INTERNATIONAL JOURNAL OF CREATIVE RESEARCH AND STUDIES
www.ijcrs.org ISSN-0249-4655

SUPPORT THE SHARED VISION FOR IOG 4.0 2030 AND CREATE A SHARED VALUE STRATEGY TO MULTIPLIER EFFECT ON THE IMPROVEMENT OF COMMUNITY WELFARE THROUGH THE EXPLOITATION OF OLD WELLS WITH STRATEGIC ALLIANCES BASED ON ENVIRONMENTALLY

Fransjono Lazarus
Pertamina Hulu Energi, Indonesia

Adi Putra Wawang Darmawan
Pertamina Hulu Rokan, Indonesia

ABSTRACT

Upstream oil and gas industry still plays a strategic role in supporting Indonesia's strong and sustainable economy. However, in the current era of the energy transition, Indonesia has a strong commitment to net zero emissions by increasing the use of new and renewable energy. The upstream oil and gas industry must undertake strategies to carry out its position to reduce carbon emissions successfully. In addition, Indonesia's national oil and gas company, Pertamina, has fully committed to implementing ESG (environmental, social, governance), which will affect the company's reputation and potentially impact access to external funding. In response to the dynamic business environment, Indonesia's national oil and gas company, Pertamina, implements an ambidexterity strategy by carrying out exploration innovation (radical) and exploitation innovation in Indonesia. Exploration innovation focuses on discoveries and the development of new renewable energy management; exploitation innovation will optimize the utilization of existing resources in fossil energy management of upstream oil and gas. One of the ways is by maximizing the exploitation of old wells to meet the 2030 national production target. The development of strategic alliance managerial capabilities reinforces the job performance of upstream oil and gas companies in Indonesia to achieve the shared vision of Indonesia's Oil & Gas (IOG) 4.0 by 2030, including optimizing old wells that still have potential. The alliance network that manages strategic partnerships with local companies/regional companies/Regionally Owned Enterprises (BUMD)/Village Cooperative Units (KUD) in the exploitation of old wells in Indonesia will serve as corporate social capital because it can create corporate shared value (CSV) with a multiplier effect on the improvement

of community welfare, which is environmentally sound. This paper will support strategic decision-making in encouraging the governance of old wells exploitation from the planning phase, then from the operation to the post-operation stage, which assists the implementation of ESG commitment in upstream oil and gas companies in Indonesia.

KEYWORDS: *Indonesia oil & gas 4.0, ambidexterity strategy, strategic alliance managerial capabilities, social capital, corporate shared values, environment, social, governance, Indonesian upstream oil and gas companies, exploitation of old wells.*

INTRODUCTION

In the opening ceremony of "The 2nd International Convention on Indonesian Upstream Oil & Gas 2021", which was held in a hybrid manner by The Special Task Force for Upstream Oil and Gas Business Activities (SKK Migas) from November 29 to December 1, 2021 in Nusa Dua Bali, the President of the Republic of Indonesia represented by the Coordinating Minister for Maritime and Investment Affairs, Luhut Binsar Panjaitan, said that the Government of the Republic of Indonesia still sees the upstream oil and gas industry as a strong and sustainable economic driver. The upstream oil and gas industry is not only creating added value but also increasing infrastructure development in the region, especially for rural, isolated, and disadvantaged areas. This was reaffirmed by the Minister of Energy and Mineral Resources of the Republic of Indonesia, Arifin Tasrif, who said that the upstream oil and gas industry still occupies a strategic position, although at the same time, Indonesia has a strong commitment to increasing the use of new and renewable energy. The upstream oil and gas industry will not necessarily be abandoned in the middle of the energy transition era, considering that this industry is one of the pillars of energy and the pillars of the Indonesian economy. The supporting sectors feel the Multiplier Effect of this sector. The upstream oil and gas industry also needs to implement strategies to take successful action to reduce carbon emissions in the field. In a statement by the President Commissioner of PT Pertamina (Persero), Basuki Tjahaja Purnama, in the virtual event "2020 International Convention on Indonesia Upstream Oil & Gas" confirmed that Pertamina controls 86 oil and gas blocks and all of them are open to strategic partnerships, including the Rokan Block. Pertamina in the future will no longer enter and manage, or even explore and exploit oil and gas blocks alone, both at home and abroad, without a good partner with minority share options and nonoperator positions in five to ten years of execution time (Agung, F., 2020, December 2).

The existence of new and renewable energy (EBT) power plants and low-carbon technology is another global trend that is the embodiment of government policies outlined in the General Plan for National Energy (RUEN) 2017 regarding Indonesia's primary energy supply target in 2020-2025 (National Energy Council, 2020). This shows Indonesia's strong commitment to net zero emissions by increasing the use of new and renewable energy in today's energy transition era. On a global scale, several countries in the Americas, Europe, and Asia have targeted a reduction in CO2 emissions by 2035 to 2060 (Irmawati et al., 2019). Indonesia's primary energy mix target in 2020-2050 is also changing. This dynamic environmental condition disrupts the operations of several energy companies, including upstream oil and gas companies in Indonesia. SKK Migas and Cooperation Contract Contractors (KKKS) have actively supported the government's commitment to reducing carbon emissions as a global commitment in the Climate Change Conference. The SKK Migas' initiative to conduct integrated low-carbon operations is also included in the Indonesia Oil and Gas 4.0 (IOG 4.0) 2020-2030 Strategic Plan. The issue of environmental sustainability has become one of the priorities to be considered for it to become one of the pillars of IOG 4.0.

In addition, Indonesia's national oil and gas company, Pertamina, is fully committed to implementing ESG, which will affect the company's reputation and access to external funding. Pertamina has been assessed by the Sustainalytics rating agency on a solicited basis using the comprehensive rating method. The assessment began

on July 29, 2021, and ended on September 24, 2021, with 11 ESG materials described in 54 indicators (23 environmental indicators, 12 social indicators, and 19 governance indicators). The 54 indicators are divided into 225 sub-indicators. From this assessment, Pertamina obtained an ESG Risk Rating score of 28.1 (the lower, the better) and was rated at the medium risk level (Energia, 2021). Specifically in the upstream sector through PT Pertamina Hulu Energi as an Upstream Subholding, it has established one of the ESG Focus related to Community Involvement & Development (CID), namely a breakthrough and innovation effort in community empowerment programs around the operating area through community development flagship programs that are relevant to the company's core competencies.

On another occasion, the President Director of PT Pertamina Hulu Energi (PHE), Budiman Parhusip, at the Energy Outlook 2022 event aired by CNBC Indonesia on February 24, 2022, said that the company has led to new renewable energy, but the use of fossil fuels in the future is predicted to still increase in Indonesia and other developing countries. Oil and gas demand is rising by 2.7% per year, making the resources and production of oil and gas needed even greater. Many fields or work areas of PHE are mature assets, have been produced for a long time, and have a relatively high rate of production decline. To face this condition, Budiman stated that PHE had revitalized the company's assets in the old category, and the company has consistently made updates so the mature assets can continue to be used (Rahadian, L., 2022, February 24).

In the upstream sector management, Pertamina continues to execute growth strategies with mergers and acquisitions (M&A), development of new fields, and transfer of management of production sharing contracts (PSC) fields which have been exhausted in Indonesia; as well as optimization strategies with enhanced oil recovery (EOR) projects, identification of oil and gas well exploration and production, improvement in technology and operational excellence, building internal capabilities through portfolio optimization, strategic alliances with operational cooperation patterns (KSO), technical assistant contracts (TAC), unitization, and Joint Operating Body (JOB)/ Badan Operasi Bersama (BOB). Pertamina Group, through its subsidiary PT Pertamina EP, has established strategic partnerships with local companies/regional companies/Regionally Owned Enterprises (BUMD) or Village Cooperative Units (KUD) in the exploitation of old wells.

DISCUSSION

The exploitation of old wells has strategic and economic potential. The shared vision of regaining 1 million BOPD needs massive implementation, including the utilization of old wells that still have potential. The management of old wells that includes community participation in the KUD/BUMD network is the company's social capital in exploiting old wells, contributing significant performance to the company with field economics considerations. In addition, the exploitation of old wells by BUMD/KUD will positively impact local economic improvement, including the welfare of local communities. Based on National Planning Board (BAPENAS) data in Wibisono (2018), more than seventy percent of domestic oil and gas production in Indonesia is currently produced by old wells. The opportunity to manage old wells by maximizing the results of well and reservoir repairs, reducing or slowing the natural decline rate in oil and gas production, and operating more effectively and efficiently (Wibisono, 2018). In a virtual discussion held by AKAMIGAS Energy and Mineral Polytechnic (PEM AKAMIGAS) on May 18, 2020, the Director of Oil and Gas Program Development of the Ministry of Energy and Mineral Resources said that currently, there are 1,440 old oil wells managed through partnership programs in upstream oil and gas companies that are still able to produce products of 1,905.23 BOPD.

According to the Minister of Energy and Mineral Resources Regulation No. 1 of 2008 (Permen of ESDM No. 1 of 2008) article 1 section (2) concerning Guidelines for Oil and Gas Mining Business in Old Wells, old wells are petroleum wells drilled before 1970, have been produced, and are located in a field that is not cultivated in a working area that is bound by a cooperation contract and is no longer operated by the Cooperation Contractor (KKKS). The consideration of the birth of Permen of ESDM No. 1 of 2008 is an effort to optimize petroleum production in a working area in which there are old wells to improve the welfare of the community around the

location of old wells. Therefore, it is necessary to carry out petroleum mining exploitations in old wells by including the participation of the surrounding community through BUMD / KUD.

Whereas in article 1 section (5) of Permen (Ministerial Regulation) of ESDM No. 1 Year 2008, it is stated that producing petroleum is an effort of taking, lifting, and or raising petroleum from old wells to the delivery point agreed by the parties. In managing this old well, KUD or BUMD reactivate and produce old wells at their own expense using mechanical aids or technology approved by KKKS, then the oil produced is submitted to KKKS. KUD or BUMD gets a service fee for the cost of producing oil and transportation to the delivery point agreed upon in the old well production agreement in the form of money and not in inkind or oil. Nevertheless, until now, it is recorded that only PT Pertamina EP, one of the KKKS, a subsidiary of Pertamina Group, has cooperation in the exploitation of old wells with KUD and BUMD.

Article 15 of Permen of ESDM No. 1 Year 2008 has also explained that in producing petroleum, KUD/BUMD has obligations on occupational safety, health, and environmental management aspects, as well as to provide technical guidance and supervision on aspects of occupational safety and environmental management by BUMD/KUD that produce petroleum. However, its implementation is not going well because improvements are still needed in orchestrating the related stakeholders through socio-economic and political approaches together with all stakeholders, both at the central and regional levels. The obligation of technical guidance and supervision of exploiting old wells cannot simply be delegated to KKKS.

Currently, the management of old wells is still unable to contribute significant oil production because it needs appropriate policy support in order to attract the active participation of all KKKS that have old wells in accordance with the provisions of Article 1 section (2) of Permen of ESDM No. 1 of 2008 in the exploitation of old wells by including the participation of the surrounding community through BUMD/KUD as the implementation of creating shared value. In the planning phase, policy formulation should not only be related to the application for approval of BUMD/KUD licenses, oil production agreements, implementation and remuneration for oil production services, and delegation of guidance and supervision to KKKS. However, it is necessary to update the policy on the limitations of technical factors related to drilling regulations on old wells that allow for deepening of more than 50 meters, considering that the wells were abandoned in 1970, still using the technology at that time. If the technical factor is increased for the operation of old wells throughout Indonesia, then additional production and lifting of oil production will increase. If workover is carried out, hydraulic fracturing or deepening will conflict with existing policies because the limitation of producing old wells is only from the layer that has been produced. If workover is carried out to move layers or deepen to deeper layers, it will enter the exploration activity area of the KKKS cooperation contract with SKK Migas. On the other hand, using more reliable technology, such as artificial lifts or stimulation, would be less economical for KUD or BUMD.

In the post-operation stage, it is also necessary to update environmentally sound policies by providing support for implementing environmental, social, governance (ESG) commitments for KUD or BUMD that operate old wells. The policy must align with the government's commitment to reducing carbon emissions, including as stipulated in Presidential Regulation No. 98 of 2021 on the Implementation of Carbon Economic Value for Achieving Nationally Determined Contribution Targets and Controlling Greenhouse Gas Emissions in National Development. The policy update includes the need for a special formula regarding the fund reserve of abandonment and site restoration (ASR) or post-operation activities for BUMD or KUD that operate old wells through a joint account supervised by the Director General of Oil and Gas of ESDM. In accordance with the provisions in the Decree of the Head of SKK Migas No.KEP-0087/SKKMA0000/2018/S8 Rev01. ASR is an activity to permanently close wells, stop operations and eliminate the ability of Production Facilities and supporting facilities to be operated again, including permanent dismantling and carry out environmental restoration in Working Areas in Upstream Oil and Gas Business Activities, based on environmental final assessment (EFA) / study of potential environmental risks due to the release of hazardous and toxic materials

(B3), B3 waste and hydrocarbon compounds into the environment from facilities that are still operating or have been operated which are completed before the end of the cooperation period. In the practice of implementing Permen of ESDM No. 1 of 2008, ASR fund reserves for BUMD/KUD that operate old wells cannot be delegated to KKKS alone but need a special policy that is a derivative of Permen of ESDM No.1 of 2008 because it involves multi-stakeholders. The special formula for ASR fund reserves for BUMD/KUD that cultivate old oil and gas wells can be taken from the proportion of fees from KKKS to KUD/BUMD for the results producing oil from old wells implementations.

In addition to updating policies, it is also necessary to develop strategic alliance managerial capabilities in upstream oil and gas companies in Indonesia that will manage BUMD/KUD networks in the exploitation of old wells. Strategic alliance managerial capabilities are one of the things that encourage the performance improvement of national upstream oil and gas companies in Indonesia. Alliance is a collaborative effort between two or more companies by combining resources to achieve mutually compatible goals that are not easily achieved alone (Bucklin and Sengupta, 1993; Day, 1995; Heide and John, 1990; Sividas and Dwyer, 2000; Varadarajan and Cunningham, 1995; Varadarajan and Rajaratnam, 1986 in C. Jay Lambe, Robert E, Spekman and Shelby D. Hunt, 2002). A strategic alliance is the assembling of resources and specific skills by companies that work together to achieve common goals and the specific goals of each business partner personally or individually (Varadarajan and Cunningham, 1995 in C. Jay Lambe, Robert E, Spekman and Shelby D. Hunt, 2002). Meanwhile, Eisenhardt and Martin (2000) mentioned that dynamic capabilities could be used in a fairly changing environment. Dynamic capabilities are a set of specific and identifiable processes such as product development, strategic decision-making, and alliances (Cirjevskis, A., 2019). Managerial capabilities that support collaborative strategies in alliances will enable alliance partners to make strategic changes required by environmental discontinuities. Dynamic managerial capabilities as drivers of successful alliance performance (Cirjevskis, A., 2019).

Responding to the dynamic business environment of the upstream oil and gas sector related to the demands of the energy transition process towards green energy and the natural decline in oil production in Indonesia, Pertamina, as Indonesia's national oil and gas company, has implemented an ambidexterity strategy by carrying out exploration (radical) and exploitation (incremental) innovations that need to be carried out simultaneously to continue achieving a competitive advantage. According to Jurksiene and Pundziene (2016), exploratory innovation will focus on new discoveries, undeveloped skills, and unexplored knowledge in developing renewable energy management in Indonesia, while exploitative innovation will optimize opportunities from existing resources in fossil energy management in upstream oil and gas in Indonesia. One of the incremental strategies carried out in the upstream sector needs to be replicated by other KKKS as upstream oil and gas companies in Indonesia by optimizing the exploitation of environmentally sound old wells with a BUMD/KUD network alliance strategy. This is part of a breakthrough community empowerment program around the operating area relevant to the company's core competencies and in line with government regulations. Old wells with a large number and potential reserves, if appropriately managed, can have the opportunity to increase national oil production while bringing a multiplier effect in improving welfare for the surrounding community.

CONCLUSION

The development of strategic alliance managerial capabilities encourages the improvement of the performance of upstream oil and gas companies in Indonesia in achieving the shared vision of Indonesia Oil & Gas (IOG) 4.0 in 2030, including the utilization of old wells that still have potential. The incremental strategy that needs to be carried out by upstream oil and gas companies in Indonesia is to optimize the exploitation of old wells with an alliance strategy with the BUMD/KUD network as a breakthrough community empowerment program around the operating area relevant to the company's core competencies that align with Government regulations and needs to be encouraged for the implementation of ESG commitments. An alliance network that manages

strategic partnerships with local companies/regional companies/BUMD/KUD in the exploitation of old wells in Indonesia will function as corporate social capital because it is able to create corporate shared value (CSV) with a multiplier effect of improving the welfare of environmentally sound communities.

In overcoming the uncertain disruptive business environment due to global turbulence popularly called VUCA (Volatility, Uncertainty, Complexity, and Ambiguity), Pertamina needs to carry out an aggressive transformation by rearranging the business model, including determining the right strategy to determine the management of upstream oil and gas assets, which mostly manage old wells, to be in line with the fulfillment of the national oil and gas production target of 1 Million BOPD and 12 BSCFD of gas by 2030. Thus, it is hoped that this paper will provide support for strategic decision-making in encouraging the governance of exploitations of old wells starting from the planning phase, developing strategic alliance managerial capabilities in exploitations of old wells from the operating to environmentally sound post-operations phase, it is also necessary to update environmentally sound policies by providing support for implementing environmental, social, governance (ESG) commitments for KUD or BUMD that operate old wells. The policy update includes the need for a special formula regarding the fund reserve of abandonment and site restoration (ASR) or post-operation activities for BUMD or KUD that operate old wells through a joint account supervised by the Director General of Oil and Gas of ESDM.

REFERENCES

Agung, F. (2020, December 2). *Demi Gandeng Mitra, Pertamina Siap Hanya Pegang PI 50% di Blok Migas Miliknya*. Accessed 7 October 2022, from https://industri.kontan.co.id/news/demi-gandeng-mitra-pertamina-siap-hanya-pegang-pi-50-di-blok-migas-miliknya

BUMI (2022). *Pengurangan Emisi Karbon Harus Inline Dengan Target Produksi 2030.* Buletin SKK Migas Periode Juni 2022 pp.14-16. Accessed 7 October 2022, from https://skkmigas.go.id/assets/bumi-juni-2022-1658290971.pdf

Cirjevskis, A. (2019). *What Dynamic Managerial Capabilities are Needed For Greater Staretgic Alliance Performance?* Journal of Open Innovation Technology, Market, and Complexity.

Dewan Energi Nasional. (2020). *Bauran Energi Nasional*.

Direktorat Jenderal Minyak dan Gas Bumi Kementerian Energi dan Sumber Daya Mineral. (2020, May 18). *Pengelolaan Sumur Minyak Tua Tingkatkan Perekomonian Masyarakat.* Accessed 7 Oktober 2022, from https://migas.esdm.go.id/post/read/pengelolaan-sumur-minyak-tua-tingkatkan-perekonomian-masyarakat

Eisenhardt, K. M., & Martin, J. A. (2000). *Dynamic capabilities: What are they?* Strategic Management Journal.

Energia (2021). *Implementasi & Komitmen Penuh Pertamina Dorong Peningkatan Rating ESG.* ESG Insight#10 Investor Relations Periode Oktober 2021 pp.1-14.

Satuan Kerja Khusus Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi (2021, December 1). *IOG 2021 Resmi Dibuka, Pemerintah Tegaskan Posisi Strategis Industri Hulu Migas*. Accessed 7 October, 2022 from https://www.skkmigas.go.id/berita/iog-2021-resmi-dibuka-pemerintah-tegaskan-posisi-strategis-industri-hulu-migas

Satuan Kerja Khusus Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi (2020, February 25). *Penataan Sumur Tua Untuk Tambah Produksi Migas dan Kesejahteraan Rakyat*. Accessed 8 October, 2022 from https://www.skkmigas.go.id/berita/penataan-sumur-tua-untuk-tambah-produksi-migas-dan-kesejahteraan-rakyat

Irmawati, et al. (2019) *Pertamina Outlook Energy 2050: Towards Green Energy, Pertamina Energy Institute*.

Jurksiene, L. and Pundziene, A. (2016). *The relationship between dynamic capabilities and firm competitive advantage, The mediating role of organizational ambidexterity.* European Business Review Vol. 28 N0. 4 pp.431-448. Emerald Group Publishing Limited.

Koka, B.R., Prescott, J.E.(2002). *Strategic alliance as social capital: a multidimentional view*. Strategic Management Journal. Vol. 23, p.795-816.

Lambe, C. Jay, Spekman, Robert E., Hunt, Shelby D. (2002). *Alliance Competence, Resources, and Alliance Success: Conceptualization, Measurement, and Initial Test*. Journal of the Academy of Marketing Science, Vol. 30, p.141-158.

Rahadian, Lalu (2022, February 24). *Banyak Lapangan Migas 'Tua', Ini Cara PHE Genjot Produksi.* Accessed 8 October 2022, from https://www.cnbcindonesia.com/news/20220224133321-4-318011/banyak-

lapangan-migas-tua-ini-cara-phe-genjot-produksi

Setiawan, Verda Nano (2022, July 26). *'Penghijau' Lapangan Migas Bisa Kasih Rp468,74 T ke Negara*. Accessed 8 October 2022, from https://www.cnbcindonesia.com/news/20220726122025-4-358629/penghijau-lapangan-migas-bisa-kasih-rp46874-t-ke-negara

Wibisono, K. (2018) *Pengelolaan Lapangan "Tua" Studi Kasus Lapangan Sembakung, Kalimantan Utar*a, Prosiding Seminar Nasional Cendekiawan, pp. 423–428

Law of the Republic of Indonesia No. 22 of 2001 on Oil and Natural Gas referring to Constitutional Court Decision No. 36/PUU-X/2012

Government Regulation No. 35 of 2004 on Upstream Oil and Gas Business Activities as amended by Government Regulation No. 55 of 2009 on the Second Amendment to Government Regulation No. 35 of 2004 on Upstream Oil and Gas Business Activities

Presidential Regulation No. 98 of 2021 on the Implementation of Carbon Economic Value to Achieve Nationally Determined Contribution Targets and Control over Greenhouse Gas Emissions in Relation to National Development

Regulation of the Minister of energy and Mineral Resources No. 1 of 2008 on Guidelines of Petroleum Mining Concession to Old Wells

Decree of the Head of Special Task Force for Upstream Oil and Gas Business Activities No.KEP-0087/SKKMA0000/2018/S8 on Guidelines for Abandonment and Site Restoration (ASR) revision 01