

CLIENT:	AGA JOB NO.:
FACILITY	BY/DATE:
PROJECT:	CHECKED/DATE:
LINE SIZING CALCS	APPROVED/DATE:
Rev 2	

INPUT		
EQUATION SET NUMBER	1	1
EQUATION SET DESCRIPTION	Gas Flow	Gas Flow
FLOW REGIME	TRANSITION/TURBULENT	TRANSITION/TURBULENT
EQUATION TYPE	DARCY-GAS	DARCY-GAS
FLowsheet Ref.		
LINE NO.		
FROM		
TO		
COMMENT		
COMMENT		
COMMENT		
NOTES		
GAS FLOWRATE, MMSCFD Q _d	1.578	1.578
SPECIFIC GRAVITY SG _{gas}	1.1000	1.1000
VISCOSITY cp	0.0200	0.0200
COMPRESSIBILITY Z	0.9600	0.9600
OIL/COND FLOWRATE BOPD	0.000	0.000
SPECIFIC GRAVITY SG _{oil}	0.8000	0.8000
VISCOSITY, μoil cp	2.0000	2.0000
WATER FLOWRATE, BPD BWPD	0.000	0.000
SPECIFIC GRAVITY SG _{water}	1.0150	1.0150
VISCOSITY, μwater cp	1.3070	1.3070
PRESSURE, Absolute PSIA	1265.00	1265.00
PRESSURE, Gauge PSIG	1250.00	1250.00
TEMPERATURE °F	85.00	85.00

API 14E DESIGN BASIS		
EMPIRICAL CONSTANT, Eqn 2.14 C	100	100
CRITICAL VELOCITY ft/sec	60.00	60.00

SELECTED PIPE:		
ANSI Rating	150.00	150.00
Nominal Diameter in	0.75	1
Schedule	40	40
Pipe Absolute Roughness e		
(=0.00015 for new steel pipe) ft	0.00013	0.00013
Inside Diameter in	0.750	1.000

PROGRAM RESULTS:		
dP/100 ft PSI	143.063	31.587
VELOCITY ft/sec	69.617	39.159
WITHIN CRITICAL VELOCITY? Yes/No	NO	YES
(Note: See Linesizing Case Descriptions Page)		
SYSTEM EQUIV. FEET ft	265	265
TOTAL PRESSURE DROP PSI	379.12	83.71
SYSTEM FRICTION HEAD LOSS ft	#DIV/0!	#DIV/0!