

REFERENCES

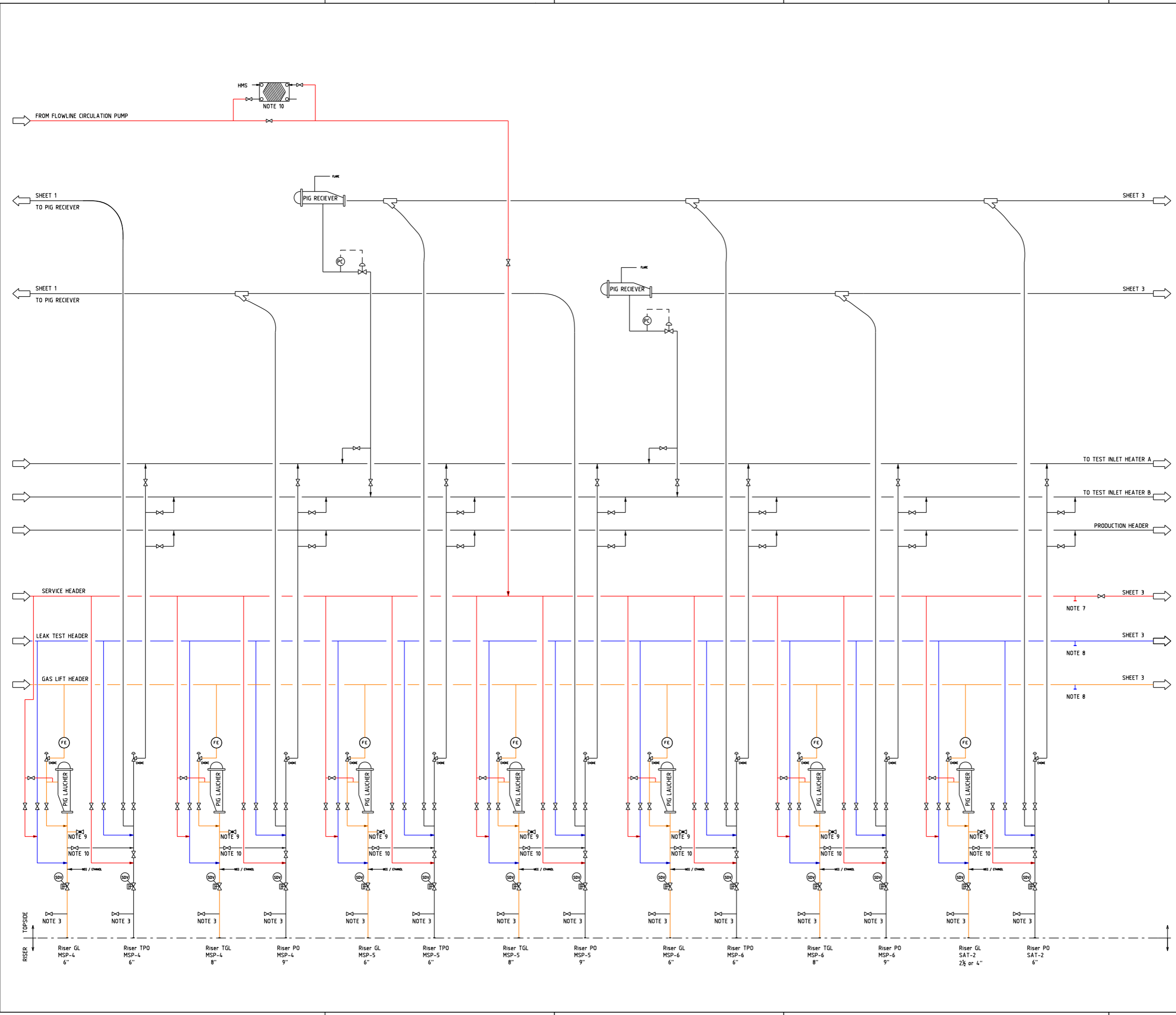
NOTES

- 1 - This drawing is preliminary and during detailed design CONTRACTOR shall submit to PETROBRAS for approval the final configuration;
- 2 - CONTRACTOR shall consider, additionally, injection of MEG via production riser to X-TREE and return of fluids on gas lift riser;
- 3 - For coiled tubing connection and special operations according to GTD item 3.9;
- 4 - Production chokes shall be manual and remote operated;
- 5 - For start up, commissioning or decommissioning procedures;
- 6 - The flow rate required for each pump is 120 m<sup>3</sup>/h. The maximum dead oil flow rate is 50% based on total flow rate of mixture. The diesel and dead oil shall be measured with dedicated fiscal metering;
- 7 - For N2 connection and special operations according to GTD item 3.9;
- 8 - For Hydrostatic Test;
- 9 - For gas lift riser depressurizing according to GTD item 2.6.1
- 10 - The unit shall be able to inject hot diesel (80°C) or mixture of crude and diesel only into production riser at maximum flowrate of 120 m<sup>3</sup>/h, return through gas riser and aligned to production test header at minimum pressure of 5 bar g.

REV.	DESCRIPTION	DATE	BY	APPROV.
0	ISSUED FOR INFORMATION	31/05/2017	THOMAS	HCG

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	<b>PETROBRAS</b>	UO-BC/IPP/PMF
CLIENT:	AGP/CP/PROJ-REV MRL I	
PROGRAM:	MARLIN FIELD DEVELOPMENT	
UNIT:	FPSO MRL-1	
TITLE:	PROCESS FLOW DIAGRAM TOPSIDE MANIFOLD	
PROJ:	UO-BC/IPP/PMF	DES: THOMAS
VERIF:	THOMAS	APPROV: HCG
SCALE:		SHEET: 1 of 3
DATE:	31/05/2017	NUMBER: I-DE-3534.00-1223-943-PP6-001
		REV: 1



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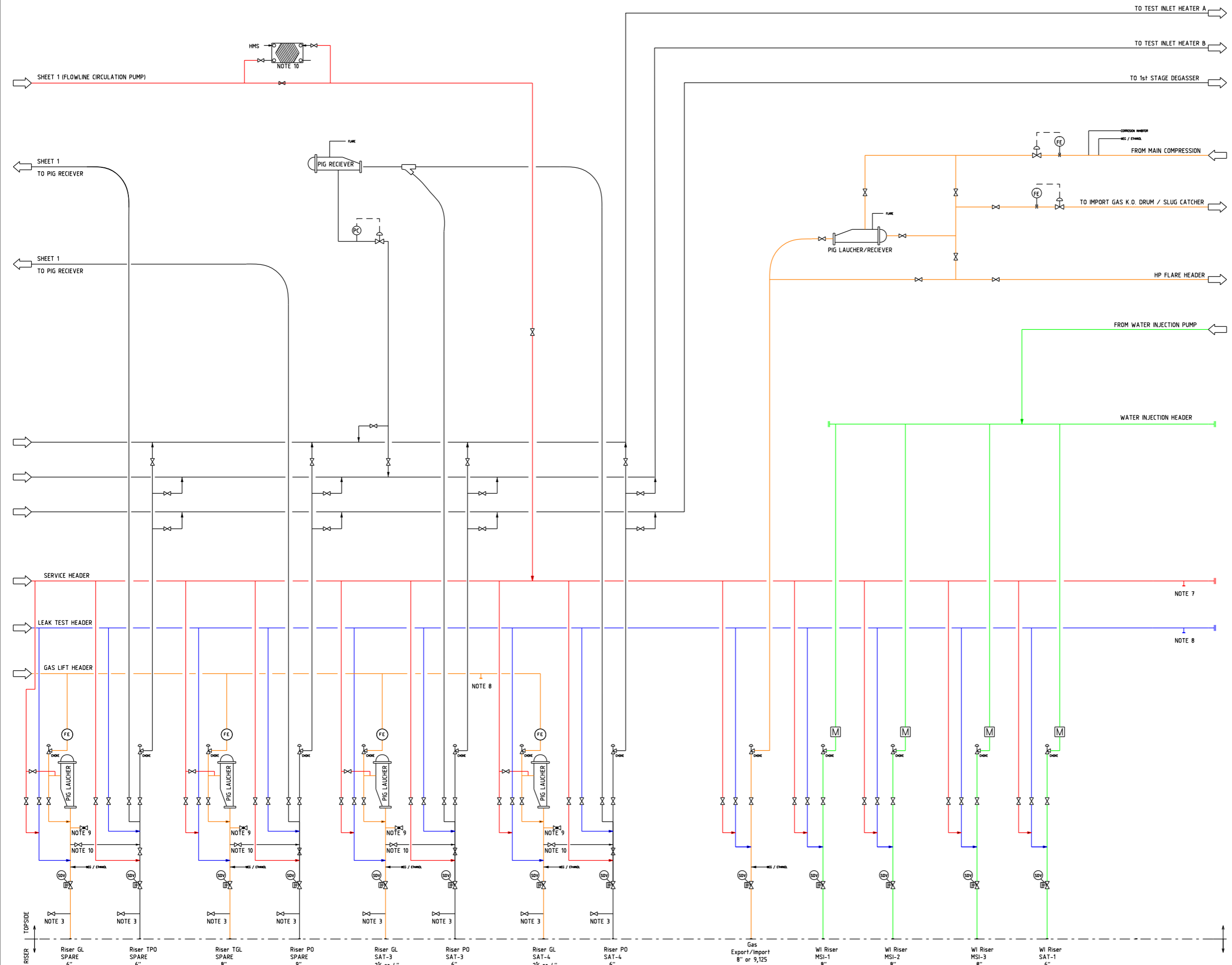
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PROJ:	UO-BC/IPP/PMF	DES:	THOMAS
VERIF:	THOMAS	APPROV:	HCG
ESCALE:		SHEET:	2 of 3
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