

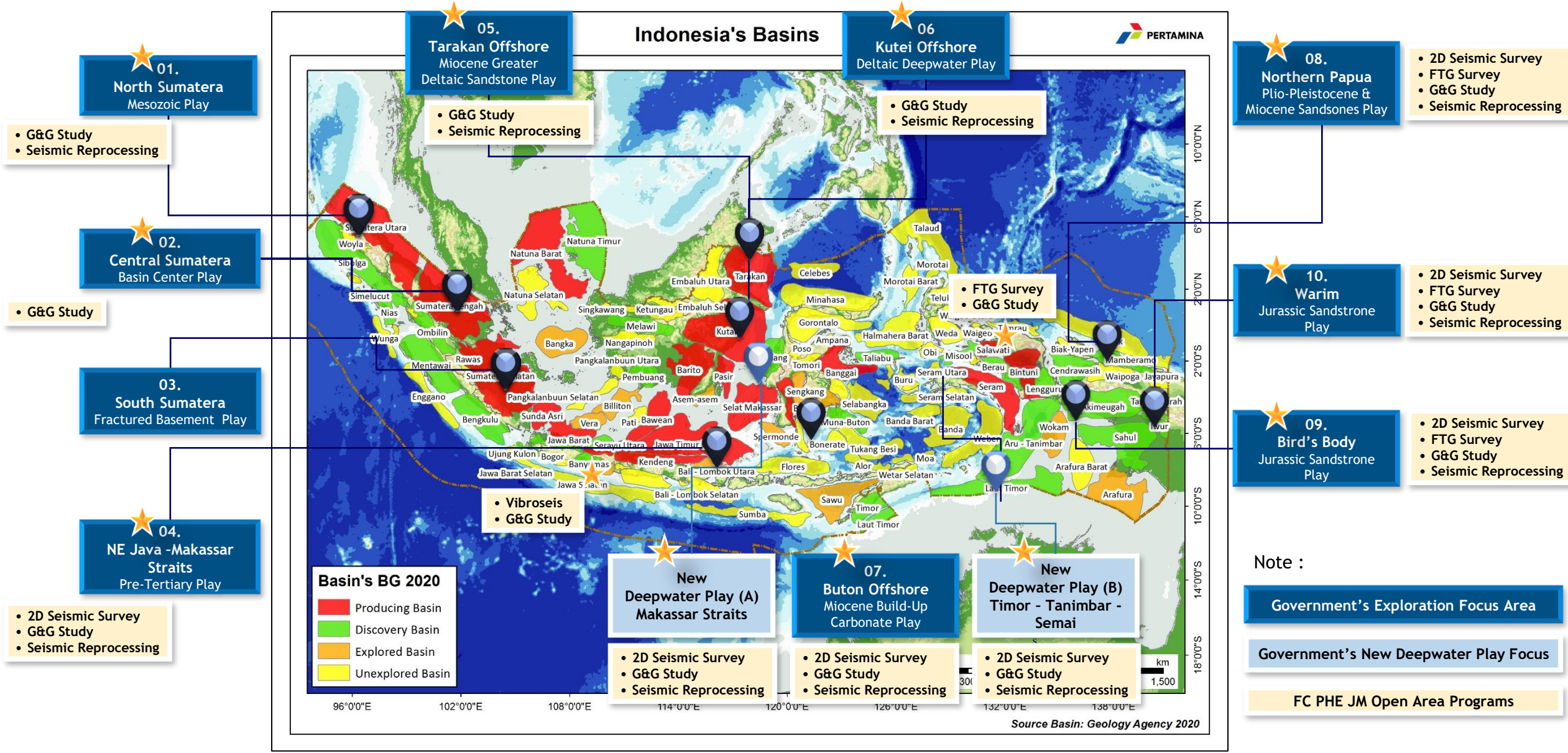


Offering Results of Seismic Survey with G&G Data: From Firm Commitment of PHE Jambi Merang (JM) to Possible Cooperation of Joint Studies in New Exploration Area

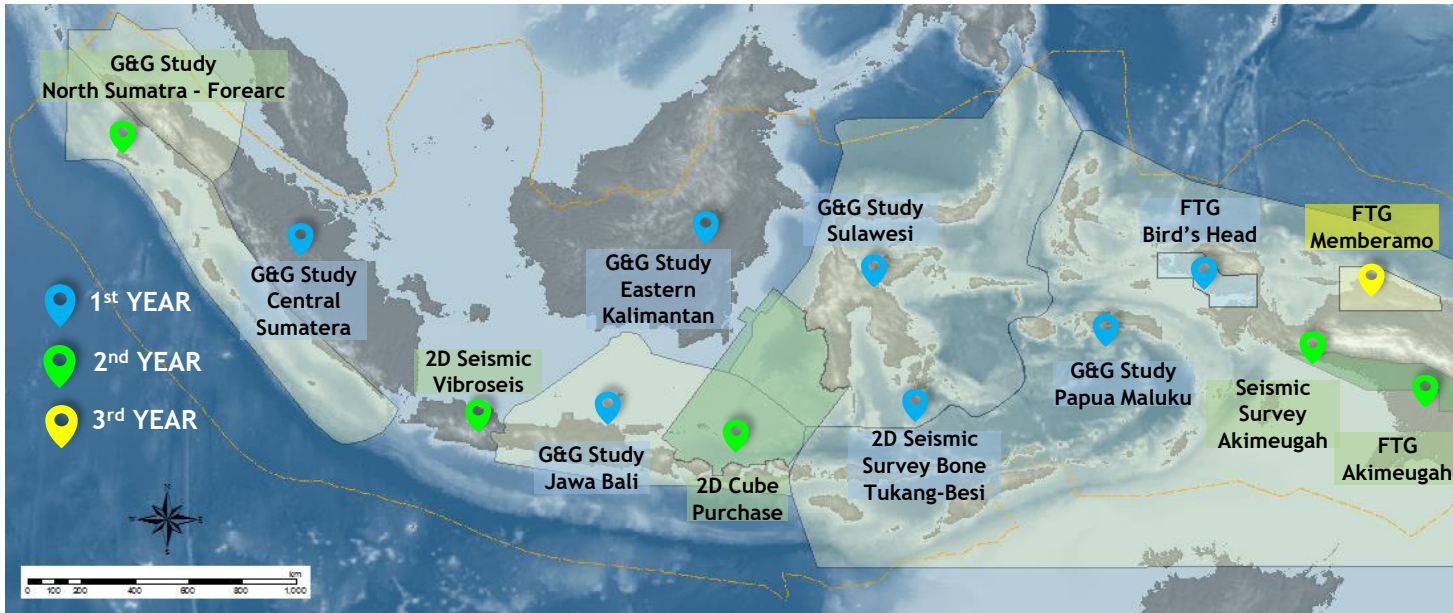
Jakarta, June 17, 2021




5-year Programs of Firm Commitment (FC) PHE JM in Open Area




Progress of FC PHE JM in Open Area



As follow up of FC PHE JM to conduct Work Programs in Open Area, Pertamina has pursued Joint Study (JS) in **3 (three)** exploration potential areas:



1 on-going JS has commenced on Q1 2021



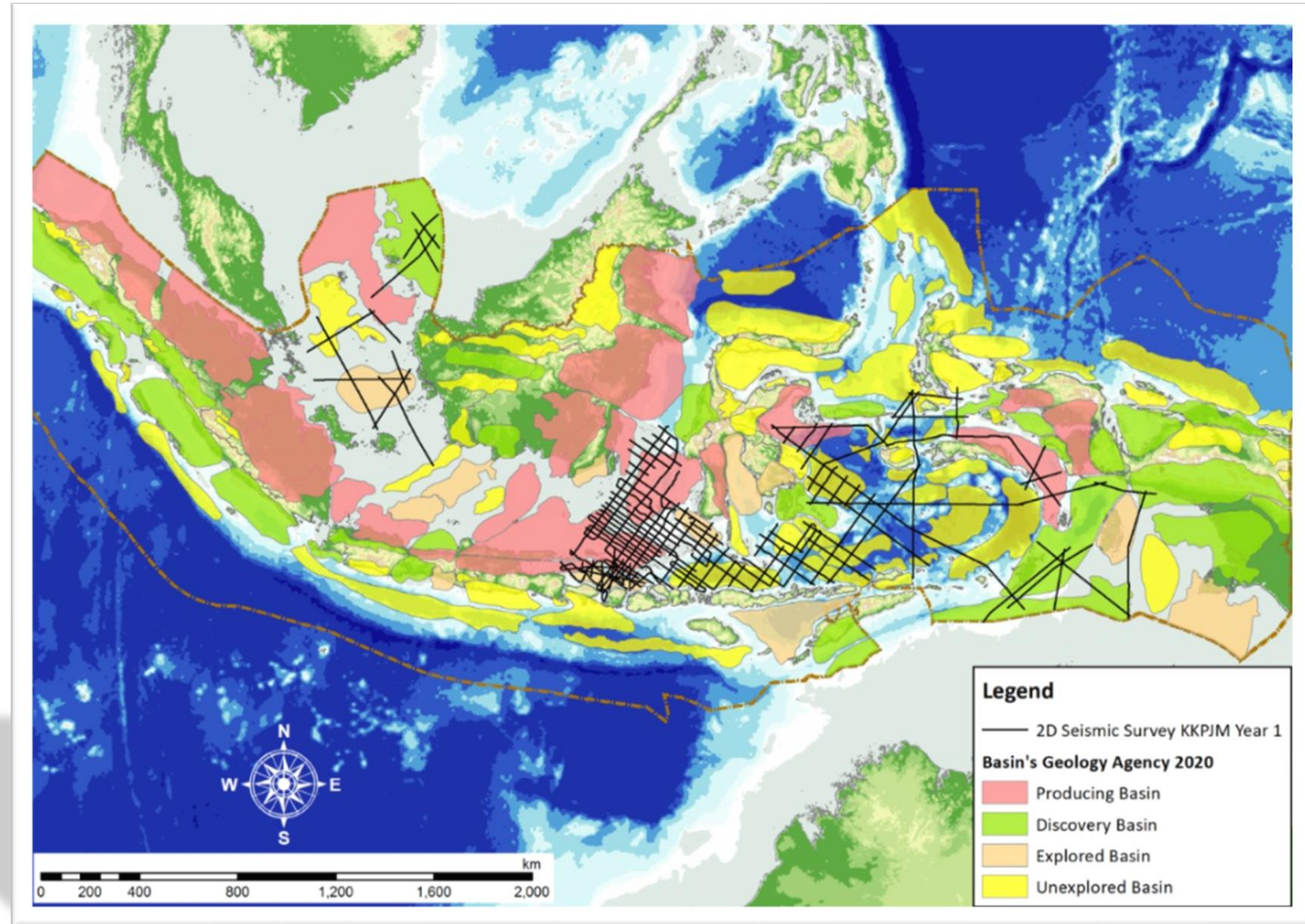
2 upcoming JS will be commenced in Q3 2021 and Q1 2022

| | |
|--------------------------------|--|
| 1ST YEAR | <p>2D Seismic Acquisition & Processing 2D Seismic Bone Tukang Besi: Completed</p> <p>Integrated G&G Regional Study KTi & ST: Completed JB, PM, SL: ~50% Progress Review 3 (Subsurface Mapping)</p> <p>FTG Acquisition & Processing Bird's Head Region: KoM: 7 Mei 2021; mobilization process</p> |
| 2ND YEAR | <p>2D Seismic Acquisition & Processing</p> <ul style="list-style-type: none"> Vibroseis Subvolcanic Java: <ul style="list-style-type: none"> - Test line completed, - Enviro permit & procurement process for full survey Akimeugah Area: Waiting for FTG result Another candidate : Buton, Bone <p>Integrated G&G Regional Study North Sumatra & Sumatera Forearc: Data & procurement preparation</p> <p>2D Cube Data Purchase South Makassar 2D Cubed data purchase: Vendor registration, procurement and contract amendment process</p> <p>FTG Acquisition & Processing Akimeugah-Iwur Region: The plane is already in Timika</p> |
| 3RD YEAR | <p>2D Seismic Acquisition & Processing Area is not defined yet. To be prepared in 2021</p> <p>Integrated G&G Regional Study Area is not defined yet. To be prepared in 2021</p> <p>2D/3D REPROCESSING/PURCHASE Area: Tarakan, Kutai (to be confirmed)</p> <p>FTG Acquisition & Processing Area: Memberamo</p> |

Implementation of PHE Jambi-Merang Firm Commitment

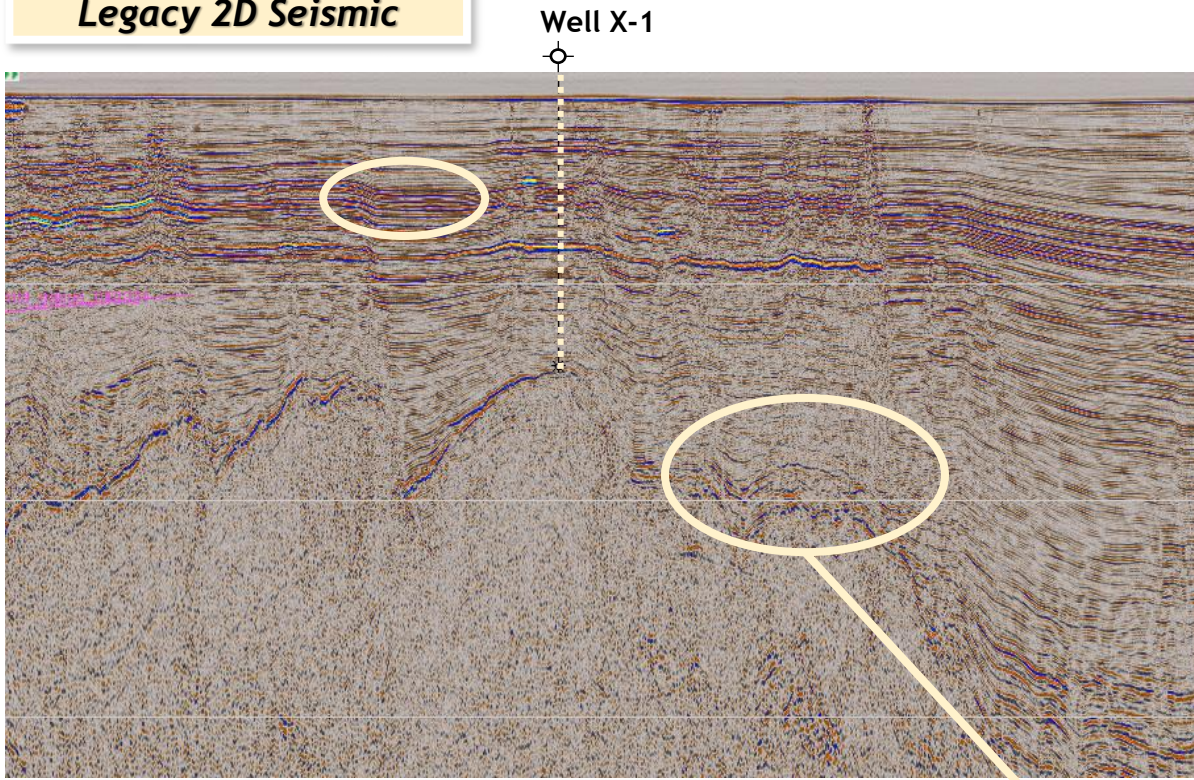
2D Seismic Survey Bone Tukang - Besi

1. Total Length of survey : 32,215 km
 - Straight Line: 31,153 km
 - Continuous Lines Acquisition (CLA): 1,062 km
2. Number of Lines : 114 lines
3. Number of Traversed Basin : 35 basins
4. Survey started: 20th November 2019
5. Survey completed : 3rd August 2020
6. Processing & Data Validation completed : 1st March 2021
7. Data will be opened to public : 1st March 2022

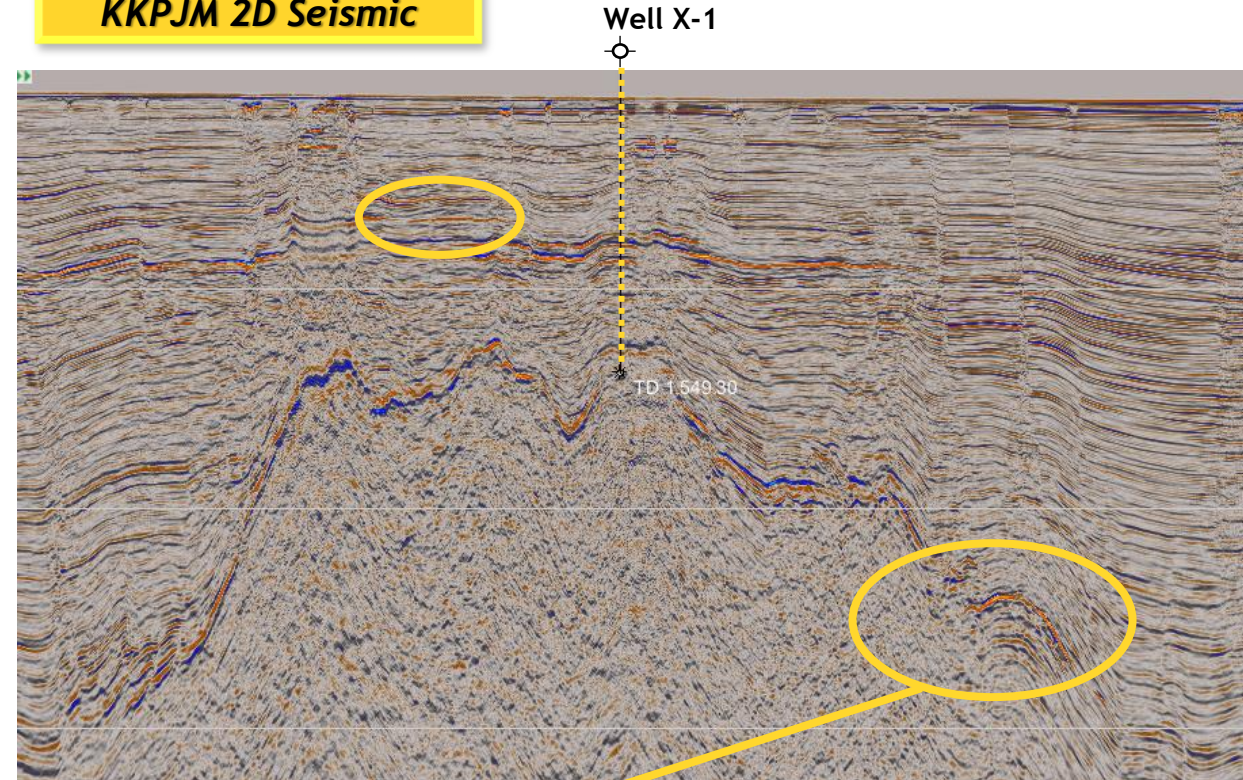


Comparison of 2D Seismic Profiles: FC PHE JM and Legacy Lines

Legacy 2D Seismic



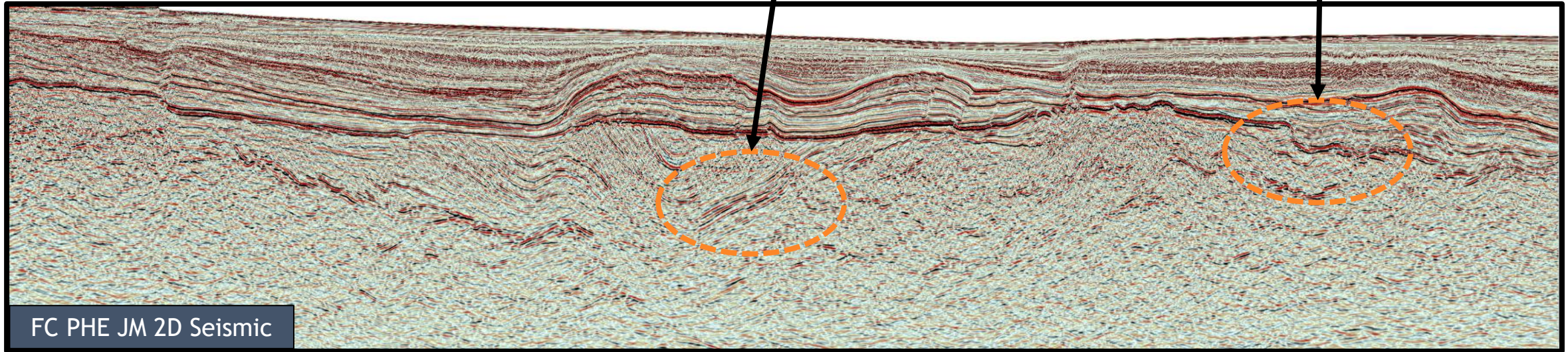
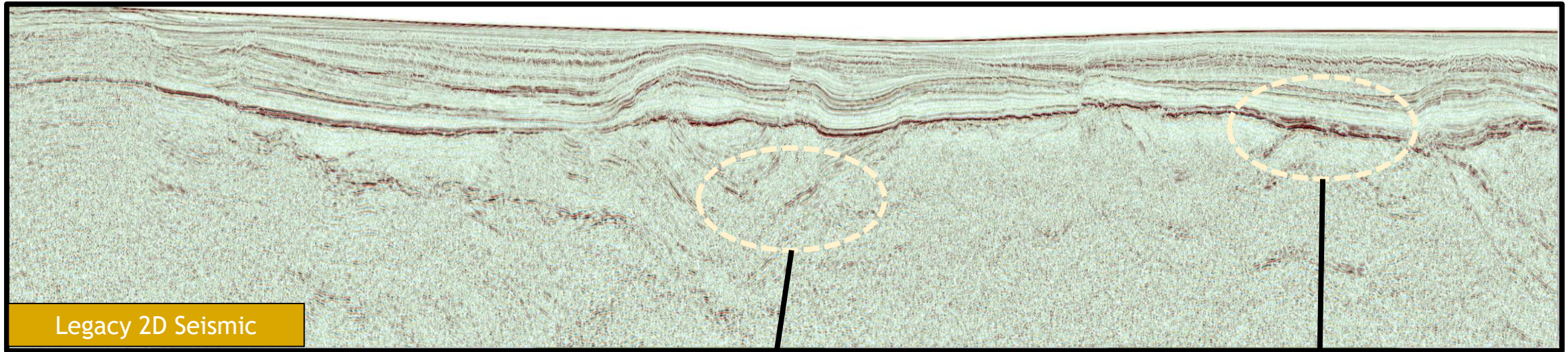
KKPJM 2D Seismic



1. 2D Seismic FC PHE JM have optimum frequency content; compare to 1995 vintage which possible have high frequency noise (ringing)
2. 2D Seismic FC PHE JM have higher S/N (Signal to Noise ratio) and less multiple at deeper reflector

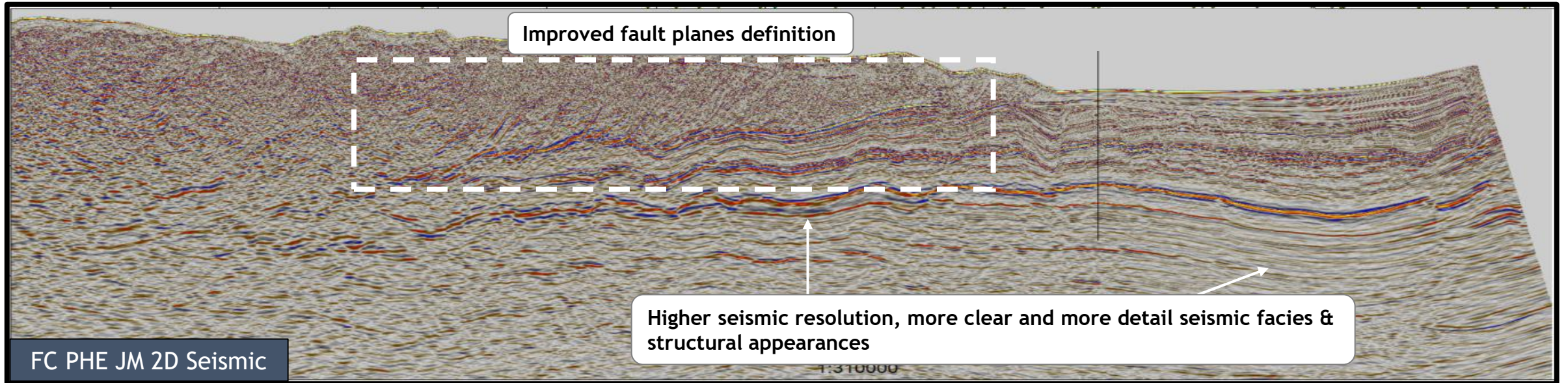
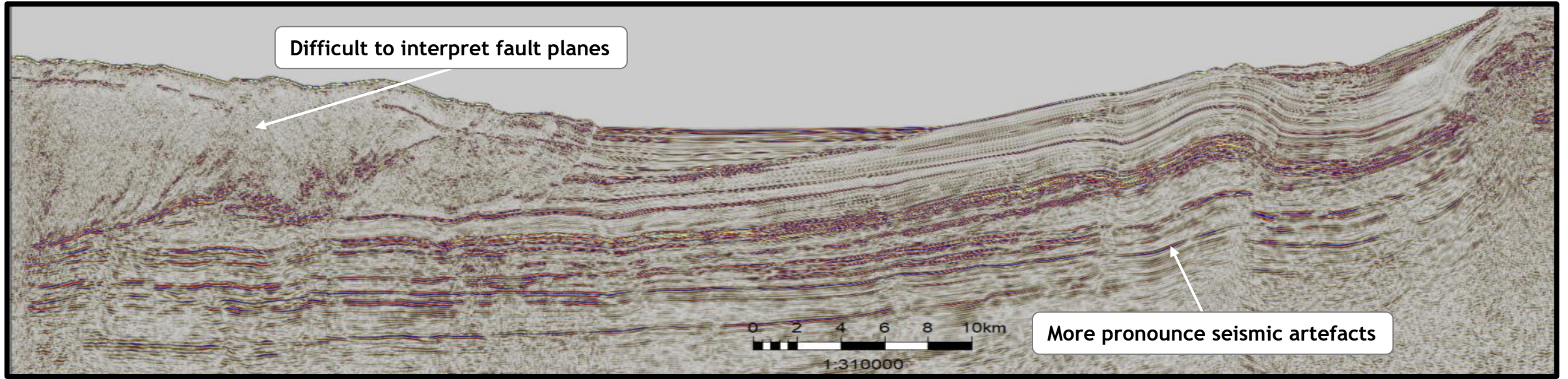


Comparison 2D Seismic Profile between FC PHE JM & Legacy Lines



FC PHE JM 2D Seismic provides higher seismic resolution event and improved seismic facies definition compared to legacy 2D Seismic.

Comparison 2D Seismic Profile between FC PHE JM & Legacy Lines



Closing Remarks



2D Seismic Survey for fulfilling firm commitment PHE Jambi Merang was commenced on 20th November 2019 and completed on 3rd August 2020 with the **length of survey realization as of 32,215 Km Off shore or 107 % compared to original plan as of 30,000 Km**, comprising Bone-Tukang Besi, Papua, Maluku, Bangka, and East Natuna Areas. Implementation progress of PHE Jambi Merang Firm Commitment is on the right track, in term of timeline, work programs and results.



2D Seismic Processing and Interpretation as of 114 lines was completed on 1st March 2021 and **identified several interested/potential areas.**



There are **3 interested area**, where one of them have already signed the JSA between PHE and Posco International Corporation, 1 JS is on going progress by PHE and 1 more interested area is on going process for JSA signing.



There are still big **opportunities for other companies** interested to conduct Joint Study with PHE based on latest seismic data.



Firmed Commitment of PHE JM in open area is a good model and also applicable to other companies for boosting exploration campaign in the future.



There is no way to maintain oil & gas production and reserves except doing **Exploration, Exploration and Exploration...**

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