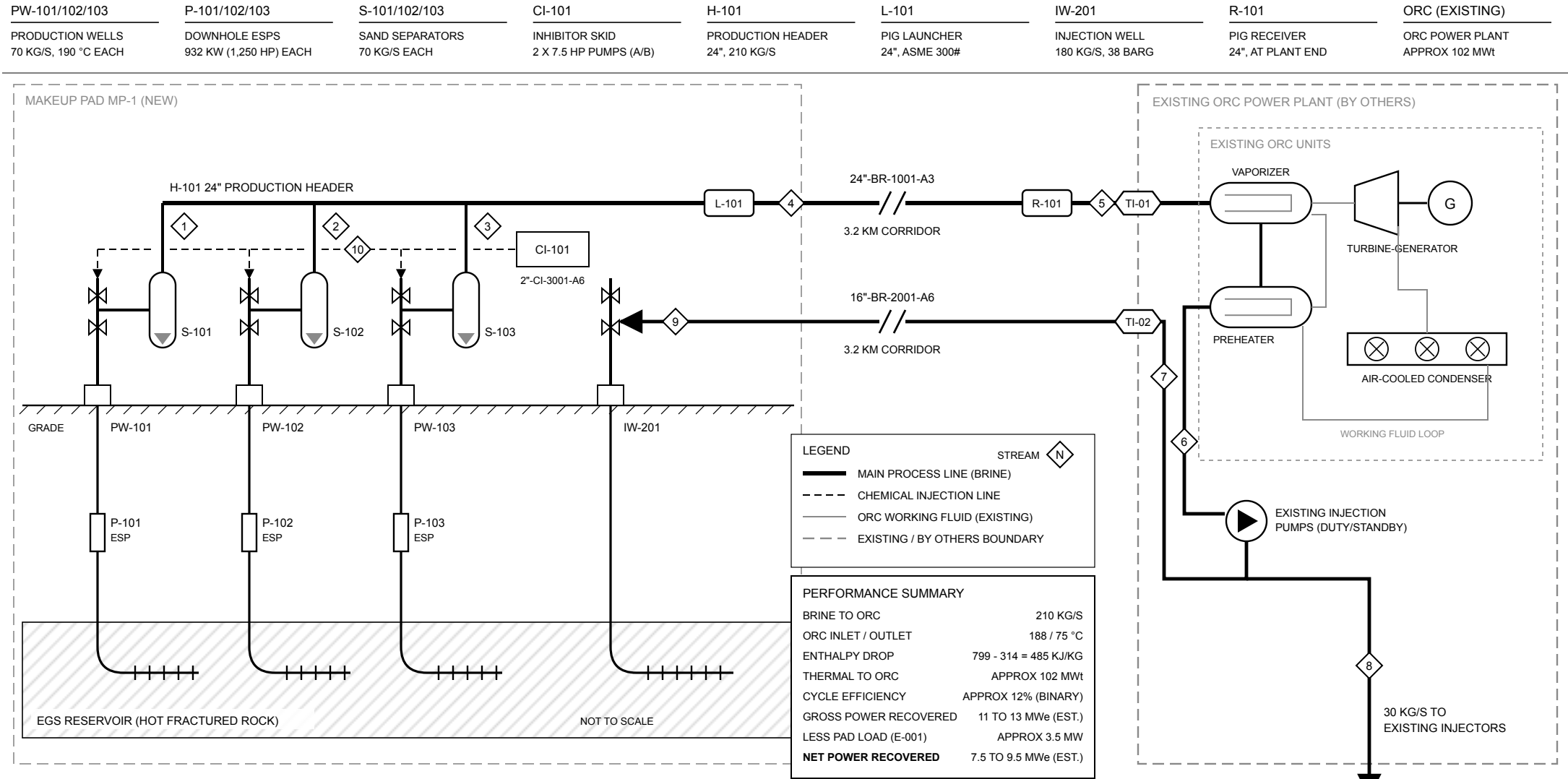




PROCESS FLOW DIAGRAM
MAKEUP PAD MP-1 TO EXISTING ORC PLANT

STREAM NUMBER	1	2	3	4	5	6	7	8	9	10
DESCRIPTION	PW-101 TO S-101	PW-102 TO S-102	PW-103 TO S-103	H-101 TO PIPELINE	ARRIVAL AT TI-01	ORC BRINE OUTLET	TI-02 TO PAD (IW-201)	TO EXISTING INJECTORS	IW-201 WELLHEAD	INHIBITOR TO WELLHEADS
PHASE	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID (CHEM)
MASS FLOW	KG/S	70.0	70.0	70.0	210.0	210.0	210.0	180.0	30.0	180.0
TEMPERATURE	°C	190	190	190	190	188	75	75	75	AMB
PRESSURE	BARG	25.0	25.0	25.0	24.5	22.0	17.0	42.0	42.0	38.0
ENTHALPY	KJ/KG	807	807	807	807	799	314	314	314	-
DENSITY	KG/M3	876	876	876	876	878	975	975	975	1,100
VOLUMETRIC FLOW	M3/H	288	288	288	863	861	775	665	111	665
LINE NUMBER		10"-BR-1101	10"-BR-1102	10"-BR-1103	24"-BR-1001	24"-BR-1001	EXISTING	16"-BR-2001	EXISTING	16"-BR-2001
										2"-CI-3001

MASS BALANCE: STREAMS 1 + 2 + 3 = 4 = 5 = 6 = 210 KG/S. STREAM 6 = 7 + 8 = 180 + 30 KG/S. STREAM 7 = 9 = 180 KG/S. STREAM 10 NEGLIGIBLE.

HEAT AND MATERIAL BALANCE
NORMAL OPERATION, ALL THREE PRODUCTION WELLS ONLINE

- GENERAL NOTES
- ALL VALUES ARE NOTIONAL FOR THE NORMAL OPERATING CASE WITH PW-101, PW-102 AND PW-103 ONLINE.
 - BRINE REMAINS SINGLE-PHASE LIQUID THROUGHOUT. OPERATING PRESSURE EXCEEDS SATURATION PRESSURE (APPROX 12.6 BAR ABS AT 190 °C) AT ALL POINTS.
 - ENTHALPY AND DENSITY ARE BASED ON SATURATED-LIQUID WATER PROPERTIES. DISSOLVED SOLIDS AND NON-CONDENSABLE GASES ARE NEGLECTED.
 - OF 210 KG/S COOLED BRINE LEAVING THE EXISTING INJECTION PUMPS, 180 KG/S RETURNS TO IW-201 VIA TI-02 AND 30 KG/S GOES TO EXISTING PLANT INJECTORS.
 - PIPELINES ARE ABOVE GROUND ON SLEEPERS WITH EXPANSION LOOPS AT APPROX 150 M. PIPING DESIGN TO ASME B31.1.
 - POWER RECOVERY IS AN ESTIMATE ONLY. CONFIRM AGAINST ORC VENDOR PERFORMANCE DATA. PAD LOAD APPROX 3.5 MW (MUF-SCH-002) IS FED FROM THE PLANT (TI-03).

- REFERENCE DRAWINGS
- MUF-G-001 COVER SHEET AND DRAWING INDEX
 - MUF-C-001 OVERALL SITE PLAN AND PIPELINE CORRIDOR
 - MUF-PID-101 P&ID MAKEUP PAD MP-1 WELLHEADS AND PRODUCTION HEADER
 - MUF-PID-102 P&ID BRINE PIPELINES AND PLANT TIE-INS
 - MUF-E-001 ELECTRICAL ONE-LINE DIAGRAM
 - MUF-SCH-001 LINE LIST AND TIE-IN SCHEDULE
 - MUF-SCH-002 EQUIPMENT LIST AND ELECTRICAL LOAD LIST

CLIENT

PROJECT

COUNTY,

PRELIMINARY - NOT FOR CONSTRUCTION

REVISIONS

REV	DATE	DESCRIPTION
A	2026-10-02	ISSUED FOR REVIEW

DESIGNED

[ENGINEER NAME]

DRAWN

[ENGINEER NAME]

CHECKED

APPROVED

DATE

2026-10-02

SCALE: NTS

PROCESS

PROCESS FLOW DIAGRAM AND HEAT AND MATERIAL BALANCE

MUF-PFD-001