Perancangan tata kelola keamanan informasi berdasarkan Information Security Management System (ISMS) ISO/IEC 27001:2005 untuk pengelolaan data migas yang dikelola oleh pihak ketiga: studi kasus Pusat Data dan Teknologi Informasi Energi dan Sumber Daya Mineral = Design of information security overnance based on Information Security Management System (ISMS) ISO/IEC 27001:2005 for oil and gas data management that are managed by third parties: a case study at Data and Information Technology Center for Energy and Mineral Resource / Dian Ikasari

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Abstrak

[Minyak dan gas bumi (migas) merupakan sumber daya alam yang sangat strategis bagi Indonesia. Karena hingga saat ini sektor migas masih menjadi salah satu tulang punggung perekonomian nasional, sumber penerimaan dan devisa negara, bahan bakar bagi industri, mendorong investasi, penyerapan tenaga kerja, pemenuhan energi domestik dan peningkatan kemampuan sumber daya manusia serta sumber pengembangan ekonomi daerah. Oleh karena itu, pengelolaan data migas yang baik, akurat, lengkap dan aman akan membantu pemerintah dalam pengambilan keputusan dan kebijakan bidang migas. Karena keterbatasan sumber daya manusia, sarana, dan prasarana, hingga saat ini Pusdatin ESDM bekerja sama dengan pihak ketiga dalam pengelolaan data migas. Namun dalam menjalin kerja sama tersebut, Pusdatin ESDM belum memiliki tata kelola keamanan infomasi yang dibutuhkan untuk mendukung keamanan data dan informasi migas.

Berdasarkan hal tersebut, jelas bahwa permasalahan di Pusdatin ESDM terkait keamanan informasi pada pengelolaan data migas adalah aspek kerahasiaan, integritas, dan ketersediaan informasi dan data migas belum didukung secara optimal. Sehingga perlu dikembangkan tata kelola keamanan informasi yang sesuai bagi Pusdatin ESDM untuk pengelolaan data migas yang dikelola pihak ketiga.

Penelitian ini membahas perancangan tata kelola keamanan informasi untuk pengelolaan data migas yang dikelola oleh pihak ketiga, dengan menggunakan standar keamanan informasi ISO/IEC 27001:2005. Melalui pendekatan penilaian risiko, dipilih sasaran pengendalian dan pengendalian ISO/IEC 27001:2005 yang sesuai untuk pengelolaan data migas. Berdasarkan sasaran pengendalian dan pengendalian terpilih, dikembangkan tata kelola keamanan informasi untuk pengelolaan data migas yang dikelola oleh pihak ketiga. Dalam hal pemetaan peran dan tanggung jawab keamanan informasi, digunakan konsep RACI pada kerangka kerja OMBOK (Outsourcing Management Body of Knowledge).

Hasil penelitian ini didapat rancangan tata kelola keamanan informasi yang sesuai bagi Pusdatin ESDM dalam melaksanakan pengelolaan data migas yang hingga saat ini bekerja sama dengan pihak ketiga.;Oil and gas is a natural resource that is very strategic for Indonesia. Nowadays, oil and gas sector remains one of the backbone of the national economy, source of revenue and foreign exchange, fuel for industry, encourage

investment, employment, fulfillment of domestic energy and upgrading of human resources, as well as a source of regional economic development. Therefore, good, accurate, complete and safe data management will assist the government in making decisions and policies of oil and gas fields. Due to limited human resources, facilities, and infrastructure, Pusdatin ESDM (Data and Information Technology Center for Energy and Mineral Resource) cooperate with third parties in oil and gas data management. However, Pusdatin ESDM do not have any governance to make sure the security of oil and gas information.

It is clear that the information security problem in Pusdatin ESDM for oil and gas data management is the low concern of data confidentiality, integrity, and availability. So it is necessary to develop information security governance suitable for Pusdatin ESDM for oil and gas data management which are managed by third parties.

This study discusses the design of information security governance for oil and gas data management, managed by a third party, by using information security standards ISO/IEC 27001:2005. Through a risk assessment approach, control objectives and control of ISO/IEC 27001:2005 which related to the data management of oil and gas are selected. Based on control objectives and control selected, the information security governance for oil and gas data management that are managed by a third party, are developed and created. In the case of mapping the roles and responsibilities of information security, RACI concept of OMBOK (Outsourcing Management Body of Knowledge) framework is used.

The results of this study is an information security governance design suitable for Pusdatin ESDM in implementing oil and gas data management managed by third parties., Oil and gas is a natural resource that is very strategic for Indonesia. Nowadays, oil and gas sector remains one of the backbone of the national economy, source of revenue and foreign exchange, fuel for industry, encourage investment, employment, fulfillment of domestic energy and upgrading of human resources, as well as a source of regional economic development. Therefore, good, accurate, complete and safe data management will assist the government in making decisions and policies of oil and gas fields. Due to limited human resources, facilities, and infrastructure, Pusdatin ESDM (Data and Information Technology Center for Energy and Mineral Resource) cooperate with third parties in oil and gas data management. However, Pusdatin ESDM do not have any governance to make sure the security of oil and gas information.

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