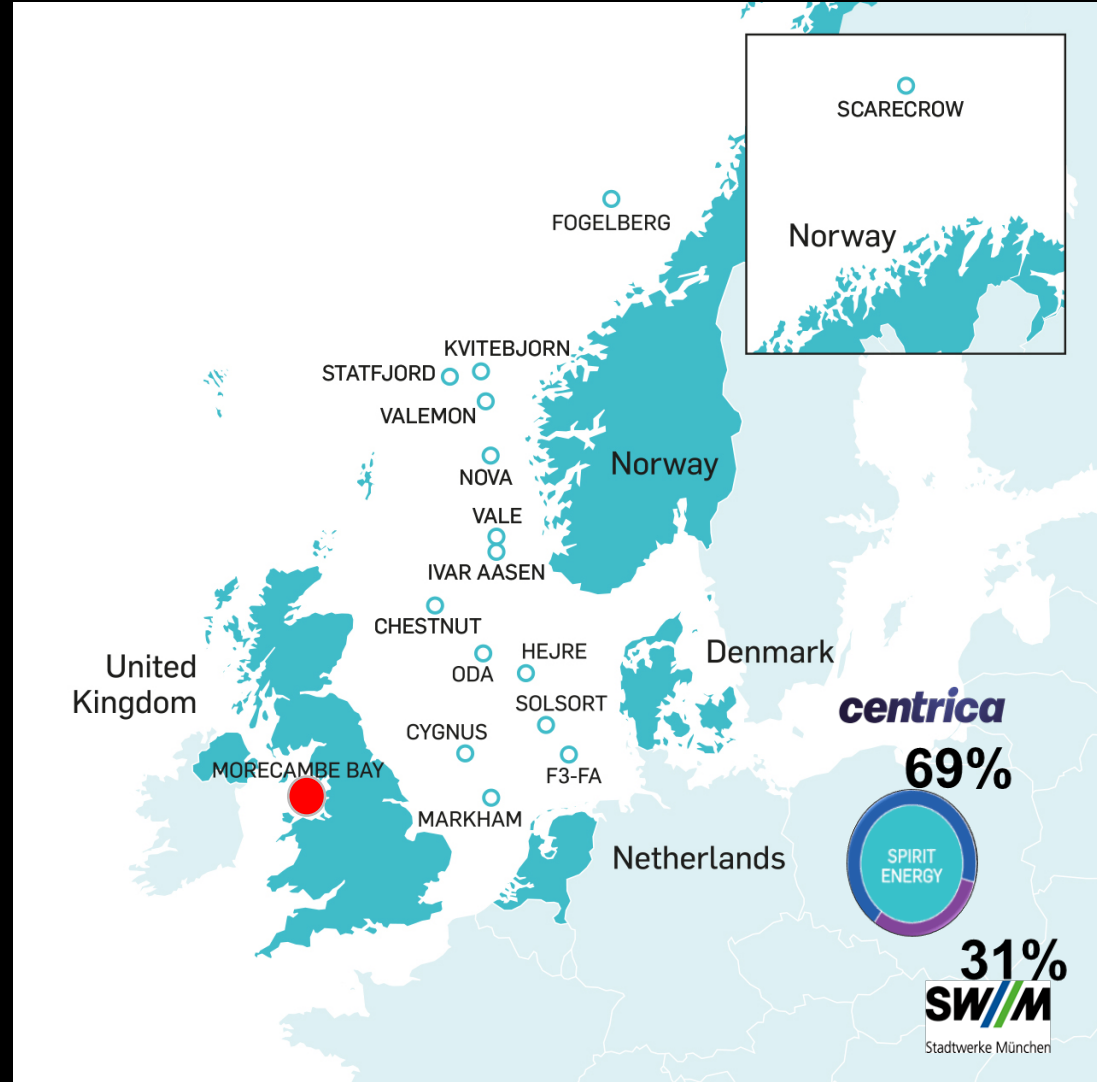
Morecambe Bay Late-Life Planning and Contracting

Decom North Sea 21st March 2018

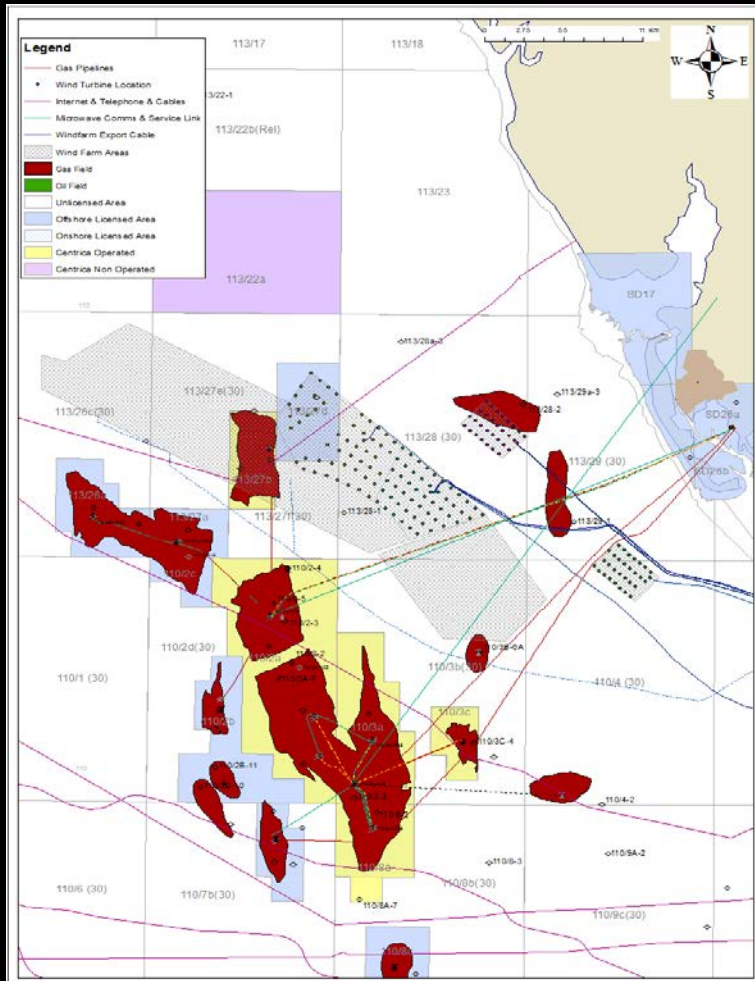


PORTFOLIO OVERVIEW

- Headquartered in the UK and operations across key NW Europe regions – the UK, Norway, Denmark and the Netherlands – employing more than 700 people
- Producing around 50 million barrels of oil equivalent (mmboe) per year, with 2P reserves of 409 mmboe and 2C resources of more than 200 mmboe
- Interests in 28 producing fields and more than 70 exploration licenses



Field History



Discovered 1969 by Gulf Oil, Well 110/08-2. Licensed by British Gas and appraisal drilling commenced shortly after.

Planned in the Late 70's – Early 80's as a seasonal supply facility to feed peak winter demand with high production rates.

Installation of facilities commenced 1984.

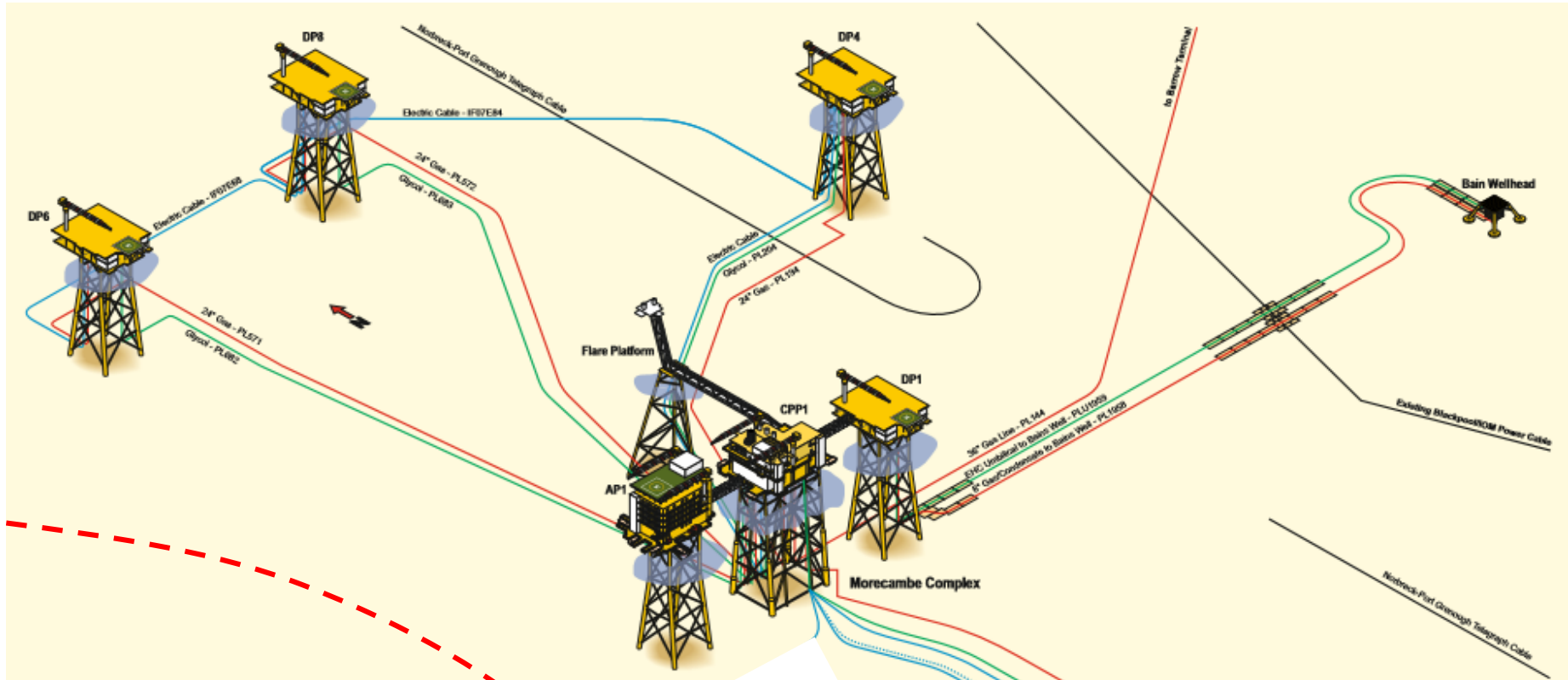
19 Development Wells drilled 1984 – 1987 from NUIs.

Stage 2 development 1989 – 1991, DP6 and DP8, 14 additional Dev wells.

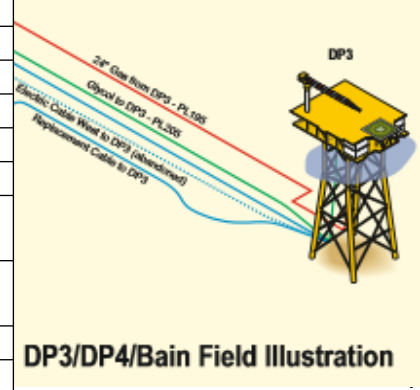
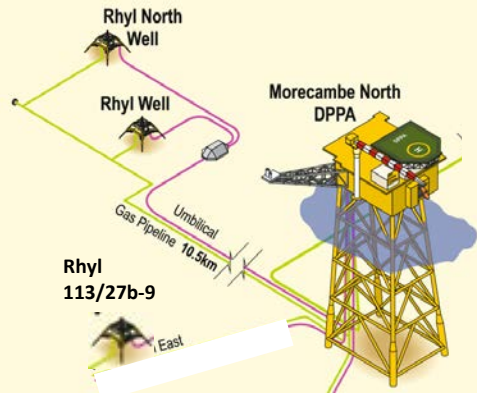
D6 (1998) on DP4 + H8 (2001) & H9 (2005) on DP8 = Total 36 Dev Wells.



Morecambe Hub Overview

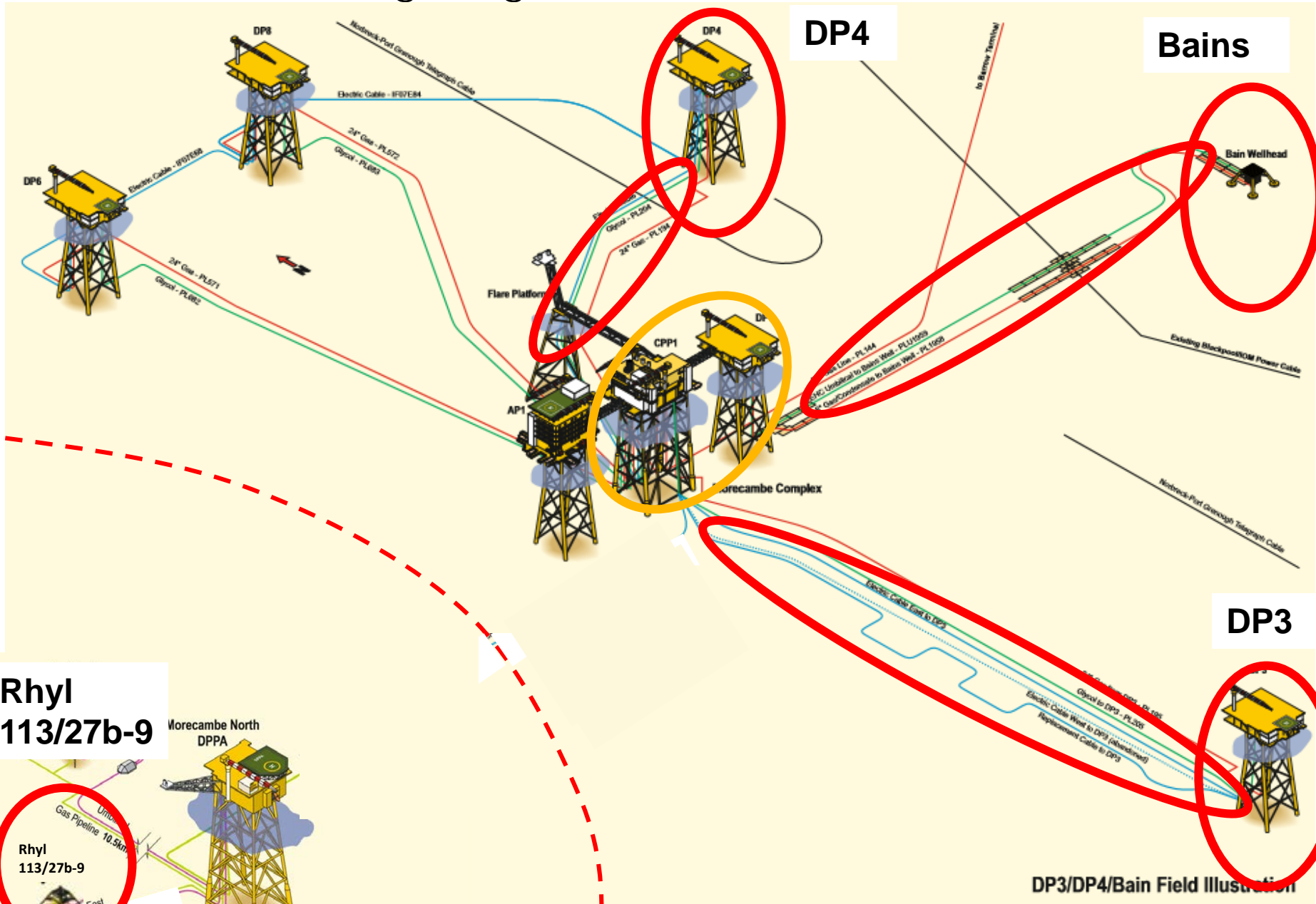


Asset	Topsides Weight	Jacket Weight	Piles Weight
Morecambe DP3	6762	2729	2422
Morecambe DP4	6759	2648	1936
Morecambe DP1	6151	2904	2346
Morecambe AP1	6976	1920	2388
Morecambe CPP1	21291	5697	6720
Morecambe CPP1 Flare	n/a	974	564
Morecambe DP6	3719	3383	Inc with jacket
Morecambe DP8	3717	3062	Inc with jacket
Morecambe North (DPPA)	2487	3730	1755
Totals	57861	27048	18131



DP3/DP4/Bain Field Illustration

Decommissioning Programme Overview



Rhyll
113/27b-9

Rhyll
113/27b-9

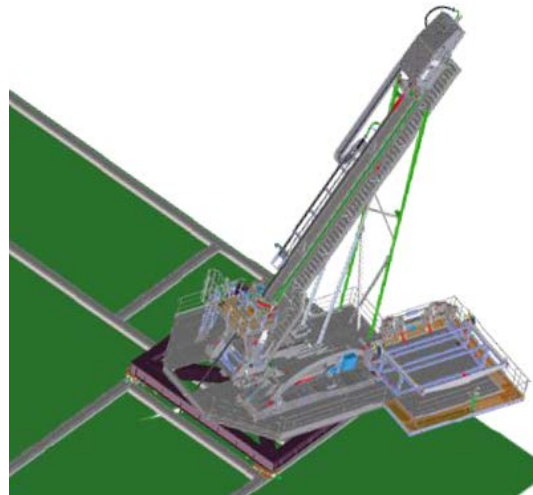
DP4

Bains

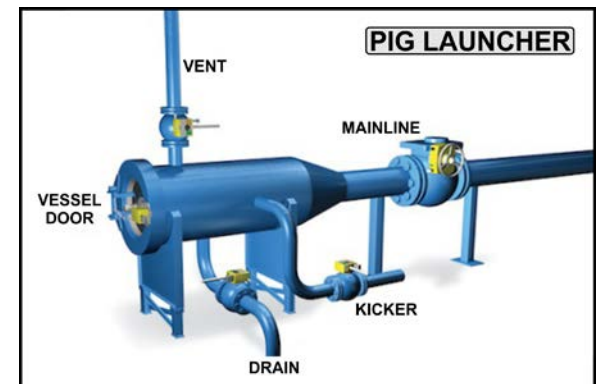
DP3

DP3/DP4/Bain Field Illustration

PHASE 1 – DSV, Well P&A, Pipeline Flushing, Facilities Decom



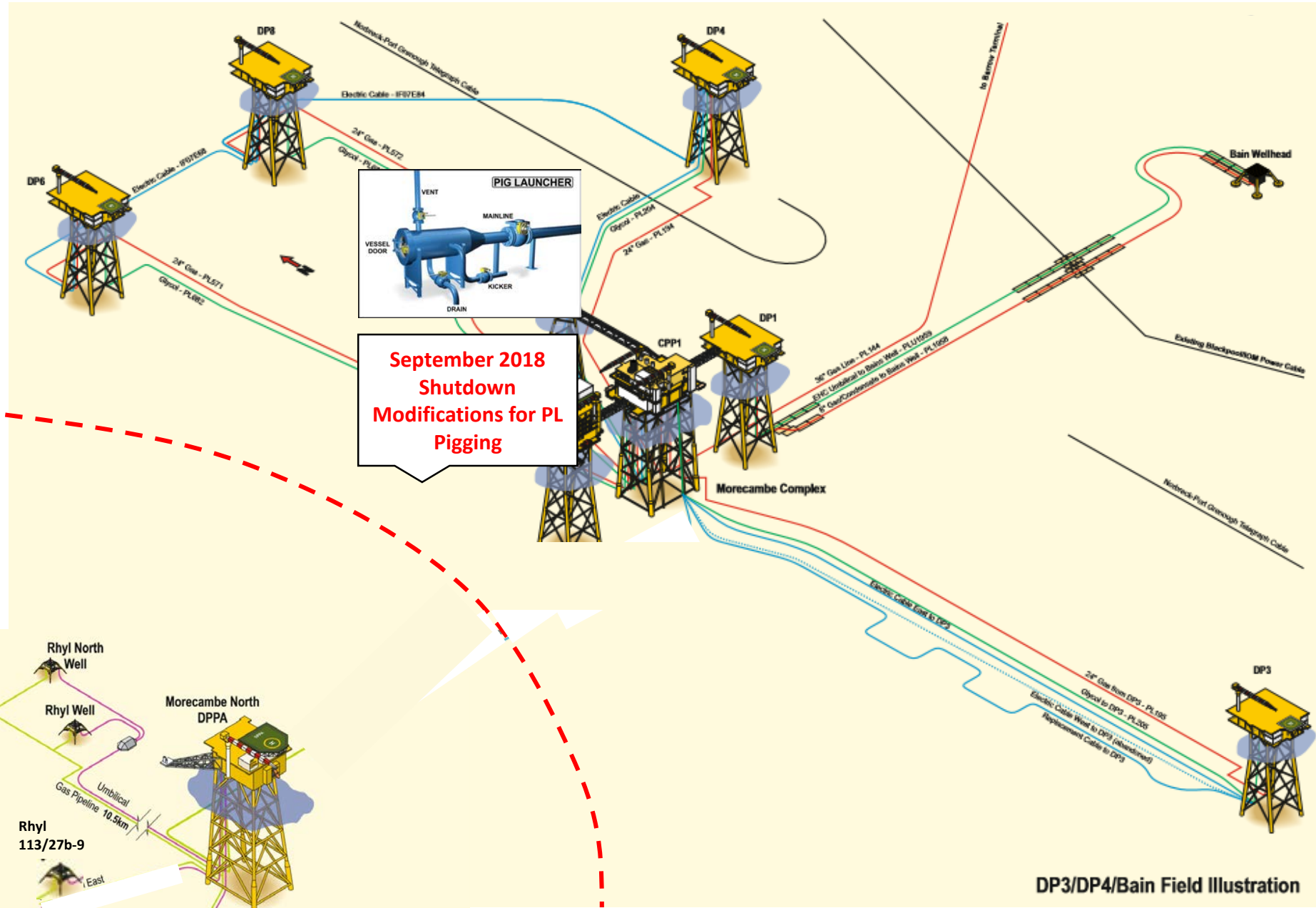
Key Work Packages
Platform Well P&A - DP3 & DP4
Subsea Well P&A Bains
Subsea Well P&A Rhyll 113/27b-9
Long Leads:
<ul style="list-style-type: none"> • Slant Drill Rig • Wellhead & Tree tooling • Navigation-aids • Shutdown Pigging Spools
DSV Campaign
Pig and isolate pipelines DP4 & DP3
Pig and isolate pipelines Bains
Decom Service Contractor
Decommissioning Safety Cases / Rig COMOPS



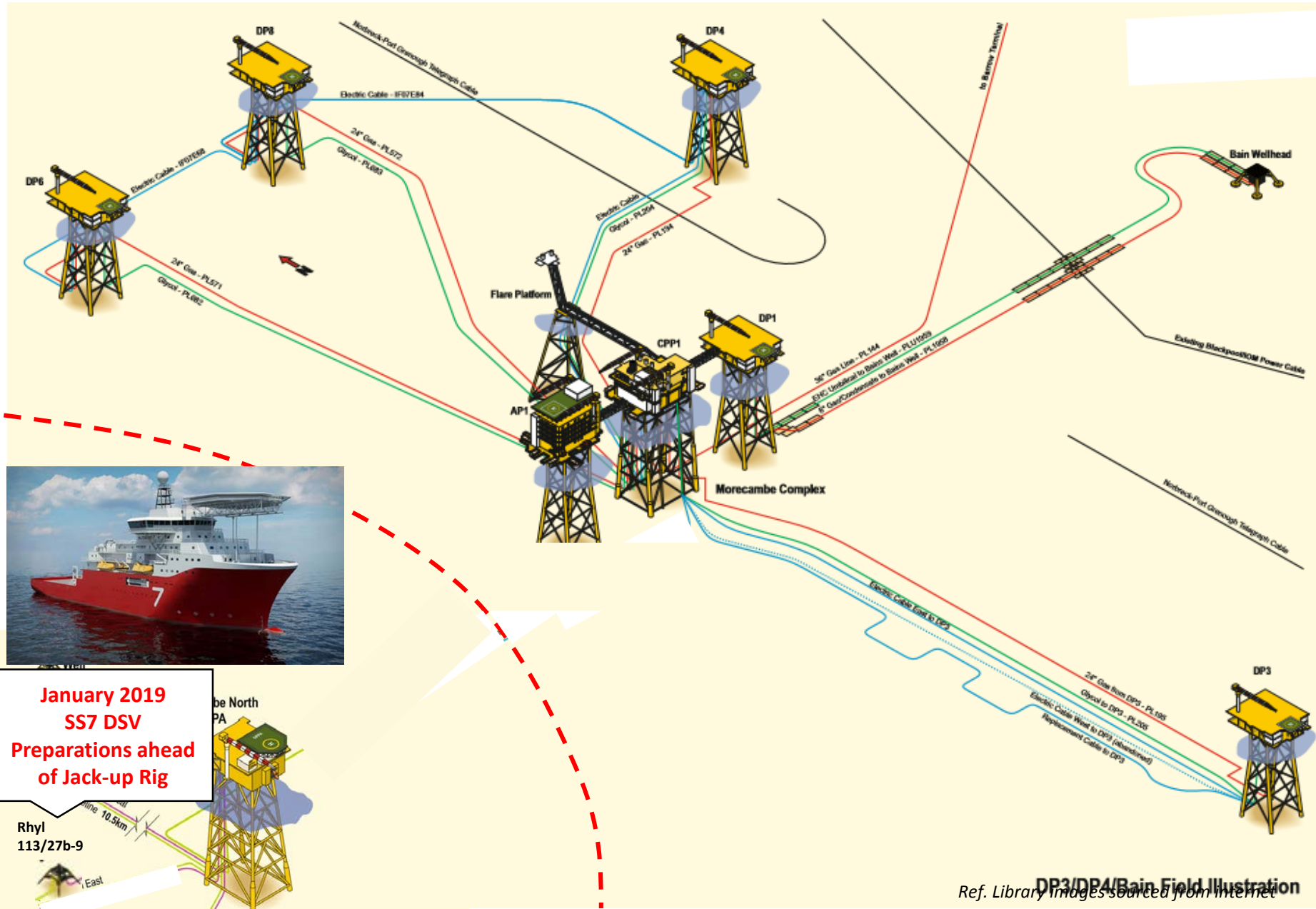
PHASE 2 – Infrastructure Removal Services



Shutdown Pipeline Decommissioning Interface



DSV Preparations for Subsea P&A – Rhyll 113/27b-9



January 2019
SS7 DSV
Preparations ahead
of Jack-up Rig

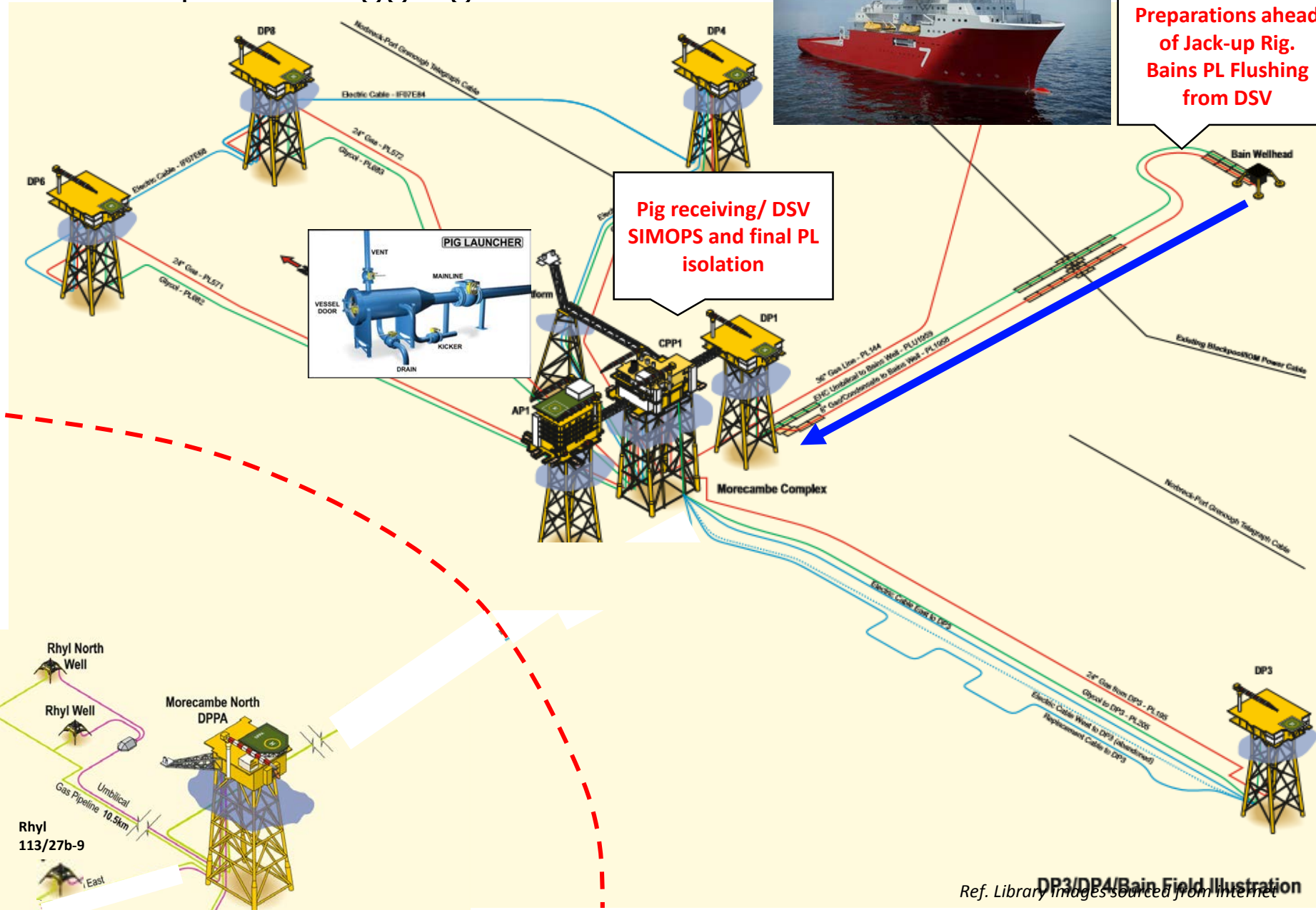
Rhyll
 113/27b-9



DSV Preparations for Subsea P&A and Pipeline Pigging - Bains

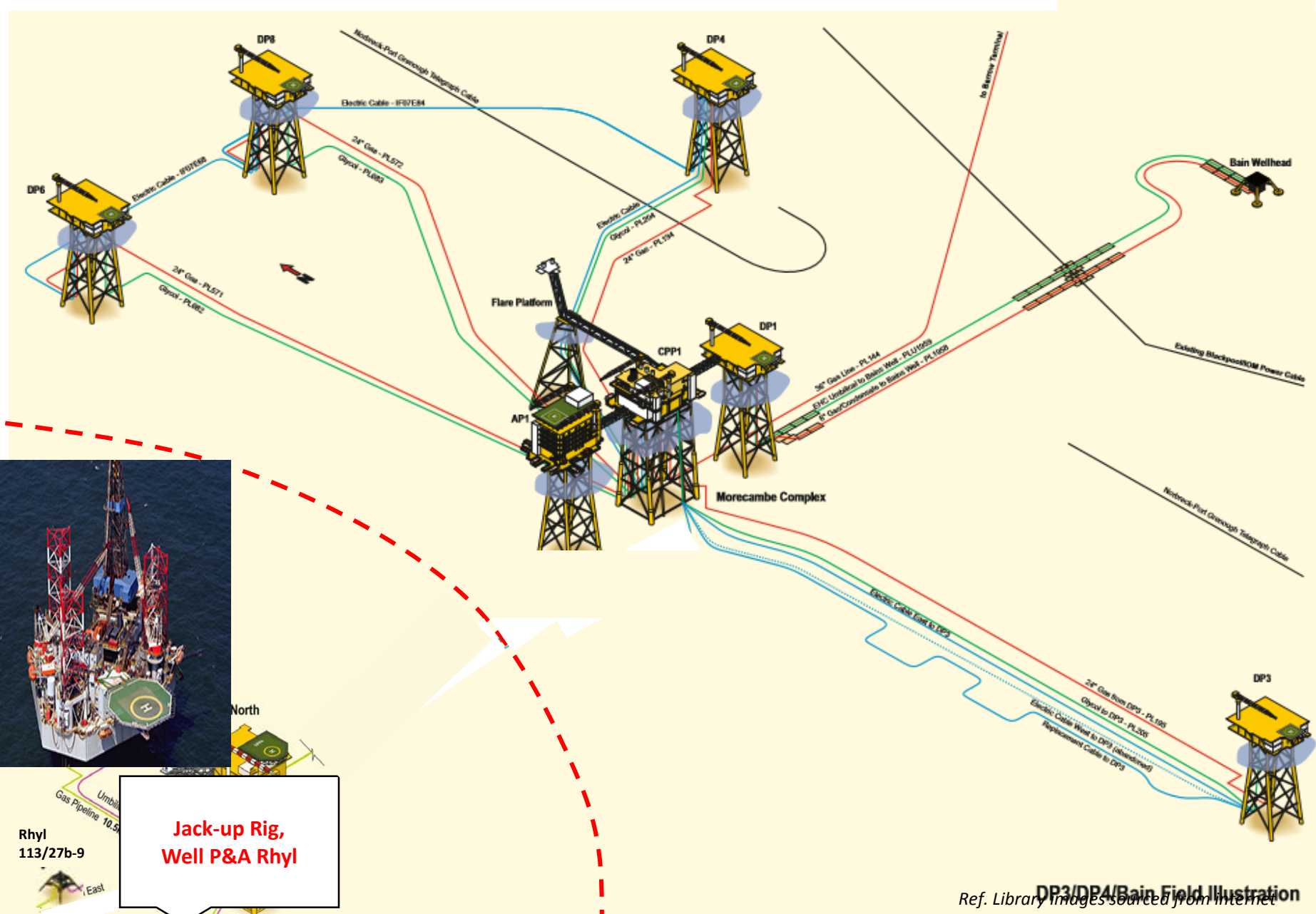


January 2019
 SS7 DSV
 Preparations ahead
 of Jack-up Rig.
 Bains PL Flushing
 from DSV



Pig receiving/ DSV
 SIMOPS and final PL
 isolation

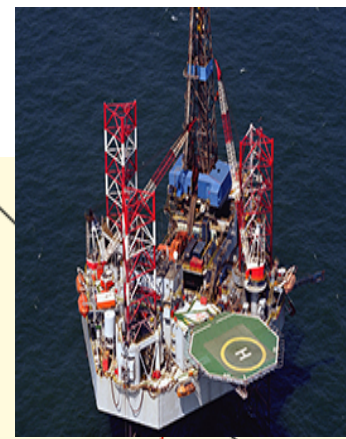
Subsea Well P&A – Rhyll 113/27b-9



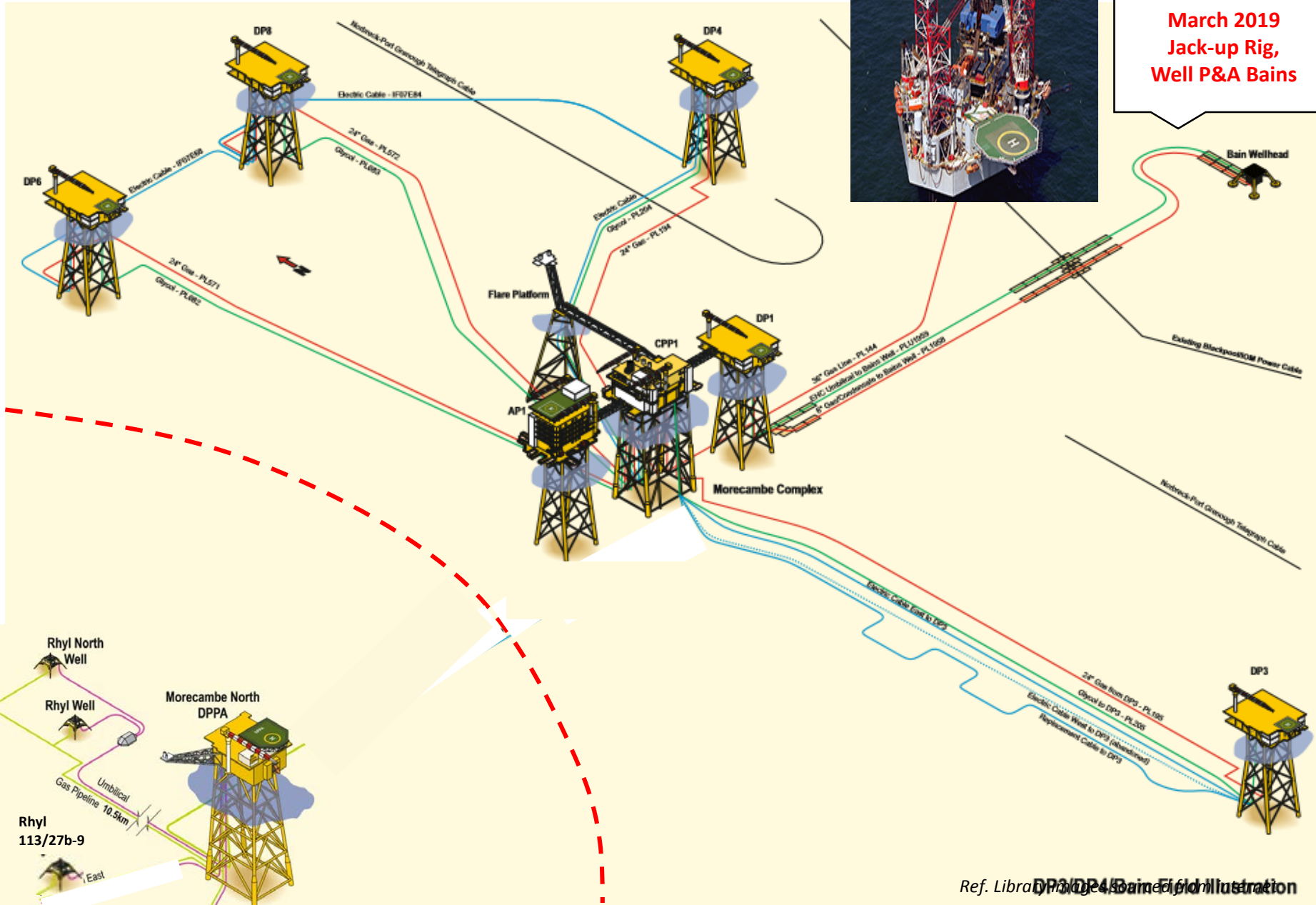
**Jack-up Rig,
Well P&A Rhyll**

Rhyll
113/27b-9

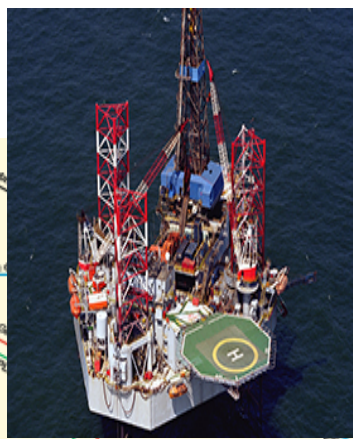
Subsea Well P&A - Bains



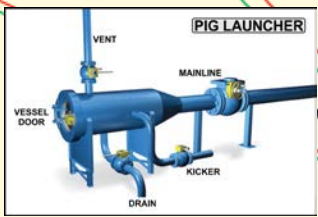
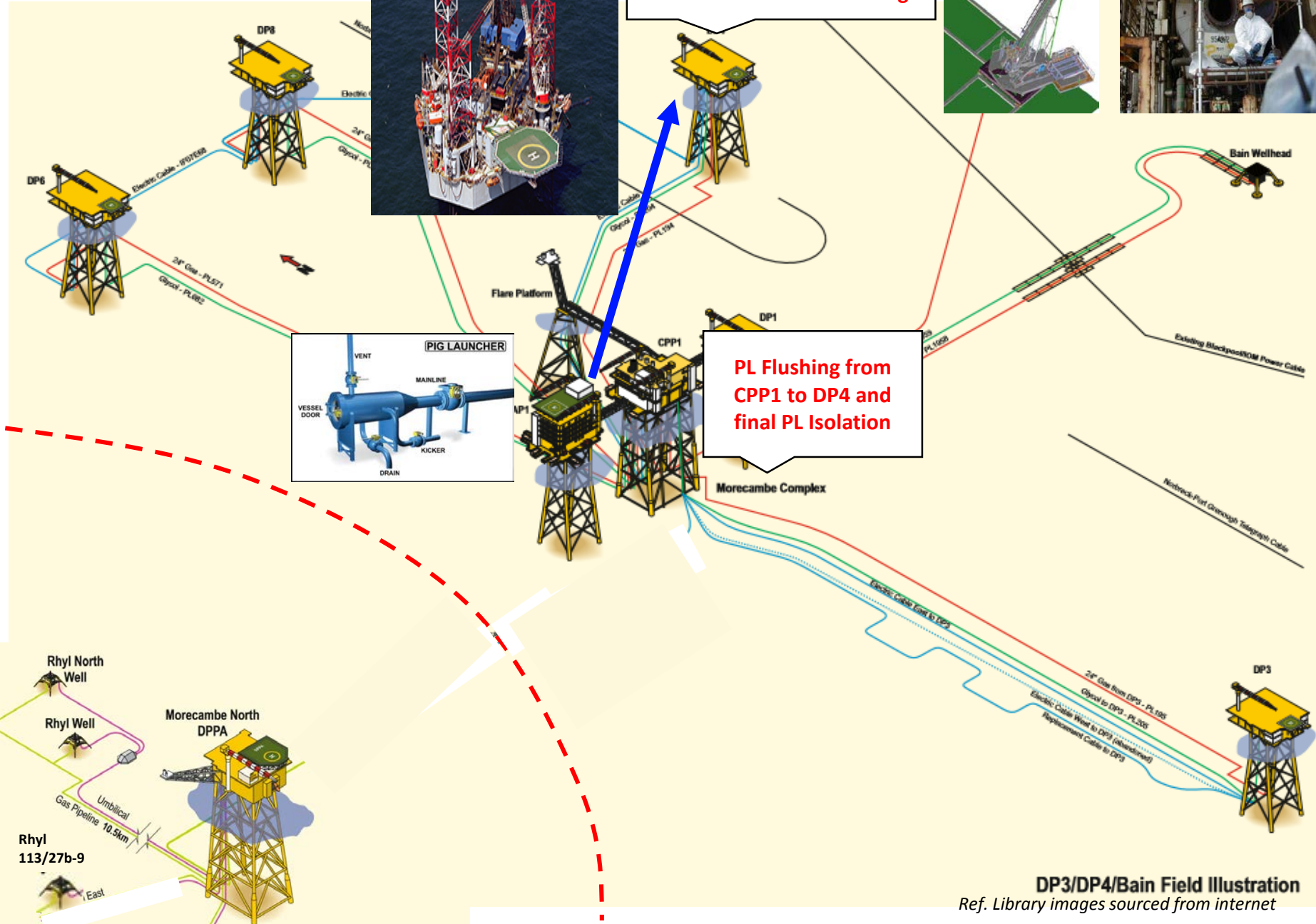
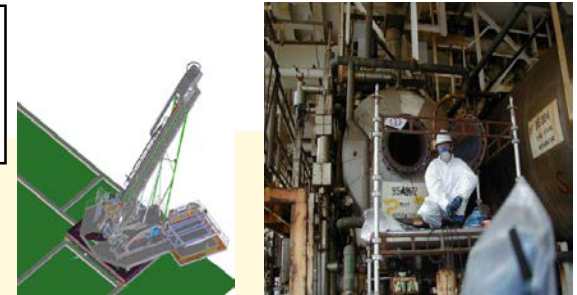
March 2019
Jack-up Rig,
Well P&A Bains



DP4 PHASE-1



**Jack-up Drill Rig Arrival DP4,
Well P&A, PL isolations and
Facilities Decommissioning**

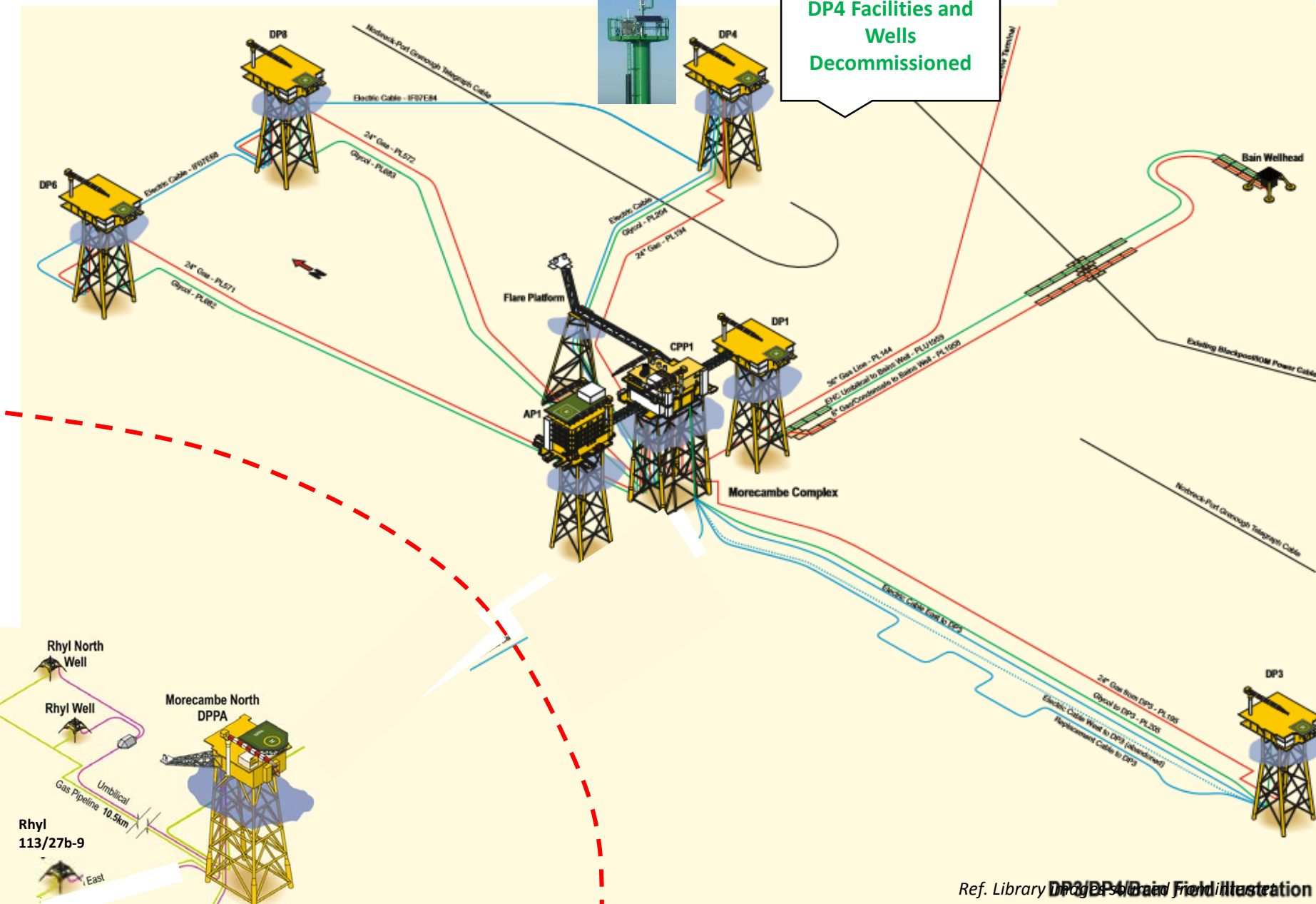


**PL Flushing from
CPP1 to DP4 and
final PL Isolation**

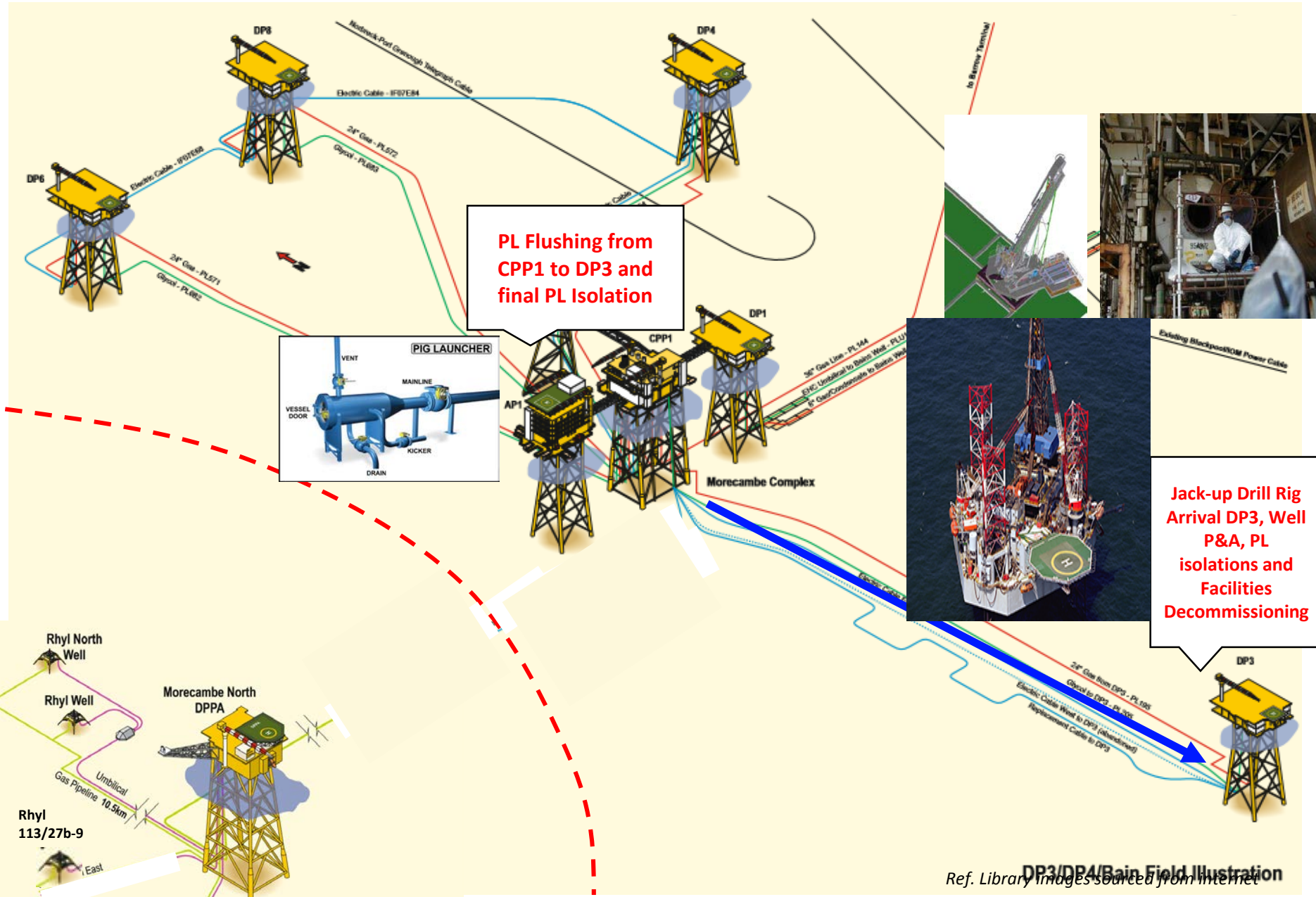
DP4 PHASE-1 Complete - Lighthouse Mode



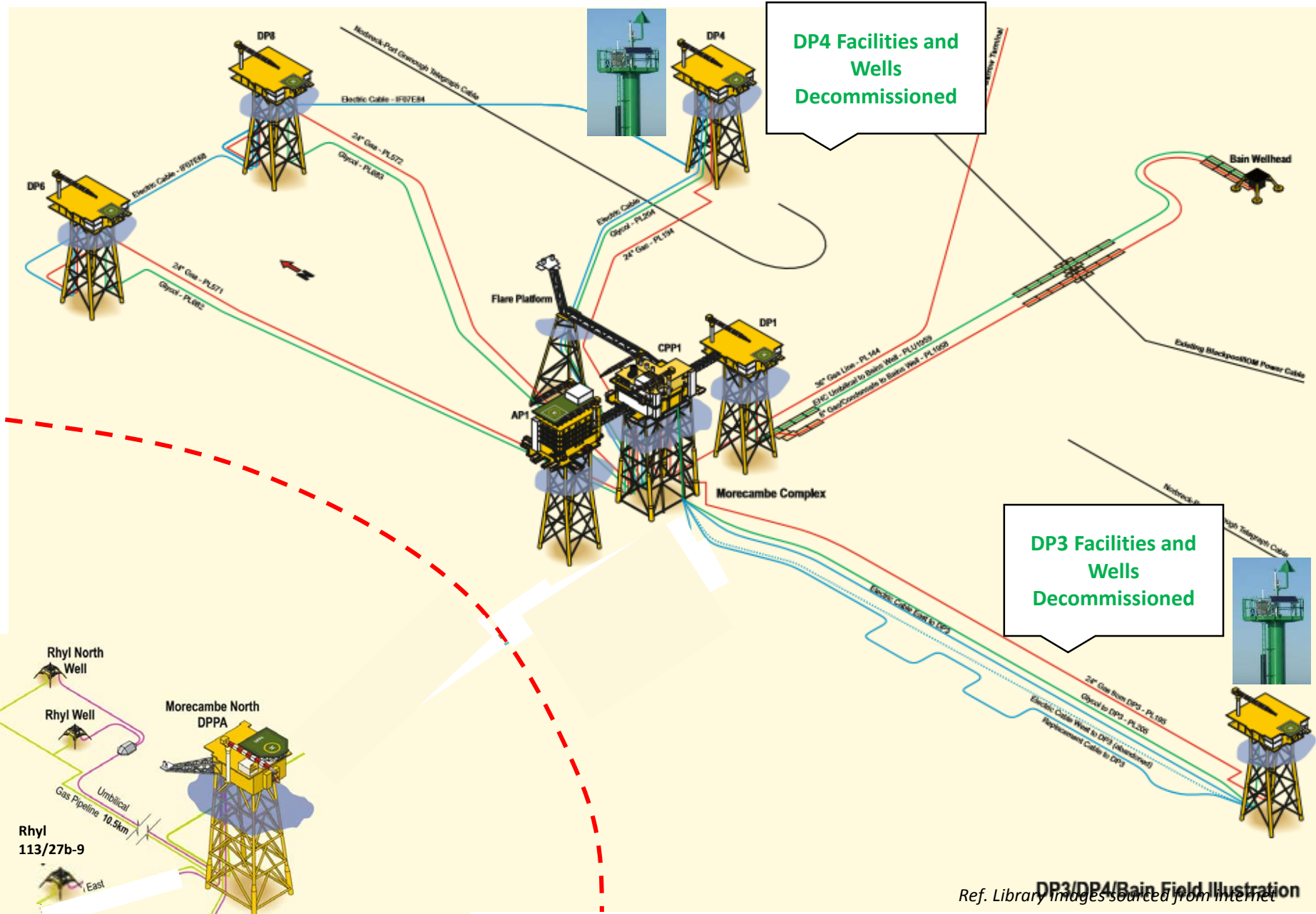
DP4 Facilities and Wells Decommissioned



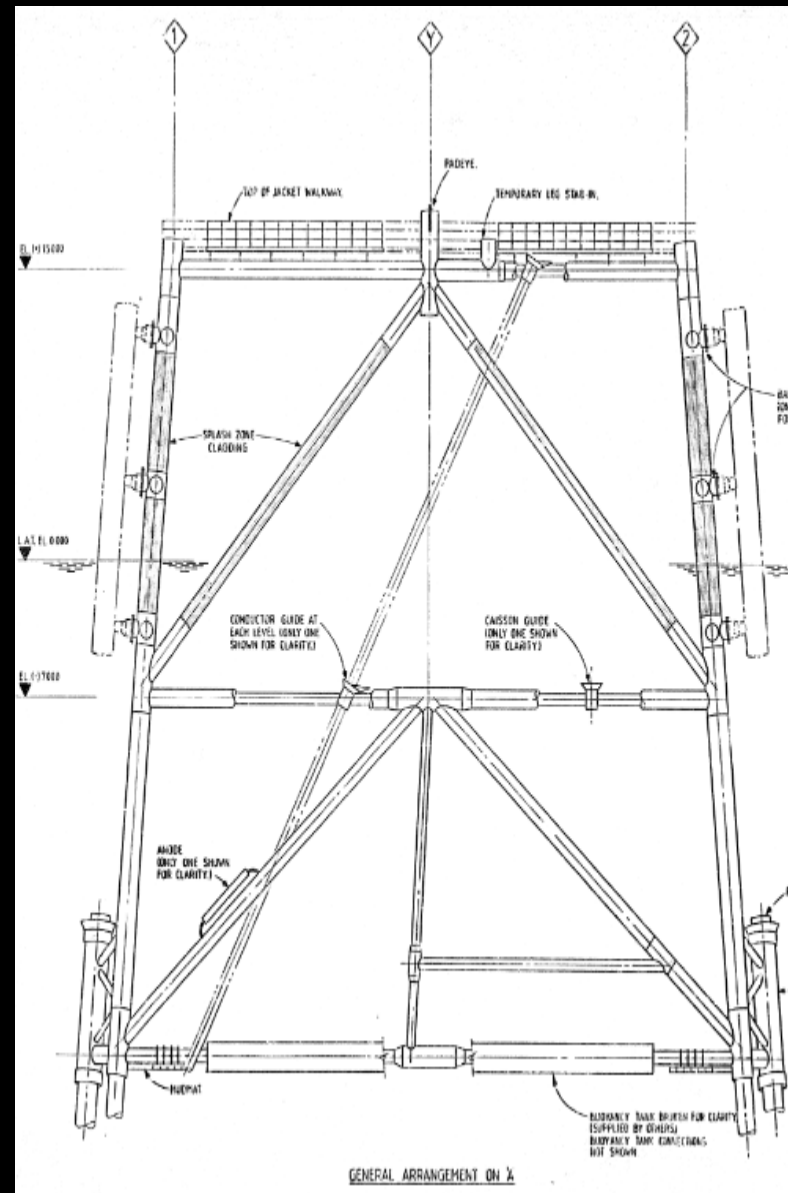
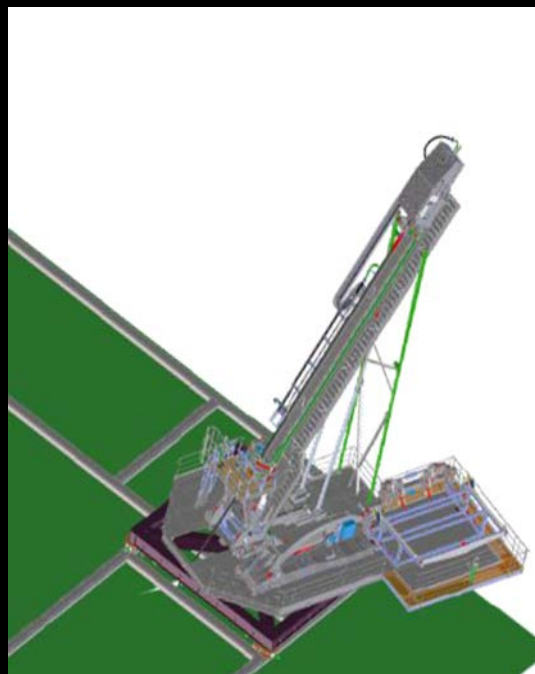
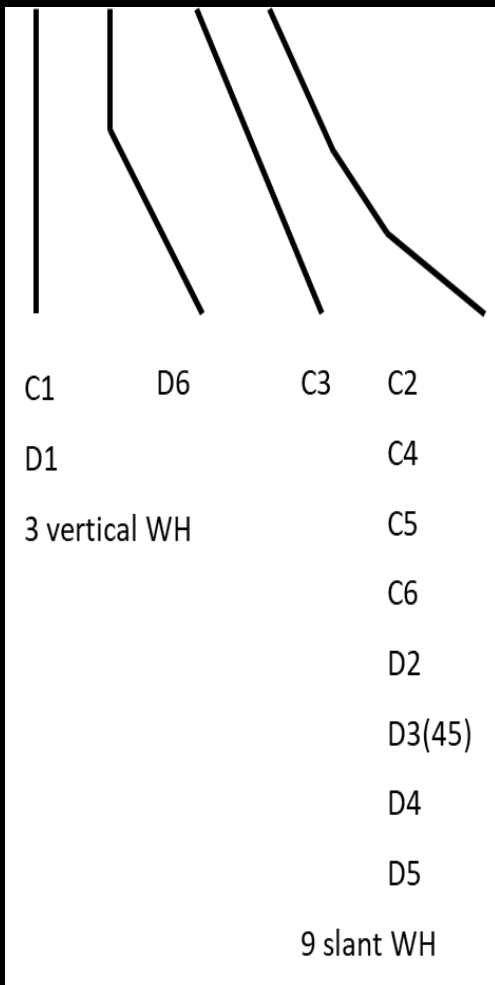
DP3 PHASE-1



DP3&4 PHASE-1 Complete - Lighthouse Mode



Key Challenges – Slant Wells



Key Challenges – Stranded Cranes





SPIRIT ENERGY



PD&MS
IKM
STORK



PHASE-1
DELIVERY

ARDENT



RIG

PETROFAC



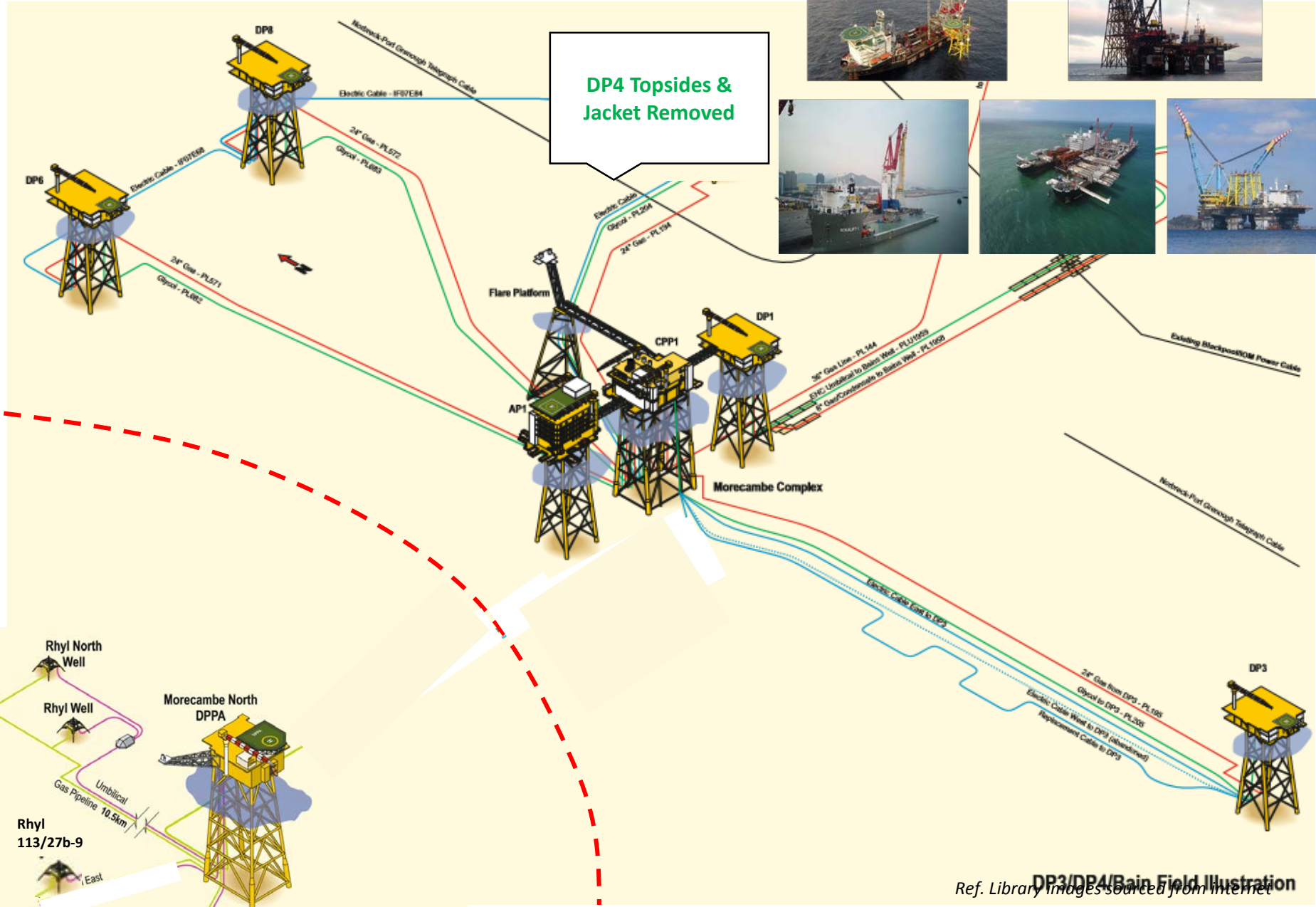
SUBSEA 7



PHASE 2 – Infrastructure Removal Services



DP4 PHASE-2



DP3 PHASE-2

