

180 projects, 14 countries and the most demanding of terrain. Our ever-increasing list of satisfied clients is a reflection of our determination to excel in every venture that we undertake.

United we stand....



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ability to mobilise
manpower and
equipment for projects
worldwide

Be it the scorching desert

sun, the fierce monsoon or temperatures ranging from -40° C to +40° C, our people have braved it all and brought accolades to the Company. In turn, recognising its people as its most important asset, Punj Lloyd focuses on their health and safety, training them to maintain the highest degree of

safety standards. In fact, Punj Lloyd Kazakhstan's safety record, culminated in the award of 5.5 million man-hours without a day away from work injury. This and many other awards conferred to Punj Lloyd for its HSE performance are a reflection of its concern for the well being of its people.

Today, Punj Lloyd is undisputedly one of India's largest engineering construction companies, a feat that has been accomplished as a result of the enthusiasm, drive

and expertise of its people. Our engineers have exceptional project management and multi-disciplinary skills. Punj Lloyd's policy of integrating and training local workforce with managers from India has helped at project sites across the world. Crossing cultural barriers, our diverse workforce speaks only one language - that of attaining common goals.

At our projects, the team spirit among workers has contributed to precise co-ordination, motivation and enthusiasm. At Kazakhstan, the Indian workforce learnt the local language on the job,

hence bringing in a feeling of camaraderie with their fellow Kazakh workers.

While the workforce comprise 70 per cent Kazakhs and 30 per cent Indians, both share a strong bonding and even enjoy Indian meals together. For the 20 km (36" dia) Uran Trombay Jawahardeep offshore pipeline, Punj Lloyd mobilised its Indonesian manpower. This ability to mobilise manpower and equipment for projects worldwide, gives Punj Lloyd a competitive edge over other players in the field. On the 42" dia Dahej-Vijaipur pipeline, expert manpower was mobilised from 11 countries, including Turkish and Indonesian welders from our own sites.

This multi-skilled workforce is the core strength behind the Company's capability to handle multiple complex projects. Highly adaptable, the teams are confident of handling tasks in any region of the world, any climate and any terrain. Their 'can do' culture and determination empowers them to face all challenges head on. Truly an asset to Punj Lloyd, this able and talented workforce is confident of achieving milestones in all projects.

♦ P K Gandhi

Undeterred by the Treacherous Mire

Tambora Field Development Project Phase II

A drive to excel is what makes Punj Lloyd one of Asia's leading infrastructure builders. Our successfully executed projects, some well before time, are a testament to Punj Lloyd's endeavour to surpass its client's expectations every time.



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tambora field
development phase II

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equipped with the resources,
experience and expertise,
we took the task head on

PT. Punj Lloyd Indonesia (PTPLI) was awarded the EPSC contract for Tambora Field Development Project Phase II / EPSC2 (TB2/

EPSC2) in November 2004. The project was part of Total's Tambora field development programme to meet its production requirements. Located in East of Kalimantan, Indonesia, on the inner margin of the Mahakam delta,

Tambora offered us a challenging task by virtue of its

swampy and marshy terrain. Nothing daunted, PT. Punj Lloyd with its reputation of being 'All terrain specialists', equipped with the resources, experience and expertise, took the task head on.

The project is a gas pipeline network comprising a 24" dia trunkline from the Gathering Testing Satellite (GTS 4) Station, which is a new facility, to the existing STP 3 located at the Central Processing



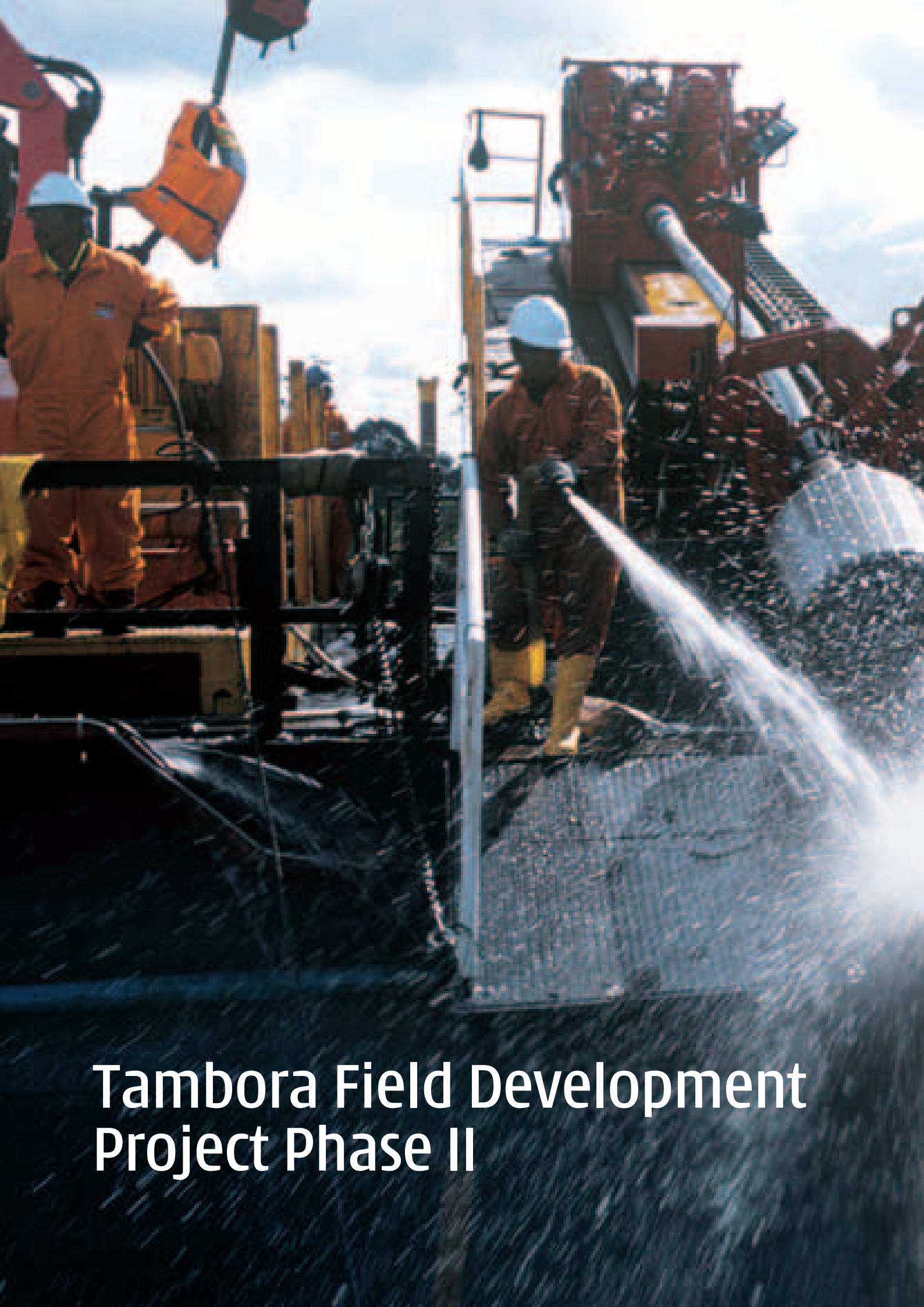
Unit of the Tambora field. En route, the trunkline connects GTS 3, GTS 2X and the existing GTS 2. 8" dia flowlines with 2" dia piggy back lines connect gas wellhead platforms TMX-4 and TMX-7 to GTS 4 and TMX-9 and TMX-11 to GTS 3. The above lines also comprise five Horizontal Directional Drilling (HDD) sections, four of 24" dia and one of 8 dia".

The immediate requirement was first to reroute the three 6" dia existing flow lines to install new facilities, which involved piling, pipe-laying, welding, NDT, testing and painting in swamp. The tie-up of the line during shutdown was a



extensive aerial
pipeline installations
in swamp



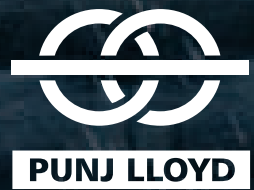


Tambora Field Development Project Phase II





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quasi offshore
nature of work



crucial activity and was completed one week ahead of schedule.

The proximity of the PT. Punj Lloyd yard at Sungaipurun, Indonesia on the banks of Mahakam river to Total gasfields offered an advantage

as material storage, prefabrication and painting were performed at the yard. The work was 'Quasi-Offshore' as materials to the marshy locations were transported through landing craft, tugs and barges, while personnel staff lodged in long boats and moved around the sites with the aid of speed boats and sea trucks. The water front and the jetty facility at Sungaipurun yard were widely utilised.

The installation involved ROW clearing of dense marshy plants along the pipeline route. Swamp equipment was

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HDD performed
inhouse using own
equipment



extensively used for aerial section installation. In most areas, the swamp was 2 m deep. Piles were driven in the aerial sections and prefabricated structures were welded to support the pipe strings. At HDD locations, the strings were prefabricated on these aerial sections. Temporary jetty and platforms were installed at all these locations for resources and material mobilisation and demobilisation.

The HDD strings were pre-tested before pull back and were placed over rollers to facilitate smooth pull back. The HDD rig and accessories were mounted on a work barge and were located in clusters. At one location, a temporary platform - designed to take 150 T of load - was fabricated to install rig for HDD operations. In

other locations, the HDD equipment was placed on the barge. The aerial sections which were erected on piles were finally tied-in with the HDD exit and entry points. Dredging at river crossings used a clamshell barge and the prefabricated river crossing spools were erected by a river crossing work barge, incorporated with davits at the PT. Punj Lloyd yard in Sungaipurun. Pre-commissioning is in progress for the 24" dia trunkline and the 8" dia and 2" dia flowlines / piggyback lines from TMX-9 and TMX-11 to GTS 3.

◆ Govindarasu R



SOME FIRSTS

- ≈ Extensive aerial pipeline installations in a swamp area of 11.7 km
- ≈ HDD performed in-house using Punj Lloyd Indonesia's own equipment
- ≈ Single HDD section of 24" dia pipeline for 2 km

CHALLENGES

- ≈ Tidal variations upto 2 m
- ≈ In-house fabrication of swamp equipment
- ≈ Round the clock maintenance of swamp equipment due to exposure to adverse working conditions
- ≈ Pressure on supply dates due to global steel market demand
- ≈ Timely procurement ready for HDD accessories from various specialist vendors spread all over the world

LANDMARK ACHIEVEMENTS

- ≈ Strings for HDD welded, radiographed, coated pre-tested and ready for pull back in 57 days from receipt of pipes
- ≈ Trunkline ready for precommissioning within 7 months of receipt of pipes, including 4 HDD sections of 5.4 km and 4 km of swamp erection

Method of construction

24" TRUNK LINE

| | |
|-------------------------|------------------------|
| Aerial swamp erection | - 7 Sections - 3,916 M |
| HDD crossing | - 4 Sections - 5,494 m |
| Open cut river crossing | - 1 Section - 64 m |

8" FLOWLINE / 2" PIGGYBACK LINE

| | |
|-------------------------|------------------------|
| Aerial swamp erection | - 8 Sections - 7,809 m |
| HDD crossing | - 1 Section - 914 m |
| Open cut river crossing | - 3 Sections - 365 m |

6" FLOWLINE REROUTING

| | |
|-----------------------|------------------------|
| Aerial swamp erection | - 3 Sections - 1,300 m |
|-----------------------|------------------------|

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achieved 1.99 million
man-hours with out
LTI by end of april '06

The gas pipeline network

for Total's Tambora Field Development Project in Indonesia is considered one of the toughest, owing to the marshy terrain and difficult working conditions.

Having handled similar projects in equally difficult terrain, the team enthusiastically set the pace, keeping the HSE objectives in mind.

New employees were taken through the safety orientation program, highlighting the project structure, duties and responsibilities, hazard identification techniques and emergency response procedures. Safety training was conducted

Integrating Health, Safety and Environment with Work

HSE Achievements

1.99 million man-hours without LTI by April 2006

The only contractor for Total projects in Kalimantan to have undergone audit by DNV, SUCOFINDO

DNV accreditation for OHSAS 18001: 1991, ISO 14001: 1996, ISO 9001: 2000

A score of 92 per cent in the SUCOFINDO audit by the Govt. of Indonesia, falling in the category of 'Golden Flag'

A score of 81 per cent in the HSE audit conducted by Total E & P Indonesia for their contractors

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swamp equipment
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conditions

throughout the project. To cover every aspect related to safety, new requirements were identified and incorporated in the training module.

With the objective of increasing involvement and motivating employees, monthly safety awards were instituted for adopting best safety practices – promoting workmen for communicating possible hazards and their control.

A stickler for maintaining highest HSE standards, PT Punj Lloyd took initiatives right from the onset of the project. The commitment of the management alongwith continuous training programs, created awareness among every individual working on the project.

During construction, eco efficient technologies were promoted and action taken to maintain a clean environment. Noise limits in work area, air quality at facilities were regularly monitored. Conscious of safeguarding the environment during construction, all procedures and specifications laid down by Total E&P Indonesia for environmental safety were strictly followed.

◆ K Jayaraman

Construction of Flowlines and Wellhead in ADCO's Bab & BuHasa Oilfields, UAE

In March 2005, amidst stiff competition in Abu Dhabi, UAE, Punj Lloyd aggressively bid and was awarded the ADCO contract for 940 km of flowlines. With a duration of three years, this is an on-call contract wherein Punj Lloyd will lay the flowlines as and when oil wells are drilled. This is the first time Punj Lloyd has undertaken a service contract of this nature.

A special local team kick-started the project which faced new government regulations for visa processing, amended labor laws and municipality land approvals.

The skills and competence of the

project team won ADCO's appreciation. With a weld repair rate of only 0.3 per cent, the client reduced the radiography percentage from 20 to 10. This was achieved by close monitoring of welding parameters, typically heat input, welding speed, wind velocity and welding consumable control.

Punj Lloyd has completed one year of the contract in March 2006, without lost time injury and zero accidents. A function was recently held to commemorate this achievement, lauding Punj Lloyd's efforts to maintain high standards of safety.

In keeping with its policy of offering a helping hand to the local community



at its project locations, Punj Lloyd hired local Personal Relation Officers (PROs) to interface with the government bodies on behalf of the Company.

Very conscious of maintaining the highest standards of Q&HSE, a risk analysis report was developed for each activity, where controls were identified and monitored at their respective sites. A team of HSE advisors carried out routine site inspections. All light vehicles were fitted with vehicle monitoring devices and all drivers were trained as per ADCO safety rules. Daily toolbox meetings were conducted

before starting work. Making the work force accountable for HSE in his area of activity, resulted in high compliance. Spot checks of vehicles were practised. Strict vigilance was maintained for speed control in the oil field areas.

With Punj Lloyd's stringent standards of quality and safety, the project team is confident to make this a model project in the Middle East region.

◆ K S Shenoy

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lost time injury
and zero accidents**



Reaching out...

With the objective of aligning business goals with social values, Punj Lloyd has always undertaken community developmental work at its various project sites. In Indonesia, where PT. Punj Lloyd has been actively involved in several projects, an environment awareness program was held in two schools near the Company's base camp in Sungaipurun. The children were sensitised about their environment and their own safety. They were also cautioned about the ill effects of alcohol and drugs.

To reach out better to the local community, the programmes were conducted in their mother tongue Bahasa Indonesia. Apart from the locals, Indian Expats of PT. Punj Lloyd Indonesia and representatives of the client, Total E&P Indonesia, were also present.

◆ K Jayaraman



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ISO 9001 : 2000 QMS
ISO 14001 : 1996 EMS
OHSAS 18001 : 1999 OHSMS