

**PEMETAAN FASIES LAPISAN “ALANG-1”,
BERDASARKAN DATA LOG SUMUR DAN DATA INTI BATUAN
FORMASI DURI, LAPANGAN APS DI BAGIAN SELATAN,
CEKUNGAN SUMATERA TENGAH**

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SARI

Lapangan minyak APS terletak di Cekungan Sumatera Tengah, merupakan salah satu lapangan penghasil minyak yang di operasikan oleh PT. Chevron Pacific Indonesia dengan teknologi injeksi uap yang terbesar di dunia dan produksinya kedua terbesar di Indonesia setelah Lapangan Minas. Lapisan Alang-1 merupakan salah satu lapisan yang terdapat di Lapangan APS. Fokus penelitian berada pada bagian selatan Lapangan APS, lapisan Alang-1. Lapangan APS terletak sekitar 150 km/95 mil dari barat laut Pekanbaru, ibukota Propinsi Riau.

Produksi kumulatif Lapangan APS mencapai 2.000.000.000 barel tetapi produksi harian mulai menurun menjadi sekitar 148.500 barel perhari. Lapangan APS diperkirakan masih mempunyai cadangan hidrokarbon yang cukup besar, sehingga terus dilakukan penentuan lokasi sumur pengembangan dengan mengetahui persebaran fasies kita bisa mengetahui daerah mana yang masih potensial untuk dikembangkan dengan mengkombinasikan data properties batuan.

Penelitian ini menggunakan data log sumur dan data inti batuan. Data log sumur yang digunakan sebanyak 310 *wells* yang setiap *well* terdiri dari log GR, log NPHI, dan log RHOB. Data deskripsi inti batuan terdapat di 6 *wells* yang memiliki *sample* inti batuan yang terdiri dari batupasir *medium – very fine sand* dan didominasi oleh struktur sedimen yang dipengaruhi oleh aktivitas pasang surut seperti terdapat struktur *flaser* dan keterdapatannya bioturbasi. Berdasarkan analisis lingkungan pengendapan dari batuan inti dan data log, diinterpretasikan bahwa lapisan Alang-1, Formasi Duri Lapangan APS di bagian selatan diendapkan pada lingkungan delta yang dipengaruhi oleh arus pasang surut (*tide-dominated delta*) yang terdiri dari *Abandoned Delta Plain, Active Distributaries, Delta Front, dan Non Tidal Delta Plain*, dengan arah pengendapan Timur Laut- Barat Daya.

**MAPPING FACIES LAYER “ALANG-1”,
BASED ON WELL LOG DATA AND CORE DATA
FORMATION DURI, SOUTHERN APS FIELD SELATAN,
CENTRAL SUMATERA BASIN**

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ABSTRACT

APS Oil field, which is located in Central Sumatera Basin, is one of the oil-producing field operated by PT. Chevron Pacific Indonesia, the largest steam flood injection technology in the world and the second largest of its production in Indonesia after the Minas Field. Alang-1 layer is one layer contained in the APS Field. The focus of research at the southern part of the layer Alang-1 Southern Field APS. APS field is located approximately 150 km/95 miles northwest of Pekanbaru, capital of Riau Province.

APS Field cumulative production reached 2 billion barrels but daily production began to decline to around 148 500 barrels per day. APS field is expected to have a sizeable hydrocarbon reserves, thus continuing determination by knowing the location of development wells with facies distribution we can determine which areas are still a potential to be developed by combining the data properties of rocks.

This study uses the well log data and core data. Well log data are used as much as 310 wells per well consisting of GR logs, log NPHI, and log RhoB. Rock core description data contained in 6 wells which have a rock core sample consisting of sandstones medium - very fine sand and is dominated by sedimentary structures are influenced by tidal activity as there flaser structures and bioturbation. Based on the analysis of depositional environment of core and log data, interpreted that the layer Alang-1, Southern APS Field Duri Formation in the southern part of the delta that was deposited in an environment influenced by tidal currents (tide-dominated delta) which consists of *Abandoned Delta Plain*, *Active distributaries*, *Delta Front*, and *Non-Tidal Delta Plain*, with the direction of deposition of the Northeast-Southwest.