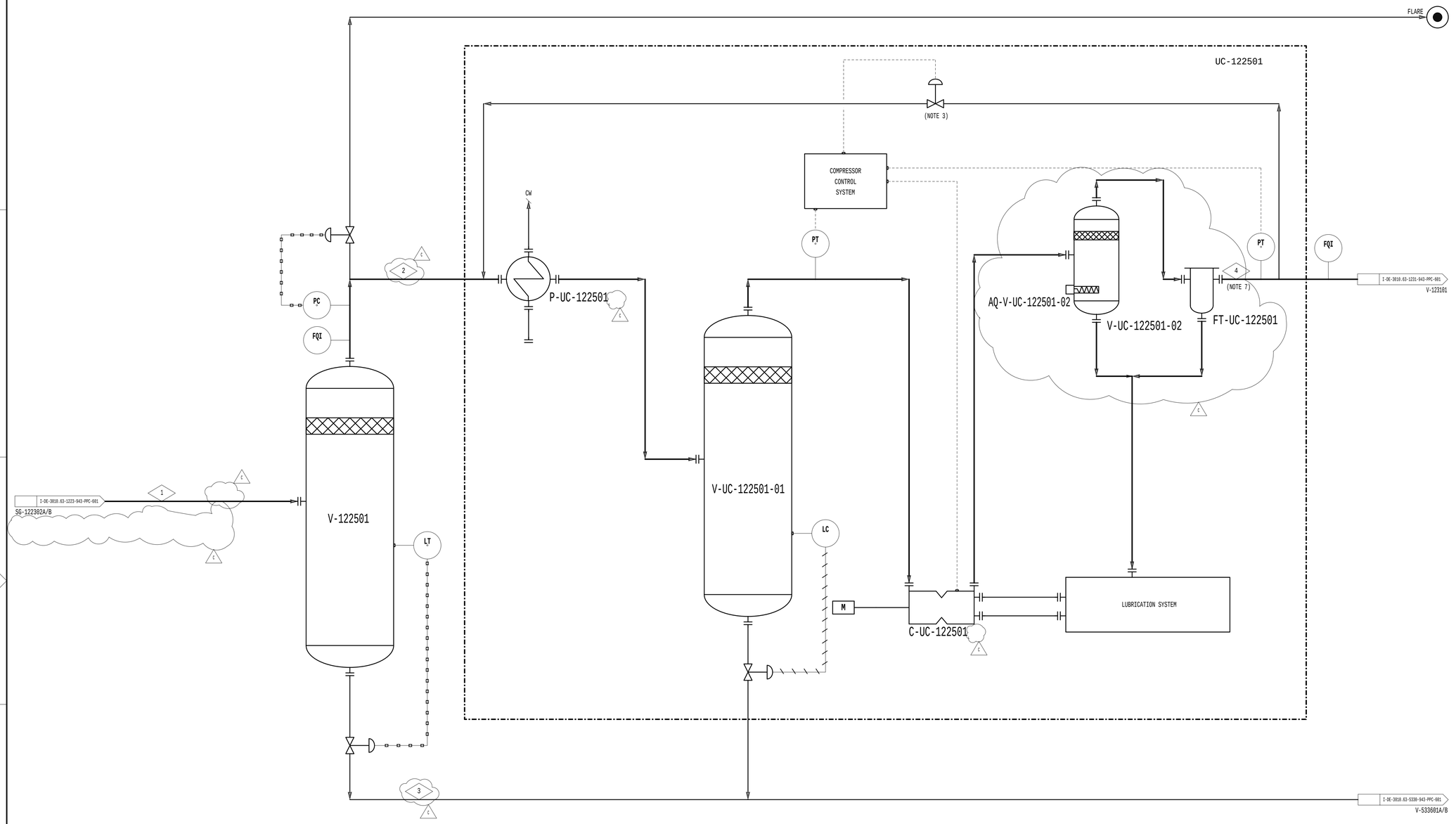

REFERENCE DOCUMENTS

ET SYMBOLS AND ABBREVIATIONS

EQUIPMENT

TAG	DESCRIPTION	TYPE	CAPACITY (NOTE 2)
V-122501 (1x100%)	GAS BOOSTER K.O. DRUM	VERTICAL	155000 m³/d
C-UC-122501 (1x100%)	GAS BOOSTER UNIT COMPRESSOR	SCREW	155000 m³/d
V-UC-122501-01 (1x100%)	GAS BOOSTER SUCTION K.O. DRUM	VERTICAL	155000 m³/d
UC-122501 (1x100%)	GAS BOOSTER COMPRESSION UNIT	-	155000 m³/d
P-UC-122501 (1x100%)	GAS BOOSTER COMPRESSION COOLER	SHELL AND TUBE	HOLD (NOTE 9)
V-UC-122501-02 (1x100%)	GAS BOOSTER K.O. DRUM	VERTICAL	155000 m³/d
FT-UC-122501 (1x100%)	GAS BOOSTER FILTER	COALESCER	155000 m³/d
AQ-V-UC-122501-02 (1x100%)	GAS BOOSTER COMPRESSION K.O. DRUM OIL HEATER	ELECTRICAL HEATER	HOLD (NOTE 9)

GENERAL NOTES

1 - GAS FLOW RATE AT PRESSURE AND TEMPERATURE OPERATION CONDICTIONS.

2 - GAS CAPACITY AT 20°C AND 101.3 kPa abs.

3 - RECIRCULATION SHALL BE ANALYSED BY DETAILING DESIGN, TO PERFORM CONTROL WHEN GAS FLOW IS BELOW 10% COMPRESSOR CAPACITY.

4 - OIL VOLUMETRIC FLOW RATE AND OIL DENSITY ARE THE ACTUAL VALUES IN DRY BASIS.

5 - CHARACTERISTICS OF FRACTIONS:
C12 + FROM 3-MLS-2RJS: PM= 654, API=16,5
C20 + FROM 4-RJS-0442: PM= 479, API=6,7

6 - CANCELLED.

7 - THIS TEMPERATURE WAS ESTIMATED AS 100°C. IT SHALL BE CONFIRMED DURING DETAILING DESIGN.

8 - TO BE CONSIDERED OIL CARRYOVER, AT GAS BOOSTER PACKAGE INLET, FOR AN ESTIMATED FLOWRATE OF 400 L/DAY.

9 - TO BE DEFINED BY CONTRACTOR.

10 - MASS AND ENERGY BALANCE REFERS TO YEAR 2007 (MAXIMUM OIL/GAS).

STREAM CHARACTERISTICS COMPOSITION (% MOLAL) AND FLOW RATES		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
WATER	H_2O	12.97	12.97	0.00	12.97																										
NITROGEN	N_2	0.05	0.05	0.00	0.05																										
CARBON DIOXIDE	CO_2	0.53	0.53	0.00	0.53																										
METHANE	C1	59.15	59.15	0.00	59.15																										
ETHANE	C2	6.90	6.90	0.00	6.90																										
PROPANE	C3	8.11	8.11	0.00	8.11																										
I-BUTANE	I-C4	1.63	1.63	0.00	1.63																										
N-BUTANE	N-C4	4.30	4.30	0.00	4.30																										
I-PENTANE	I-C5	1.51	1.51	0.00	1.51																										
N-PENTANE	N-C5	1.64	1.64	0.00	1.64																										
N-HEXANE	N-C6	1.35	1.35	0.00	1.35																										
N-HEPTANE	N-C7	0.97	0.97	0.00	0.97																										
N-OCTANE	N-C8	0.59	0.59	0.00	0.59																										
N-NONANE	N-C9	0.19	0.19	0.00	0.19																										
N-DECANE	N-C10	0.08	0.08	0.00	0.08																										
N-UNDECANE	N-C11	0.03	0.03	0.00	0.03																										
N-DODECANE	N-C12	0.00	0.00	0.00	0.00																										
N-TRIDECANE	N-C13	0.00	0.00	0.00	0.00																										
N-TETRADECANE	N-C14	0.00	0.00	0.00	0.00																										
N-PENTADECANE	N-C15	0.00	0.00	0.00	0.00																										
N-HEXADECANE	N-C16	0.00	0.00	0.00	0.00																										
N-HEPTADECANE	N-C17	0.00	0.00	0.00	0.00																										
N-OCTADECANE	N-C18	0.00	0.00	0.00	0.00																										
N-NONADECANE	N-C19	0.00	0.00	0.00	0.00																										
C12+ (NOTE 5) 3-MLS-2-RJS	C12+	0.00	0.00	0.00	0.00																										
C20+ (NOTE 5) 4-RJS-0442	C20+	0.00	0.00	0.00	0.00																										
	TOTAL	100.00	100.00	100.00	100.00																										
MOLAR FLOW RATE	(kgmol/h)	138.3	138.3	0.00	138.3																										
MASS FLOW RATE	(kg/h)	3688	3688	0.00	3688																										
OIL VOLUMETRIC FLOW RATE (NOTE 4)	(m³/h)	0.00	0.00	0.00	0.00																										
GAS VOLUMETRIC FLOW RATE (NOTE 1)	(m³/h)	3239	3239	0.00	576.0																										
WATER VOLUMETRIC FLOW RATE	(m³/h)	0.00	0.00	0.00	0.00																										
MOLECULAR WEIGHT	(kg/kgmol)	26.7	26.7	-	26.7																										
PRESSURE	(kPa abs)	118	118	-	980.3																										
TEMPERATURE	(°C)	60	60	-	100																										
OIL DENSITY (NOTE 4)	(kg/m³)	0.00	0.00	0.00	0.00																										

Figura 2.4-5 - Planta de Gás Booster

REV.	DESCRIPTION	DATE	EXEC.	CHECK	APPROV.
C	RELEASED BY PETROBRAS. REVISED WHERE INDICATED.	14NOV02	SOLANGE	ZARATTINI	ZARATTINI
B	REVISION DUE TO CONSISTENCY VERIFICATION	10DEC01	EBP	MAURO	MAURO
A	GENERAL REVISION - APPROVED BY UN-RIO	23NOV01	EBP	MAURO	MAURO
0	ORIGINAL	23OCT01	EBP	MAURO	MAURO

THE DATA, OR PART THEREOF ARE PETROBRAS PROPERTY AND THUS MUST NOT BE USED IN ANY WAY WITHOUT PERMISSION

I-DE-3010.63-1225-943-PPC-601_C.PID

PETRÓLEO BRASILEIRO S.A. PETROBRAS

CENPES

CLIENT OR USER: UN-RIO / ATP-MLS

JOB OR PROJECT: MARLIM SUL FIELD DEVELOPMENT

AREA OR UNIT: UNIT P-51

TITLE: UTILITY FLOW DIAGRAM
GAS BOOSTER COMPRESSION

DESIGN	CENPES	DRAWN	EBP	CHECK	MAURO	APPROVAL	MAURO
SCALE	NO SCALE	SIZE	A1: 841x594mm	CC	600659	SHEET	01 of 01
DATE	23OCT01	No.	I-DE-3010.63-1225-943-PPC-601				

I-DE-B20184-51DB-101-UTC-016

STANDARDIZED FORM BY EP-2B-0001 - FIGURE A32