



**Approved by**  
**General Deputy Director**  
**“VIETSOVPETRO”**

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**DANG DUC PHONG**

**TECHNICAL REQUIREMENT**  
**FOR PROVISION OF ROV SPREAD FOR SURVEY AND**  
**OFFSHORE INSTALLATION FOR DHN & TNHA PROJECT**  
**(INCLUDE VESSEL AND EXCLUDE FUEL)**


*Ref No: VSP-GENR-S-0004-TR*

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*Date: 23 January 2026*






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## 1. DEFINITIONS AND ABBREVIATIONS

DHN Project	Dai Hung Nam Project, Dai Hung Field Development Project, Block 05-1(a). Offshore Viet Nam
TNHA Project	Thien Nga Hai Au Field Development Project – Block 12/11
CONTRACTOR/VSP	Vietsovpetro Joint Venture
SUB-CONTRACTOR/ BIDDER	The party providing/renting the DP2 vessel with ROV spread completed
MWS	Marine Warranty Surveyor
WORK	The goods and services provided to the CONTRACTOR/CLIENT by the SUB CONTRACTOR/ BIDDER/ SUPPLIER
ROV	Remotely operated underwater vehicle
BK-TNHA	Thien Nga – Hai Au Wellhead Platform
WHP-DHN	Well head Platform Dai Hung Nam
HLV	Heavy Lift Vessel
HLB	Heavy Lift Barge
AHT	Anchor Handling Tug
CB	Crane Barge
CV	Crane Vessel
BP	Bollard Pull
DPO	Dynamic positioning Operator

## 2. SCOPE OF WORK/SUPPLY

SUBCONTRACTOR shall provide necessary resources, equipment and necessary arrangements to perform the works complying with the approved project codes, standards, specifications, drawings and the requirement described in project document, which includes but is not limited to, the execution, management, supervision, planning,



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monitoring, scheduling, coordination and supplies labor, material, consumable, tools and equipment, safety equipment to perform successfully the whole work in SUBCONTRACTOR's Scope of work


All equipment, materials, manpower shall be ensured quantity, quality and certificates in order that the project shall be performed in accordance with the project specification and schedule.

SUB-CONTRACTOR shall provide completed set of ROV, Marine vessels (**not include fuel**) and lubricants receiving, handling, storage, offshore transportation, customs clearance service etc. and to support CLIENT to perform successfully the whole work.

The SUB-CONTRACTOR shall perform all works including, but not limited to, the following:

- Perform all necessary procedures, engineering documents for relevant scope of work include prepare ROV operation procedure.
- Set up, install, dismantle ROV's spread on deck of vessel, perform all necessary sea fastening.
- Provided Operation & Construction personnel/ manpower. All personnel must have valid Work Certificates, Health Certification for Offshore Working and BOSIET certificate.
- ROV IMCA Audit according to relevant code and standards. SUBCONTRACTOR shall provide valid IMCA certificate, report in technical proposal.
- Seabed object and existing facilities detection and Debris removal within ROV capabilities.
- All work within the capabilities of the ROV as are Survey, Debris removal, Operate the ROV Valve, Cut Cable...
- ROV to carry out a pre-installation survey (visual check) of the Jacket footprint and remove debris before jacket set-down
- Perform ROV works to support and monitor WHP-DHN/BK-TNHA jacket and pile installation, including but not limited to the following:
  - Wire rope cut-off (maximum sling diameter 64mm) of the Tow line after TNHA Jacket rotation alignment with the HLV centerline.




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- Wire rope cut-off (maximum sling diameter 64mm) of the Tow line after DHN Jacket upending.
  - Monitoring during Jacket flooding, set down and docking to docking piles
  - Jacket survey check after set down
  - Monitoring during pile stabbing into skirt piles; piles driving; Installation and recovery of leveling equipment; Jacket levelling; Jacket Grouting; Valve activation; pile gripper activation; buoyancy tanks removal; Boatlanding installation (if any).
- Provide necessary tool, cable, 43inch full HD monitoring screen to transfer and set up remote temporary monitor station on Deck and operation cabin of VSP's crane barge/vessel.
  - Perform post-installation survey for the Jacket WHP-DHN, Jacket BK-TNHA and anchor handling crossing existing facilities for Crane barge/ vessel and HLV anchor deployment.
  - Provide accommodation and catering service for CONTRACTOR's personnel.
  - Coordinate with the positioning team to carry out the CONTRACTOR's works as requested.
  - Response and closed all MWS/ VSP comments.
  - Any other work as VSP's requirement.
  - Post installation and As-built survey as VSP's instruction.
  - Issue the Installation Survey Procedure to the CONTRACTOR and obtain approval from the CONTRACTOR and MWS at least 15 days prior to commencement of the offshore works
  - Prepare and issue post-installation, and as-built survey reports, complete with all ROV recorded files, and obtain approval from the CONTRACTOR and CLIENT.

### 3. SUBCONTRACTOR EXPERIENCE

SUBCONTRACTOR has experience at least 02 similar projects within 05 years for offshore field.



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SUBCONTRACTOR shall mobilize high qualified and experienced personnel/ engineer/specialist in the field of offshore survey/report and well English spoken for the Service including but not limited to:

- Project Manager.
- Data processor/drafting.
- Electronic engineer and staff.
- ROV superintendent, supervisor, pilot personnel
- Marine crew

#### **4. TECHNICAL REQUIREMENT**

##### **4.1 GENERAL REQUIREMENT**

- SUB-CONTRACTOR is vessel & ROV owner or have Letter of Commitment of all Tugboat & ROV applied for the Project by Vessel's Owner and ROV's Owner
- SUB-CONTRACTOR shall perform every customs formalities so that the Survey Vessel is allowed to operate in survey areas during site survey period.
- SUB-CONTRACTOR shall be responsible for obtaining port entry and departure clearances for the vessels. All port authority fees, pilotage fees, agency service charges, inspection fees and certification costs for the mobilized vessels shall be borne by the SUB-CONTRACTOR.
- SUB-CONTRACTOR shall ensure security for CONTRACTOR's/CLIENT's Representative, Survey Vessel and survey equipment during time of the Service.
- SUB-CONTRACTOR shall provide notification and relevant information to all concerned parties at the field (including the Main CONTRACTOR, the Owner, and the Field Operator, etc.) before and after carrying out works at the field.
- SUB-CONTRACTOR to provide tugboats c/w all valid certificates, P&I, H&M Insurance...
- SUB-CONTRACTOR has to provide on board the accommodation, catering for up to 09 CONTRACTOR's personnel and relevant personnel including two-man






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cabins with private bathroom and toilets facilities. Other equipment and instrument used for survey will be provided on site at the day and time specified in the contract schedule.

- SUB-CONTRACTOR shall complete all required inspections, preparation and installation and shall demobilize all equipment upon completion of the Service.
- SUB-CONTRACTOR shall be responsible for reporting and providing daily updates on working conditions to CONTRACTOR throughout the onshore and offshore operations.
- SUB-CONTRACTOR will be considered as mobilized after demonstrating onsite, in real time that all equipment were been calibrated and in operation when the vessel has been mobilized.
- Mobilization date is subjected to contract schedule and subjected to the vessel availability.
- The corresponding equipment including but not limited to:
  - The hardware and software on board, which are license compliance;
  - ROV System and its necessary tools be loaded and installed on deck.
- All equipment proposed for use by the SUB-CONTRACTOR shall be of the latest type and shall be accompanied by catalogues, manufacturer's certificates, and calibration certificates valid beyond the Service completion date, including adequate spares for successful execution.
- SUB-CONTRACTOR shall guarantee all measurement equipment are brand new and good operation. These measure equipment shall be protected during the site survey period and recovered when demobilization to ensure the adequate data for Survey Final Report.
- The Vessel Owner shall contact the Charterer's Marine Warranty Surveyor (MWS) and the Charterer's representatives and obtain their approval prior to mobilization. The SUB-CONTRACTOR shall be responsible for obtaining all required permissions for port entry and exit.



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- The vessel shall undergo a Suitability Survey conducted by the Marine Warranty Surveyor (MWS) or another recognized classification society prior to mobilization to the Project. The vessel party shall be responsible for addressing, closing out, and complying with all recommendations issued by the MWS before commencement of the Project. The validity of the recommendation close-out report shall be six (6) months, after which a re-survey shall be required.
- Foreign-flagged vessels shall be required to obtain a specific operating permit for activities within the waters of Ho Chi Minh City, issued by the Vietnam Maritime and Inland Waterways Administration.


## 4.2 VESSEL REQUIREMENT

SUB-CONTRACTOR is responsible for providing one (01) DP2 ROV vessel with all necessary certificates and insurance policies in accordance with class requirements and the requirements of the relevant Vietnamese authorities.

### The general requirements for ROV vessel are as following:

- Classification: VRH/\*VRM/DNV/ABS (+) A1, DP2 or equivalent
- Year of built: The Tugboat's years in service is NOT to exceed 15 years. Any Tugs older than 15 years are required to be inspected by an independent third party at the CONTRACTOR's expense
- Dynamic Positioning System: **DP2**
- Main engine should satisfy the Requirements of MWS but not less than **6000 BHP.**
- Bow thruster minimum capacity 1x400 kw or equivalent and have good condition for Offshore operation
- Principal dimensions:
  - Length OA                      Refer 60 – 75 m
  - Breadth Moulded              Refer 12 - 18 m
  - Depth Moulded                Refer 5.0 - 8.0m




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- ROV Vessel shall be dedicated to operating and assisting the ROV and survey equipment at all times during Offshore Performance of the work under the same Working Weather Condition with ROV.
- Navigation and communication equipment.
- ROV Vessel is to meet the requirement of classification and relevant Vietnamese authority such as but not limited to: Gyro Compass, Echo Sounder, GMDSS system, EPIRB, SART, INMARSAT, Telephone /Fax /E-mail, Weather facsimile, etc.
- Life-saving equipment: All lifesaving equipment shall be in compliance with requirement of classification relevant SOLAS convention 1974 Rules and Vietnamese authority.
- The Vessel must be in good condition and sufficient all document/ certificates for joining the Project.

**The general requirements for the vessel's crew are as following:**

- SUB-CONTRACTOR to provide 02 DPO (Dynamic positioning Operator) seniors with full DP certificate and 02 DPO juniors must be rich experience, require at least 02 years' experience.
- ROV Vessel and marine crew should be provided with all necessary insurance policies such as but not be limited to Hull & Machinery, P&I, Workman Compensation, etc.
- The vessel Captain is requested to have **at least 5 years** of working experience in offshore operations. Tugboat captain is required to provide a Curriculum Vitae and a Captain certificate.
- The chief officer (First Officer) is required to have **at least four (4) to five (5) years** of experience in offshore operations and shall be responsible for watchkeeping and acting on behalf of the Captain throughout the offshore operations
- The Vessel's Crew shall have **at least 1-2 years** working experience at offshore fields. Require providing the Curriculum Vitae of all the chief and main crew.



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- SUB-CONTRACTOR is required to perform offshore works on a continuous 24 hours per day, 7 days per week basis.
- The vessel shall be in good operational condition and shall possess all necessary documents and certificates required to participate in the Project.
- The Captain of the Tugboat must communicate with the VSP's representative and CB/CV/HLV representative to obtain permission before approaching and securing the vessel.

### 4.3 ROV REQUIREMENT

ROV system is required during performance works of ROV survey. It includes but not limit, as follows:

**ROV is Work class, at least 100 HP (ROV is manufactured in 2011 or newer) with Schilling manipulators 5 functions and 7 functions or equivalent, auto-positioning & plotting system. Can move debris around the survey area.**

**Working weather limitation condition:**

- Current speed max: 2.0 knots,
- Wind speed max: 25 knots
- Significant wave height Hs: 2.0 m


**ROV Topside package system:**

- Launch and recovery system, Skid A-frame, sheave, docking device and lifting winch. Control and workshop containers, umbilical winch & hydraulic power pack;
- Workshop/spares container;
- Control/cabin: Color Monitors, VCR's/DVD's and Monitors+ spares;

**Underwater package system:**

- Seeking Bathymetric system;
- High Resolution Scanning Sonar;
- Transponder/Responder.
- Auto depth and heading;




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- Obstacle avoidance sonar;
- Altitude sensors;
- Depth sensors;
- 3 cameras system;
- Boom mounted color camera c/w pan and tilt;
- Central cameras;
- Low Light Camera (SIT);
- Seven function weight manipulator arm;
- Fluxgate compass;
- Underwater variable intensity lighting units;
- Seawater velocity probe for system calibration;

**ROV survey equipment:**

- Pitch Roll sensor;
- Wheeled undercarriage;
- Associated consumables & spares.
- Other equipment's:
- PC computer system with servers, post processing software and navigation software;
- A4/A3 color printers;
- USBL Acoustic Positioning Systems;
- Gyro compass;
- Navigation display monitors; ○ Sub-mini beacons + charging units;
- Uninterrupted power supply units.
- Cutting tool (Cutting wire rope sling up to dia 64mm)
- Dual head profiler, bathymetric system.
- Some other ROV tools according to project requirements



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**Personnel** are required for works of ROV inspection as follows (including, at least but not limit):

- 1 ROV Superintendent: Minimum 8-10 years of experience work with ROV, with IMCA Certificate;
- 2 ROV Supervisors: Minimum 07 years of experience work with ROV, with IMCA Certificate;
- 4 ROV Pilots/ Technicians/Engineers to maintain all equipment in working order with minimum 05 years of experience work with ROV, with IMCA Certificate;

#### 4.4 REPORT

Comprehensive records of all operations, observations and measurements shall be maintained by the SUBCONTRACTOR throughout the entire project.

These records shall include a detailed daily log of all activities, weather conditions and Sea State, observations equipment used, personnel and work completed.

##### Survey Reports

The data collected during the survey shall be collated and synthesized in a comprehensive report. This written report shall include field methodology, equipment, accuracy, including a narrative section of results, wind, wave, tide, swell and current, sediment transportation, conclusions and recommendations.

Survey Reports will not be accepted if it is missed the data in any part for any reasons.

When the site survey period is finished, the SUB-CONTRACTOR shall make and submit the Preliminary Survey Report (PSR) to CONTRACTOR for consideration. The PSR content shall be summarized entire site survey activities of SUB-CONTRACTOR at site and included the gathered raw data and the site survey events.


Pursuant to Survey Services Schedule of Contract, the SUB-CONTRACTOR shall submit the Final Survey Reports to CONTRACTOR/CLIENT for comment and approval.

Base on the VSP's writing approval and Survey Services

Schedule of Contract, the SUB-CONTRACTOR shall issue and submit the Final Survey Reports to CONTRACTOR for completion. The delivered Final Survey Reports (original) shall be included 02 sets in English for each campaign.

The survey report shall with pdf file, native file and two (02) USB data storage devices containing all survey data and video recordings to the Client as part of the survey report deliverables.



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## 5. HIRING TIME WINDOW

No	Description	Unit	From	To	Qty	Time duration	Note
1	Vessel & ROV Mob/Demob	time			1.00		
2	<b>WHP-BK TNHA</b> Support during Jacket installation (Footprint survey before Jacket Set down, monitor during Jacket, pile and boatlanding installation, cut off Sling of Tow line and monitor during grouting, Monitor during Buoyancy tanks removal) Post-installation survey	days	01/8/2026	25/8/2026	1.00	25.00	
3	<b>WHP-DHN</b> Support during Jacket installation (Footprint survey before Jacket Set down, monitor during Jacket, pile and boatlanding installation, cut off Sling of Tow line and monitor during grouting, Monitor during Buoyancy tanks removal) Post installation survey for jacket	days	26/8/2026	03/10/26	1.00	39.00	
4	Cutting tool mob/demob	time			1.00		
5	Cutting tool	days	01/8/2026	06/09/26		37.00	
<b>TOTAL FOR VESSEL &amp; ROV</b>						<b>64.00</b>	

**Note:**

- The actual Mob/demob schedule shall depend on the overall project schedule and will be updated at a later stage.
- ON-HIRE at VietSovpetro's port after completed set-up and function test ROV system at VSP's port and ready for working
- OFF-HIRE at VietSovpetro's port after completed the Work and upon receipt of demobilization instruction.
- ON-HIRE / OFF-HIRE shall be conducted at VSP's port.
- The ROV cutting tool shall be mobilized and demobilized at VSP's port, in accordance with VSP's instructions and subject to actual conditions.



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## 6. TECHNICAL PROPOSAL

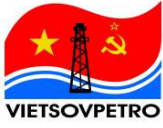
The SUB-CONTRACTOR's technical proposal includes, but is not limited to:

- Letter of Commitment of all Tugboat applied for the Project by Vessel's Owner and ROV's Owner
- Previous contracts for similar projects and the provision of track records, if any.
- Provision of List of Personnel and CVs with all relevant certificates and documentation of the entire crew and ROV operation team
- Survey procedure.
- List of ROV equipment and relevant certificate
- Vessel specification.
- Vessel and ROV documents, certificates, classification, and insurance documentation
- ROV operation manual
- Detailed scope of service and recommendation/comments for this Scope of Work and execution schedule.
- Suitability Survey documentation issued by the Marine Warranty Surveyor (MWS) within one (1) year prior to the bid submission date if any

## 7. APPENDICES

- Appendix 1: Survey Drawing and Offshore Installation drawings (Update later)
- Appendix 2: Load-out and Transportation & Offshore Installation Schedule for TNHHA Project in 2026
- Appendix 3: Load-out and Transportation & Offshore Installation Schedule for DHN Project in 2026

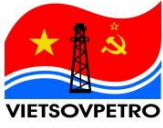


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**APPENDIX 1:**

**Survey Drawing and Offshore Installation drawings (Update later)**



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**APPENDIX 2:**

**Load-out and Transportation & Offshore Installation Schedule  
for TNHA Project**





# BLOCK 12/11 THIEN NGA HAI AU DEVELOPMENT PROJECT TRANSPORTATION AND INSTALLATION SCHEDULE



Activity ID	Activity Name	Original Start	Finish	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
<b>BK-TNHA Platform - Transportation &amp; Installation schedule</b>												
159	02-Aug-26	05-Sep-26	05-Sep-26									
<b>LOAD OUT AND SEAFASTENING</b>												
29	26-Jul-26	23-Aug-26	23-Aug-26									
<b>Load out of Jacket &amp; Piles</b>												
14	26-Jul-26	07-Aug-26	07-Aug-26									
10	26-Jul-26	05-Aug-26	05-Aug-26									
10	26-Jul-26	05-Aug-26	05-Aug-26									
10	30-Jul-26	09-Aug-26	09-Aug-26									
8	15-Aug-26	21-Aug-26	21-Aug-26									
8	15-Aug-26	23-Aug-26	23-Aug-26									
159	02-Aug-26	06-Sep-26	06-Sep-26									
152	02-Aug-26	01-Sep-26	01-Sep-26									
<b>TRANSPORTATION &amp; OFFSHORE INSTALLATION OF BK-TNHA Platform</b>												
<b>Pre-installation Survey</b>												
13	02-Aug-26	15-Aug-26	15-Aug-26									
<b>Mobilization of Survey Vessel</b>												
4	02-Aug-26	02-Aug-26	02-Aug-26									
0	02-Aug-26	02-Aug-26	02-Aug-26									
2	02-Aug-26	04-Aug-26	04-Aug-26									
2	04-Aug-26	06-Aug-26	06-Aug-26									
6	06-Aug-26	12-Aug-26	12-Aug-26									
5	06-Aug-26	10-Aug-26	10-Aug-26									
2	10-Aug-26	12-Aug-26	12-Aug-26									
4	12-Aug-26	15-Aug-26	15-Aug-26									
2	12-Aug-26	13-Aug-26	13-Aug-26									
2	13-Aug-26	15-Aug-26	15-Aug-26									
5	16-Aug-26	20-Aug-26	20-Aug-26									
2	16-Aug-26	18-Aug-26	18-Aug-26									
3	18-Aug-26	20-Aug-26	20-Aug-26									
8	20-Aug-26	23-Aug-26	23-Aug-26									
2	20-Aug-26	22-Aug-26	22-Aug-26									
0	20-Aug-26	22-Aug-26	22-Aug-26									
1	22-Aug-26	23-Aug-26	23-Aug-26									
2	23-Aug-26	25-Aug-26	25-Aug-26									
1	25-Aug-26	25-Aug-26	25-Aug-26									
1	25-Aug-26	26-Aug-26	26-Aug-26									
0	27-Aug-26	27-Aug-26	27-Aug-26									
2	27-Aug-26	28-Aug-26	28-Aug-26									
4	28-Aug-26	01-Sep-26	01-Sep-26									
3	29-Aug-26	31-Aug-26	31-Aug-26									
1	31-Aug-26	01-Sep-26	01-Sep-26									
33	18-Jul-26	26-Aug-26	26-Aug-26									
23	18-Jul-26	16-Aug-26	16-Aug-26									
<b>Transportation &amp; Installation of Jacket &amp; Piles</b>												
<b>Jack, Marine Spread</b>												
<b>Jacket Transportation barge</b>												
SCH4-3010												
SCH4-3020												
SCH4-3200												
SCH4-3210												
SCH4-3050												
<b>Jacket Installation</b>												
SCH4-2960												
SCH4-2970												
SCH4-2980												
SCH4-2990												
SCH4-3000												
SCH4-3000												
SCH4-3000												
SCH4-3190												
SCH4-2820												

Actual Level of Effort Milestone  
 Actual Work   
 Remaining Work

21-Oct-25 Date  
 Issue for information Revision  
 Approved

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Văn bản này được xác thực tại <https://office.vietson.com.vn/vot-so-dinh-danh-770-26-1CKT-VL>



# BLOCK 12/11 THIEN NGA HAI AU DEVELOPMENT PROJECT TRANSPORTATION AND INSTALLATION SCHEDULE



Activity ID	Activity Name	Original Start	Finish	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
15	Demob. Marine Spread	11-Aug-26	25-Aug-26									
16	Jacket Transportation barge	11-Aug-26	15-Aug-26									
17	Transit to Vung Tau	11-Aug-26	15-Aug-26									
18	Clear barge and demob.	13-Aug-26	15-Aug-26									
19	Piles Transportation barge	21-Aug-26	25-Aug-26									
20	Transit to Vung Tau	21-Aug-26	25-Aug-26									
21	Clear barge and demob.	23-Aug-26	25-Aug-26									
22	Transportation & Installation of Topside	14-Aug-26	01-Sep-26									
23	Topside Transportation barge	14-Aug-26	26-Aug-26									
24	Topside Transportation Barge transit to Field	14-Aug-26	14-Aug-26									
25	Installation Topside	26-Aug-26	31-Aug-26									
26	Preparation, out off seafastening, installation of Topside to final position	26-Aug-26	27-Aug-26									
27	Workout 04 leg of Topside	26-Aug-26	26-Aug-26									
28	Installation Handrail/Ladder/Stairway and complete TS installation	1 26-Aug-26	26-Aug-26									
29	Demg material & equipment	1 26-Aug-26	30-Aug-26									
30	Un-mooring operation of Crane barge	1 30-Aug-26	31-Aug-26									
31	Demob. Marine Spread	5 26-Aug-26	01-Sep-26									
32	Crane barge	0 31-Aug-26	31-Aug-26									
33	Demobilization of Crane Barge	0 31-Aug-26	31-Aug-26									
34	Topside Transportation barge	5 26-Aug-26	01-Sep-26									
35	Topside Transportation Barge transit to Vung Tau port	2 26-Aug-26	30-Aug-26									
36	Clear barge and demob.	2 30-Aug-26	01-Sep-26									
37	MARINE SPREAD	15 02-Aug-26	08-Sep-26									
38	ROV survey	15 02-Aug-26	08-Sep-26									
39	Pre-installation survey	13 02-Aug-26	15-Aug-26									
40	Mobilization of ROV - Pre-installation survey	4 02-Aug-26	08-Aug-26									
41	ROV survey at field - Jacket installation and RD modification	3 07-Aug-26	15-Aug-26									
42	Demobilization of ROV - Pre-installation survey	3 13-Aug-26	15-Aug-26									
43	Subsea installation	12 18-Aug-26	30-Aug-26									
44	Mobilization of ROV - Subsea installation	4 18-Aug-26	21-May-26									
45	ROV survey at field - Subsea installation	6 21-May-26	27-May-26									
46	Demobilization of ROV - Subsea installation	3 27-May-26	30-May-26									
47	Jacket installation	19 07-Aug-26	26-Aug-26									
48	Mobilization of ROV - Jacket installation	2 07-Aug-26	08-Aug-26									
49	ROV survey at field - Jacket installation	15 09-Aug-26	24-Aug-26									
50	Demobilization of ROV - Jacket installation	2 24-Aug-26	26-Aug-26									
51	Post-installation survey	8 31-Aug-26	08-Sep-26									
52	Mobilization of ROV - Post-installation survey	2 31-Aug-26	08-Sep-26									
53	ROV survey at field - Post-installation survey	4 02-Sep-26	08-Sep-26									
54	Demobilization of ROV - Post-installation survey	2 08-Sep-26	08-Sep-26									
55	Hoang Sa Crane barge (Subsea installation)	16 16-Aug-26	01-Jun-26									
56	Mobilization of Hoang Sa Crane Barge	5 16-May-26	20-May-26									
57	Subsea installation at field	8 20-May-26	29-May-26									
58	Demobilization of ROV - Subsea installation	4 29-May-26	01-Jun-26									
59	Jacket transportation barge	20 25-Jul-26	14-Aug-26									
60	Mobilization of Jacket Transportation barge	0 25-Jul-26	25-Jul-26									
61	Load out & seafastening Jacket on barge	10 26-Jul-26	05-Aug-26									
62	Jacket Transportation Barge transit to Field	3 05-Aug-26	07-Aug-26									
63	Jacket Transportation Barge at field	2 07-Aug-26	08-Aug-26									
64	Transit to Vung Tau	3 08-Aug-26	12-Aug-26									
65	Clear barge and demob.	2 12-Aug-26	14-Aug-26									
66	Piles, Boatlanding transportation barge	30 29-Jul-26	27-Aug-26									
67	Mobilization of Piles, Boatlanding Transportation barge	0 29-Jul-26	29-Jul-26									
68	Load out & seafastening Piles, Boatlanding on barge	10 30-Jul-26	09-Aug-26									
69	Piles, Boatlanding Transportation Barge transit to Field	3 09-Aug-26	11-Aug-26									
70	Piles, Boatlanding Transportation Barge at field	12 11-Aug-26	23-Aug-26									
71	Transit to Vung Tau	3 23-Aug-26	25-Aug-26									
72	Clear barge and demob.	2 25-Aug-26	27-Aug-26									
73	Topside transportation barge	18 14-Aug-26	01-Sep-26									

█ Actual Level of Effort  
█ Actual Work  
█ Remaining Work  
◆ Milestone  
→ summary



# BLOCK 12/11 THIEN NGA HAI AU DEVELOPMENT PROJECT TRANSPORTATION AND INSTALLATION SCHEDULE

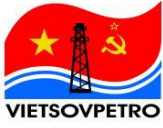


Activity ID	Activity Name	Original Start Duration	Finish	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
SCHA-3362	Mobilization of Topsides Transportation barge	0 14-Aug-26	14-Aug-26									
SCHA-3364	Load out & seafastening topside on barge	8 15-Aug-26	23-Aug-26									
SCHA-3366	Topsides Transportation Barge transit to Field	3 23-Aug-26	26-Aug-26									
SCHA-3368	Topsides Transportation Barge at field	2 26-Aug-26	27-Aug-26									
SCHA-3370	Transit to Vung Tau	3 27-Aug-26	30-Aug-26									
SCHA-3372	Clear barge and demob.	2 30-Aug-26	01-Sep-26									
SCHA-3332	Heavy lift vessel (Jacket, Piles and Topsides installation)	24 07-Aug-26	31-Aug-26									
SCHA-3334	HLV at field	0 07-Aug-26	07-Aug-26									
SCHA-3334	Installation of Jacket, Piles and Topsides	23 08-Aug-26	31-Aug-26									
SCHA-3336	DelMob HLV	0 31-Aug-26	31-Aug-26									
SCHA-3376	Diving vessel - 1st trip	17 08-Aug-26	25-Aug-26									
SCHA-3376	Diving vessel - 1st trip	5 08-Aug-26	12-Aug-26									
SCHA-3378	Diving vessel transit to Field - 1st trip	2 08-Aug-26	09-Aug-26									
SCHA-3380	Remove lifting slings	1 10-Aug-26	11-Aug-26									
SCHA-3380	Transit to Vung Tau - 1st trip	2 11-Aug-26	12-Aug-26									
SCHA-3382	Diving vessel - 2nd trip	4 21-Aug-26	25-Aug-26									
SCHA-3382	Diving vessel transit to Field - 2nd trip	2 21-Aug-26	22-Aug-26									
SCHA-3384	Remove Buoyancy Tanks	3 21-Aug-26	23-Aug-26									
SCHA-3386	Transit to Vung Tau - 2nd trip	2 23-Aug-26	25-Aug-26									
SCHA-3388	GROUTING support vessel	10 14-Aug-26	23-Aug-26									
SCHA-3388	Mobilization of GROUTING support vessel	0 14-Aug-26	14-Aug-26									
SCHA-3390	Load out equipment on GROUTING support vessel	2 14-Aug-26	15-Aug-26									
SCHA-3392	GROUTING support vessel transit to Field	2 15-Aug-26	17-Aug-26									
SCHA-3394	GROUTING works at field	3 18-Aug-26	21-Aug-26									
SCHA-3396	Transit to Vung Tau	2 21-Aug-26	22-Aug-26									
SCHA-3398	Clear barge and demob.	1 22-Aug-26	22-Aug-26									

█ Actual Level of Effort  
█ Actual Work  
█ Remaining Work  
◆ Milestone  
◆ summary

Date	Revision	Checked	Approved
21-Oct-25	Issue for information		



	<b>TECHNICAL REQUIREMENT</b> FOR PROVISION OF ROV SPREAD FOR SURVEY AND OFFSHORE INSTALLATION FOR DHN & TNHA (INCLUDE VESSEL AND EXCLUDE FUEL)	DOC. NO.	VSP-GENR-S-0004-TR
		REV.	0
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### **APPENDIX 3:**

## **Load-out and Transportation & Offshore Installation Schedule for DHN Project**



WHP-DHN Overall EPC Project Schedule (final)		Classic Schedule Layout												22-Jan-26 19:58														
Activity ID	Activity Name	Remaining Duration	Original Duration	Start	Finish	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035												
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
<b>DHN-updated TS.4.1 WHP-DHN Overall EPC Project Schedule</b>																												
DHN-updated TS.0	Project Milestones	562	562	0%	15-Aug-25	13-Oct-27																						
DHN-updated TS.1	Preliminaries	653	653	0%	16-Aug-25	13-Oct-27																						
DHN-updated TS.2	Detail Engineering	407	407	0%	18-Aug-25	09-Mar-27																						
DHN-updated TS.3	Procurement	400	400	0%	18-Aug-25	27-Feb-27																						
DHN-updated TS.4	WHP-DHN Platform	494	494	0%	15-Aug-25	08-Jul-27																						
DHN-updated TS.4.1	WHP-DHN Onshore Fabrication	475	475	0%	15-Aug-25	10-Jun-27																						
DHN-updated TS.4.2	WHP-DHN Loadout and Seafastening	249	249	0%	15-Aug-26	21-Apr-27																						
DHN-updated TS.4.1.1	Jacket & Piles LOSF	16	16	0%	15-Aug-26	31-Aug-26																						
DHN-1000	Preparation work on Launching Barge and Skid way	5	5	0%	15-Aug-26	20-Aug-26																						
DHN-1010	Rotation of Launching barge perpendicular to quayside	0	0	0%	20-Aug-26	20-Aug-26																						
DHN-1020	Continue repair work on Launching Barge before load-out	2	2	0%	20-Aug-26	22-Aug-26																						
DHN-1030	Site moving and loadout Jacket by strand-jack method (skidding)	1	1	0%	22-Aug-26	23-Aug-26																						
DHN-1040	Seafastening for Jacket (up to 50%) and activities post-load out	4	4	0%	23-Aug-26	27-Aug-26																						
DHN-1050	Rotation of launching barge along quayside	0	0	0%	27-Aug-26	27-Aug-26																						
DHN-1060	Continue carry out seafastening and set up, testing for launch	4	4	0%	27-Aug-26	31-Aug-26																						
DHN-1070	Completion T&I check list and get approval from MMS for seafastening	0	0	0%	31-Aug-26	31-Aug-26																						
DHN-1080	Jacket Load-out Completion and ready for sailway	0	0	0%	31-Aug-26	31-Aug-26																						
DHN-updated TS.4.1.1	Load-out Piles	10	10	0%	25-Aug-26	04-Sep-26																						
DHN-1090	Installation of grillage beams and seafastening members on barge	3	3	0%	25-Aug-26	28-Aug-26																						
DHN-1100	Load out of 04 Piles of group 1 onto VSP-05	2	2	0%	28-Aug-26	29-Aug-26																						
DHN-1110	Rotate pile barge and rig-up along side quayside	1	1	0%	29-Aug-26	30-Aug-26																						
DHN-1120	Load out of 04 Piles of group 2 onto VSP-05	2	2	0%	30-Aug-26	31-Aug-26																						
DHN-1130	Installation of Uprighting Frame, upending support and set up	2	2	0%	31-Aug-26	02-Sep-26																						
DHN-1140	Completion seafastening for Piles on barge	2	2	0%	01-Sep-26	03-Sep-26																						
DHN-1150	Testing Upending Clamp	1	1	0%	02-Sep-26	03-Sep-26																						
DHN-1160	Installation of lifting gear and Hydraulic Shackle and testing	1	1	0%	02-Sep-26	03-Sep-26																						
DHN-1170	Trial lifting and Upending pile	1	1	0%	03-Sep-26	04-Sep-26																						
DHN-1180	Load out Shiplose onto barge	1	1	0%	03-Sep-26	04-Sep-26																						
DHN-1190	Clean up barge and Ready for Sailway	1	1	0%	04-Sep-26	04-Sep-26																						
DHN-updated TS.4.2	Topside LOSF	15	15	0%	06-Apr-27	21-Apr-27																						
DHN-updated TS.4.2	WHP-DHN Transportation & Installation	371	371	0%	01-May-26	07-May-27																						
DHN-updated TS.4.2.4	Pre-installation Survey	7	7	0%	01-May-26	08-May-26																						
DHN-6680	Mobilization of ROV vessel to Field	0	0	0%	01-May-26*																							
DHN-6710	Survey WHP-DH01 jacket launching area by Side scan Sonar	4	4	0%	01-May-26	04-May-26																						
DHN-6720	Survey foot print jacket installation area and anchors of Demob	4	4	0%	04-May-26	08-May-26																						
DHN-6730	Demobilization of ROV vessel at field	0	0	0%	08-May-26																							
DHN-updated TS.4.2.2	Docking piles installation Campaign	13	13	0%	12-Jun-26	24-Jun-26																						
DHN-6860	Mobilization of Crane Vessel to VSP's port	0	0	0%	12-Jun-26																							
DHN-6870	Preparation works and load out docking piles, equipment onto Crane Vessel	1	1	0%	12-Jun-26	13-Jun-26																						
DHN-6880	Towing Crane Vessel to Field	2	2	0%	13-Jun-26	15-Jun-26																						
DHN-6890	Mooring operation for Crane Vessel	4	4	0%	15-Jun-26	16-Jun-26																						
DHN-6900	Frame & Docking piles installation	4	4	0%	16-Jun-26	20-Jun-26																						
DHN-6910	Unmooring operation for Crane Vessel	1	1	0%	20-Jun-26	21-Jun-26																						
DHN-6920	Towing Crane Vessel to shore	2	2	0%	21-Jun-26	23-Jun-26																						
DHN-6930	Clear & offhire Crane Vessel	1	1	0%	23-Jun-26	24-Jun-26																						
DHN-updated TS.4.2.3	Jacket	49	49	0%	15-Aug-26	03-Oct-26																						
DHN-updated TS.4.3.2	Vessel Mob/Demob	49	49	0%	15-Aug-26	03-Oct-26																						
DHN-updated TS.4.3.2.2	Heavy Lift Barge	13	13	0%	28-Aug-26	09-Sep-26																						

TASK filter: All Activities

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WHP-DHN Overall EpCII Project Schedule (final)		Classic Schedule Layout																									
Activity ID	Activity Name	Remaining Duration	Original Duration	Schedule % made	Start	Finish	2025			2026			2027			2028			2029								
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
DHN-1*	Cut off top of jacket legs	1	1	0%	26-Sep-26	27-Sep-26																					
DHN-1*	Touch up painting and recover scaffoldings	2	2	0%	25-Sep-26	27-Sep-26																					
DHN-1*	Jacket installation completion	1	1	0%	27-Sep-26	28-Sep-26																					
DHN-6*	Truong Sa un-morning operation	1	1	0%	28-Sep-26	29-Sep-26																					
DHN-6*	Truong Sa transit back to VSP's port	2	2	0%	29-Sep-26	01-Oct-26																					
DHN-updated TS.4.2.1	Topside	31	31	0%	06-Apr-27	07-May-27																					
DHN-updated TS.4.3	WHP-DHN Hook-up & Commissioning	41	41	0%	28-May-27	08-Jul-27																					
DHN-updated TS.5	Infield Pipelines	605	605	0%	11-Nov-25	08-Jul-27																					
DHN-updated TS.6	Existing Facilities (FPU and WHP-DH02)	425	425	0%	03-Nov-25	18-Jun-27																					
DHN-updated TS.7	Start-up and Performance Testing Assis	97	97	0%	02-Apr-27	08-Jul-27																					
DHN-updated TS.8	Project As-Built & Final Documentation	113	113	0%	19-May-27	06-Oct-27																					

