



Wintershall Annual Pipeline - Surveys - 2022

Wingate to D15-FA-1 12-inch gas / 2-inch methanol pipeline bundle

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1.1	13/02/2023	Client's comments	KSV	IZO	DDR
Revision	Date	Description of Revision	Author	Checked	Approved

REVISION HISTORY

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The table on this page should be used to explain the reason for the revision and what has changed since the previous revision.

Rev.	Date	Reason for revision	Changes from previous version
1.0	10/01/2023	Issued for client	N/A
1.1	13/02/2023	Client's comments	Changes in sections 1.2,1.2.4 and 1.2.5 – changed lengths of the features

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1 WINGATE TO D15-FA-1 12 INCH GAS / 2 INCH METHANOL PIPELINE BUNDLE

The 12-inch gas / 2-inch methanol pipeline bundle was laid in 2011 to connect the Wingate platform operated by Wintershall in the UK Sector to the D15-FA-1 platform operated by Neptune in the Dutch Sector. The length of the route is 20.000 km with the Wingate platform location at KP -0.015 and the tie-in with the spool piece at KP 0.000. It should be noted that the KP values in this report refer to the pipeline position and length as updated in 2022. Refer to Table 1 for details. The 12/2-inch bundle was trenched and contains no side-taps or other engineering features.

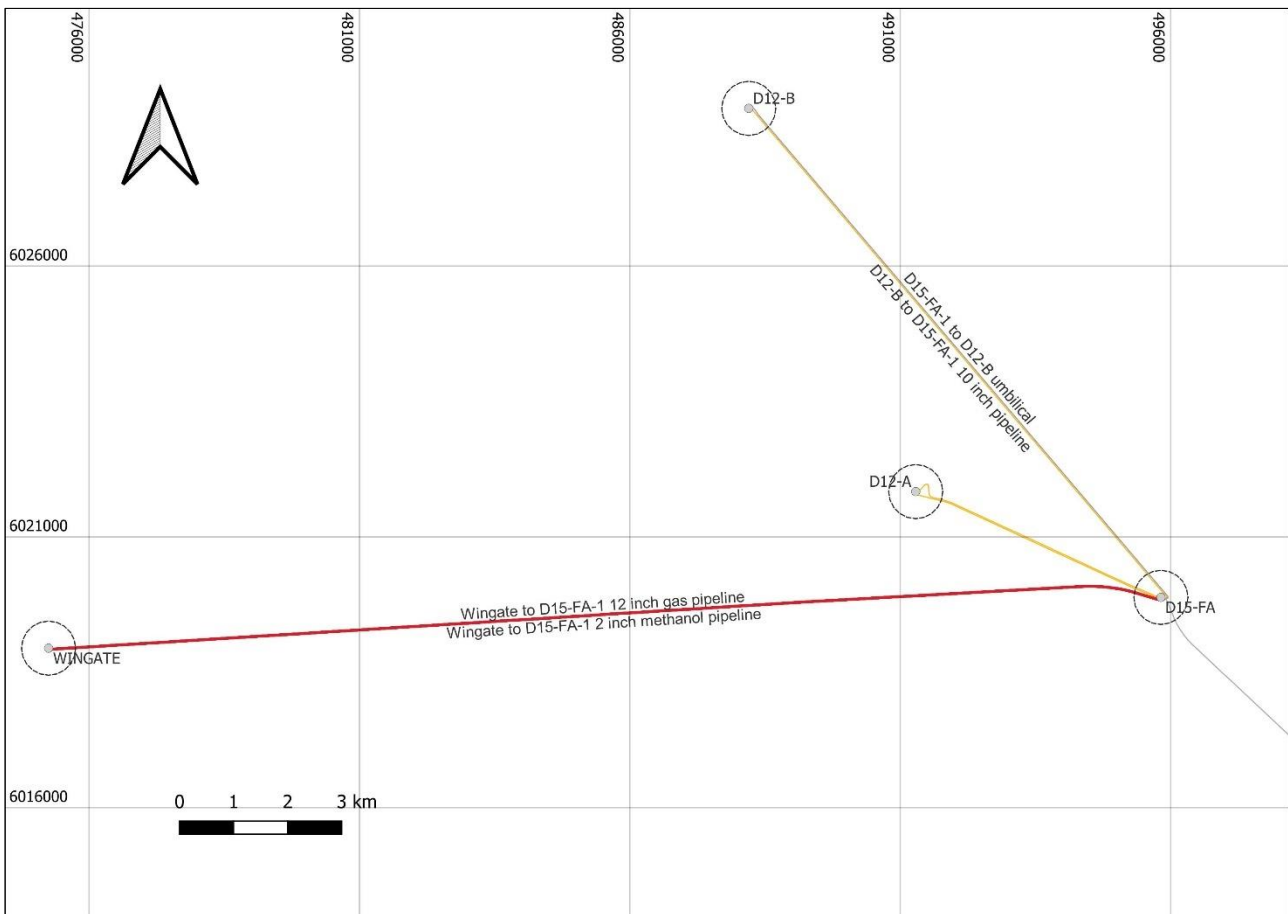


Figure 1: Wingate to D15-FA-1 12/2-inch bundle overview

A general inspection survey was carried out along the length of the pipeline in 2022.

Table 1: Wingate to D15-FA-1 12/2-inch Bundle Details

Pipeline Name	Diameter (inch)	Type	Length (km)	Installed	Product	Status
Wingate to D15-FA-1	12/2	Rigid steel/ Rigid steel piggybacked	20.000	2011	Gas/Methanol	Active
* Length of pipeline based on client supplied drawing is 20.623 km						

1.1 CONSTRUCTION DETAILS

The construction details of the 12/2-inch bundle are presented in Table 2. Where the position of an engineering feature or pipeline/cable crossing was observed to differ from the client supplied position, the observed position is given in the construction details table (Table 2). In such a case, in the detailed event listing (Table 7) only the observed position of the feature or crossing is given. Cable crossing positions are based on information from Client.

Table 2: Wingate to D15-FA-1 12/2-inch Bundle Construction Details

E	ED50 / UTM Zone		Features & Remarks
	31° N, CM 3° E		
	Easting	Northing	
[km]	[m]	[m]	
-0.015	475267	6018936	Bundle start at Wingate platform
20.608	495794	6019860	Minke to D15-FA-1 8 inch / 90 mm umbilical (ENGIE) crossing
20.623	495806	6019868	Bundle end at D15-FA-1 platform

1.2 SURVEY RESULTS

In this section, the survey results are organised by category and compared to the findings of the previous survey. A detailed listing of the survey results, which lists the events geographically along the pipeline starting at KP 0.000, is given in Table 7. In Table 7, there are also events noted along the spool piece at the beginning of the bundle, but as the spool piece wasn't provided by the client, the locations were provided without the KP references. A summary of the 2022 survey results is provided below in Table 3, the events that are found at spool piece before the beginning of the pipeline are not included here.

Table 3: Event Listing Summary

Event Listing Summary		Depth of Burial	Rock Dump on Pipeline	Mattress	Exposure	Freespan
Counts	-	-	4	4	0	0
Total length	(m)	-	140	104	-	-
Minimum	(m)	-	8	7	-	-
Maximum	(m)	-	75	69	-	-
Percentage	%	-	0.7	0.5	-	-

1.2.1 Freespans and Exposures

Table 4: Exposures and Freespans

Comparison		Exposure			Freespan		
		2016	2018	2022	2016	2018	2022
Counts	-	1	1	0	0	0	0
Total length	(m)	6	3	-	-	-	-
Minimum	(m)	6	3	-	-	-	-
Maximum	(m)	6	3	-	-	-	-

There were no freespans noted along the pipeline bundle, same as in 2018. Also, there is a decrease in the number and length of exposures since no exposures were detected in the 2022 survey.

1.2.2 Depth of Burial

No depth of burial survey was conducted during the 2022 survey.

1.2.3 Debris

The number of Debris items reported has decreased since 2018 from 1 to 0 in vicinity of pipeline. Some unidentified items may not have been classified as Debris during this year's reporting interpretation.

Table 5: Debris

Comparison	2016	2018	2022
No. of identified contacts	5	1	0

1.2.4 Rock Dump and Mattress Protection

In 2022, 140m of rock dumps are reported on the pipeline, 11m more than in 2018. It could be due to different interpretation since there is also a decrease in the total length of mattresses by 23m, so some mattresses may be interpreted as rock dumps.

Table 6: Rock Dumps and Mattress Protection

Comparison		Rock Dump			Mattress Protection		
Event Listing Summary		2016	2018	2022	2016	2018	2022
No.	-	1	1	4	1	1	6
Total length	(m)	129	129	151	127	127	116
Total length on Pipeline	(m)	129	129	140	127	127	104

1.2.5 Detailed Event Listing of Wingate to D15-FA-1 12/2 Inch Bundle

Table 7: Detailed Event Listing of Wingate to D15-FA-1 12/2-inch Bundle

KP	ED50 / UTM Zone		DCC	Water depth	Code	Rock Dump	Mattress	Exposure	Freespan	Features & Remarks
	31° N, CM 3° E									
	Easting	Northing								
[km]	[m]	[m]	[m]	[m]		[m]	[m]	[m]	[m]	
OUT	475267	6018936	-24	23.01	PS					Bundle start at Wingate platform
OUT	475280	6018910	14	29.18	MS					
OUT	475283	6018916	7	29.67	ME		7			
OUT	475279	6018921	-8	29.69	MS					
OUT	475284	6018922	-3	28.95	ME		5			
OUT	475278	6018924	-9	29.55	RDS					
OUT	475285	6018922	-2	28.97	MS					
0.006	475292	6018930	-8	30.01	RDE	16				Length on pipeline: 6m
0.056	475342	6018929	-3	29.55	MS					
0.066	475352	6018927	-1	29.56	ME		69			
0.073	475359	6018929	-2	29.23	ME		17			
0.080	475367	6018930	-2	29.20	MS					
0.089	475376	6018930	-1	29.08	ME		10			
0.091	475377	6018930	-2	29.10	MS					
0.099	475385	6018932	-3	29.20	ME		7			
20.496	495690	6019863	1	39.44	RDS					
20.561	495747	6019826	19	39.69	ES					
20.571	495762	6019842	0	38.81	RDS					
20.571	495762	6019842	0	38.83	RDE	75				
20.599	495788	6019851	5	40.19	EE			47		Not on pipeline
20.608	495794	6019860	0	37.16	XING					Minke to D15-FA-1 8 inch / 90 mm umbilical (ENGIE) crossing
20.616	495796	6019873	-9	40.00	RDS					
20.623	495806	6019870	-2	38.71	RDE	52				
20.623	495806	6019868	0	37.67	PE					Bundle/Pipeline end at D15-FA-1 platform
OUT	495803	6019876	-9	36.15	RDE	8				Length on pipeline: 7m

1.3 DATA EXAMPLES OF FEATURES OF INTEREST

Data examples are prepared for the following features of interest:

- Wingate platform departure
- D15-FA-1 platform approach

1.3.1 Wingate platform departure

The Wingate to D15-FA-1 12/2-inch bundle departs from the east side of the Wingate platform. Refer to Figure 2 for a MBES record of the platform departure and to Figure 3 for the SSS record.

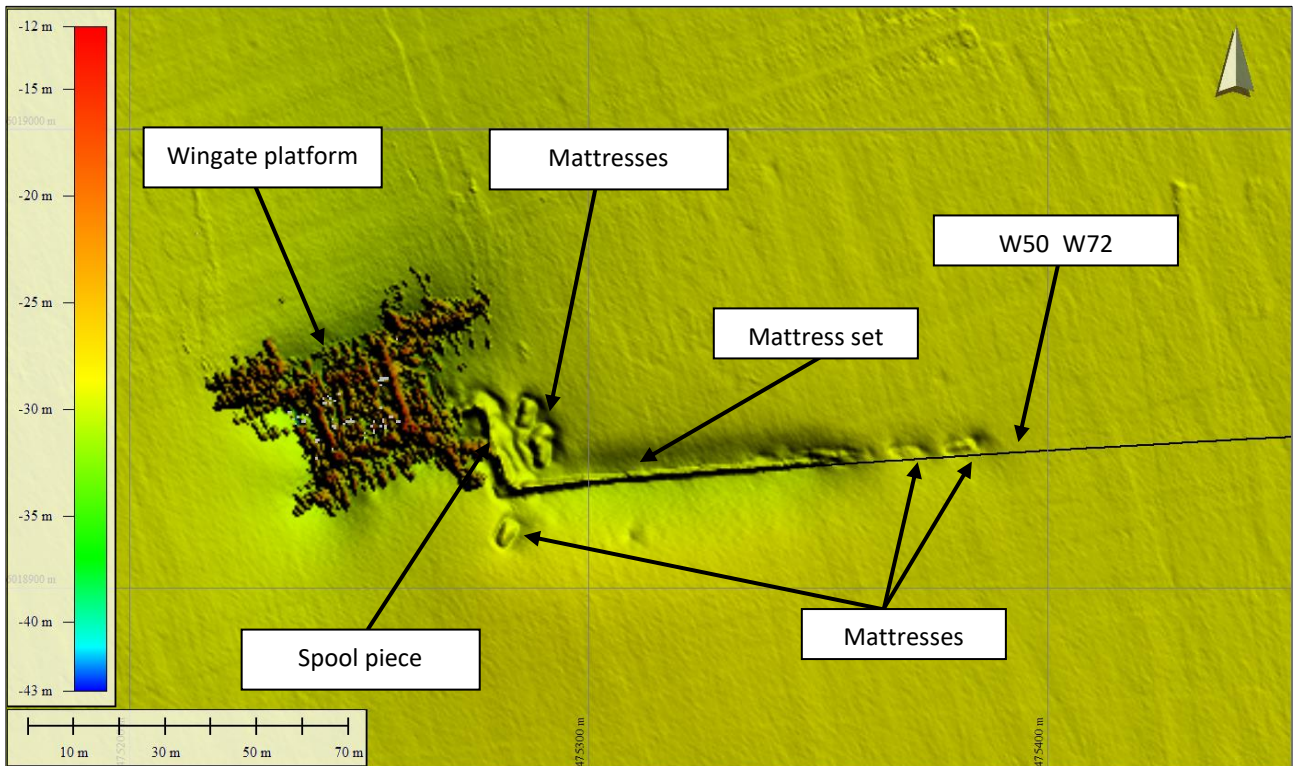


Figure 2: MBES overview of the pipeline departure at Wingate platform

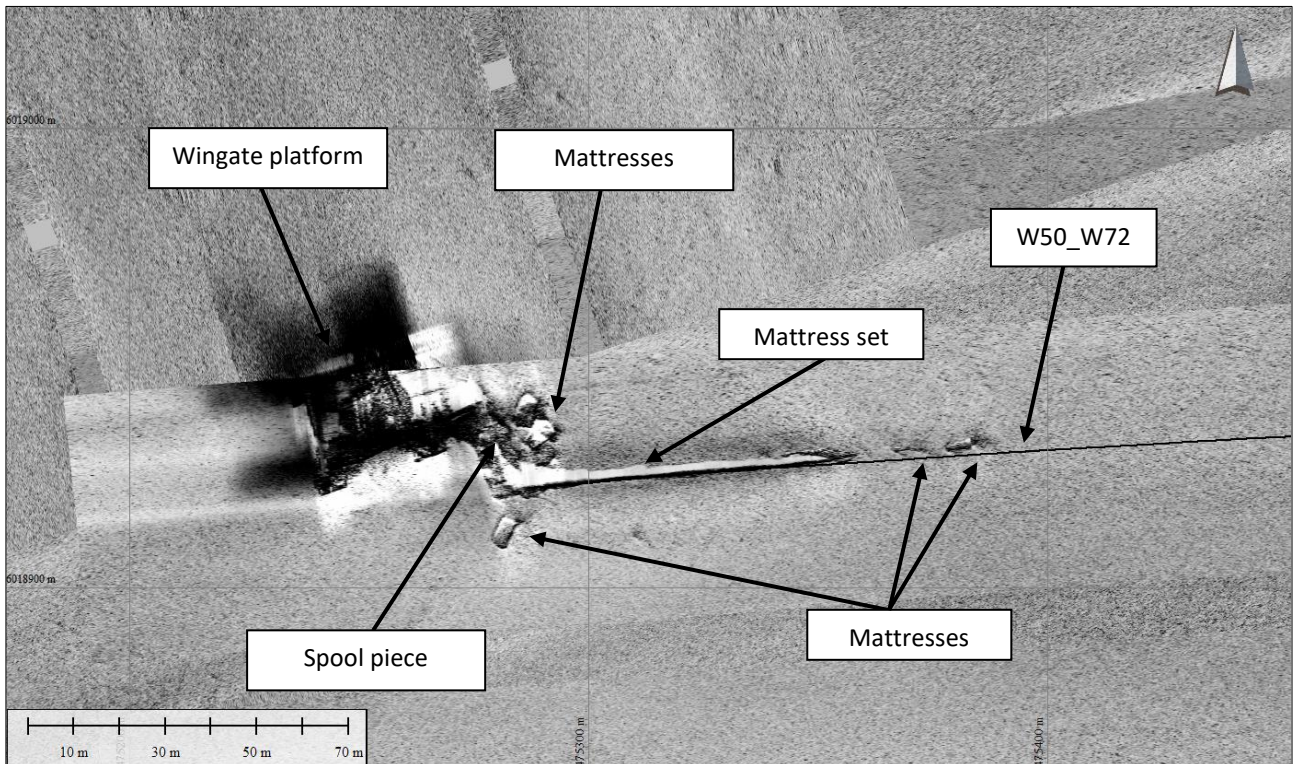


Figure 3: SSS overview of the pipeline departure at Wingate platform

1.3.2 D15-FA-1 platform approach

The Wingate to D15-FA-1 12/2-inch bundle approaches the D15-FA-1 platform from the south-west. On its approach the bundle was found to be rock dumped. Refer to Figure 4 for a MBES overview of the pipeline approach to D15-FA-1 platform and Figure 5 for a SSS record.

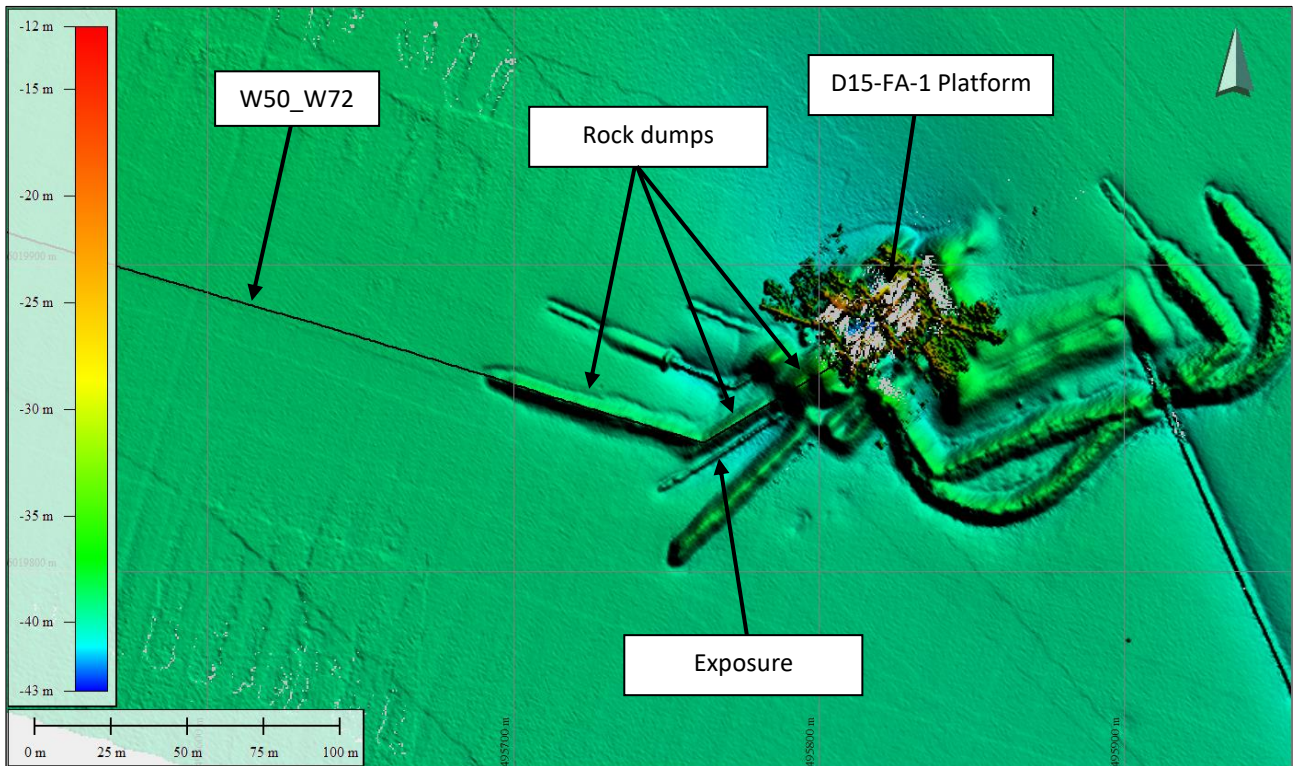


Figure 4: MBES overview of the pipeline approach to D15-FA-1 platform

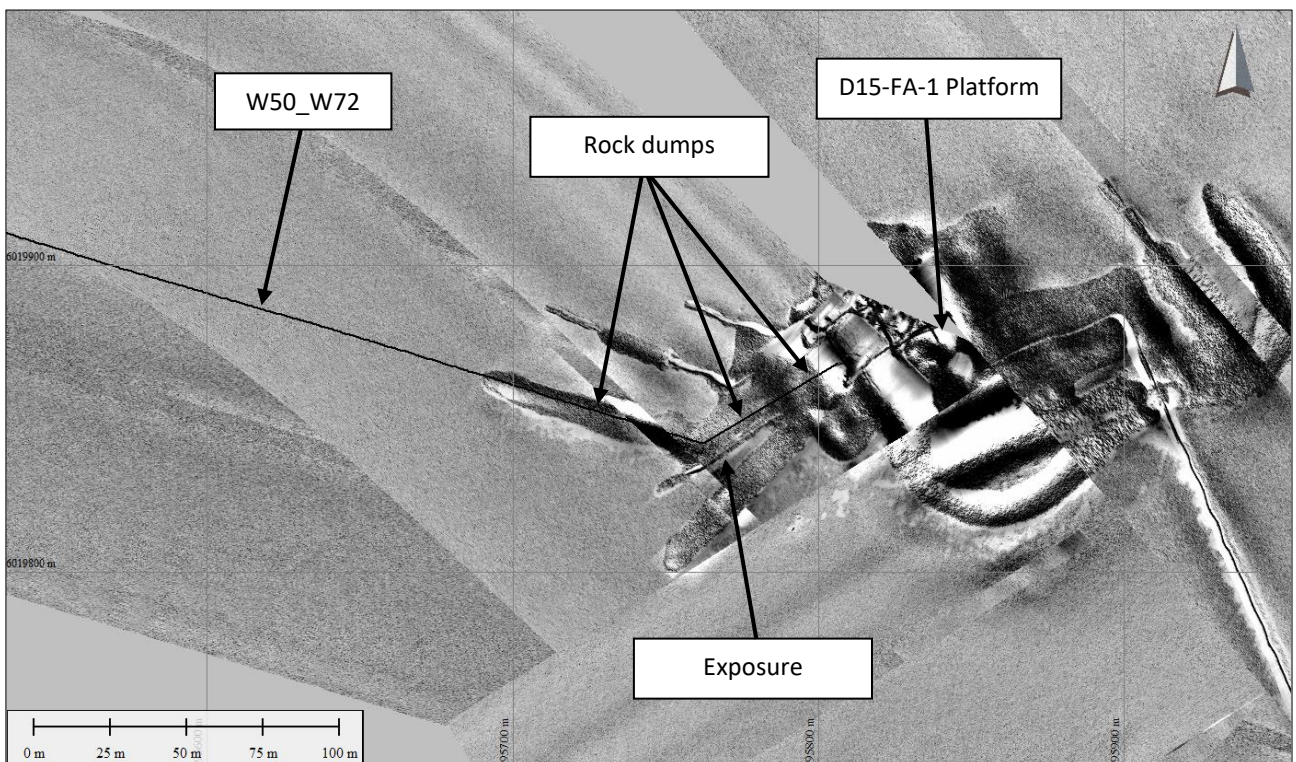


Figure 5: SSS overview of the pipeline approach to D15-FA-1 platform