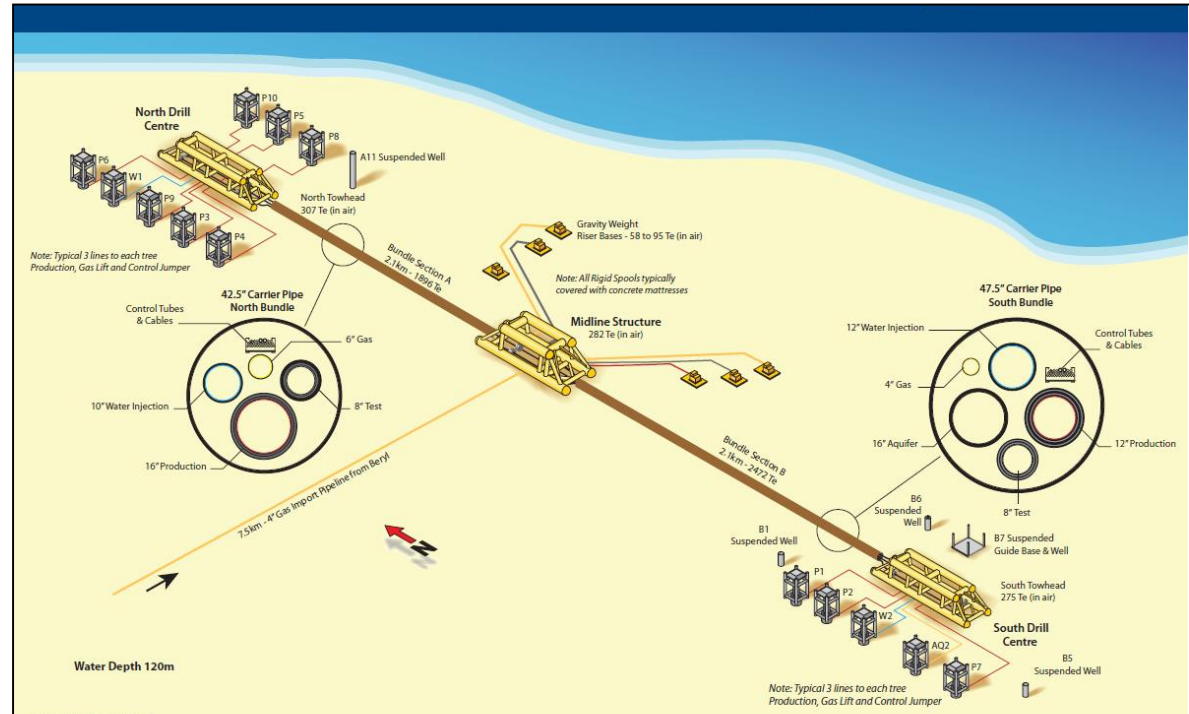


Leadon Decommissioning

April 27th 2016, Martin Simms

Leadon Decommissioning – Discovery to CoP

- Discovered in 1979 by British National Oil Corp.
- Appraisal well in 1998 by Kerr McGee
- Field Development & First Oil 2000/01



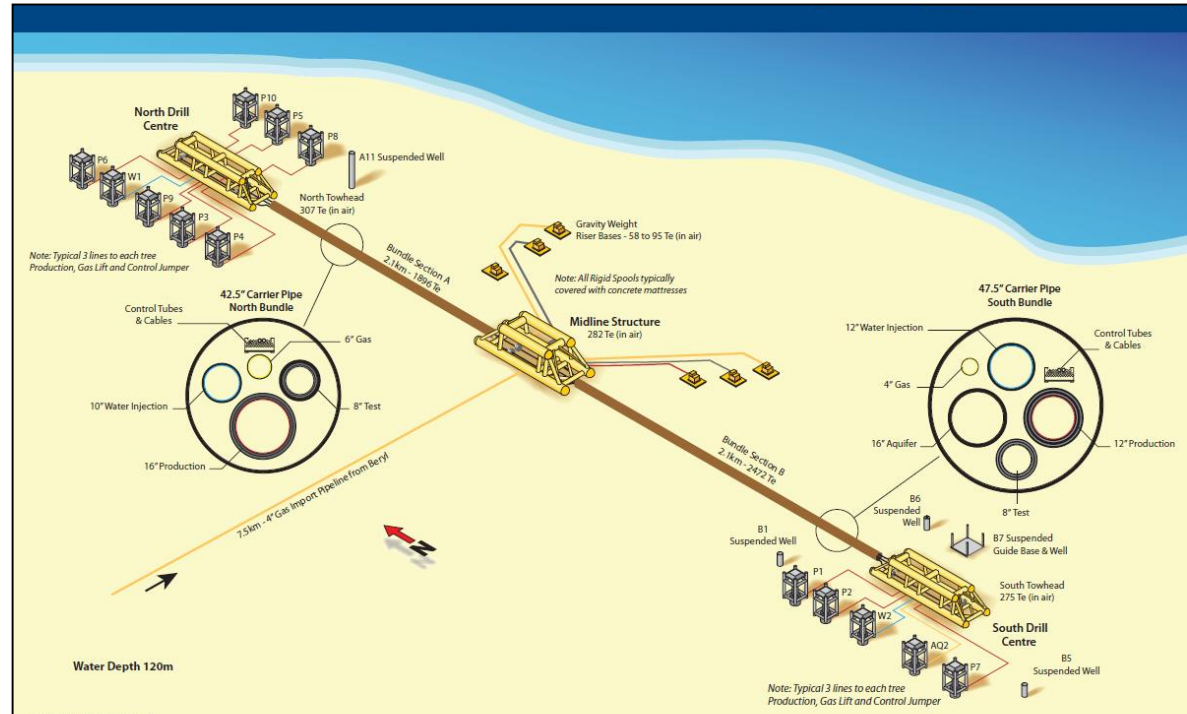
Leadon Decommissioning – Discovery to CoP

Architecture

- 13x wells (10x production)
- 5x partially abandoned wells
- N/S bundle, 47.5"/42.5", 4.2km
- 3x towhead/MLS, 300te
- 6x riser bases, 95te
- 4" flowline, 7.5km
- 6-12" rigid spools
- 200x concrete mattresses

Decom programme

- Approved Feb 2016



Leadon Decommissioning – Subsea Campaigns

Subsea Campaigns

- 2013 - Sampling Campaign
- 2015 - Pressure Source Disconnection & South Cluster Prep for P&A

Campaign Success Story

- Appreciation of Inherent Risks
- Good Valve Integrity
- Sampling
- Efficient DSV operations
- 96% Material Recycled



Leadon Decommissioning – Well Abandonment

Leadon South Well Abandonment

- South Cluster Milestone Achieved
- Works completed by Sedco 704
- Efficiencies identified during operations

#	Well #	Dril. Name	Prod. Name	Slot P&A Name	Towhead
1	9/14a-N2	N2	P3	A4	Leadon North
2	9/14a-9	9	P4	A5	Leadon North
3	9/14a-N3y	N3Y	P5	A10	Leadon North
4	9/14a-N4	N4	P6	A1	Leadon North
5	9/14a-N6y	N6Y	P8	A11A	Leadon North
6	9/14a-N1z	N1Z	P9	A3	Leadon North
7	9/14a-N7	N7	P10	A9	Leadon North
8	9/14a-N5	N5	W1	A2	Leadon North
9	9/14a-A11	N6	-	A11	Leadon North
10	9/14b-S3a	S3A	P1	B1A	Leadon South
11	9/14b-S1z	S1Z	P2	B2	Leadon South
12	9/14b-S7	S7	P7	B5A	Leadon South
13	9/14b-S4	S4	W2	B3	Leadon South
14	9/14b-S5	S5	A2_AQ2	B4	Leadon South
15	9/14b-S6	S6	AQ1	B6	Leadon South
16	9/14b-S2X	S2X	-	B5	Leadon South
17	9/14b-W3	W3	W3	B7	Leadon South
18	9/14b-S3	S3	-	B1	Leadon South



Leadon Decommissioning – Well Abandonment

As-Left condition

- Wells bullheaded with water/glycol mix
- XMTs flushed with glycol
- CITHPs recorded

P&A Scope

1. Latch onto well and pull completion
2. Reservoir isolation
3. Overburden Isolation
4. Removal of Wellhead

Optimisation Scenarios Considered

1. XT & WH removal offline



Leadon Decommissioning – Well Abandonment

Campaign Feedback

1. Positive operations;
 - a. perf & wash
 - b. Plug & perf.
 - c. Abrasive cutting of WHs
2. Hopping BOP between XMTs
3. Batch recovery of XMT & WHs
4. Expertise and attitude of smaller specialist contractors
5. Extended lessons learned



Leadon Decommissioning - Next 12 Months

- Planning for P&A of Leadon North
- Riser Base Recovery
- Tender Recovery of Towheads

