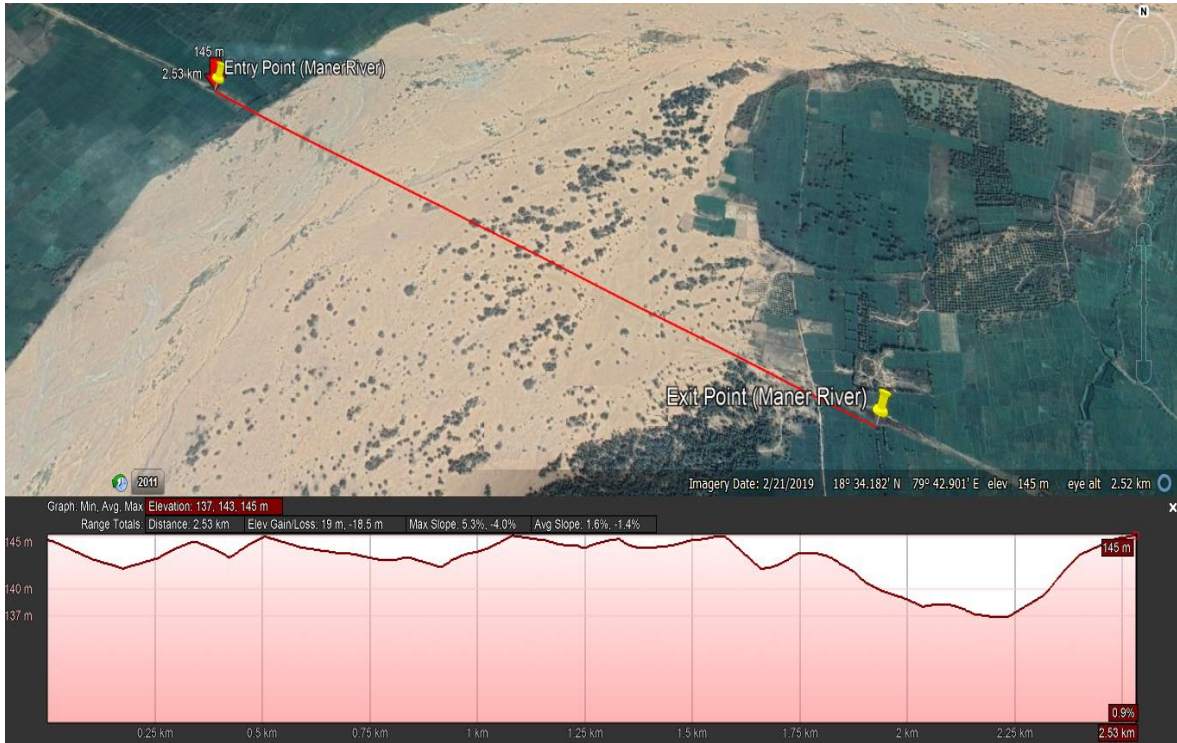


PROJECT REPORT

Horizontal Directional Drilling Across Maner River @ CH:- 411+256.39 KM



PROJECT DETAILS

PROJECT DETAILS for Horizontal Directional Drilling Across Maner River @ CH:- 411+256.39 KM	
OWNER	GSPC INDIA TRANSCO LIMITED (GITL)
CONTRACTOR	KALPATARU POWER TRANSMISSION LIMITED (KPTL)
HDD CONTRACTOR	TRENCHLESS ENGINEERING SERVICES PVT. LTD. (TESPL)
PMC	ENGINEERS INDIA LIMITED (EIL)
TPI	VCS
TPI (2)	CERTIFICATION ENGINEERS INDIA LIMITED (CEIL)
PIPE DETAILS	18" + 6" (2x HDPE AND 1x OFC)
METHOD	Intersect Methodology with Paratrack 2
RIGS USED	400 Ton and 100 Ton

The mighty Maner River is a part of prestigious Mallavaram Bhilwara pipeline project of GITL for laying of 18" pipe from state of Telangana to Rajasthan state. Main Contract was signed between GITL and KPTL. After due diligence and on past performance basis. KPTL on approval from GITL awarded the job to TESPL.

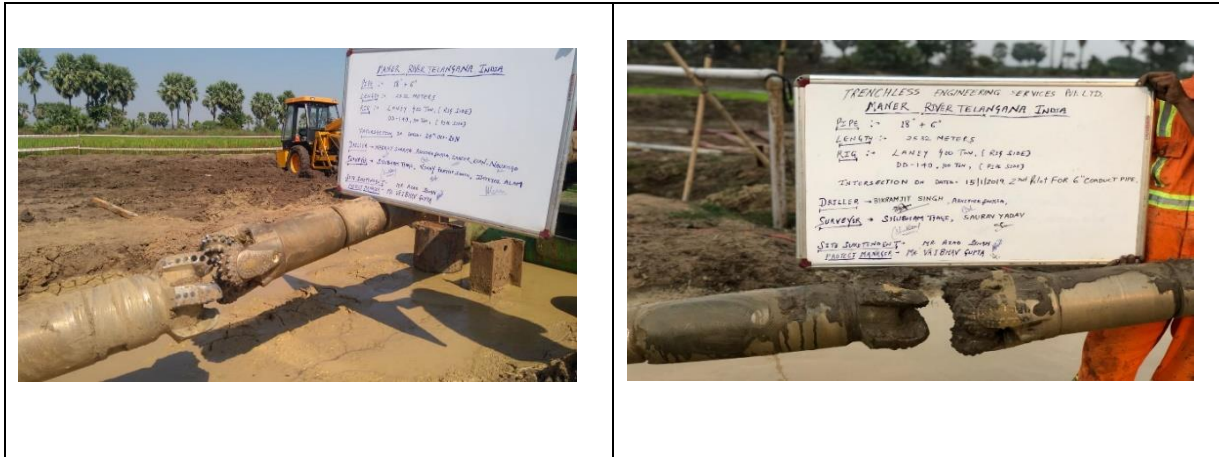
Detailed Geotechnical Investigation was carried out and we found that there are two transition zones of rock. One at STA 300 and other at STA 2000. The Rock zones were total 400 meters max, while the balance strata was largely soft soil with mixture of gravel and sand.

The Intersect Zone was selected between STA 1950 to 2000, just after exiting the Rock and entering in the softer zone. Besides a good coil could be laid for Intersection.

Profile Parameters Of Maner River HDD Project				
Sr. No.	Profile Parameter	UOM	Measurements	
			18"	6"
1	HDD Length	Meter	2532.05	2532.27
2	Maximum Reaming Size	Inch	28"	10"
3	Rig Side Pilot Length	Meter	1989.20	1961.31
4	Pipe side Pilot Length	Meter	546.13	573.87
5	Intersection distance from Rig Side	Meter	1987.56	1959.85
6	Entry Angle	Degree	10	10
7	Exit Angle	Degree	8	8
8	Maximum Depth from Entry	Meter	20.11	19.69
9	ROC Rig Side	Meter	600	600
10	ROC Pipe side	Meter	600	600
11	Actual Pulling Load for 18" Product Pipe	Ton	106 T	35

Laying of 18” and 6” by Intersection Method

Drilling using the bigger rig was started and once the pilot reached a MD of 1500 meters, the drilling from Pipe side rig was commenced. The BHA had to be changed twice going in with jetting, then with motor and once we passed the rock layer, it was changed to Jetting assembly. Casing was installed in either sides to contain frac-outs and returns were processed in environmentally way.



Both Intersection were done like clockwork. While the first Intersection for 18 inch pipe was achieved at STA 1989, the second Intersection was achieved at STA 1961 for the 6 inch pipe. It was a defining moment for TEAM TRENCHLESS to have successfully executed 2 Intersections one after another without the use of Intersection Tools such as Passive Ranging or Rotating Magnets. The Intersections were carried out on basis of sheer accuracy of our INDEGENIOUS Steering Engineers and Drillers. This being a first in India to be done in-house Design Engineering and Execution Capabilities.



After approval of coordinates and pilot hole from the owners and TPI, the reaming procedures were carried out. For 18 inch pipe the hole was opened to a dia of 28 inches and for 6 inch OFC conduit, the pipe was pulled immediately after the pilot hole. The tooling used for Hole opening operations was indigenously fabricated in – house to last the complete length of the crossing without having to trip it out for changing cutters.



The total time from start to finish took 4-1/2 months and we take this opportunity to thank GITL, KPTL, EIL, VCS and CEIL to have shown faith in TESPL's capabilities.

Vipin Gupta
(Managing Director)
Trenchless Engineering Services Pvt. Ltd.