

পশ্চিমবঙ্গ পশ্চিম বঙ্গাল WEST BENGAL

45AB 359246

Memorandum of Understanding

This memorandum of understanding (hereinafter referred to as the "MoU") is made and entered into on the 17th Feb - 2021

Between

**Essar Oil and Gas Exploration and Production Limited (EOGEPL)**, a company registered under the Companies Act, 2013 having its registered office at F 20, Balaji Shopping, Wide Angle, Highway, Nagalpur, Mehsana, Gujarat -3840025 and also office at AN 81 B Sector, 2B, Martin Luther King Road, Bidhan Nagar, Durgapur - 712312 District Paschim Burdwan (West Bengal) hereinafter referred to as "**EOGEPL**" which expression shall, unless repugnant to the context, be deemed to include its successors and permitted assigns

And

**Indian Institute of Technology (Indian School of Mines) Dhanbad**, an All India Institution financed by the Central government, established as a public engineering and research institute, by the Government of India, having its office at Police Line, Sardar Patel Nagar Hirapur, Dhanbad, Jharkhand 826004 hereinafter referred to as "**IIT (ISM)**" which expression shall, unless repugnant

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to the context and meaning thereof, be deemed to mean and include successors, executors, representatives and permitted assignees.

IIT (ISM) is an institute offering specialized under-graduate and post-graduate programmes in the energy and allied sectors since 1926 and was granted the status of IIT (ISM) by the Act of Parliament in 2016.

**EOGEPL and IIT (ISM)** are individually referred to as the "Party" and collectively referred to as the "Parties".

**Whereas**

**EOGEPL** is an Exploration and Production company, primarily focusing on exploration and production of Oil & Gas including Coal Bed Methane (CBM).

**And**

EOGEPL is willing to jointly work with IIT (ISM) in the field of (but not limited to) Enhanced Recovery, Advance Reservoir Simulation, CBM exploitation technology from Deeper Coal seams, various research & studies.

**Whereas**

**IIT (ISM)** is a public engineering and research institute with special focus on the Oil and Gas sector will addresses the need for trained and specialized human resource for Oil & Gas Industry worldwide. It intends to expand the opportunities for students and professionals to develop an intellectual knowledge base with leadership skills to compete in the global arena. This objective is being addressed through a number of specialized and well-planned undergraduate and post-graduate energy education programs and intensive research initiative. **IIT (ISM)** is interested in conducting Industrial research pertinent to Indian Industry and taking lead to establish facility on the campus.

**Now Therefore the MoU Witness That Parties Hereto Agrees as Follows:**

**1. Scope and Areas of Collaboration**



This Industry-academia collaborative research and development initiative is aimed at creating a comprehensive platform for pursuing advanced research works jointly by EOGEP and the IIT (ISM). The objectives of this collaboration under the MoU, but not limited to, are envisaged as follows:

- i. Collaborative execution of research projects in the jointly agreed Thematic Research Areas, but not limited to,
  - a. Enhance biogenic hydrocarbon generation for CBM/Oil & gas (Microbial stimulation/augmentation)
  - b. Advance Reservoir simulation studies in Industry standard software platforms
  - c. Research for development of suitable technologies for exploitation of gas from Deeper coal seams along with screening of new enhanced recovery techniques for increasing production from existing wells
  - d. Jointly work towards finding the effective solution for the technological challenges faced in E&P activity under the framework of COLLOBORATIVE PROGRAM and as individual PROJECTS as set out
- ii. Promoting Internships, visiting and adjunct faculty programs and research oriented career programs.
- iii. Extending EOGEP industrial platform and IIT(ISM) research platform to each other.
- iv. Conducting short and long term courses in IIT(ISM) and jointly organizing workshops, seminars and conferences.
- v. Promoting entrepreneurship activities in jointly agreed areas.

## **2. Responsibilities:**

### **2.1 Responsibilities of EOGEP:**

- i. To propose initial list of thematic areas of research and to provide necessary data support.
- ii. Access to wells to carry out investigation, research experiments etc. as jointly agreed.
- iii. To jointly pursue collaborative research and training programmes with the IIT(ISM).





## 2.2 Responsibilities of IIT (ISM):

- i. Provide Research under the various thematic areas & Technology development support and carry out other academic activities in collaboration with EOGEP L and by engaging students and faculties.
- ii. Surveying & scouting the advanced technologies of interest to EOGEP L and advising EOGEP L on their potential benefits/drawbacks. Collecting and understanding contemporary E&P issues for utilizing their strength and dynamically upgrading the work for the results.
- iii. Providing training to EOGEP L officials as agreed jointly knowledge building/knowledge transfer in the mutually agreed areas.
- iv. Providing space and basic infrastructural facilities for carrying out the research work smoothly subject to rules and regulation of IIT (ISM) governing such activities.
- v. To convene regular meetings of the Thematic Research Committee (TRC) to monitor the progress and guide the IIT(ISM) faculty to enable and ensure time bound, cost effective and quality solutions on priority.
- vi. To provide access to Lab/Libraries of IIT (ISM) to EOGEP L professionals subject to rules and regulation of IIT (ISM) governing such activities.

## 3. Understanding of Parties

- 3.1 Nothing in this MoU shall grant to either Party the right to bind the other Party, without the prior written consent of the other Party.
- 3.2 The Parties understand and acknowledge that this MoU will provide the foundation for more comprehensive and definitive agreements.
- 3.3 The collaboration between IIT(ISM) and EOGEP L set out in clause 1 will be developed and will be functional under the framework of Collaborative Program.
- 3.4 Under the Collaborative program, IIT(ISM) and EOGEP L will have frequent exchange through meeting and other forms of communication to discuss and develop projects under the areas specified under items 1 and those may be of mutual interest



3.5 Each Party would bear its own costs, including costs and expenses with regard to implementation of this MoU. Further, actual implementation would be undertaken by respective Party at its own risk and cost.

3.6 Each Party represents that with respect to the matters which are subject to this MoU; it will not make or offer any payment, gift, either directly or through intermediaries, to or for the use of any public official where such payment, gift, promise or advantage would amount to any illegality and /or corrupt practice under the law.

3.7 For and on behalf of the IIT(ISM) Dr. Keka Ojha and Dr. Rajeev Upadhyay or any other person nominated and approved by the Director, IIT (ISM), will be representatives for the purpose of establishing projects under the Collaborative Program.

3.8 For and on behalf of the EOGEP, its CEO or any other person/s nominated and approved by him will be its representatives for the purposes of its establishing projects under the Collaborative Program.

3.9 This MoU is a non-exclusive arrangement among the Parties.

3.10 Publications in Journals, Presentations & Conferences: It is agreed between the Parties hereto that neither Party shall disclose any data or information that may be proprietary or confidential in nature including publication of any article, study, discussion, presentation, information, data, etc. Further, publications and presentations in Journals & Conferences respectively shall be under joint authorship of IIT(ISM) & EOGEP.

3.11 None of the parties shall incur any obligations or liabilities on behalf of the other Party or the Parties without entering into specific definitive agreements, as the case may be. None of the Parties shall act as an agent, employee, partner or joint venture of the other Party or the Parties. Any obligations and liabilities of the Parties hereunder shall be individual and not jointly or collectively.

#### 4. Technology Transfer

i. IIT (ISM) and EOGEP may transfer their available know-how, technology, work flows and practices to each other by provision of:





a) Formal training programs including work association,

b) Association of EOGEP L executives during critical phase of any study.

ii. Any and all intellectual property or technology transfer/sharing/licensing shall be on as-is-where-is basis. EOGEP L is advised to test the workability deliverables before the actual implementation. IIT (ISM) does not makes any representations, conditions, or warranties, either express or implied, with respect to such reports or deliverables. IIT (ISM), and its personnel including faculty, students and staff will not be liable for any damage or loss, whether direct, consequential, incidental, or special, which EOGEP L or its agents may suffer, arising from the technology/intellectual property or any deliverables under this MoU.

#### 5. Intellectual Property Rights:

Subject to the Intellectual Property Right Protection Agreement signed between the Parties on

17th Feb' 2021

- i. The intellectual property arising out of this work shall be jointly held in the name of **EOGEP L** and **IIT (ISM)** wherein **EOGEP L** will be the first party, mentioning inventors from both the sides. **EOGEP L** will be responsible to file, maintain and defend the against any claims and/or possible encroachment using its own technical support to defend any claim encroachment will be provided by **IIT (ISM)** shall retain the rights for teaching and to continue research in the specified area using the IP thus developed.
- ii. The right to first use of IPR/Patent/Technology developed through this collaboration for its commercial exploitation shall rest with **EOGEP L** and its group companies. EOGEP L shall exercise such right to first use of IPR/Patent/Technology developed through this collaboration within six months from the date of generation of such IPR/Patent/Technology. However, in case of the generation of profit by its uses from third party will be shared with **IIT (ISM)**. The extent of such sharing will be mutually decided on a case to case basis. **IIT (ISM)** may share the amount so generated, with the







inventor(s) from IIT (ISM) as per the existing norms of IIT (ISM).

**EOGEPL** shall have full right to transferring /assigning /licensing the product/ process/ technology developed to third party. **EOGEPL** shall equally share any benefit accruing from assignments/sale/licensing/or any other manner with IIT (ISM).

## **6. Status of MoU**

This MoU is intended to record mutual understandings of the Parties hereto as the date hereof.

It is clearly understood by IIT (ISM) and **EOGEPL** that there will be no obligation or financial commitment whatsoever on the Parties under this MoU unless otherwise agreed.

For each one of the activities and/or actions identified by the Parties under this MoU, and/or when specific obligations or financial commitments appear necessary to the Parties, the Parties may enter, directly or through the concerned affiliate, into a specific agreement defining in detail the respective obligations and commitments of each Party, and particular the program of work, the financial conditions of its execution and the provisions regarding industrial property and exploitation of the results to be obtained.

This MoU is a non-binding expression of the current intentions of the parties, and neither party will incur nor be bound to any legal obligations or expense hereunder to the other parties until and unless definitive agreements have been negotiated, approved by the necessary management levels of each Party and executed and delivered by authorized representatives of both Parties.

## **7. Notices and Addresses:**

For the purposes of this MoU, the address of the Parties will be as follows and all correspondences and notices in relation to the present MoU sent to the Parties at the address mentioned below shall be deemed to be sufficient service of the notice on the Parties.

### **Address of Essar Oil & Gas Exploration and Production Limited (EOGEPL)**

CEO, EOGEPL  
AN 81 B Sector,  
2B, Martin Luther King Road,  
Bidhan Nagar, Durgapur - 712312  
District - Paschim Burdwan, (West Bengal)





**Address of IIT (ISM):**

Director IIT (ISM),  
Petroleum Engineering Department,  
Indian institute of technology (ISM) Dhanbad  
Sardar Patel Nagar, Hirapur, Dhanbad, Jharkhand 826004

**8. Term of MoU**

The MoU shall be effective from the date written hereinabove and shall remain effective for an indefinite period unless otherwise terminated at an early date.

**9. Termination and Withdrawal**

This MoU may be terminated:

- (a) By either Party upon providing 30 days' written notice.
- (b) If winding up process has been initiated by or against any of the Party.
- (c) If any Party becomes bankrupt or has a receiving order made against it or enters into a composition with its creditors or in the event of force majeure prohibiting its continuity; or If any Party breaches any of its obligations under this MoU and fails to take steps to remedy the breach within 7 days after receiving a written notice of the breach from the Party;

On the happening of any one of the events mentioned in (a, b & c) above, either of the Parties may terminate this MoU, by written notice to the other Party, its receiver, manager, trustee liquidator, administrator or any other person in whom the affairs of the relevant party may have become vested:

Further this MoU will come to an end due to any exigency on part of IIT (ISM) or EOGEP L that may require termination of this MoU.

#### 10. Amendment

This MoU may be amended upon the mutual consent of both Parties and such amendments will have no impact on any specific agreement then in force.

#### 11. Force Majeure

In the event of either Party being rendered unable by Force Majeure to perform any obligation required to be performed by them under this MoU, the relative obligation of the Party affected by such Force Majeure shall, upon notification to the other Party be suspended for the period during which such cause lasts.

The term "Force Majeure" as employed herein shall mean Act of God, floods, tempest, war, act of terrorism, civil riot, fire, viral breakouts, epidemics, pandemics, and Acts, Rules and Regulations of Government authority (whether Central, State or Local authority) directly affecting the performance of the MoU.

#### 12. Confidentiality

Both Parties acknowledge the confidentiality of the information which may be exchanged between the Parties from time to time as being essential to this MoU and agree not to disclose the same to any third party. For the objectives of this MoU as defined in clause 1, the Parties have signed Confidentiality and Intellectual Property Right Protection Agreement and all Confidential Information (as defined thereunder) shall be subject to confidentiality obligations laid down in the Confidentiality and Intellectual Property Right Protection Agreement dated 17th Feb' 2021

#### 13. Dispute Resolution

1. The parties shall make effort to resolve amicably any disagreement arising between them under or in connection with the MoU.
2. Should the dispute, controversy or claim still persists, it shall be finally and exclusively, settled jointly by CEO, EOGEP L and Director, IIT (ISM), which shall be binding on both the Parties.

RSV

RSV



#### 14. Applicable Law and Jurisdiction

This MoU including all matters connected with this MoU, shall be governed by the laws of India (both substantive and procedural) for the time being in force and shall be subject to exclusive jurisdiction of Courts Kolkata.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be executed as of the date

For & on behalf of IIT (ISM)

For & on behalf of EOGEP.



Prof. Rajiv Shekhar

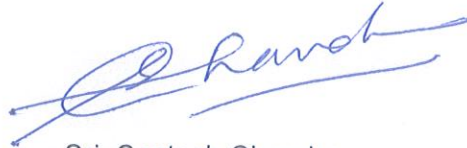
Director

IIT(ISM) Dhanbad

Sardar Patel Nagar, Hirapur

Dhanbad, Jharkhand 826004

Mail-id:



Sri. Santosh Chandra

CEO


Essar Oil and Gas Exploration and Production  
Limited


AN 81 B Sector, 2B, Martin Luther King Road,  
Bidhan Nagar

Durgapur - 712312 District Paschim  
Burdwan(West Bengal)

Mail-id: [Santosh.Chandra@essarenp.co.in](mailto:Santosh.Chandra@essarenp.co.in)

#### Witnesses:

1. By  S. K. Acharya (Name & Signature)  
IIT (ISM)

2. By  Rajiv Shekhar (Name & Signature)

