

BILL OF MATERIALS (THIS SHEET SET)

NO	ITEM	QTY	UNIT	NPS	DESCRIPTION
1	PIPE	40.9	ft	12	Pipe 12 in STD (0.375 in), API 5L X52 PSL2, BE, 3-coat paint
2	PIPE	6.2	ft	1	Pipe 1 in Sch 80 (0.179 in), ASTM A106 Gr B, BE, 3-coat paint
3	FITTING	2	ea	12	Cap, B16.9, WPHY-52, 0.375 in
4	FITTING	3	ea	12	Tee straight, B16.9 / MSS SP-75 WPHY-52, STD (0.375 in)
5	FITTING	4	ea	12	Reducer concentric 12x8, B16.9 / MSS SP-75 WPHY-52, 0.375 x 0.500 in
6	FITTING	1	ea	1-1/2	Weldolet, MSS SP-97, A105, 1-1/2 in x run, bore to suit Class 600 WN
7	FITTING	1	ea	1	Sockolet, MSS SP-97, A105, Class 6000, 1 in
8	FITTING	1	ea	1	Sockolet, MSS SP-97, A105N, Class 6000, 1 in x run (A6 branch)
9	FITTING	2	ea	1	Elbow 90 socket weld Class 6000, A105
10	FITTING	7	ea	3/4	Sockolet, MSS SP-97, A105, Class 6000, 3/4 in
11	FITTING	4	ea	3/4	Nipolet, MSS SP-97, ASTM A105, Class 6000, 3/4 in
12	FLANGE	9	ea	12	WN flange, 12 in Class 600 RF, A105N (CVN at -20 F), bore to match 0.375 in wall
13	FLANGE	4	ea	8	WN flange, 8 in Class 600 RF, A105N (CVN at -20 F), bore to match 0.500 in wall
14	FLANGE	1	ea	1-1/2	WN flange, 1-1/2 in Class 600 RF, A105N (CVN at -20 F)
15	GASKET	10	ea	12	Spiral-wound gasket, 12 in Class 600, 316 / flexible graphite, CS outer ring, 316 inner ring (ASME B16.20)
16	GASKET	4	ea	8	Spiral-wound gasket, 8 in Class 600, 316 / flexible graphite, CS outer ring, 316 inner ring (ASME B16.20)
17	BOLT	10	ea	12	Stud bolt set, 12 in Class 600 (20 studs 1.125 in dia x 8.75 in), A193 B7 with 2 A194 2H nuts, PTFE coated
18	BOLT	4	ea	8	Stud bolt set, 8 in Class 600 (12 studs 1.125 in dia x 7.5 in), A193 B7 with 2 A194 2H nuts, PTFE coated
19	VALVE	1	ea	3/4	Gate valve, 3/4 in, Class 800, A105, SW x NPT, with hex plug (HPV)
20	VALVE	2	ea	3/4	Gate valve, 3/4 in, Class 800, A105, SW x NPT, with hex plug (LPD)
21	VALVE	4	ea	3/4	Gate valve, 3/4 in, Class 800, A105, SW x NPT (instrument root)
22	VALVE	2	ea	3/4	Gate valve, 3/4 in, Class 800, A105, SW x NPT, with hex plug (drain)
23	VALVE	2	ea	3/4	Gate valve, 3/4 in, Class 800, A105, SW x NPT, with hex plug (vent)
24	PIPE NIPPLE	7	ea	3/4	Nipple, 3/4 in Sch 160, A106 B, PBE x 4 in
25	VALVE	1	ea	12	SDV-102: Ball valve API 6D full bore trunnion, RF Class 600, electro-hydraulic spring-return FC (see LST-003)
26	VALVE	1	ea	12	HV-131A: Ball valve API 6D full bore trunnion, RF Class 600, gear operator (see LST-003)
27	VALVE	1	ea	8	FCV-131: Globe valve, RF Class 600, electric modulating (see LST-003)
28	VALVE	1	ea	12	HV-131B: Ball valve API 6D full bore trunnion, RF Class 600, gear operator (see LST-003)
29	VALVE	1	ea	12	HV-132A: Ball valve API 6D full bore trunnion, RF Class 600, gear operator (see LST-003)
30	VALVE	1	ea	8	FCV-132: Globe valve, RF Class 600, electric modulating (see LST-003)
31	VALVE	1	ea	12	HV-132B: Ball valve API 6D full bore trunnion, RF Class 600, gear operator (see LST-003)
32	VALVE	1	ea	1	HV-102H: Globe valve, SW Class 800, lever (see LST-003)

PIPE AND COMPONENT WEIGHT EXCLUDING VALVES (APPROX.): 6,872 lb. Pipe quantities are net centerline take-off; the MTO (mto/mechanical_mto.csv) adds a 5 % allowance.

PIPE CUT LIST (NET, EXCL. ROOT GAP)

PIECE	NPS	CUT LENGTH	WELDS	LOC
1033-A1	12	0'-6"	1 / 2	AG
1033-A2	12	2'-4"	3 / 4	AG
1033-A3	12	2'-4"	5 / 6	AG
1033-A4	12	0'-6"	7 / 8	AG
1033-B1	12	22'-3"	9 / 10	AG
1031-A1	12	0'-5 5/8"	11 / 12	AG
1031-A2	12	2'-9 3/8"	13 / 14	AG
1031-A3	12	2'-9 3/8"	17 / 18	AG
1031-A4	12	0'-5 5/8"	19 / 20	AG
1032-A1	12	0'-5 5/8"	21 / 22	AG
1032-A2	12	2'-9 3/8"	23 / 24	AG
1032-A3	12	2'-9 3/8"	27 / 28	AG
1032-A4	12	0'-5 5/8"	29 / 30	AG
1162-A1	1	1'-0 3/4"	- / 31	AG
1162-A2	1	2'-0 7/8"	32 / 33	AG
1162-A3	1	1'-11 5/8"	34 / 35	AG
1162-A4	1	1'-0 3/4"	36 / -	AG

WELD LIST (NDE PER SPC-SPC-008)

W	LINE	NPS	TYPE	S/F	NDE	LOCATION
1	1033	12	BW	SHOP	RT 100 %	cap/pipe
2	1033	12	BW	SHOP	RT 100 %	pipe/tee
3	1033	12	BW	SHOP	RT 100 %	tee/pipe
4	1033	12	BW	SHOP	RT 100 %	pipe/tee
5	1033	12	BW	SHOP	RT 100 %	tee/pipe
6	1033	12	BW	SHOP	RT 100 %	pipe/tee
7	1033	12	BW	SHOP	RT 100 %	tee/pipe
8	1033	12	BW	SHOP	RT 100 %	pipe/cap
9	1033	12	BW	FIELD	RT 100 %	branch to tee
10	1033	12	BW	SHOP	RT 100 %	pipe/valve
11	1031	12	BW	FIELD	RT 100 %	branch to tee
12	1031	12	BW	SHOP	RT 100 %	pipe/valve
13	1031	12	BW	SHOP	RT 100 %	valve/pipe
14	1031	12	BW	SHOP	RT 100 %	pipe/red
15	1031	12	BW	SHOP	RT 100 %	red/valve
16	1031	12	BW	SHOP	RT 100 %	valve/red
17	1031	12	BW	SHOP	RT 100 %	red/pipe
18	1031	12	BW	SHOP	RT 100 %	pipe/valve
19	1031	12	BW	SHOP	RT 100 %	valve/pipe
20	1031	12	BW	FIELD	RT 100 %	end weld (to tee / U)
21	1032	12	BW	FIELD	RT 100 %	branch to tee
22	1032	12	BW	SHOP	RT 100 %	pipe/valve
23	1032	12	BW	SHOP	RT 100 %	valve/pipe
24	1032	12	BW	SHOP	RT 100 %	pipe/red
25	1032	12	BW	SHOP	RT 100 %	red/valve
26	1032	12	BW	SHOP	RT 100 %	valve/red
27	1032	12	BW	SHOP	RT 100 %	red/pipe
28	1032	12	BW	SHOP	RT 100 %	pipe/valve
29	1032	12	BW	SHOP	RT 100 %	valve/pipe
30	1032	12	BW	FIELD	RT 100 %	end weld (to tee / U)
31	1162	1	SW	FIELD	MT/PT	pipe/ellsw
32	1162	1	SW	FIELD	MT/PT	ellsw/pipe
33	1162	1	SW	FIELD	MT/PT	pipe/valve
34	1162	1	SW	FIELD	MT/PT	valve/pipe
35	1162	1	SW	FIELD	MT/PT	pipe/ellsw
36	1162	1	SW	FIELD	MT/PT	ellsw/pipe

WELD SUMMARY: 36 welds (25 shop / 11 field). Weld numbers match sheet 1. Instrument and small-bore branch welds (olets, SW) are additional, counted in the MTO.

NOTES / REFERENCES

1. QUANTITIES TAKEN FROM THE SAME PIPING MODEL AS THE GA PIP-DWG-001 AND THE MTO.
2. VALVE DATA PER MEC-LST-003 AND MEC-DS-006 / DS-007.
3. SUPPORT ITEMS NOT INCLUDED; SEE MEC-CAL-005.
- REF: PIP-SPC-001
- REF: mto/mechanical_mto.csv

REVISIONS

REV	DATE	DESCRIPTION	BY	CHK	APP
A	2026-09-29	ISSUED FOR REVIEW (IFR)			

PRELIMINARY - ISSUED FOR REVIEW - NOT FOR CONSTRUCTION

ENGINEER OF RECORD SEAL

NOT SEALED
PRELIMINARY

PE NO. _____

PROJECT

120 MMSCFD RECEIPT INTO COUNTY,

DISCIPLINE: PIPING
SCALE: NTS

ISOMETRIC LINES 1031 / 1032 / 1033

BILL OF MATERIALS, CUT LIST, WELD LIST

DRAWN: ____ CHECKED: ____ APPROVED: ____

DWG NO. PIP-DWG-013

SHEET 2 OF 2 REV A