

International Construction Consulting, LLC

Process Calculation Sheet
LIQUID PRESSURE DROP

Project Title :

Flowing Conditions:

Oil Flowrate:	438	GPM	Oil SG	0.83
Oil Flowrate:	15,017	BPD	Viscosity	2.85
				cP
Water Flowrate	0	BPD	Water SG	1.01
			Viscosity	1.0
				cP

Selected Sizes

	Size - 1	Size	Size + 1	
Nominal Diameter	4	6	8	Inches
Outside Diameter	4.500	6.625	8.625	Inches
Wall Thickness	0.188	0.280	0.322	Inches
Internal Diameter	4.124	6.065	7.981	Inches
Velocity	10.596	4.899	2.829	ft/s
Reynolds No	9.8E+04	6.6E+04	5.0E+04	
Friction Factor	0.0203	0.0207	0.0214	
Pressure drop	3.6588	0.5432	0.1422	psi/100ft

Piping Details:

P&ID Sheet No	NA
ISO Sheet No	NA
Line No	Tank to Pump Suction
Description	Truck Unloading - Red Hills
Piping Code	A1

Fittings:

45° Elbows	0
90° Elbows	9
Thr'o Run Tees	2
Thr'o Branch Tees	2
Check Valves	0
Gate Valves	0
Ball Valves	5
Other Vel Heads	
Line length, ft	75

Equivalent Length	187.0	239.8	291.8	ft
Pressure Drop	6.84	1.30	0.42	psi
Head Loss	19.01	3.62	1.15	ft

Hydraulic Parameters

Reqd Velocity	5.0	ft/s
Pipe Roughness	0.0018	inches

Date	By	Chk	App

Project No. :
Document No:
Sheet No: Page 1 of 1