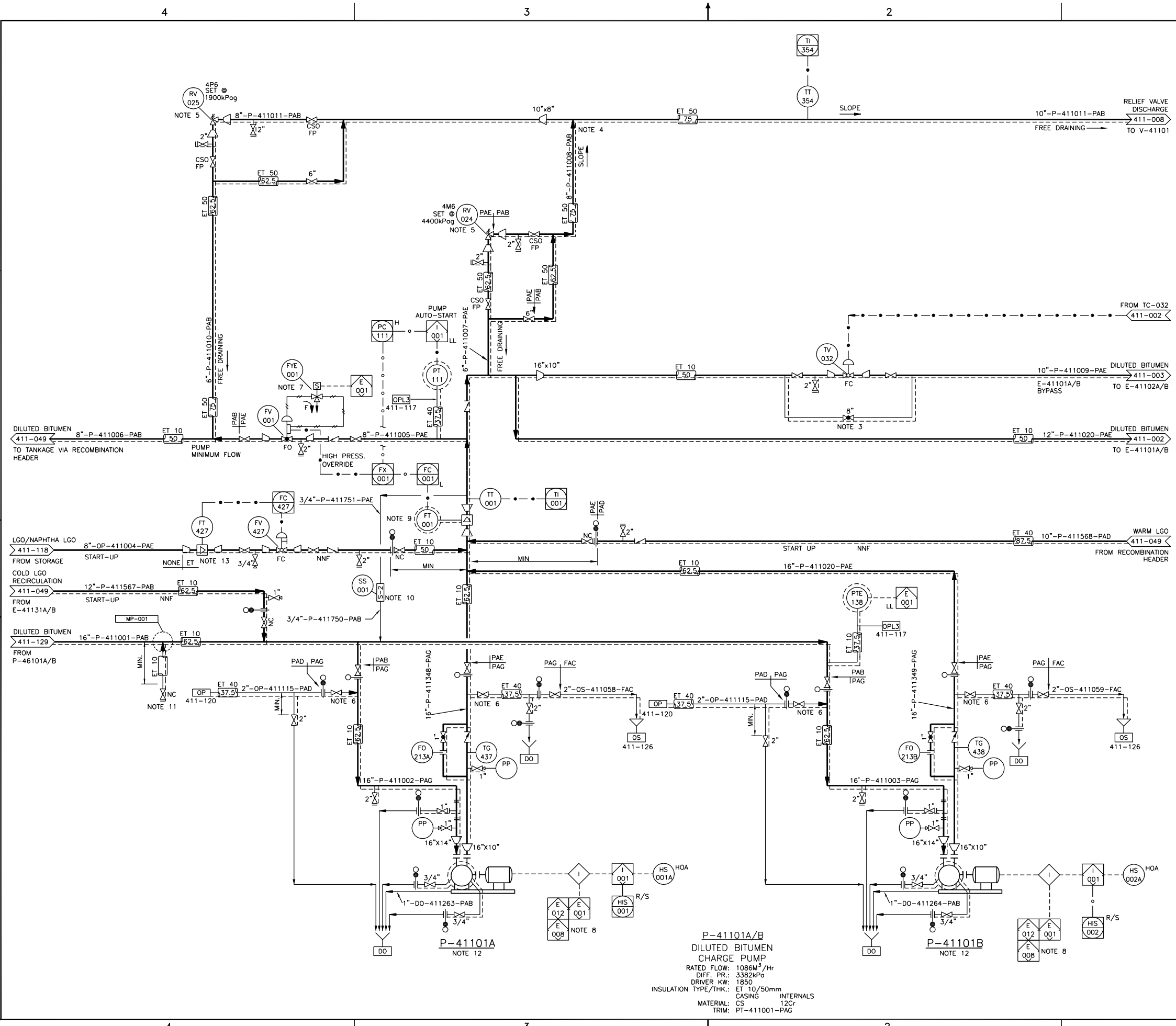




THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION PROPRIETARY TO SHELL CANADA LIMITED AND OTHER INFORMATION WHICH MAY BE
CONFIDENTIAL OR PROPRIETARY TO BECHTEL CANADA CO. OR ITS AFFILIATES. THIS DRAWING AND THE INFORMATION CONTAINED HEREIN
IS NOT TO BE USED, DISCLOSED, OR REPRODUCED IN ANY FORMAT BY ANY OTHER PARTY WITHOUT SHELL CANADA LIMITED AND
BECHTEL CANADA CO.'S PRIOR WRITTEN PERMISSION.



- NOTES:
- FOR GENERAL NOTES AND LEGEND SEE DWGS 400.0000.000.041.001, 002, 003, 004, 005 AND 006.
 - ALL INSTRUMENT LOOP AND INTERLOCK NUMBERS SHOWN ON P&ID SHALL HAVE A PREFIX "411" UNLESS OTHERWISE IDENTIFIED.
 - GLOBE VALVE REQUIRED FOR TV-032 BYPASS. DO NOT USE GATE VALVE.
 - RELIEF VALVE DISCHARGE LINE TO CONNECT TO TOP OF DISCHARGE HEADER.
 - LOCATE RV-024 AND RV-025 AT MINIMUM DISTANCE FROM V-41101.
 - FLUSHING OIL(OP) AND RECOVERED OIL(OS) CONNECTIONS TO BE FROM BOTTOM OF PROCESS LINES MINIMUM TO THE PROCESS LINE BLOCK VALVE.
 - CLOSE FV-001 TO PREVENT BACKFLOW OF HOT DILUTED BITUMEN TO TANKAGE WHEN BOTH P-41101A/B ARE TRIPPED. ENERGIZE SOLENOID TO CLOSE THE VALVE.
 - HIGH-HIGH LEVEL IN V-41101 SHUTS DOWN P-41101A/B AFTER 5 MINUTES TIME DELAY.
 - PERMANENT ACCESS TO THE FLOW METER.
 - SAMPLE POINT TO BE MINIMUM DISTANCE FROM MAIN LINE.
 - CONNECTION FOR FUTURE OIL SOLUBLE DEMULSIFIER INJECTION.
 - REFER TO P&ID NO. 411.0000.000.041.201 FOR SEAL PLAN DETAILS.

REV	ISSUED DATE	DESCRIPTION	BY	CHKD	PRS	CS	PDP	MC	APR	PEM	CLIENT APP
C	03/06/06	ISSUED FOR HAZOP	RS	PSH	DR	EK	RS	EB	MD	JSS	
B	12/20/05	ISSUED FOR APPROVAL	RS	PSH	DR	EK	DS	EB	MD	RSN	
A	10/24/05	ISSUED FOR REVIEW	RS	PSH	DR	EK	DS	EB	MD	RSN	

**SHELL CANADA LTD.**
AOSP - DOWNSTREAM EXPANSION PROJECT

**BECHTEL CANADA CO.**
JOB NO. 25183

PIPING AND INSTRUMENT DIAGRAM
AOSP DOWNSTREAM EXPANSION PROJECT
A & V - UNIT 411
DILUTED BITUMEN CHARGE PUMP

SCALE: NONE
SHELL DWG NO.: 411.0000.000.041.001
REV. C

FILE: \\HOUS2010\AOSP_PENG-CADD\A&V UNIT 411\411.0000.000.041.001.DWG MODEL DATE: 03-06-2006, 4:02pm KKMCGRE1