Sand Separator Design Data Form

1.1 Quote Information

Customer Information			
Name		Company	
Business Title			
Email		Phone Number:	
Equipment Information			
Quantity:		Ship to Location (City, State, Zip)	
Proposal Due Date		Freight Terms	☐ EXW ☐ FCA ☐ FOB ☐ CIF ☐ Other _____
Potential Order Date:		Preferred Ship Date:	

Rank (1-4) Importance of the Following:							
Price:		Spec Compliance:		Delivery:		Quality/Reliability:	

Additional Comments

1.2 Process Conditions

Process Data	Parameter	Sand Trap Typical Values
Inlet Pressure (PSIG)		3000-5000
Inlet Temp (°F)		70-120
Design Pressure (PSIG)		5000
Gas Inlet Flowrate (MMSCFD)		0-20
Gas Inlet SG		0.57-0.8
Water Inlet Flowrate (BBL/Day)		0-2000
Water Inlet SG		1.1
Oil Inlet Flowrate (BBL/Day)		0-2000
Oil Inlet SG / API		0.8
Liquid Inlet Flowrate (BBL/Day)		0-2000
Liquid Inlet SG		.6-1.0
Inlet Fluid Composition		

Shop Capable Size	<30"OD, <10'S/S, <5000#	**Required** / **Requested**

1.3 Design Scope

Style	☐ Bare Vessel ☐ Vessel with Accessories ☐ Vessel with Skid, No Accessories ☐ Packaged
Connections:	☐ API ☐ ANSI ☐ Hammer Union
Externals:	☐ Ladder ☐ Platform
Paint	☐ Cimarron Standard SP-3/DTM 1 Coat, Color: Desert Tan ☐ Cimarron Standard SP-6/2 Coat, Color: Desert Tan ☐ Custom

Vessel Adders	**Accessories (Ship Loose of Bare Vessel option)**	
NACE Adders:	Item:	OEM/Type Preference:
☐ Hardness Testing	☐ PSV	
☐ Materials	☐ Pressure Gauge	
☐ Pressure/Temperature Re-ratings		
☐ Additional NDE		

Additional Requests:

1.4 Application Guidance

Used to protect downstream equipment form produced sand causing erosion, plugging, and other process upsets. High pressure inlet wellstream enters is directed through an impingement baffle. The liquid and gas well stream exits the outlet nozzle while the sand particulates are gravity drained to the bottom of the vessel. The collected sand is discharged via an outlet drain on the bottom of the vessel.

1.5 Sizing Chart

Vertical Sand Separator Sizing Chart			
Size Dia x Ht	MAWP (PSI)	Capacity	
		Liq (BFPD)	Gas (MMSCFD)
30" x 10'	5000	3600	27.6
30" x 10'	3000	4400	15.5
24" x 10'	5000	2400	16.3
24" x 10''	3000	2950	9.1
24" x 8'	5000	1900	16.3
24" x 8'	3000	2300	9.1
16" x 8'	5000	770	7

Design assumptions/limits sizing criteria:

- Gas Flowrate capacity based on .65SG, 120F operating Temp and 3000 psig Op Press for the 5K vessels and 1000 psig Op Press for the 3K vessels. Gas Capacity was limited by the Gas Outlet nozzle velocity (100/Density^.5). 2" XXH Nozzle for 16"; 3" XXH Nozzle for 24" & 3" ANSI LWN for the 30"
- Liquid Flowrate capacity based on 1.05SG H2O and 20API Oil. Total Liquid Capacity (Oil and H2O total) calculated using a 1 minute retention time for total fluid with the liquid level at ½ way up the vessel length.