




**WATKINS WELL PAD OPTIMIZATION
MAY 20th, 2021**


DRAWING #	TITLE	REV NO.	REV DATE
WATKINS-PFD-0001	DRAWING INDEX	1	05/20/21
WATKINS-PFD-1200	WELL PAD 3-PHASE SEPARATION	1	05/20/21
WATKINS-PFD-1250	WELL PAD 3-PHASE SEPARATION	1	05/20/21
WATKINS-PFD-1500	WELL PAD 3-PHASE SEPARATION	1	05/20/21
WATKINS-PFD-1600	WELL PAD 3-PHASE SEPARATION	1	05/20/21
WATKINS-PFD-1900	WELL PAD 3-PHASE SEPARATION	1	05/20/21
WATKINS-PFD-1950	HEAT AND MATERIAL BALANCE	1	05/20/21
WATKINS-PID-1100	FLOWING WELL HEAD	1	05/20/21
WATKINS-PID-1110	PRODUCTION MANIFOLD PK-1001	1	05/20/21
WATKINS-PID-1111	PRODUCTION MANIFOLD PK-1002	1	05/20/21
WATKINS-PID-1200	BULK SEPARATOR #1	1	05/20/21
WATKINS-PID-1201	BULK SEPARATOR #2	1	05/20/21
WATKINS-PID-1205	TEST SEPARATOR #1	1	05/20/21
WATKINS-PID-1206	TEST SEPARATOR #2	1	05/20/21
WATKINS-PID-1210	BULK TREATER	1	05/20/21
WATKINS-PID-1220	VAPOR RECOVERY TOWER (VRT)	1	05/20/21
WATKINS-PID-1225	VAPOR RECOVERY HEADER	1	05/20/21
WATKINS-PID-1230	OIL TANKS	1	05/20/21
WATKINS-PID-1235	OIL TANKS	1	05/20/21
WATKINS-PID-1240	PRODUCED WATER HEADER	1	05/20/21
WATKINS-PID-1245	WATER TANKS	1	05/20/21

DRAWING #	TITLE	REV NO.	REV DATE
WATKINS-PID-1250	VAPOR RECOVERY UNIT #1	1	05/20/21
WATKINS-PID-1255	VAPOR RECOVERY UNIT #2	1	05/20/21
WATKINS-PID-1260	VAPOR RECOVERY UNIT #3	1	05/20/21
WATKINS-PID-1265	VAPOR RECOVERY UNIT #4	1	05/20/21
WATKINS-PID-1270	OFF-SPEC OIL HEADER	1	05/20/21
WATKINS-PID-1285	COMBUSTOR KNOCKOUT DRUMS	1	05/20/21
WATKINS-PID-1290	COMBUSTOR #1	1	05/20/21
WATKINS-PID-1291	COMBUSTOR #2	1	05/20/21
WATKINS-PID-1500	SALES GAS HEADER	1	05/20/21
WATKINS-PID-1510	SALES METER SKID	1	05/20/21
WATKINS-PID-1520	GAS LIFT COMPRESSOR #1	1	05/20/21
WATKINS-PID-1521	GAS LIFT COMPRESSOR #2	1	05/20/21
WATKINS-PID-1530	LIFT GAS HEADER	1	05/20/21
WATKINS-PID-1540	GAS LIFT METER SKID	1	05/20/21
WATKINS-PID-1550	GAS LIFT METER SKID	1	05/20/21
WATKINS-PID-1600	LACT SKID & PUMP SKID	1	05/20/21
WATKINS-PID-1900	FUEL GAS FILTER	1	05/20/21
WATKINS-PID-1910	INSTRUMENT AIR PACKAGE	1	05/20/21
WATKINS-PID-1920	RAIN RUN-OFF SYSTEM	1	05/20/21
WATKINS-PID-1930	METHANOL INJECTION SYSTEM	1	05/20/21
WATKINS-PID-1931	VOID	1	05/20/21
WATKINS-PID-1940	VOID	1	05/20/21

NOTES:



REFERENCE DRAWINGS		No	PROJ. NUMBER	REVISIONS	BY	CHKD	APVD	DATE		BY	DATE
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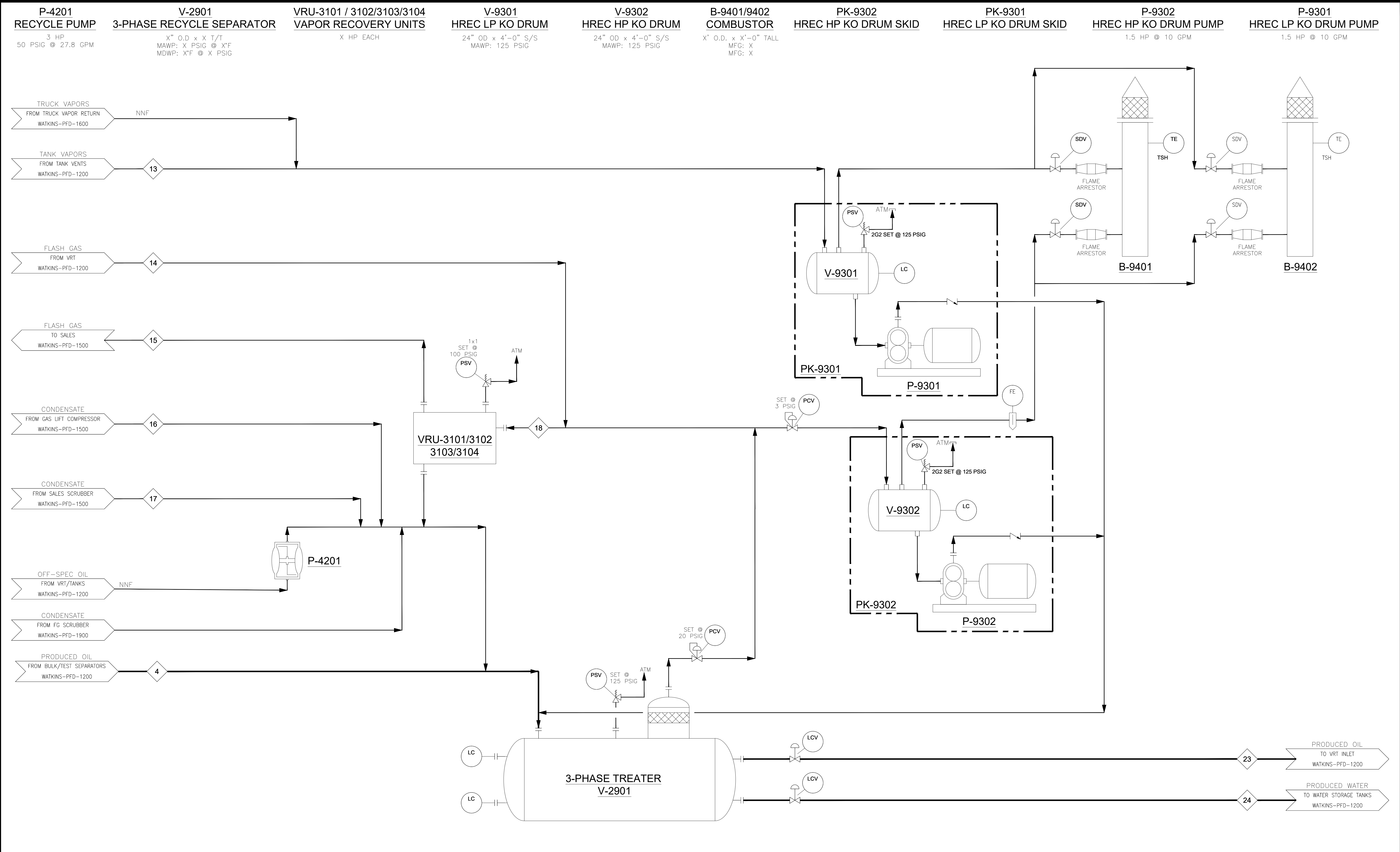
CRESTONE PEAK
RESOURCES



CRESTONE PEAK RESOURCES
WATKINS WELL PAD OPTIMIZATION
DRAWING INDEX

DRAWING NUMBER
WATKINS-PFD-0001

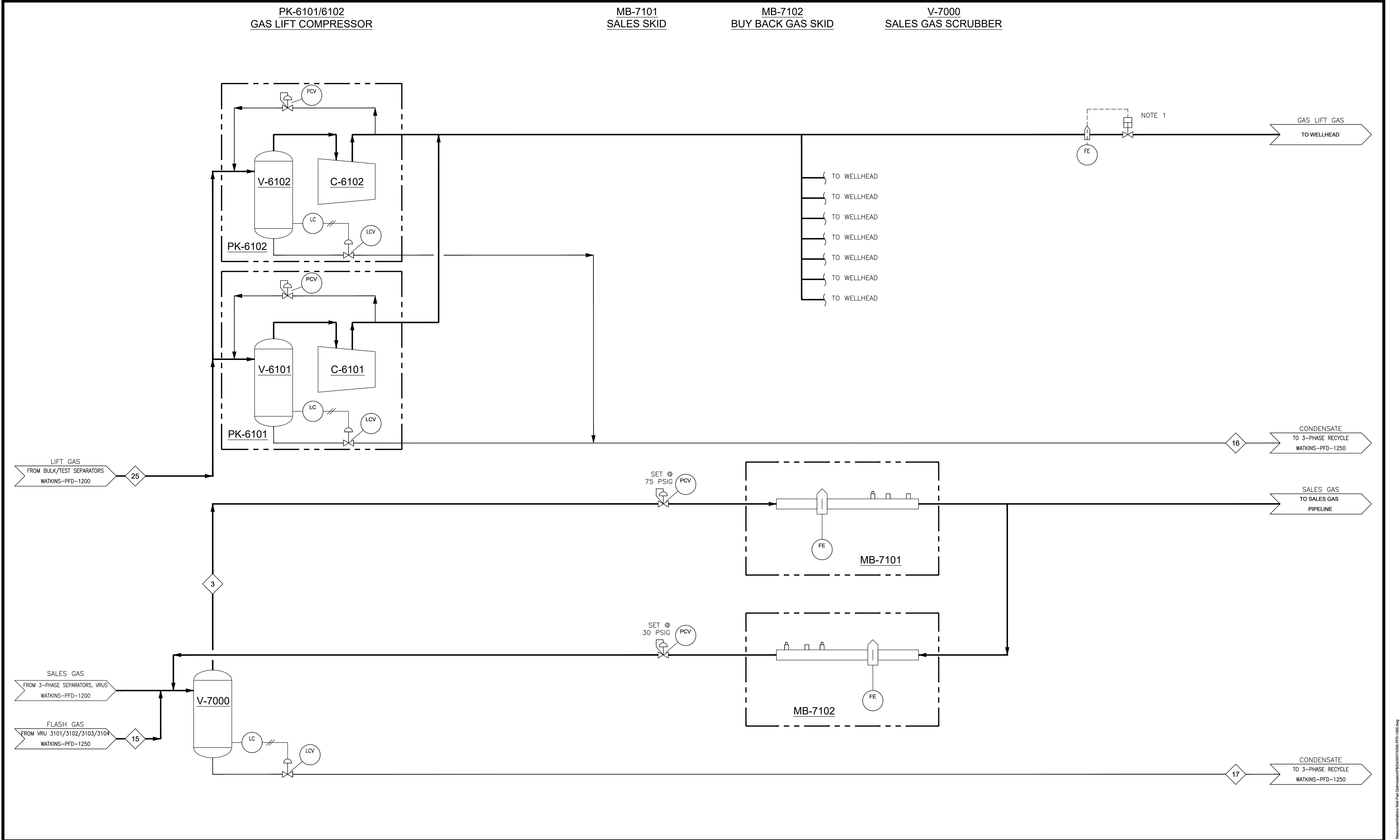
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REVISION
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	NOTES:	REFERENCE DRAWINGS		No	PROJ. NUMBER	REVISIONS				BY	CHKD	APVD	DATE		BY	DATE	<div> CRESTONE PEAK RESOURCES WATKINS WELL PAD OPTIMIZATION PROCESS FLOW DIAGRAM WELL PAD 3-PHASE SEPARATION</div>		
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WATKINS-PFD-1250																	NONE		<div>1</div>

PROJECT: WATKINS WELL PAD OPTIMIZATION
PLOT DATE: Wednesday, May 18, 2021 4:48:43 PM
DWG NAME: G:\LDS\CLIENT_PROJECTS\Crestone Peak Resources\Watkins Well Pad Optimization\WPD-Watkins-PFD-1250.dwg



NOTES:
1. GAS LIFT METERS LOCATED NEAR WELLHEAD.

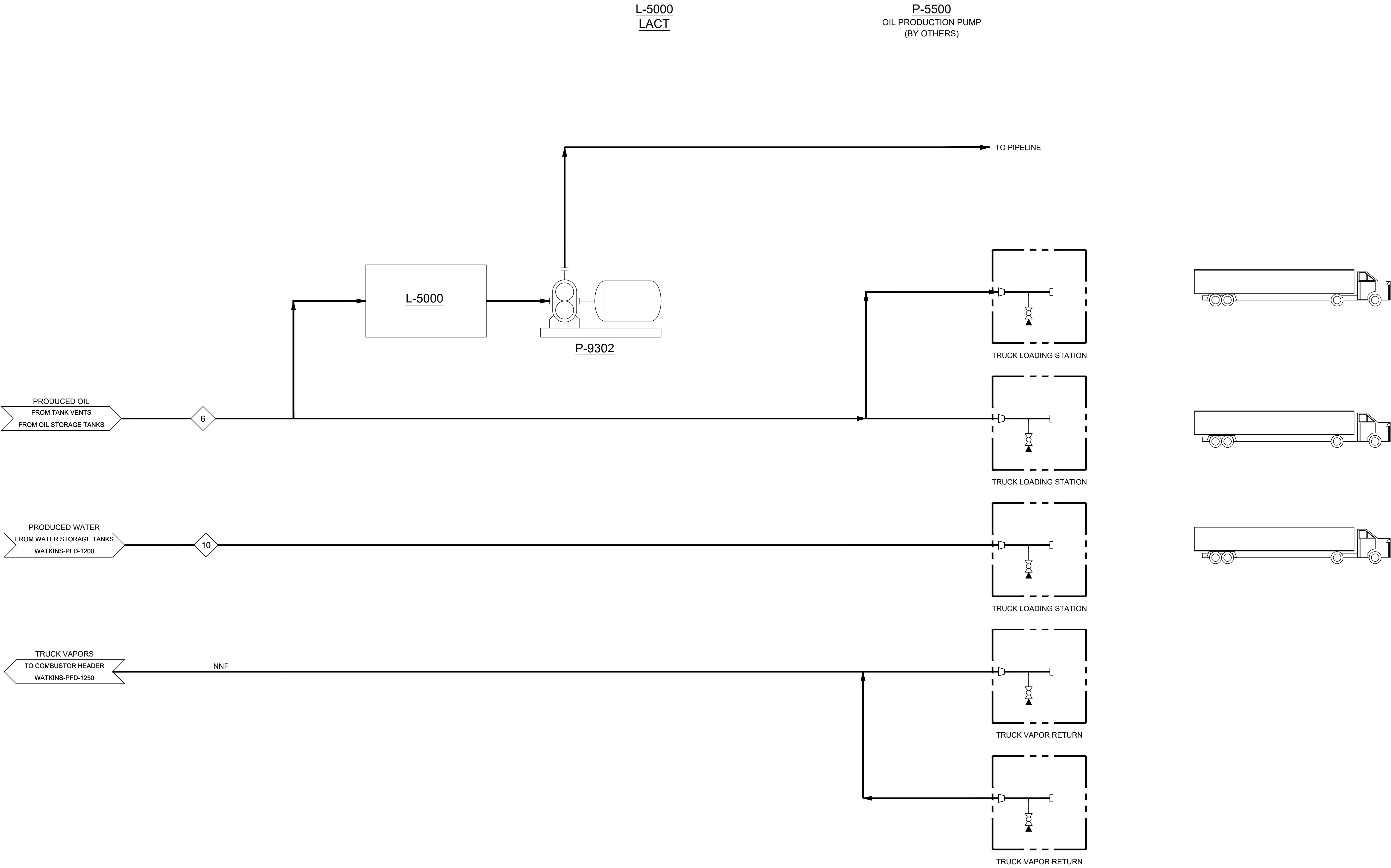


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CRESTONE PEAK RESOURCES
WATKINS WELL PAD OPTIMIZATION
PROCESS FLOW DIAGRAM
WELL PAD 3-PHASE SEPARATION

DRAWING NUMBER	SCALE	REVISION
WATKINS-PFD-1500	NONE	1

PROJECT: WATKINS WELL PAD OPTIMIZATION
DRAWN BY: JLR
CHECKED BY: JLR
APPROVED BY: JLR
DATE: 10/30/20
PLOT DATE: Wednesday, May 18, 2021 4:53:58 PM
DWG NAME: G:\LDS\CLIENT\PROJECTS\Crestone Peak Resources\Watkins Well Pad Optimization\WATKINS-PFD-1500.dwg



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CRESTONE PEAK
RESOURCES
CRESTONE PEAK RESOURCES
WATKINS WELL PAD OPTIMIZATION
PROCESS FLOW DIAGRAM
WELL PAD 3-PHASE SEPARATION

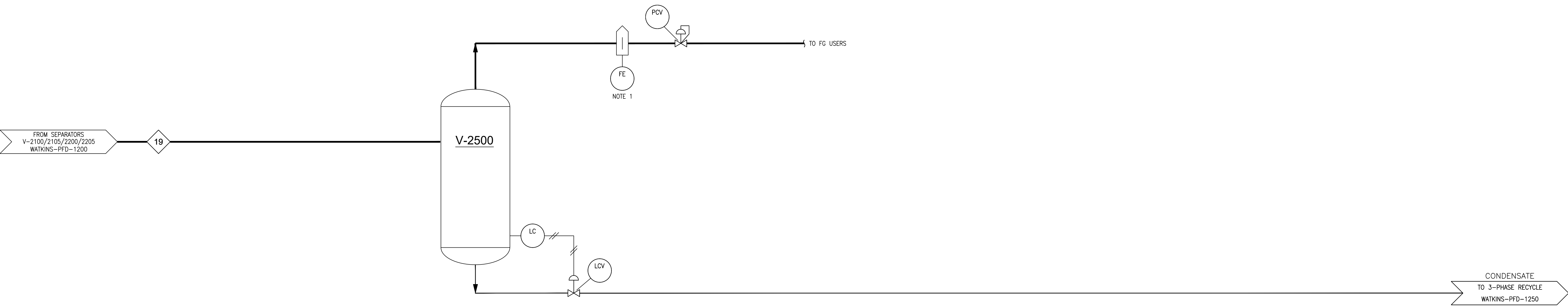
DRAWING NUMBER
WATKINS-PFD-1600

SCALE
NONE

REVISION
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V-2200
FUEL GAS SCRUBBER

PK-9500
INSTRUMENT AIR PACKAGE



NOTES:
1. SPACE FOR METER TO BE INCLUDED. METER NOT INSTALLED AT THIS TIME.



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CRESTONE PEAK
RESOURCES
CRESTONE PEAK RESOURCES
WATKINS WELL PAD OPTIMIZATION
PROCESS FLOW DIAGRAM
WELL PAD 3-PHASE SEPARATION

DRAWING NUMBER
WATKINS-PFD-1900

SCALE
NONE

REVISION
1

FLOWBACK EQUIPMENT AND OPERATIONS

- Health, Safety and Nuisance Mitigation Equipment and Controls
 - Automation Equipment
 - Electronic tank gauge – Keep tanks always closed – Reduce Emissions and Odor
 - Electric control valves – No emissions from control valves – No odor
 - Electric pumps to move fluids – Remove diesel engines and reduce emissions
 - People can monitor equipment and process from safe location
 - Reaction to process issues is quicker and safer
 - Vapor Controlled tanks
 - Maintain proper seal and reduced pressure on tanks to reduce emissions
 - Check tanks with FLIR camera to reduce emissions
 - Flash Separator
 - Called a Low Stage Separator – used to gather flash gas with compressor
 - Reduce emissions from gathering gas and placing into the product pipeline
 - Vapor Recovery Units – Compressors
 - Rigged up to gather flash gas from oil production
 - Less gas produced at oil storage tanks during the flowback process
 - Efficient Combustors
 - Used to burn off any emissions from oil and water tanks during the flowback process
 - Meet the standards required to eliminate smoke from the combustion process
 - Eliminate odors
 - Safe work environment with no flammable gas vapors
 - Emergency Shut Down (ESD) valves
 - Process control valves are used to provide safe shut-in points in case of emergency
 - There will be a ESD valve near the wellhead
 - There will be ESD valves on the separators
 - All valves will be designed for working pressure of the system
 - Valves will be set to shut in the well if there is a high-pressure event or low-pressure event.
 - Other valves will shut in equipment for the same events.