



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

Malaysia-Japan
International
Institute of Technology
(MJIT)



TRANSWATER
Engineers of Integrated Solutions

SMJG 3206 INDUSTRIAL TRAINING FINAL PRESENTATION

TRANSWATER ENGINEERING CONSULTANCY SERVICES (TECS)

NAME	: NUR MAISARAH BINTI AZIZUL
PROGRAM	: BACHELOR OF CHEMICAL PROCESS ENGINEERING
TECS SUPERVISOR	: IR. HJ. AZIONN BIN ABD AZIZ
MJIT SUPERVISOR	: DR NORHAYATI BINTI ABDULLAH

30TH SEPTEMBER 2020

10.00 A.M

MY PRESENTATION AGENDA:

- ▶ Introduction to the company
- ▶ Internship tasks
- ▶ Trainings I attended
- ▶ What I've learned
- ▶ Conclusion



INTRODUCTION TO THE COMPANY

CLIENT

- PETRONAS
- SHELL
- HESS **ExxonMobil**
- CORPORATION
- EXXONMOBIL
- REPSOL OIL & GAS



CONTRACTOR

Consultant

- Transwater Engineering Consultant Service Sdn. Bhd. (TECS)
- Petrofac RNZ

Fabricator

- EPCF Prima Sdn. Bhd.

Installation

- Petra Energy Berhad



VENDOR

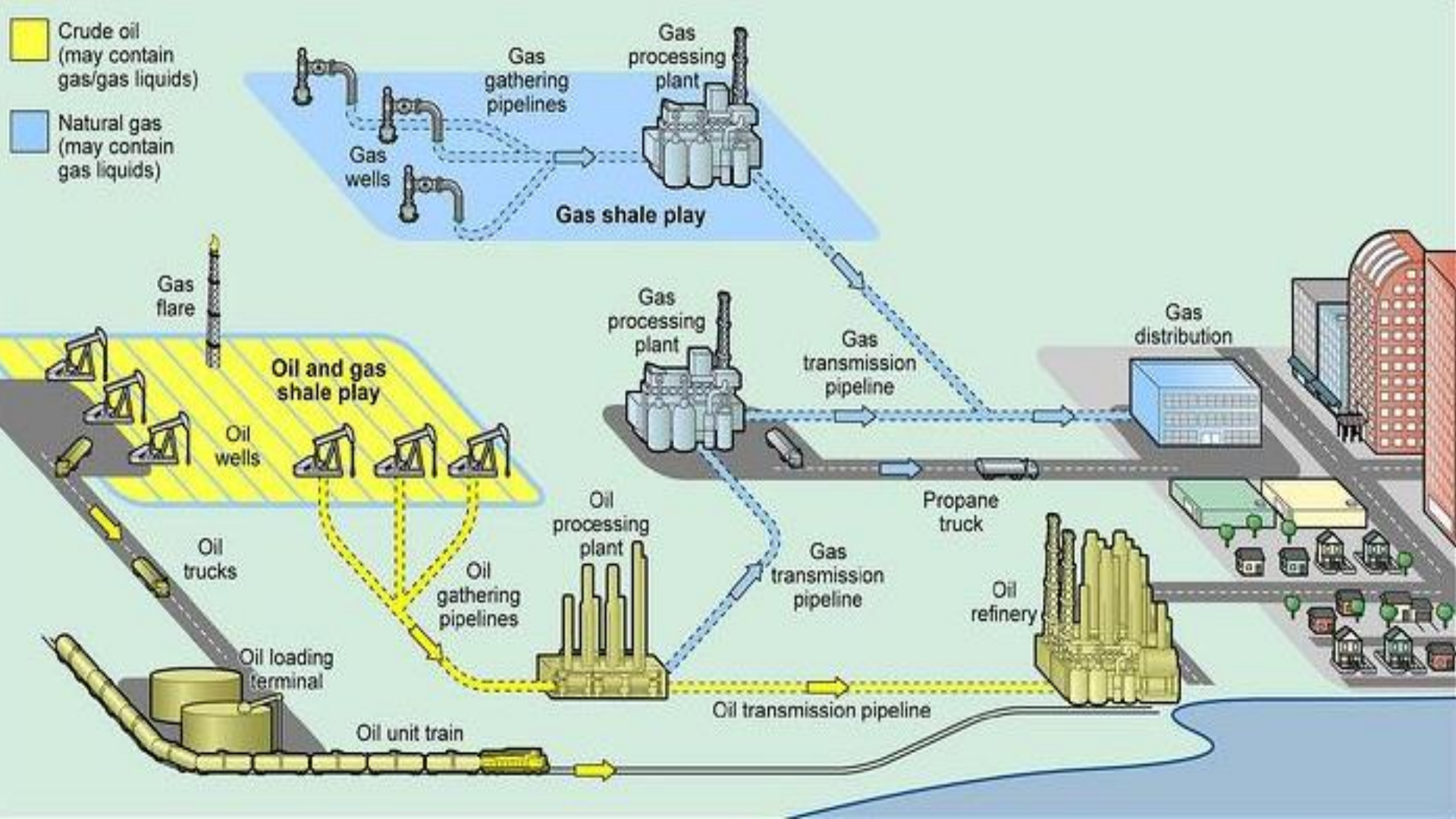
Product supplier

- Transwater API Sdn Bhd
- Mutiara Jayateknik Engineering Sdn Bhd

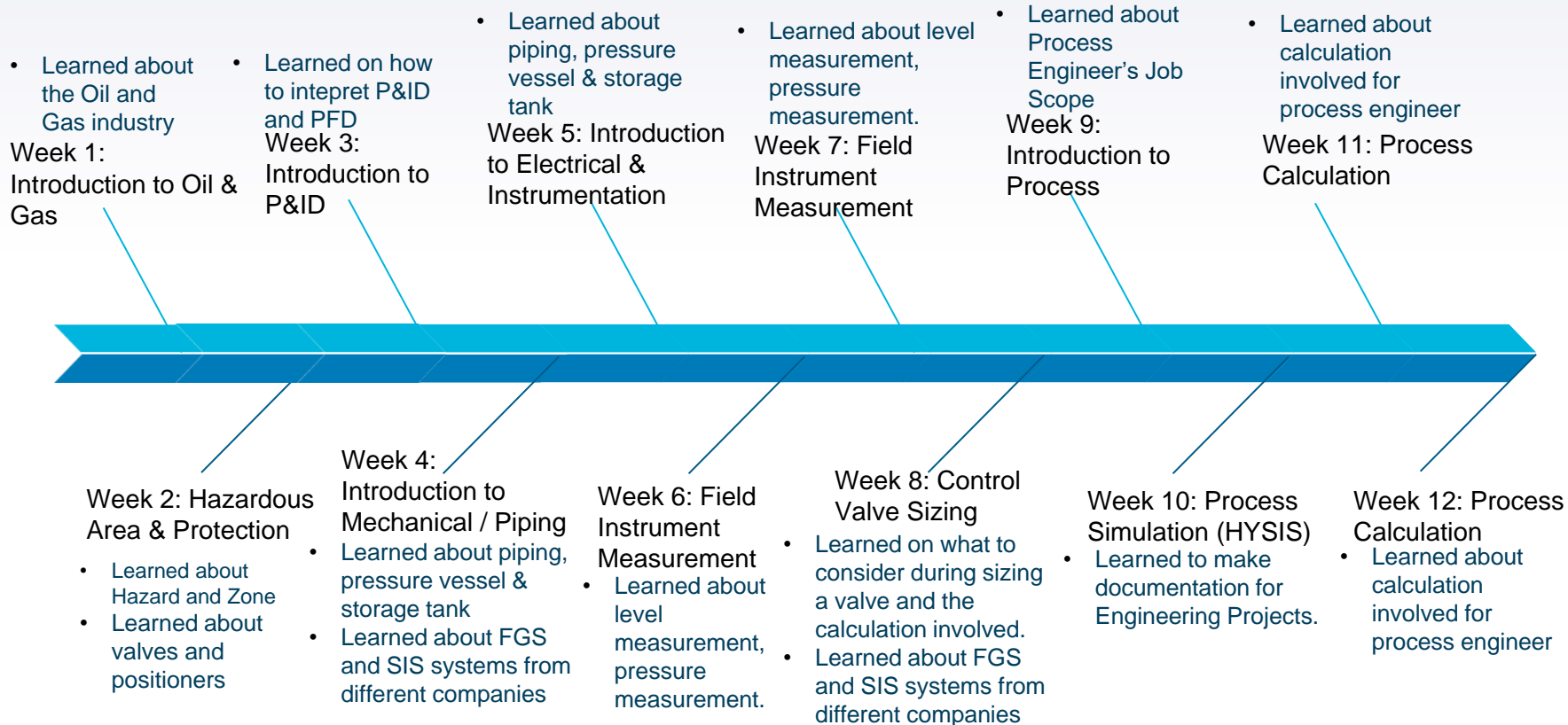
Service

- Transwater Process & Plant Service (PPS)
- MKI Engineering





INTERNSHIP TASKS



TRAININGS I ATTENDED:

IN HOUSE TRAINING

- ✓ Introduction to Oil & Gas
- ✓ Hazardous Area Protection
- ✓ Introduction to P&ID
- ✓ Sliding stem valve
- ✓ Control Valve Sizing and Selection
- ✓ Pump Sizing and Selection
- ✓ Field Instrument measurement
- ✓ Process Hydraulic Calculation
- ✓ HYSYS
- ✓ Pressure Safety Valve Sizing

HANDS ON TRAINING

- ✓ Delta V system training (Emerson)
- ✓ Trisystem SIS training (Trisystem)
- ✓ DVC calibration and installation
- ✓ Calibration of Anti-surge, Accessories
- ✓ Pressure Controller, Temperature Controller Theory and Practical
- ✓ Wireless system training (Emerson)



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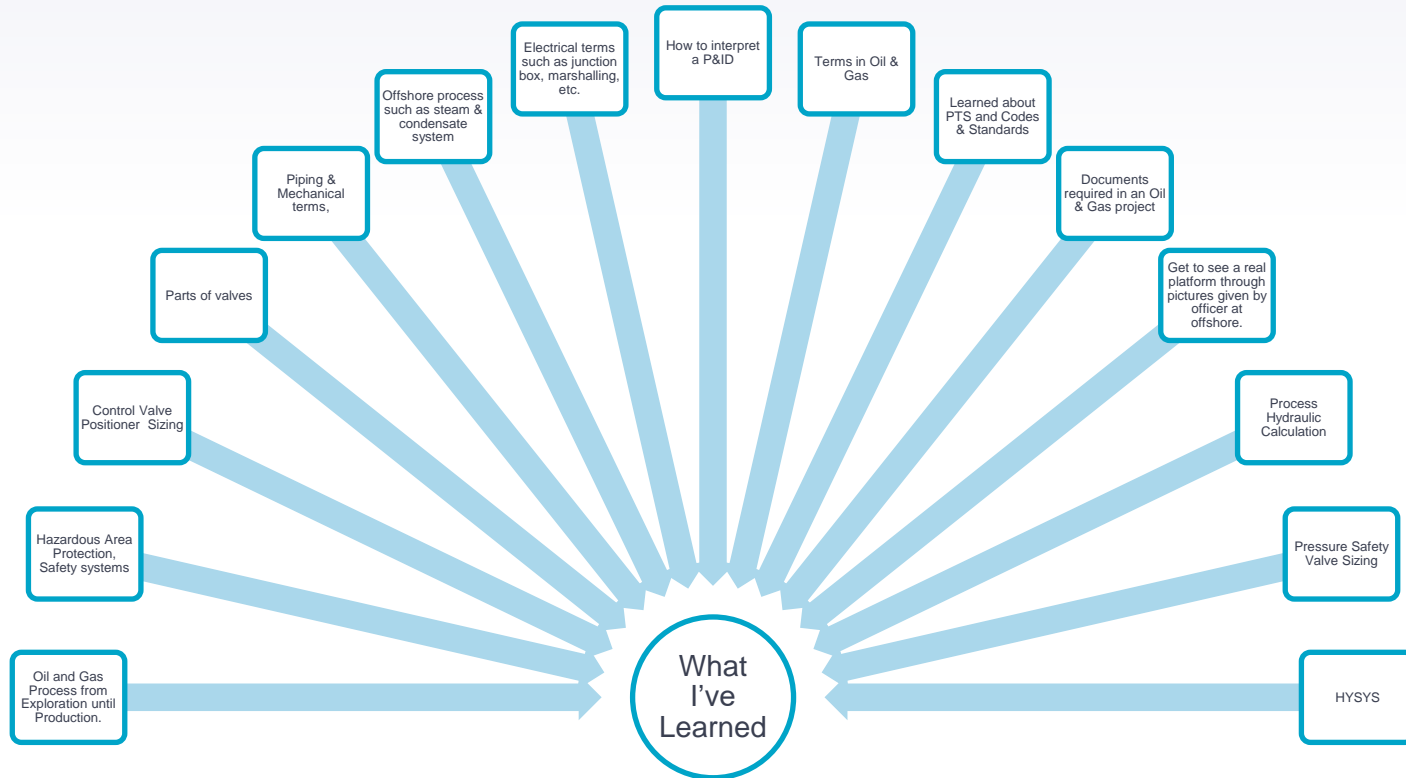


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WHAT I HAVE LEARNED



OIL & GAS PROCESSES

- ▶ Oil & Gas extraction process starting from exploration till abandonment
- ▶ Job description for each discipline
- ▶ Petronas Technical Standard (PTS)
- ▶ International Codes & Standard
 - ▶ API
 - ▶ ASME
 - ▶ IEC

PROCESS

- ▶ Steam & Condensate System
- ▶ Flaring & Venting
- ▶ Cryogenic liquid
- ▶ Refrigeration Process
- ▶ Process Hydraulic Calculation

HAZARDOUS AREA PROTECTION, SAFETY SYSTEMS

- ▶ Factors determining hazardous area
- ▶ IEC Standard for Hazardous Material Gas & Vapor (Zone 0, Zone 1, Zone 2)
- ▶ Methods of protection

ELECTRICAL & INSTRUMENTATION

- ▶ Level measurement
 - ▶ Methods to measure liquid level
- ▶ Terms for electrical & instrumental
 - ▶ HART
 - ▶ Junction box
- ▶ Wireless Instrument

MECHANICAL / PIPING

- ▶ Piping system
- ▶ Pressure vessel
- ▶ Pump

CONTROL VALVE SIZING & POSITIONER

- ▶ Factors to be considered when sizing control valve
- ▶ Formula for control valve sizing
- ▶ Positioner
 - ▶ DCS
 - ▶ DVC
- ▶ Parts of valves

CONCLUSION

- I learned a lot on Oil & Gas Industry which made me more interested to become a Process Engineer
- I have the opportunity to gain knowledge on topics other than my course (Chemical Process Engineering)
- A valuable experience for me.



THANK YOU

