PETROLEUM OIL STORAGE & REFINERY PLANT

AT SIPITANG OIL AND GAS INDUSTRIAL PARK (SOGIP), SIPITANG, SABAH, MALAYSIA

PETROVENTURE ENERGY SDN BHD

LOT 16, 1ST & 2ND FLOOR, BLOCK B, SURIA INANAM, INANAM, 88450 KOTA KINABALU, SABAH, MALAYSIA

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INTRODUCTION

Petroventure Energy Sdn Bhd was established in 2019 for the purpose of developing projects Oil Storage and Refinery Plant at the Sipitang Oil and Gas Industrial Park (SOGIP), Sabah, Malaysia. It's core business includes Refining and Blending , Storage, and Trading of various petroleum products. With its international experience and networks, Petroventure set to become Independent Oil Storage and Refinery Plant in Sabah in line with country's aspiration to become the centre of petroleum product trading. This is particularly significant in Sabah as one of the producers of oil and gas in Malaysia. Sabah strong and strategic position at the centre of the ASEAN market makes it an attractive location in providing all the essentials for the industry to cater to all global markets.

PETROVENTURE ENERGY SDN BHD ON PROCESS TO BUILD PETROLEUM OIL STORAGE WITH THE CAPACITY OF 2 MILLION CM3 & 3.5 TO 10 MILLION TONS A YEAR OIL REFINERY PLANT (70,000 UP TO 150,000 BARREL PERDAY) AT SIPITANG OIL AND GAS INDUSTRIAL PARK (SOGIP), SABAH, MALAYSIA.

INTRODUCTION

Company	: **Petroventure Energy Sdn Bhd (**as Special Purpose Vehicle Company**)**
Company No.	: (1342331-A)
Reg. Address	: Unit No. 3.24, 3rd Floor, Kompleks Asia City, Jalan Asia City, 88000 Kota Kinabalu, Sabah, Malaysia.
Cores. Address	: Lot No. A-2-22, Block A, Lorong Inanam Kapital 2, Inanam Capital, Jalan Nountun, 88450 Inanam, Kota Kinabalu, Sabah, Malaysia.
Paid Up Capital	: RM10,000,000.00
Owner	: Jesselton BIROST (Sabah) Sdn. Bhd.
Incharge Person	: Mohd Sham Haji Mohd Yasin
Contact No.	: +6016-8120708
Email	: syjsham@gmail.com / petroventureenergy@gmail.com

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PROJECT DETAILS

DEVELOPING A WORLD CLASS OIL STORAGE & REFINERY PLANT

PROJECT TITLE
DEVELOPED PETROLEUM OIL STORAGE & REFINERY PLANT

PROJECT LOCATION
SIPITANG OIL AND GAS INDUSTRIAL PARK (SOGIP), SIPITANG, SABAH, MALAYSIA

AREA
250 ACRES

DEVELOPMENT DETAILS
- CONSTRUCTION OF 70,000 UP TO 150,000 BPD REFINERY & 2 MILLION M3 OIL STORAGE FOR CRUDE & REFINED PRODUCTS
- TERMINAL BUILDING
- JETTY

PROJECT BRIEF
- TO BUILD OIL STORAGE WITH CAPACITY 2 MILLION M3 - (ESTIMATED 80 TO 100 TANKS) – (ESTIMATED USING 100 ACRES OF LAND)
- TO BUILD OIL REFINERY WITH CAPACITY 70,000 UP TO 150,000 BPD – (ESTIMATED USING 100 ACRES OF LAND)
- TO BUILD TERMINAL BUILDING AND RELATED FACILITIES – (ESTIMATED USING 50 ACRES OF LAND)

PROJECT COST
ESTIMATED INVESTMENT USD 2.0 BILLION : (REFINERY , OIL STORAGE INCLUDING JETTY & FACILITIES, MOORING FACILITIES, PETROLEUM TEST LAB, ADMIN BUILDING, FIRE STATION, BLENDING PLANT, SURAU & ETC)

CONSTRUCTION DURATION
APPROXIMATE 3–5 YEARS DEPENDING ON THE APPROVAL PROCESS

LEASING PERIOD
30 YEARS + 30 YEARS WITH EXTENSION

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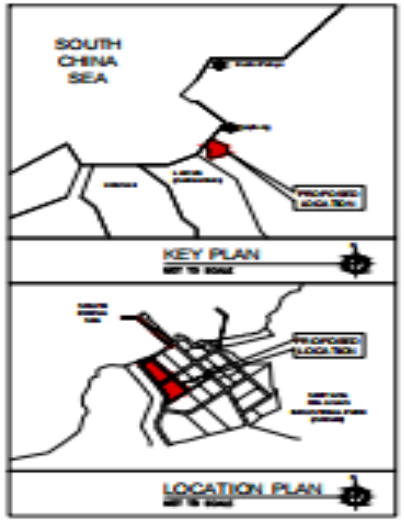
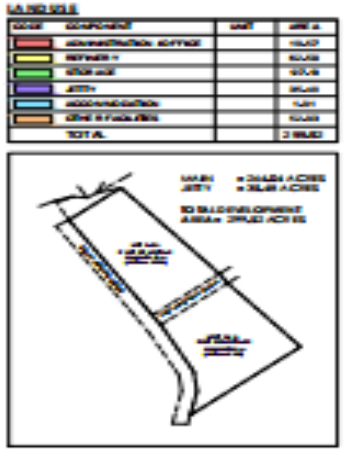
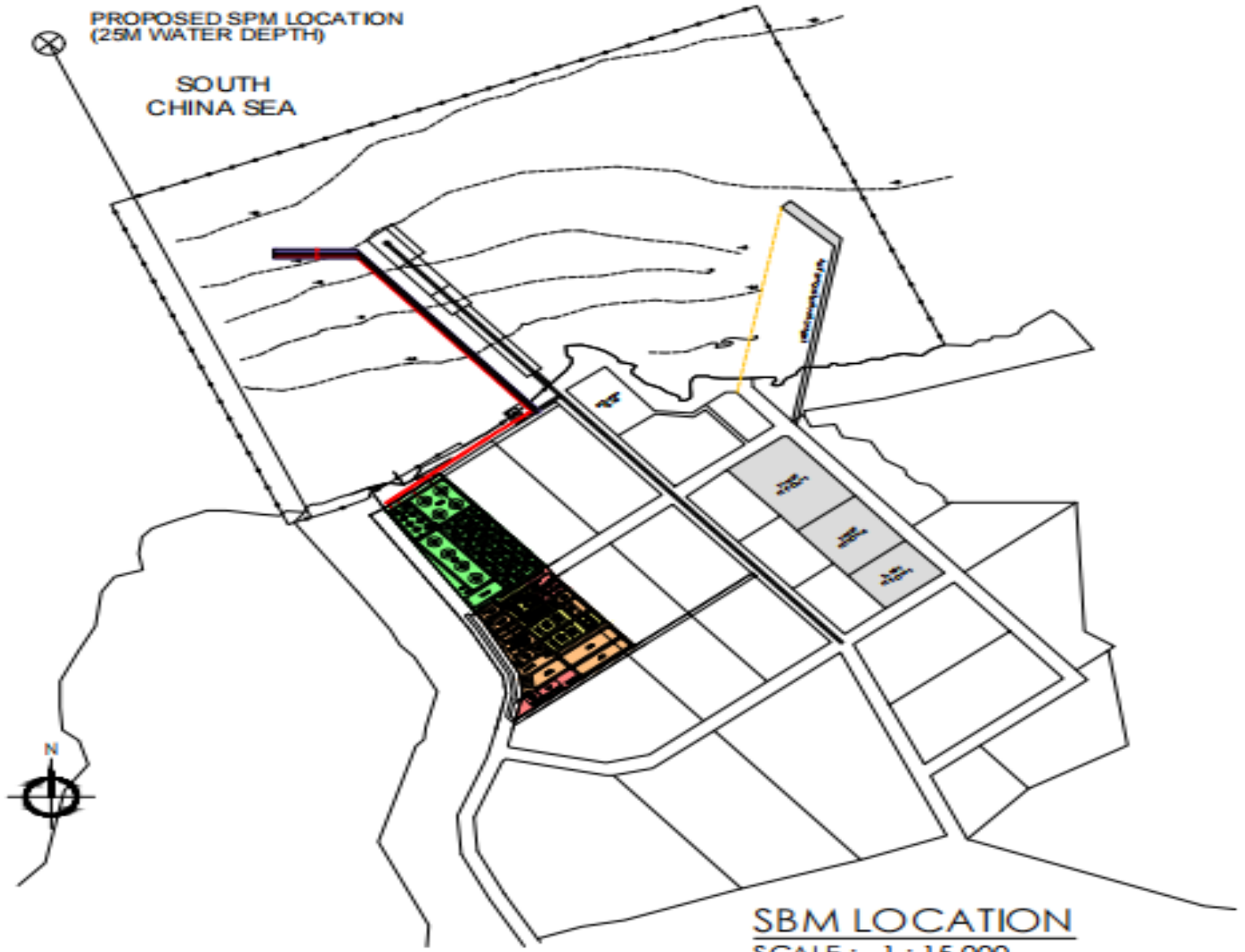
SOGIP MASTER PLAN

PROJECT LOCATION AT SOGIP







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DEVELOPMENT PLAN

PROJECT LAND USE

Total Land	**- 250Acres @ 101.00 Ha**
1) Device Footprint	- 10.47 Ha
2) Plant Storage Area	- 3.63 Ha
3) Land Torch System	- 0.7 Ha
4) Public Works Area	- 5.64 Ha
5) Land For Auxiliary Facilities	- 3.62 Ha
6) Land For Oil Depot	- 22.60 Ha
7) Management Area	- 1.78 Ha
8) Roads, Corridors and Reserved Area	- 10.52 Ha
9) Land For Tank Farm	- 8.66 Ha
10) Land For Loading & Unloading Facilities	- 0.24 Ha
11) Land For Power Plant	- 0.61 Ha
12) Green Coverage Area	- 5.56 Ha
13) Reserved Land	- 3.8 Ha
14) Land For Administrative Service Facilities & Others	- 10.19 Ha

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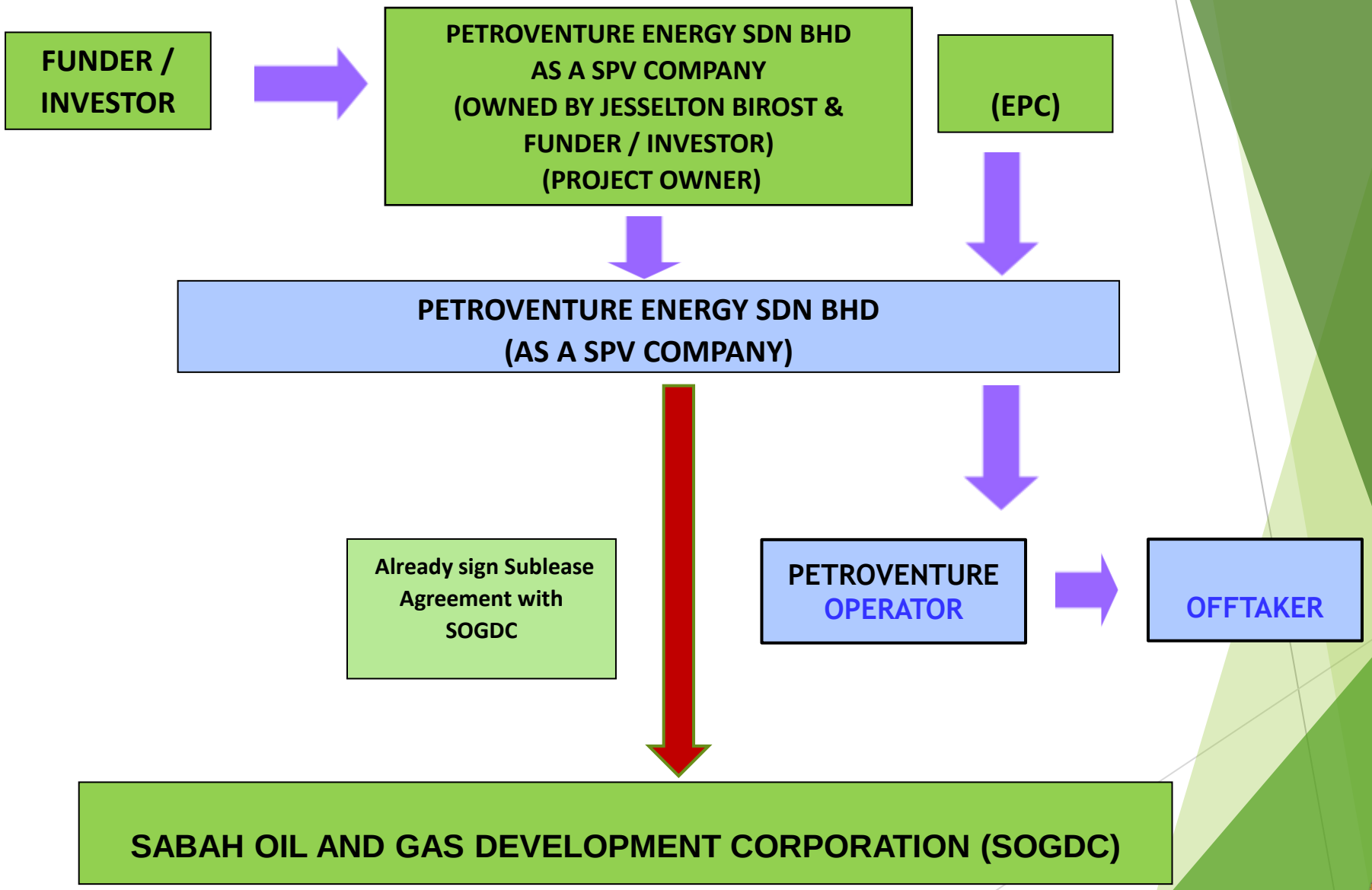
OUR STRATEGIC PARTNER



OPERATIONAL MODEL

EPC & PLANT OPERATOR

PRODUCT

GASOLINE
KEROSENE
BENZENE
LPG
ACRYLIC
SULPHUR
SLURY
FUEL OIL
DIESEL

FEEDSTOCK & OFFTAKER

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PETROVENTURE DEVELOPMENT STAGE

STAGE 1 : Conceptual Stage
- Feasibility Studies, Environmental Impact Assessment (EIA) Report, Soil Investigation (SI) report Topography Survey & Etc.
- Preparation of DETAIL IDEA PROPOSAL, DRAFT DESIGN PLAN, Conceptual Layout Plan AND DRAFT BILLS OF QUANTITY (BQ).
- Preparation of DETAIL real PROPOSAL, real DESIGN PLAN, real Layout Plan AND BILLS of quantities (BQ) for Submission of Development Plan to Local Authority.
- Sub-Lease Agreement Signing / Land Premium.
- Preliminary Project / Work Program.

STAGE 2 : Detail Design
- Detail Design, Engineering & Management Cost, Tender Documentation / Bidding, Negotiation and Project Award.

STAGE 3 : Construction Stage
- Project Scheduling and Monitoring, Construction Management & Supervision.
- Inspection and Quality Assurance, Contract Management and Claim Certification.

STAGE 4 : Commissioning And Start-Up
- Commissioning
- Start-Up

STAGE 5 : Operation And Maintenance Period
- Monitor and Auditing on Engineering & Construction, Corrective & Modification for All Defect.
- Period for 36 Months.

STAGE 6 : Training & Human Resource Development (Transfer Technology)
- Skill Training for Operators and Management for Storage Terminal, Refinery & Marine, Course on HSE.

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PROPOSED INVESTMENT VALUE STRUCTURE (USD2.0 BILLION)

YEAR	WORK DESCRIPTION	TIME FRAME/MONTH	INVESTMENT VALUE (USD)
1	• SITE PREPARATION • INFRASTRUCTURE • BUILDING FACILITIES • STORAGE TANK & TERMINAL	01 - 08 MONTHS 03 - 36 MONTHS 05 - 36 MONTHS 05 - 60 MONTHS	} USD500,000,000.00
2	• INFRASTRUCTURE • BUILDING FACILITIES • STORAGE TANK & TERMINAL • JETTY	03 - 36 MONTHS 05 - 36 MONTHS 05 - 60 MONTHS 08 - 36 MONTHS	} USD400,000,000.00
3	• INFRASTRUCTURE • BUILDING FACILITIES • STORAGE TANK & TERMINAL • JETTY • REFINERY	03 - 36 MONTHS 05 - 36 MONTHS 05 - 60 MONTHS 08 - 36 MONTHS 12 - 60 MONTHS	} USD500,000,000.00
4	• STORAGE TANK & TERMINAL • JETTY • REFINERY	05 - 60 MONTHS 08 - 36 MONTHS 12 - 60 MONTHS	} USD300,000,000.00
5	• STORAGE TANK • REFINERY • OTHERS	05 - 60 MONTHS 12 - 60 MONTHS	) USD300,000,000.00
	TOTAL AMOUNT INVESTMENT :		USD2.0 BILLION

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OIL & GAS DEMAND PERSPECTIVE

Korean Oil & Gas Company Gives Employees 120 Months of Bonus fo...

As we usher into the new year, many comp...

worldofbuzz.com

Korean Oil & Gas Company Gives Employees 120 Months of Bonus for 2022 https://worldofbuzz.com/korean-oil-gas-company-gives-employees-120-months-of-bonus-for-2022/

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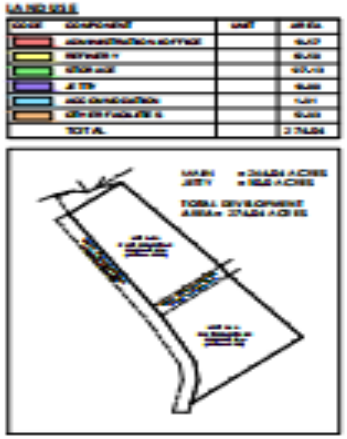
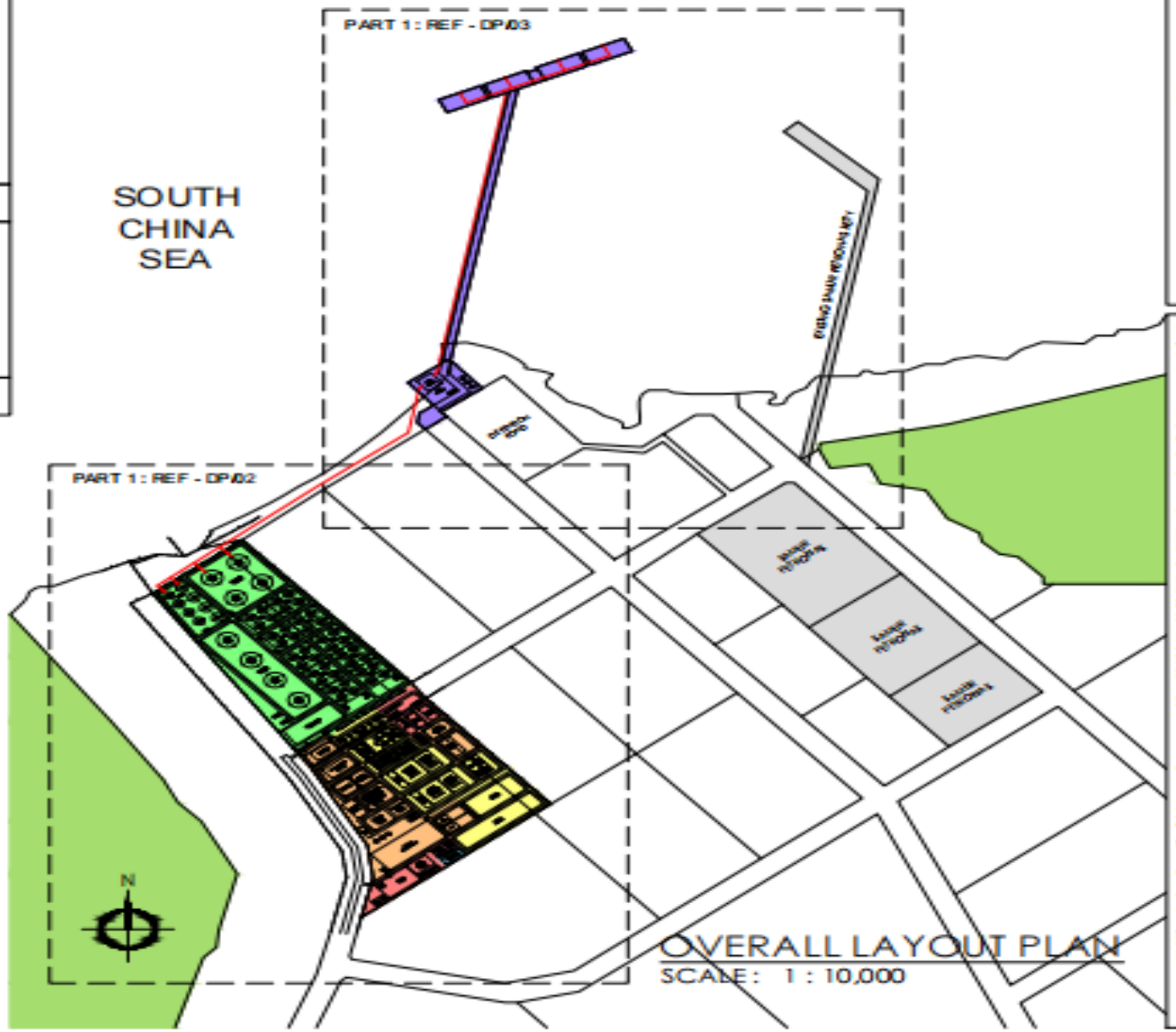
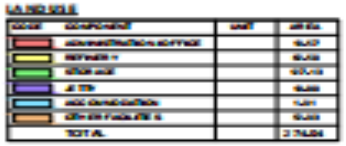
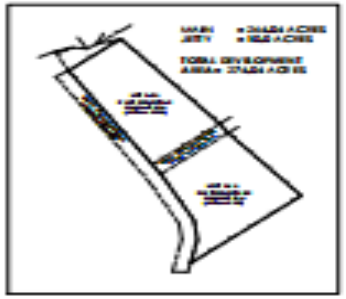
PROPOSED NEW JETTY LOCATION ALIGNMENT

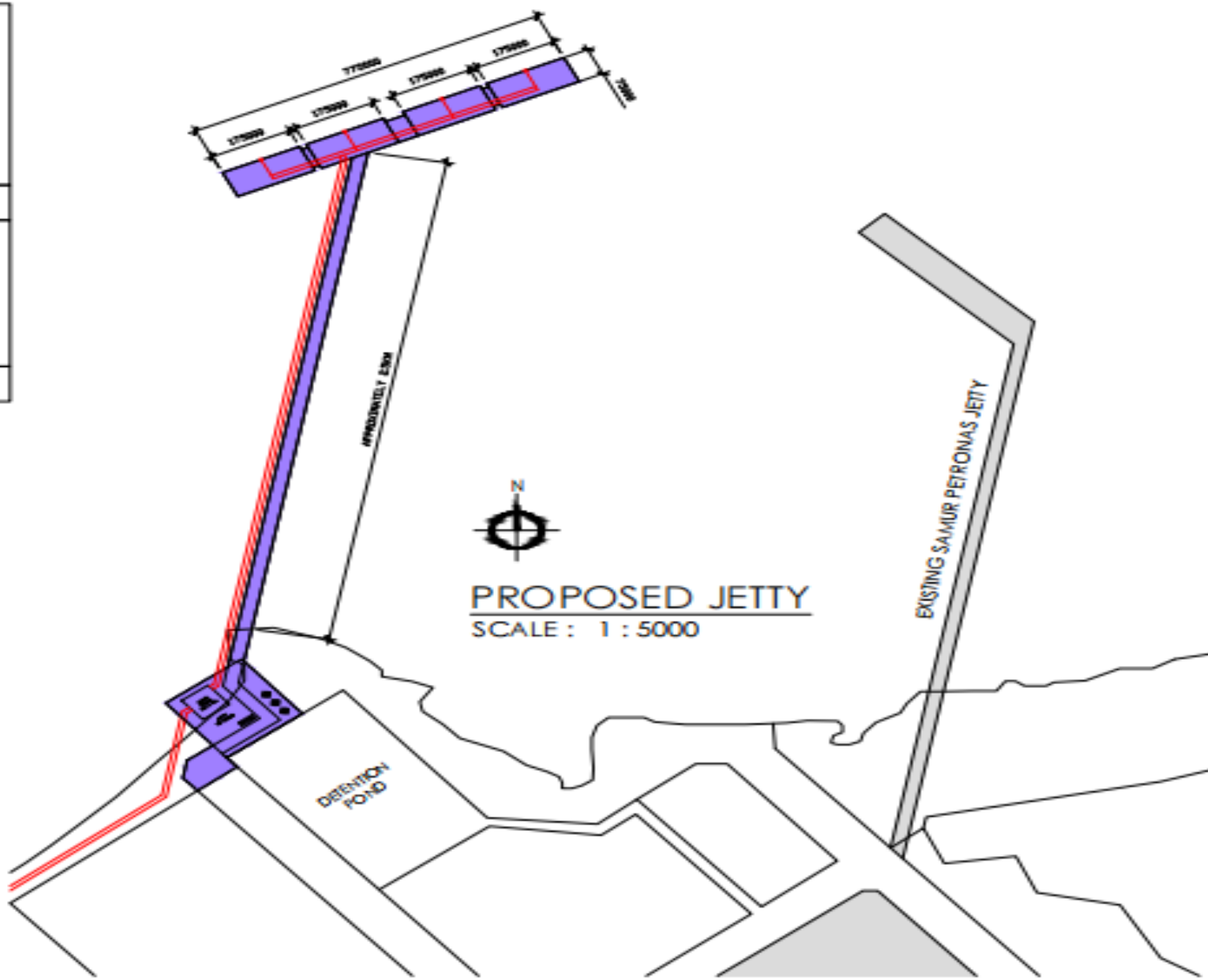


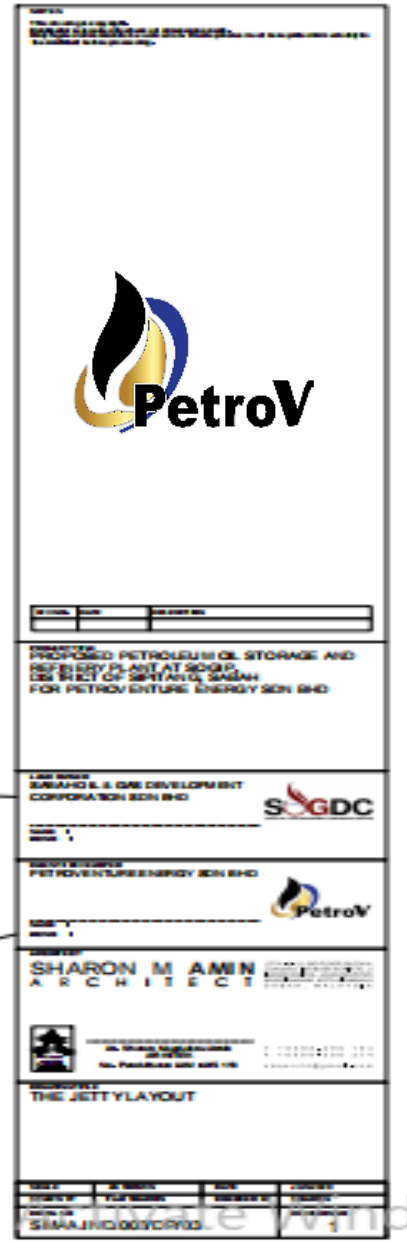


PROPOSED NEW JETTY LOCATION ALIGNMENT









Engineering Pipeline

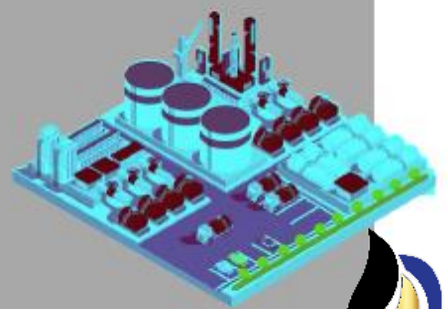
Project Proposal
项目建议书

Feasibility Study Permit/Approval
可行性研究/批准

EPC Contracting /Design
EPC 合同

Construction
施工/验收

- Project Proposal 项目建议书
- Pre-feasibility 预可研
- MOU Agreement 合作意向书
- Design Preparation 设计准备
- Permit 政府审批行政审批
- Feasibility study Final Report 可研最终报告
- Feasibility study 可行性研究
- Preliminary Design 基础设计
- EPC Contract EPC 合同
- Technical Design 技术设计+长周期设备采购
- Commission supervisionn 委托监理
- Preparation Before Use 动用前准备
- Construction 施工
- Construction Preparation 施工准备
- Procurement 材料/设备采购
- Construction Drawing Design 施工图设计
- Completion Acceptance竣工验收
- Operation & Maintenance Management 运维+管理



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Conceptual Design - Design Principles

Take into consideration the logistic, raw materials availability, manpower and other relevant:

- Reliable Long-Term Crude Oil Supply
- Economic
- Products
- Environmental Protection
- Industrial Safety
- Social Benefit
- ROI

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1. General Process Diagram & Products

- 3.5 million tons / yr. - atmospheric and pressure reducing device
- 1.6 million tons /yr. - catalytic cracking unit
- 1 million tons / yr. - delayed coking unit
- 600,000 tons / yr. - continuous reformer
- 1.8 million tons/yr. - coking gasoline and diesel hydrotreating unit
- 800,000 tons / yr. - gasoline hydrogenation etherification unit
- 250,000 tons /yr. - gas plant
- 30,000 m 3/hr. - Hydrogen Production Unit
- 800,000 tons/yr. - Gasoline Liquid Hydrocarbon Desulfurization Unit
- 30,000 tons/yr. - Sulphur Recovery unit
- 90 tons / hour sewage stripping unit

OUR CONCEPTUAL PLAN OVERVIEW

A Refinery Facilities can be Divided by Functions into 4 Categories

Jetty

Oil Storage

Process Production Units

Auxiliary Production Facilities

Transportation

Utilities

1. Process Production Units

Crude oil separation device
Diesel Hydrotreating Unit
Semi-regenerative Reforming device
Fluid Catalytic Cracking Unit
Sulfur Recovery Unit
Isomerization Unit

2. Storage & Transportation

Storage Tank
Jetty
Oil Pipeline
Oil Tank Truck/Train
Flare System

3. Utilities

Water Supply System--industrial/residential
Fire Water hydrant System
Circulating cold/hot water pipeline
Sewage pipeline system
Rainwater system
Electrical & Communication
Dynamic system - steam/air/Water
Demineralization/Nitrogen supply

4. Auxiliary Production Facilities

DCS (Distributed Control System)
Central laboratory
Environmental Monitoring Center
Maintenance - Machinery, electrical, instrument

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Conceptual Design: Master Plan & Transportation

- The entire plant covers an area of about 72 hectares (minimum)
- Crude oil and refined oil and chemicals are shipped to the factory by terminal shipping and pipe. Petroleum coke is shipped in bulk shipping.
- According to the total process flow, crude oil source and product sales market, combined with the maintenance plan of the equipment at the same time, the material entering the plant and the general layout, comprehensively determine the comprehensive storage days of various oil products, and finally determine various oils and chemicals. The capacity and quantity of the tank.
- Utilities –
  - to build a fresh water pressurized water supply station to meet the needs of the entire plant fresh water supply.
  - The whole plant needs a total of about 15,000 tons of circulating water per hour. It is necessary to build a circulating water field to meet the needs of the whole plant's circulating water supply.

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Conceptual Design: Master Plan & Transportation

(Cont'd)

❑ Utilities –

- Sewage treatment system - The refinery produces a total of about 400 tons of sewage per hour (excluding living areas, reservoir areas, and terminals). It is necessary to construct a sewage treatment plant to handle the oily sewage and production wastewater of production facilities and auxiliary production facilities.
- Exhaust gas treatment system - The exhaust gas generated in the whole process is collected by the closed pipeline system, and after being catalyzed and oxidized, it is discharged to the standard.
- Noise control - Sound insulation treatment of compressors and fans that generate noise during the production process.
- Power supply and telecommunications - A total substation of 110kV and 2x35000kVA capacity should be built in the plant to meet the needs of various facilities and system supporting facilities. The estimated operating load is approximately 3,500 kW and the transformer load factor is approximately 45%.

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Conceptual Design: Master Plan & Transportation

(Cont'd)

❑ Utilities –

- Air and heat Supply –

1. There are 1 power station in the plant, 2 sets of natural gas boilers of 110 tons/hour, 3.5 tons of steam production capacity of 3.5 MPa, and the main plant has 3.5 MPa, 1.0 MPa and 0.4 MPa. Steam pipe network.
2. The demineralized water system with a water supply capacity of 500 tons/h is set in the plant; the deaerator water system with a water supply capacity of 350 tons/hour is set.
3. The air supply capacity of the plant is 300 standard meters/min compressed air system, which provides clean air and non-purified air for the whole plant. Set up a nitrogen station with a gas production of 1500 dm 3 / h.Exhaust gas treatment system - The exhaust gas generated in the whole process is collected by the closed pipeline system, and after being catalyzed and oxidized, it is discharged to the standard.

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Conceptual Design: Master Plan & Transportation

(Cont'd)

- Auxiliary Production Facilities –
  1. Fire facilities – to build a fire station will be built in the whole plant area, equipped with sufficient fire-fighting facilities such as fire engines. Construction of a fire pump station, with fire water storage tanks, fire storage tanks and fire pumps, and fire water system tubes to meet fire protection requirements.
  2. Maintenance /Repair Facilities - General production and maintenance facilities are set up in the factory area, and regular machine repair, electric repair, and instrument repair are set up to meet routine maintenance and repair. The middle and overhaul are considered by the foreign or external committee.
  3. Warehouse - Set up the necessary warehouses and stockyards in the plant to meet the necessary inventory needs.
  4. Central Laboratory - Set up a central laboratory, responsible for the analysis and testing of the whole plant and the analysis of raw materials and finished products. Configure the appropriate analytical laboratory instrument.

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No	MANPOWER Department	Shifts	No Of People	Technical And Management Staff	Total Capacity
1	Refinery production equipment (Including atmospheric distillation, catalytic cracking, gasoline and diesel hydrogenation, catalytic gasoline hydrodesulfurization, continuous reforming, benzene extraction, product purification, MTBE sulfur recovery, gas fractionation, etc.)	4	176	66	220
2	Storage and transportation system (including refinery storage and transportation and petroleum storage) (including oil storage and transportation, in-plant process and heat pipe network and flare facilities)	4	52	5	57
3	Public works and auxiliary production facilities (including general substations, substations, circulating water yards, sewage treatment centers, central laboratories, self-provided power stations, etc.)	4	64	12	76
4	3 Repairs (mechanical, electrical, instrumentation)	4	16	3	19
No	Department	Shifts	No Of People	Technical And Management Staff	Total Capacity
5	Management				68
	Among them: Factory Leaders				5
	Factory Dispatch Room	4	8	2	10
	Equipment Division				14
	Production Department				22
	Public Engineering Unit				12
	Factory Office				5
6	Pier				60
7	Total				500

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OUR MAIN PRODUCT

Main product specifications

This project mainly produces automobile fuels such as **gasoline and diesel**, and also produces products such as **liquefied gas, propylene, benzene, and sulfur**. Gasoline products are divided into domestic sales and export. The quality of gasoline exported is considered to meet the European V emission standards. The quality of gasoline sold domestically is considered to meet the China V standard. The brand of gasoline products is considered 89 #: 92 #: 95 #. Diesel products are divided into two categories: automotive diesel and ordinary diesel. Automotive diesel is considered to meet the European V standard, and ordinary diesel is considered to meet the Chinese standard (GB 252-2011). Other product standards are implemented in accordance with current Chinese national standards.

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ENVIRONMENTAL IMPACT ASSESSMENT

Environmental Impact Assessment (EIA) report is to provide a description of the Environmental Impacts of an activity and the measures required to prevent, mitigate or abate the environmental impacts or to protect the environment.

The works that will be involved are:

1) Bathymetry Study to accommodate the alignment of the Jetty and Pipeline.
2) Marine Ecology Study and Marine Traffic Risk Assessment.
3) Environmental Impact Assessment (EIA) report for:

   a) Dredging Activities and : b) Construction and Implementation of the Refinery and Storage Tank

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PROJECT REQUIREMENT

Jetty Facilities	-	2 Berth (complete with piping and pump system) - requires a sea depth of above 14 meters - can only accommodate vessels up to 50,000 tons
Single Buoy Moring (SBM)	-	To accommodate big vessels (supertanker) - 80,000 tons and above - requires a sea depth of above 20 meters
Shipment In	-	10,000,000 tons/year (Minimum - Daily 1 shipment)
Shipment Out	-	8,000,000 tons/year (Minimum - Daily 2 shipment)
Environmental Protection	-	Design according to the standard and International specifications Refinery Construction Standards as a Class “A” Plant.
Whole Plant Capacity Workers	-	Above 1,000 People

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MASTER PLAN APPROVAL STAGES BY THE SABAH, MALAYSIAN GOVERNMENT

PETROVENTURE

↓

TO SUBMIT AND MAKE PRESENTATION OF THE DETAIL PROJECT PROPOSAL, DRAFT PLANT DESIGN AND CONCEPTUAL PLAN DESIGN OF THE PROJECT TO THE GOVERNMENT THROUGH PETROVENTURE

↓

SUBLEASE AGREEMENT ON THE SOGIP LAND BETWEEN PETROVENTURE AND THE GOVERNMENT (SOGDC)

↓

PETROVENTURE TO SUBMIT PETROLEUM OIL STORAGE & REFINERY DETAILS PLANT DESIGN FOR LOCAL AUTHORITY DEVELOPMENT APPROVAL

↓

LOCAL AUTHORITY ENDORSEMENT

DONE

DONE

ON PROCESS

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ILLUSTRATION 3D DRAWING
PETROLEUM OIL STORAGE PLANT FOR PROPOSED PETROLEUM OIL STORAGE & REFINERY PLANT

ILLUSTRATION 3D DRAWING

PETROLEUM OIL STORAGE PLANT FOR PROPOSED PETROLEUM OIL STORAGE & REFINERY PLANT

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THANK YOU

TERIMA KASIH

KOTOHUADAAN