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**Justification of location KHBK, ELAI, DPAB, TLAB & SPAA for Forest Clearance.**

With recent success in KH#43(KHDF), three new sands have been encountered in Bokabil section in addition to main Bokabil-Barail established pays. For Barail play, hydrocarbon has been established in the eastern part of the Khoraghat field close to Naga thrust through the wells KH-12, KH-18A, KH-32, CL-1z.

Hydrocarbon habitat in East Lakhbari and Kalyanpur area is already well established. Wells EL-1 and PL-1 are producers from Sylhet & Tura. In EL-1, other than Sylhet, a Gas Zone of considerable thickness has already been identified in Kopili formation and estimated in PS category. HC indication within Gondwana was observed during testing at well EL-1. Kopili and Namsang formations are interpreted to be gas bearing on logs.

In Dayalpur, Kasmarigaon area KS-1, TL-1, 3, SU-1, 2 & DP-1 are present within study area. SU-2 has produced oil given commercial oil and gas from Mid Bokabil during testing and DP-1 has given Oil in commercial quantity from Tipam, Bokabil, Barail, Sylhet and Basement and Gas from Kopili formation. No zones were identified interesting in TL-1 & 3. A well BJ-1 lying immediately south of the study area has produced oil from Bokabil

**KHBK:** The location KHBK is located in the western part of the Khoraghat main field. It is targeted to be drilled upto 3130(TVD-SS). Bokabil, Barail and Sylhet plays are well established on the footwall-side of the west hading NE-SW trending normal fault. On the basis of extensive pay-level horizon mapping and fault interpretation, there exists a suitable entrapment (fault closure) for the Bokabil new pay on the foot-wall side of the east-hading fault. In addition to Bokabil objective, the location is suitably placed to target Sylhet and Kopili as well. Seismo-geological cross-section along the proposed location and well KH#43 shows the structural- stratigraphic entrapment and lateral juxtaposition of Bokabil pay against Bokabil shales and structural entrapment of Kopili and Sylhet reservoirs. The location envisages an IOIP 0.53MMtoe of oil on success.

**ELAI:** The location ELAI is proposed to be drilled upto 2500m (TVD-SS) targeting Sylhet, Kopili (P) & Basement (S). The EL-1 structure is already estimated at Sylhet and Kopili (KSD) levels. The KSD (Kopili) sand was not tested. Based on the log characteristics it has been estimated in PS category. As it is envisaged that a trap may not be skipped or under filled along the charging path when the corresponding up dip and down dip traps have already filled up to respective spill/ leak points. Thus, explains the hydrocarbon prospectivity of the proposed



ELAI, prospect which lies in a favourable position along the East Lakhibari high separated from the existing EL-1 structure by a narrow roughly E-W trending low.

It is envisaged to tag the Basement fractures. This fractured Basement part is seen juxtaposed against the oil-bearing Sylhet formation of the adjoining downthrown PL-1 block. The location envisages an IOIP of 1.2 MMtoe of oil.

**DPAB:** The location is targeted to be drilled upto 3200m (TVD-SS) with envisaged IOIP of 1.31MMtoe. The location targets Barail (P) & Bokabil as (Secondary) target. DPAB falls in the hanging wall part of the structure for Barail. This play has not been proved so far and location to explore this play is required. The location is proposed at the highest part of the structure against the fault closure. The closure is against the east heading fault, which is in similar set up of KP-6. Barail has produced oil in DP-1 and the proposed location is close to Naga thrust and nearer to kitchen, where equivalent feature of DP-1 is being targeted. Location DPAB is proposed in the separate fault block towards south of DP-1 and close to kitchen. The same reservoir facies of Barail and lower Kopili, as encountered in DP-1 is targeted in the proposed location. Taking facies and structure into consideration, area and thickness of the individual bodies have been calculated for techno-economic analysis. The proposed location has got good aerial extent, thick reservoir bodies and good reservoir facies for primary and secondary objects which in turn will accrete good reserves.

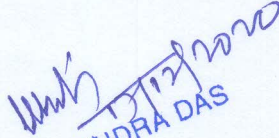
**TLAB:** Location TLAB is proposed towards north-east of Teliha Structure as vertical well with a target depth of 2750m (TVD-SS). It is a very good independent structural hump, which is observed in the proposed location. The proposed location is very near to Naga thrust (Fig.1), i.e. near to source.

The proposed location will encounter other reservoir bodies within HST and good sand body in the top part of Barail. In Barail, there is very good development of structural high. In the proposed location fault towards left will act as lateral trap for Barail sand. After discovery of hydrocarbon in the top part of HST in the well DP-1, it is all likelihood; the data suggests the proposed location has got good chance of encountering success in Tipam and HST part. The location envisages an IOIP 1.23 MMtoe of oil on success.

**SPAA:** The location is proposed to be drilled upto 2850m (TVD-SS) targeting Sylhet, Barail (P) while Kopili, Basement as (S) objects. The proposed location is situated NW of DP-1 which is an oil producer from Tipam, Bokabil, Barail, Kopili, Sylhet and Basement Pays. At Sylhet level, it is a fault closure. At Barail level it is a geomorphic high in the form of relict feature. The transgressive shale in Bokabil may act as the top seal for this feature. Deltaic reservoir is envisaged as the principal reservoir in the area. Such relict feature is oil bearing in Kalyanpur and gave oil indication in Khoraghat area. The area is falling in the geographic



and stratigraphic extent of the petroleum system. The location envisages an IOIP 2.9 MMtoe of oil on success.

  
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