



29-31 AGUSTUS 2023
YOGYAKARTA

RISK MANAGEMENT in PANEN PIPELINE PROJECT

Bambang Sukiyono, ST, MT.

Project Description Panen Pipeline

Background

Follow up from POD Field for development of pipeline facilities for Panen Fields.

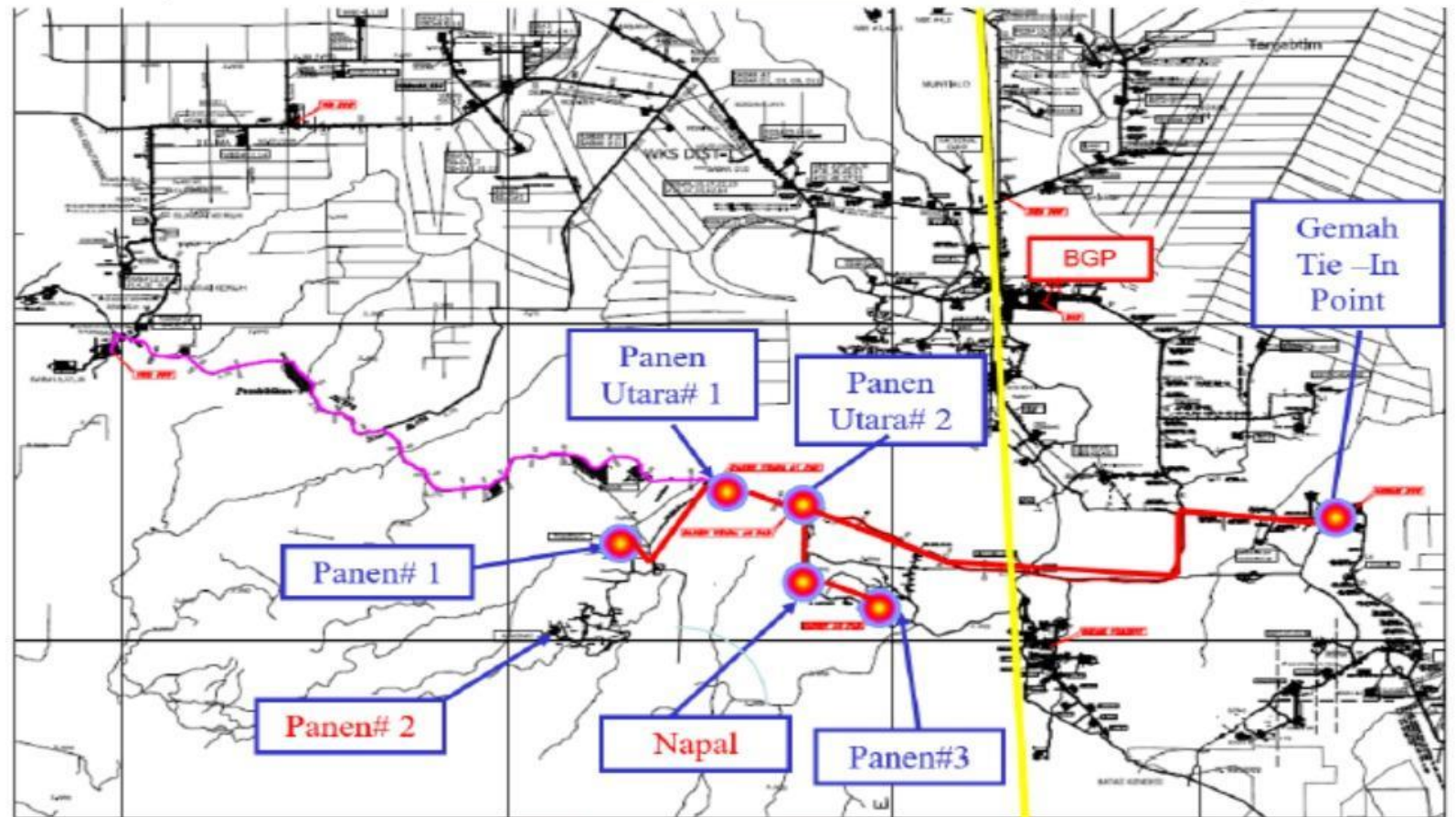
Eliminating oil trucking.

Minimizing gas flaring.

Maximizing oil and gas production from the Field.

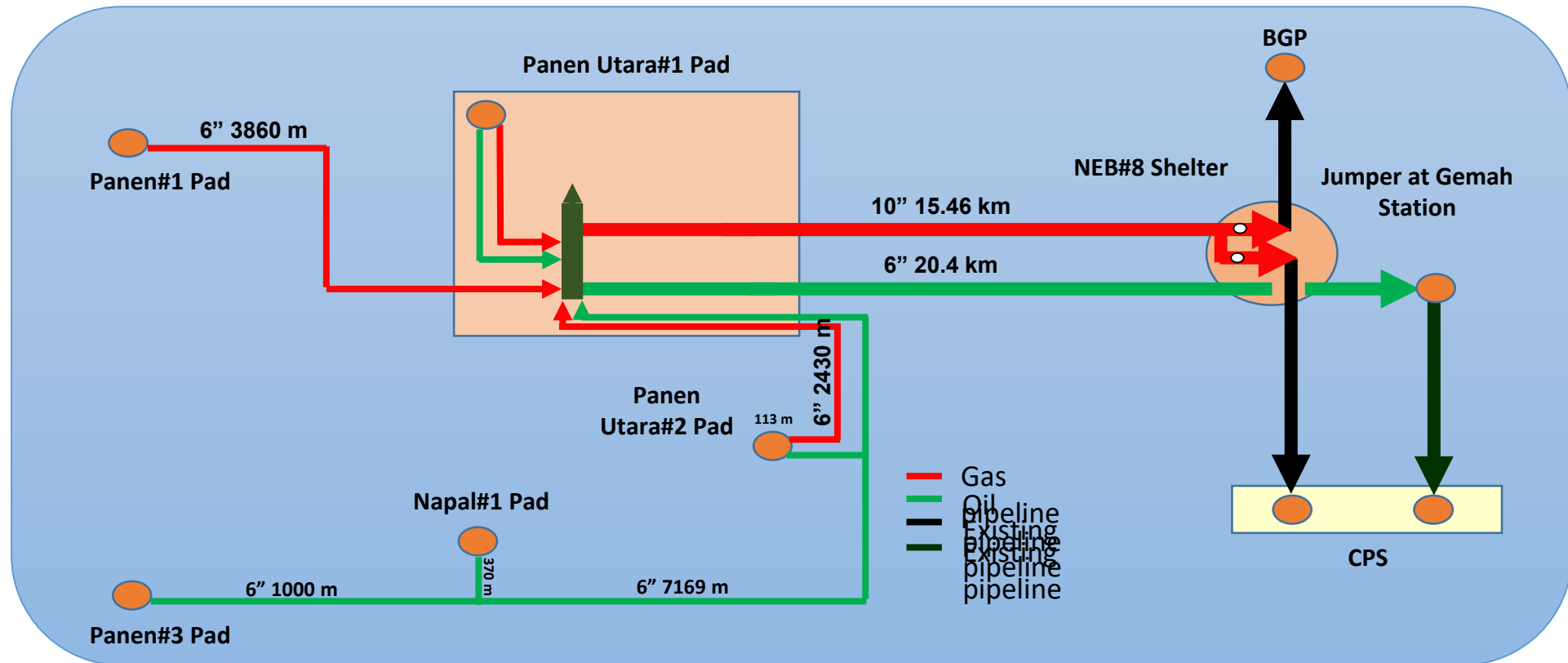
Project Description Panen Pipeline

Panen Pipeline Route



Project Description Panen Pipeline

Panen Pipeline Schematics



Project Description Panen Pipeline

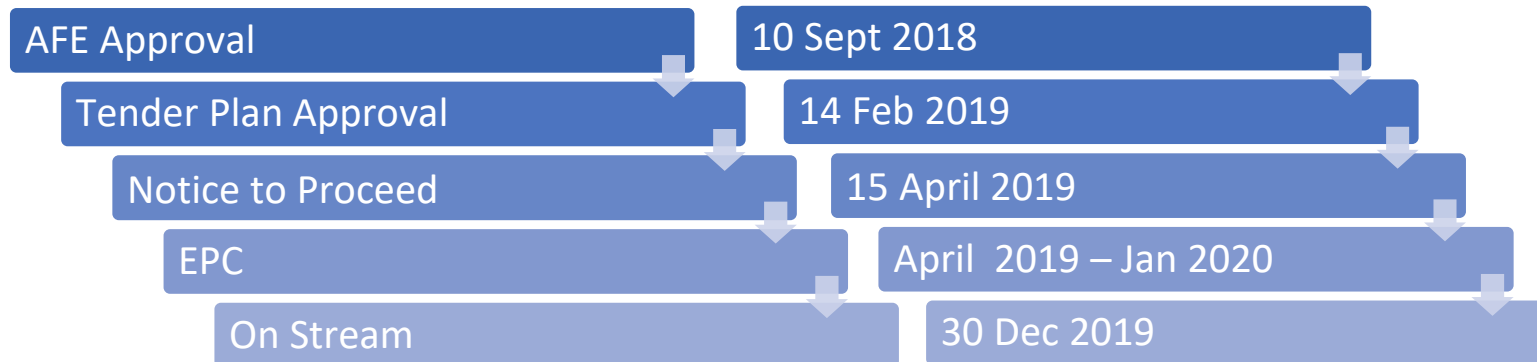
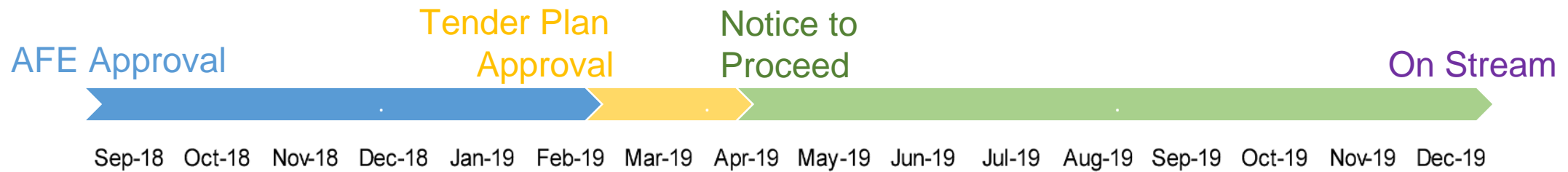
▪ Main Pipeline

1. Oil pipeline from Panen Station (PU#1) to Gemah Station 6" CS ± 20.04 km
2. Gas pipeline from Panen Station (PU#1) to NEB#8 Shelter 10" CS ± 15.46 km

▪ Sub Trunkline

1. From Panen#1 to Panen Station (PU#1)
 - 6" CS ± 3.86 km (for gas)
2. From Panen Utara#2 to Panen Station (PU#1)
 - 6" CS ± 2.824 km (for gas to Panen Station)
 - 6" CS ± 2.805 km (for oil to Panen Station)
3. From Panen#3 to Panen Station (PU#1)
 - 6" CS ± 8.169 km (for oil)
4. From Napal#1 to Panen Utara#2
 - 6" CS ± 0.37 km (for oil)

Project Description Panen Pipeline



EPC Contract Value USD 11,722,570



Health Safety Security Environment (HSSE)

- **POB average : 248**
- **Man Hours : 401,122 Hrs**
- **Fatality : 0**
- **Loss Time Incident : 0**
- **There is no environmental impact during project implementation**

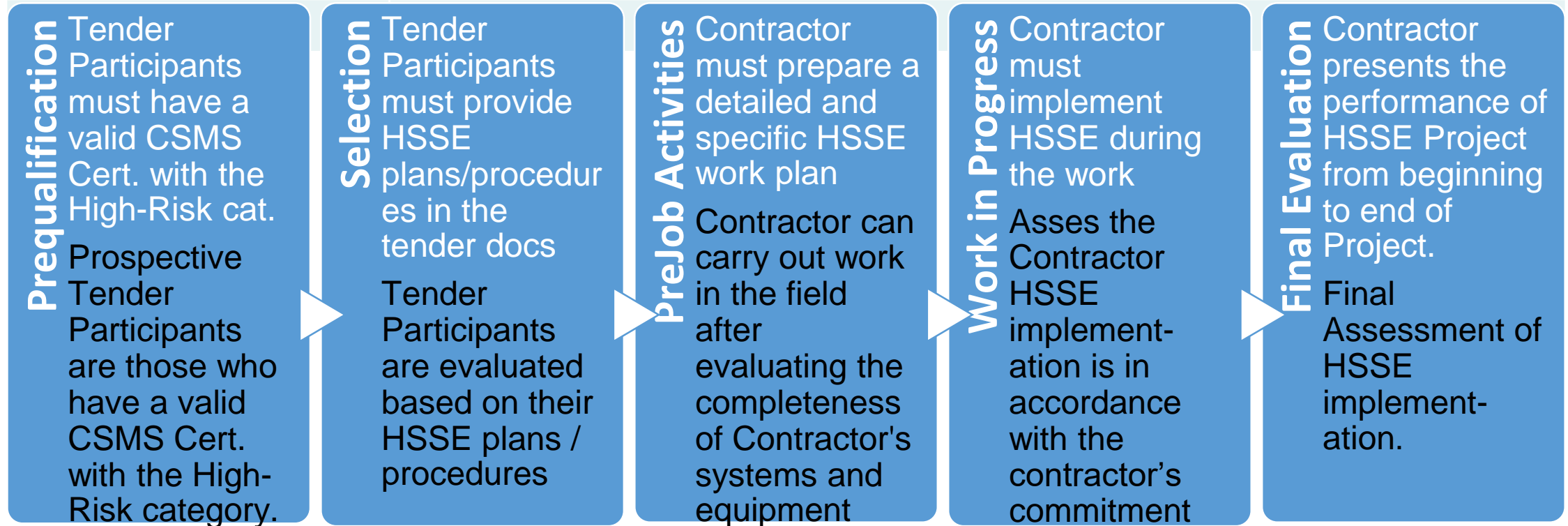
RISK MANAGEMENT

- **Planning**
 - Plan Risk Management
 - Identify Risks
 - Perform Risk Analysis
 - Plan Risk Response
- **Monitoring & Controlling**
 - Control Risk



RISK MANAGEMENT

Contractor Safety Management System (CSMS)



RISK MANAGEMENT

PROJECT RISK REGISTER

	Identification	Analysis	Response	Control
Contract EPC	The project completion timeline is very tight so the procurement process must be expedited.	The long procurement process will impact to Project Successfulness.	Support from SKK Migas and Management to accelerate the procurement process	Good coordination and communication with SKK Migas and SCM Dept. to accelerate the procurement process.
Schedule	The tender process must be completed before April 2019 to meet Project completion date in Dec 2019.			

RISK MANAGEMENT

PROJECT RISK REGISTER

	Identification	Analysis	Response	Control
Permit & Stakeholder	Pipeline Crossing with other party lead to other party pipeline damage dan project delay	Excavation hazard when crossing Other Party pipeline	Good Coordination with Other Party before and during execution.	Joint Meeting, Agreement , and involved them in Execution
	Local Residence on Pipeline ROW	Pipeline excavation was halted by Local Residence led to Project delay.	Socialization to local residence and government. Using unconventional technology (HDD)	To involve local government in Construction.
	Local Industries will stop the excavation due to disturb their activities	Construction halted by Local Industries	Socialization to Local Industries	Communication Intensively with Local industries

RISK MANAGEMENT

PROJECT RISK REGISTER

	Identification	Analysis	Response	Control
Scope	Paralel work while waiting for the results of the subsurface	Changes to the scope of work will result in delays in contract completion	To include the possibilities work as optional in the Scope of Work in the contract as well as estimated duration and costs	Coordination with contractors and related production and subsurface regarding the implementation of possibilities work
Cost	Additional work led to dispute in payment	Ensuring all scope of work and possibilities work in the contract.	Work weighting in progress payment	Payment according to work progress.

RISK MANAGEMENT

PROJECT RISK REGISTER

	Identification	Analysis	Response	Control
Material	Procurement of main materials (line pipe 6", 10") within 3 months after NTP.	Material delivery delays will result in delays in project completion	Site Visit to Pipe Manufacture to check readiness of production in Project timeline. Line pipe purchases are set at a maximum of 3 months from the date of the contract. Line pipe delivery in 3 months	Purchase targets and delivery targets in project progress reports.
Schedule	Project schedule to be completed within 8 months for pipeline installation +/- 50km	Delay in one category of activity will result in a delay the entire project	Determination of targets for each category of activity and their achievements	The achievement of each job is determined and given a penalty for delay.

RISK MANAGEMENT

PROJECT RISK REGISTER

	Identification	Analysis	Response	Control
Construction	Requires quite heavy equipment to carry out installations at several locations simultaneously with varying contours	Scattered work sites require good coordination	Good resource coordination at scattered work sites	Optimum use of resources in the achievement of workers
	Smoke Hazard during Construction.	Occupational health of construction worker	Good PPE by using face masks	Availability of PPE and regular occupational health observation
	Heavy Rain on rainy season	Soil collapse of excavation pipeline trench, Electrical shock and welding defect	Stop excavation work and welding work. Proper Excavation	Safety Patrol. Journey Management.

RISK MANAGEMENT

PROJECT RISK REGISTER

	Identification	Analysis	Response	Control
Commissioning	Lack availability of equipment, workers and hydrocarbon media during short commissioning duration led to safety and Project Schedule	Contractor and Company readiness in commissioning	Straightening and collocated Commissioning team (Contractor and Company)	Regular coordination between commissioning team of Contractor and Company PSSR

RISK MANAGEMENT

EPC Panen Sub-Trunkline and Main Pipeline



RISK MANAGEMENT

PIPE MANUFACTURE



RISK MANAGEMENT

SITE CONSTRUCTION



RISK MANAGEMENT

STATIONS





IKATAN AHLI FASILITAS PRODUKSI
MINYAK DAN GAS BUMI INDONESIA



THANK YOU

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